

# LAKE PUEBLO STATE PARK

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## TRAIL MANAGEMENT PLAN

**FINAL PUBLIC DRAFT**  
May 24, 2019

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### **Colorado Parks and Wildlife**

Lake Pueblo State Park  
640 Pueblo Reservoir Rd.  
Pueblo, Colorado 81005

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## Project Summary

Over the last 20 years, trail use has grown in popularity throughout the state and at Lake Pueblo State Park (LPSP) in particular. A trails management plan is greatly needed for LPSP. Many of the trails analyzed in this plan have informally been created by users. Without clearly designated, sustainably built and maintained trails, the trails will continue to erode, expand, and degrade. Additionally, there is a great need for collaboration and cooperation among the many stakeholders that use and manage the trail system.

Expansion of the trail system without thoughtful planning could potentially harm many of the sensitive natural and cultural resources found at the park. LPSP is situated at a natural ecotone in the Arkansas Valley west of Pueblo, which marks the convergence of many singular ecological elements. These include the north-south overlap of shortgrass prairie and desert grassland zones and along the east-west transition between the plains and the foothills ecosystems. The resulting ecological complex, in combination with the large park area, supports a variety of soil types and topography as well as several regionally rare natural habitats such as riparian, open water, and juniper forests. LPSP preserves habitat for a myriad of wildlife species including several rare animals, such as the yellow-billed cuckoo and triploid checkered whiptail lizard. The park is known for its geological and paleontological significance, and scientists as well as recreational visitors come to view the geological features. The park is also the home of many and varied archaeological sites, some dating from prehistoric times but others that are much more recent.

Several studies were completed to analyze the extensive trail system at LPSP and the park's natural and cultural resources. The natural surface trail resource assessment identified where sensitive natural and cultural resources intersect with natural surface trail systems in the North and South Shore areas. The natural surface trail condition assessment was performed to identify the physical condition of natural trails within the trail systems by measuring a variety of factors that influence the physical condition of trails in the North and South Shore areas. The paved surface trail condition assessment was performed to identify the physical condition of paved trails in LPSP by measuring a variety of factors that influence the physical condition of paved trails. Finally, existing social trails in the Chain of Lakes (COL) property area were mapped and evaluated to create a sustainable trail system for future public access to this portion of LPSP.

Results indicate that both the North and South Shores have extensive social trails that potentially impact natural and cultural resources present in the project areas. This plan proposes closing some trails, rerouting trails around resources, and performing maintenance activities in order to create a sustainable trail system. Ultimately, this plan proposes to keep over 80 percent of the trails in both areas as they are currently aligned to provide recreational experiences for visitors, while maintaining the rich cultural and natural resources present at the park. The plan proposes to keep all paved trails mapped and evaluated for this plan. Several trails are recommended for maintenance activities to ensure that visitors are safe when traveling on the designated paved trails. This plan proposes to officially designate 9.2 miles of trails of the existing social trails and add infrastructure in the COL project area to ensure functionality and ease of access by recreationists. Several recommendations are provided to ensure the long-term success of the trails system in the project areas evaluated for this plan.

## TABLE OF CONTENTS

Project Summary	ii
1.0 Introduction	1
1.1 Background	1
1.1.1 Plan Purpose and Need	1
1.1.2 Project Goals	2
1.2 Study Area	3
1.2.1 North Shore Trails	4
1.2.2 South Shore Trails	4
1.2.3 Paved Trails Area	4
1.2.4 Chain of Lakes	5
1.3 Recreation and Visitor Use	5
1.4 Public Process	5
2.0 Existing Conditions and Potential Impacts	6
2.1 Summary of Resources	6
2.2 Vegetation	7
2.2.1 Rare Plants and Communities	7
2.3 Wildlife	9
2.3.1 Sensitive Wildlife Species	9
2.3.2 Raptors	11
2.3.3 Roost / Rookery	11
2.3.4 Riparian Shrubland Bird Habitat	11
2.4 Soils	13
2.5 Water Resources	14
2.6 Paleontological Resources	15
2.7 Cultural Resources	16
3.0 Trail Assessment Methods	17
3.1 Trail Mapping	18
3.2 Natural and Cultural Resource Assessment	18
3.3 Natural Surface Trail Condition Assessment	19
3.3.1 Data Collection	20
3.3.2 Problem Point Definitions	21
3.3.3 GIS Data Analysis	23
3.3.4 Trail Problem Ranking System	23

3.4	Paved Surface Trail Condition Assessment	25
3.4.1	Data Collection	25
3.4.2	GIS Data Analysis	27
3.4.3	Trail Problem Ranking System	27
3.5	Chain of Lakes Trails	28
4.0	Trail Assessment Results	28
4.1	North Shore Trails Analysis	28
4.1.1	Trails	28
4.1.2	Natural and Cultural Resource Assessment	29
4.1.3	Natural Surface Trails Condition Assessment	29
4.2	South Shore Trails Analysis	31
4.2.1	Trails	31
4.2.2	Natural and Cultural Resource Assessment	31
4.2.3	Natural Surface Trails Condition Assessment	32
4.3	Paved Trails Condition Assessment	33
4.4	Chain of Lakes Trail Mapping	33
5.0	Trail Maintenance and Management Recommendations	34
5.1	North Shore Trails Analysis	34
5.1.1	Trail Closures	34
5.1.2	Trail Reroutes	36
5.1.3	Trail Maintenance	36
5.1.4	Proposed Trails	38
5.1.5	Park Infrastructure	38
5.2	South Shore Trails Analysis	41
5.2.1	Trail Closures	41
5.2.2	Trail Reroutes	43
5.2.3	Trail Maintenance	44
5.2.4	Proposed Trails	46
5.2.5	Infrastructure Needs	47
5.3	Paved Trails Analysis	50
5.3.1	Trail Maintenance	50
5.3.2	Infrastructure Needs	52
5.4	Chain of Lakes Trail Plan	53
5.4.1	Proposed Trails	53

5.4.2	Park Infrastructure	53
6.0	Conclusions and Future Recommendations	54
6.1	Natural and Cultural Resource Monitoring and Management Recommendations	54
6.1.1	Rare Plants and Communities	54
6.1.2	Sensitive Wildlife Species	55
1.1.1	Paleontological Resources	56
6.1.3	Cultural Resources	56
6.2	Other Trail Recommendations	57
6.2.1	Trail Construction	57
6.2.2	Safety	57
6.2.3	Usage	57
6.2.4	Proposed New Signage and Signage Improvements	58
6.3	North Shore Trails Area	58
6.3.1	Conclusions	58
6.3.2	Future Recommendations (if Managed by LPSP)	59
6.4	South Shore Trails Area	60
6.4.1	Conclusions	60
6.4.2	Future Recommendations	60
6.5	Paved Trails Area	61
6.5.1	Conclusions	61
6.5.2	Future Recommendations	61
6.6	Chain of Lakes Trails Plan	61
6.6.1	Conclusions	61
6.6.2	Future Recommendations	61
7.0	References	63

**APPENDICES**

Appendix A: Maps	67
Appendix B: Tables	140
Appendix C: Data Sheet	187
Appendix D: Potential Project Funding Sources	189
Appendix E: Relevant Laws and Policies	192
Appendix F: Recommended Best Management Practices	198
Appendix G: Existing LPSP Plans and Documents	204
Appendix H: ADA Accessibility Guidelines Document	206
Appendix I: Public Comments	319
Appendix J: Author Credentials	441

**LIST OF MAPS**

Section 1 Maps .....68  
 Section 2 Maps .....76  
 Section 4 Maps .....81  
 Section 5 Maps .....121

**LIST OF TABLES**

Table 1. Rare Plants and Communities of LPSP .....141  
 Table 2. Sensitive Wildlife Species of LPSP .....142  
 Table 3. Seasonal Raptor Buffers .....144  
 Table 4. Resource Datasets Used to Create Trail Recommendations .....145  
 Table 5. Trail Problem Measurements .....146  
 Table 6. Natural Surface Trail Ranking Weights .....148  
 Table 7. “Other” Problem Maintenance Priority Ranks for Maintenance Score Calculation .....149  
 Table 8. Paved Surface Trail Ranking Weights .....150  
 Table 9. North Shore Trails Area Trail Problems Summary .....151  
 Table 10. North Shore Trails Area Number of Problems by Trail .....152  
 Table 11. South Shore Trails Area Trail Problems Summary .....156  
 Table 12. South Shore Trails Area Number of Problems by Trail .....157  
 Table 13. Paved Trails Area Trail Problems Summary .....163  
 Table 14. Paved Trails Area Number of Problems by Trail .....164  
 Table 15. North Shore Trails Area Permanent Trail Closures .....166  
 Table 16. North Shore Trails Area Trail Reroutes and Additions .....168  
 Table 17. North Shore Trails Maintenance Priorities .....169  
 Table 18. South Shore Trails Area Permanent Trail Closures .....174  
 Table 19. South Shore Trails Area Seasonal Trail Closures .....176  
 Table 20. South Shore Trails Area Trail Reroutes and Additions .....177  
 Table 21. South Shore Trails Maintenance Priorities .....178  
 Table 22. Paved Trails Maintenance Priorities .....185

**LIST OF FIGURES**

Figure 1. Some of the rare plants and communities of LPSP (clockwise starting at top left): dwarf milkweed, Rocky Mountain bladderpod, Barneby/Arkansas River feverfew, plains escarpment prairies .....8  
 Figure 2. Some sensitive wildlife species found at LPSP include (clockwise starting at top left): northern leopard frog triploid checkered whiptail, yellow-billed cuckoo, and black-tailed prairie dog .....10  
 Figure 3. CNHP fully tracked three-leaved sumac/skunkbush present at LPSP. ....12  
 Figure 4. Soil erosion hazard present in LPSP map. ....14  
 Figure 5. Water Resources Present at Lake Pueblo State Park. ....15  
 Figure 6. Sensitive Resources present in the North and South Shore areas. ....17  
 Figure 7. Diagrams illustrating the application of maximum incision measurements for trails in flat vs. sloping terrain. ....20  
 Figure 8. Example of trail braiding (left) and erosion and root exposure (right) on natural surface trails in LPSP. ....22  
 Figure 9. Example of erosion (left) and surface cracking (right) on paved trails in LPSP. ....26

Figure 10. Trail NT3j had two problems documented over its short distance of 0.01 miles, including this erosional feature (left) and NT1c had the highest average severity score due to a large depression ranked a five out of five(right).....30

Figure 11. Geologic strata and shale formations that preserve past conditions and specimens at the park.....31

Figure 12. North Shore trail closure and reroute recommendations map.....35

Figure 13. North Shore trail mileage summary. ....36

Figure 14. Top 10 North Shore Trails needing maintenance list. ....37

Figure 15. Top 10 overall trail maintenance needs in the North Shore map. ....38

Figure 16. Example of a trail systems map that should be installed in LPSP.....39

Figure 17. Areas in need of bridge crossings over riparian or wetland zones: NT10d (left), NT10g (center), and NT11b (right).....40

Figure 18. Areas in need of step restoration: NT11d (left) and NT11e (right). ....40

Figure 19. North Shore proposed infrastructure map.....41

Figure 20. South Shore trail closure and reroute recommendations map. ....43

Figure 21. South Shore Trail Mileage Summary.....44

Figure 22. Top 10 South Shore Trails needing maintenance list. ....44

Figure 23. Top 10 overall trail maintenance needs in the South Shore map.....45

Figure 24. Recreation infrastructure present in the South Shore requiring formalization. ....46

Figure 25. Map of access area from the Arkansas Point Campground.....48

Figure 26. Example of an “iron ranger” pay station that should be installed in LPSP in the South Shore and COL areas. ....49

Figure 27. South Shore proposed infrastructure map.....50

Figure 28. Top 10 Paved Trails needing maintenance list. ....51

Figure 29. Top 10 overall trail maintenance needs in the Paved Trails Area map. ....52

Figure 30. Chain of Lakes area proposed infrastructure and trails.....54

## LIST OF ACRONYMS

ADA	Americans with Disabilities Act
ARPA	Archaeological Resources Protection Act
BGEPA	Bald and Golden Eagle Protection Act
CAS	Colorado Archaeological Society
CPW	Colorado Parks and Wildlife
CNAP	Colorado Natural Areas Program
CNHP	Colorado Natural Heritage Program
COL	Chain of Lakes
CRS	Colorado Revised Statute
ESA	Endangered Species Act
ESRI	Environmental Systems Research Institute
GIS	Geographic Information System
GPS	Global Positioning System
LPSP	Lake Pueblo State Park
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OAHP	Office of Archaeology and Historic Preservation
OSAC	Office of the State Archaeologist of Colorado
RMP	Resource Management Plan
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Office
SRHP	State Register of Historic Places
SWA	State Wildlife Area
SWAP	State Wildlife Action Plan
WDPS	Western Distinct Population Segment

## DEFINITIONS

<b>Seasonal Closure</b>	A proposed trail closure for a specified date based on a resource present at the location. Seasonal closures are only implemented if the wildlife species is active at the location for the year based on Park monitoring efforts.
<b>Permanent Closure</b>	A proposed trail closure that will be implemented indefinitely due to a sensitive resource issue at the location.
<b>Trail Reroute</b>	A proposed alternative path for a current trail to avoid a sensitive resource. Trail reroutes will be determined after consultation with a professional technical trail consultant at a later date and are not currently provided in this report. Trails in need of a rerouted path are identified.
<b>Resource Intersect Analysis</b>	A study conducted to identify where sensitive natural and cultural resources intersect with the North and South Shore natural surface trail systems and to recommend mitigation measures to eliminate or reduce the impact of the trails on the identified resources.
<b>Condition Assessment Analysis</b>	A study conducted to identify the physical condition of natural trails within the North and South Shore trail systems by measuring a variety of factors that influence the physical condition of trails, to create monitoring points for future comparison, to recommend measures to eliminate or reduce trail problems, and to prioritize trail maintenance activities.
<b>Infrastructure/ Trail Infrastructure</b>	<p>Infrastructure are man-made structures proposed for the identified trail areas that influence trail system functioning.</p> <p>This report refers to proposed infrastructure by CPW to improve the functioning of the system, such as trail signs, bridges, and fences.</p> <p>This report also refers to trail infrastructure that must be formalized by the park that was previously built by users, such as ramps and bridges.</p>

## 1.0 Introduction

### 1.1 Background

Pueblo Reservoir was developed by the Bureau of Reclamation (Reclamation) as part of the Fryingpan-Arkansas water storage project. Pueblo Reservoir's capacity of 4,646 surface acres of water is surrounded by 17,035 acres of public land. Pueblo Reservoir was developed to provide "flood control, supplemental water for irrigation, municipal and industrial water supplies, recreational opportunities, and conservation of fish and wildlife resources."

Pursuant to a Lease with Reclamation (Contract No. 14-06-700-8018, dated January 15, 1975), Colorado Parks and Wildlife (CPW) is responsible for the operation, management and administration of Pueblo Reservoir and surrounding property owned by Reclamation, known as Lake Pueblo State Park (LPSP) and Pueblo Reservoir State Wildlife Area (SWA), for recreation and related purposes. LPSP comprises 13,691 acres of property surrounding the reservoir and the 4,646 acres of surface water of the reservoir and opened to the public on July 1, 1975.

In addition, "Title 33" of the Colorado Revised Statutes directs the State of Colorado to provide outdoor recreation and authorizes the development of State Parks and Wildlife Areas. It mandates that within the Colorado Department of Natural Resources, CPW be the agency responsible for these areas. Thus, CPW is statutorily charged with the responsibility to "protect, preserve, enhance and manage, for the use, benefit and enjoyment of the people of and visitors to Colorado, the natural, scenic, scientific, and outdoor recreation areas of the state."

#### 1.1.1 Plan Purpose and Need

Over the last 20 years, trail use has grown in popularity throughout the state and at LPSP in particular. The South Shore trail network at the park is well-known statewide. It is a highly used and revered system of over 50 miles of trails. The system developed over the past few decades from social use by mountain bikers, equestrian riders, and hikers and was not formally designated by CPW or Reclamation. In the past ten years, the trails were maintained by the Southern Colorado Trail Builders Club as a result of informal arrangements with CPW.

Due to this history and lack of formal designation of the trails, many trails were not properly planned, formally designed, or approved through the required federal processes such as the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and potentially other regulations within design and construction processes.

While the South Shore trail network is the most significant trail area in need of assessment and planning, various undesignated social trails in the park and the eastern portion of the neighboring wildlife area have developed without planning and assessment over the years. These are mostly on the north side of the park in between the North Marina, Northern Plains Campground, West Fishing Access, and the northeast corner of the SWA. Many are trails where visitors move between those recreation areas and some were created via resident access from the bordering neighborhoods in Pueblo West. This is particularly the case in the northeast portion of the SWA.

A trail management plan is greatly needed for LPSP. Many of the trails analyzed in this plan have informally been created by users. Without clearly designated and sustainably built and maintained

trails, trails will continue to erode, degrade and expand. Expansion of the trail system without proper planning has the potential to harm sensitive natural and cultural resources at the park.

Additionally, there is a great need for collaboration and cooperation among the many stakeholders that use and manage the trails system. Successful cooperation among all these groups is essential to the future of the trail system at LPSP. This plan will solidify collaboration between land managers, land owners, and trail user groups.

The purpose of this plan is to summarize the methods, results, and recommendations of trail-related studies for LPSP, to provide LPSP with a guide for trail operations and management, and to provide the planning documentation required for compliance with NEPA that is required of the land owner, Reclamation, to formalize the user created components of the trail system.

The overarching purpose of the completed trail studies is to improve and maintain the extensive trail system present at LPSP. The following list identifies the individual study purposes:

1. **Natural resource intersect analysis:** The purpose of this study was to identify where sensitive natural and cultural resources intersect with the North and South Shore natural surface trail systems and to recommend mitigation measures to eliminate or reduce the impact of the trails on the identified resources.
2. **Natural surface trail condition assessment:** The purpose of this study was to identify the physical condition of natural trails within the North and South Shore trail systems by measuring a variety of factors that influence the physical condition of trails, to create monitoring points for future comparison, to recommend measures to eliminate or reduce trail problems, and to prioritize trail maintenance activities.
3. **Paved surface trail condition assessment:** The purpose of this study was to identify the physical condition of paved trails in LPSP by measuring a variety of factors that influence the physical condition of paved trails, to create monitoring points for future comparison, and to recommend measures to eliminate or reduce paved trail problems.
4. **Chain of Lakes trail plan:** The purpose of this study was to evaluate existing social trails in the Chain of Lakes (COL) property area and provide recommendations for new trails in order to create a sustainable trail system for future public access to this portion of LPSP.

### *1.1.2 Project Goals*

The following project goals were developed through the completion of the trail studies and through collaboration between CPW and the Bureau.

1. **Knowledge**
  - a. Map all natural and paved surface trails in the areas of interest for planning purposes.

## 2. Ecosystem

- a. Identify the location, type, and condition of natural and cultural resources at LPSP.
- b. Identify where LPSP natural surface trails intersect significant natural and cultural resources.
- c. Modify existing natural surface trails to mitigate or eliminate impacts to natural and cultural resources.

## 3. Design and Safety

- a. Evaluate the physical condition of natural and paved surface trails to reduce safety concerns, provide maintenance recommendations, and to improve the visitor use experience of the trails.
- b. Maintain existing trail routes whenever possible while mitigating the effects of high trail use on natural surface trails.
- c. Reduce redundancy in the trail system through removal of unnecessary duplicative trails, such as spurs and trails that lead to similar areas as other trails.
- d. Create a visitor-friendly trail system in the park that provides access to desired locations and reduces the tendency of visitors to create social trails.
- e. Develop and designate ADA (Americans with Disabilities Act) accessible trails where possible and as conditions allow.
- f. Identify potential future infrastructure enhancements for improved trail access and experiences.

## 4. Compliance

- a. Ensure the LPSP trail system has met all Federal, State, and local requirements for public use.

## 5. Partnership

- a. Maintain, promote, and enhance relationships and communications between landowners, management agencies, and trail user groups during the planning and management processes.

## 6. Education

- a. Encourage appropriate trail etiquette; develop and enforce regulations as necessary.
- b. Develop and implement educational information and outreach efforts to enhance trail safety, condition, and enjoyment.
- c. Identify opportunities for interpretation of local resources within the trail system.

### 1.2 Study Area

LPSP is located in Pueblo County, on the eastern slope of the Rocky Mountains about six miles west of Pueblo's city center and Interstate 25 (**Map 1.1**). US Highway 50 runs east to west through Pueblo and is located two miles north of LPSP. The park encompasses approximately 14,000

acres of land, 4,600 acres of which is water (**Map 1.2**). The study area for this plan consists of four general areas of LPSP: North Shore, South Shore, the Paved Trails Area, and COL (**Map 1.3**).

Most of the park lands are owned by Reclamation and managed by CPW, which includes the South Shore, most of the Paved Trails and a portion of the trail system in the North Shore project areas. CPW also manages the Pueblo Reservoir SWA, west of the state park. The majority of the North Shore project area falls within the SWA boundaries and is managed specifically for hunting and fishing access by the CPW Area 11 Wildlife Office. The management goals of a SWA are much different than a State Park and management of trails is not typical in a wildlife area. The SWA is more vulnerable to urban impacts related to everyday use by local residents than LPSP lands simply because management actions and staffing are based on patterns of hunting and fishing use. The COL area is owned by CPW and operated by LPSP staff. CPW recently acquired the Litvak Property, a seven-acre parcel and it has been added to the COL. Additionally, privately-owned property and City of Pueblo property are scattered throughout the area around the CPW-owned and managed lands. The City of Pueblo has access rights to most of the Arkansas River corridor and trail. **Map 1.4** displays the land ownership of the park and adjacent properties. Other areas that are State-owned lands but are not included in this trail plan include Honor Farm and a parcel owned by the State Land Board.

### *1.2.1 North Shore Trails*

For this plan, the study area of the North Shore encompasses 917 acres of land and is located in the northwest portion of LPSP and the northeast portion of the Pueblo Reservoir SWA (**Maps 1.3 and 1.5**). A total of 15 miles of undesignated trails were identified during the project analysis, 11.1 miles of which was in the SWA and 3.9 miles located in LPSP. The trail system travels through sensitive shale barrens, pinyon-juniper woodlands, riparian areas, and open grassland and shrubland ecosystems.

### *1.2.2 South Shore Trails*

The South Shore area encompasses 2,964 acres of land in the southern half of LPSP (**Map 1.3 and 1.6**). A total 53 miles of undesignated trails and 4.9 miles of two track roads were mapped for the project analysis. The trail system travels through many canyons and crosses several creeks, wetlands, and riparian zones sometimes with significant elevation gains.

### *1.2.3 Paved Trails Area*

The Paved Trails area encompasses 1,383 acres of land, with the majority of trails in the eastern half of LPSP (**Maps 1.3 and 1.7**). The paved trails analysis includes the Pueblo Reservoir Trail, which travels from north of the dam at the North Shore Marina along Juniper Road, heading east around the dam, then south towards the Visitor's Center. It also includes all paved trails in the Rock Canyon Swim Beach, Cottonwood Picnic, Anticline Fishing Pond, and Osprey Picnic areas. Paved trails were created in early 2016 in the park and have since deteriorated and become unsafe for visitors in some areas. A total of 12.6 miles of paved trails were mapped for the project analysis. Most service roads and two tracks were already mapped by CPW and totaled approximately 5.4 miles within the Paved Trails project area. The trail system travels through flat grasslands and shrublands, pinyon-juniper woodlands, and riparian ecosystems.

### **1.2.4 Chain of Lakes**

COL is located east of the dam and encompasses 459 acres of land in the eastern half of LPSP (Maps 1.3 and 1.8). A total of 8.5 miles of undesignated trails social trails were identified within the COL project area; and a total of 11.5 miles of social trails east of the Pueblo Reservoir Dam that are not all considered part of the COL area were mapped for the project analysis. Most service roads and two tracks were already mapped by CPW and totaled approximately four miles within the COL project area. The area consists of an expansive riparian corridor with cottonwood groves, grasslands and seven ponds created during historic gravel mining operations. Three of these ponds are currently open to fishing and CPW plans to open two more ponds for public access in Spring, 2019. The final two ponds will open in the future when access issues are resolved. This area provides an important linkage between the City of Pueblo urban development and LPSP protected natural and cultural resources (CPW 2016).

### **1.3 Recreation and Visitor Use**

LPSP is a premier year-round recreation destination, as well as one of the most visited state parks in Colorado with approximately 2,400,000 people visiting the park annually. Park activities include camping, fishing, hiking, biking, boating, swimming, and picnicking. Pueblo Reservoir is one of the largest bodies of water along the Front Range and its central location and mild year-round climate draws many recreationists to visit the park (CPW 2017a).

Balancing increased visitation and demand for expanded recreational opportunities with the conservation of the park's natural resources is a major challenge facing park staff. Increased undesignated trail creation by visitors has occurred as a result of the over two million people that visit the park every year. Mountain biking, hiking, and horseback riding are three main recreational activities pursued on the visitor-created trails addressed in this plan. Although undesignated, the park's trails have been praised by mountain bikers, equestrians, and hikers due to the range in trail difficulty, the moderate climate of the region which allows for year-round activity, and the number of trails available for exploration. Many small social trails have also been created as a result of visitors accessing the Reservoir for fishing or for better views.

### **1.4 Public Process**

Coordination with and input from the public was an important part of the creation of this plan. Informal meetings and conversations with stakeholders and interested individuals occurred continuously before and during this planning process.

In January 2014, CPW and the Bureau started a separate planning process to update the LPSP's Resource Management Plan (RMP). This RMP, following federal guidelines and managed by the Bureau, encompasses all aspects of the Bureau owned properties including the trails. Dozens of formal, written comments about the trails were received at that time and were reviewed again by planners at the start of this current trail planning process. The comments centered mainly around keeping the trails accessible, sustainable and open to multiple types of recreation. The Reclamation's RMP has not yet been completed by the finalization of this trail plan and the existing public comments collected at RMP public meeting are maintained by Reclamation. It should be noted that this trail plan will be incorporated into the RMP planning process and the final RMP.

Comments and input received was seriously considered for incorporation into the plan. The final version of this plan was made available to the public for review and written comment from April

17 through April 29, 2019. A public meeting with LPSP and Reclamation staff was held on April 29, 2019. Public input was considered during the creation of the trail maintenance and management recommendations provided in this report. Written public input directly related to this plan was collected and is included in **Appendix I** of this plan.

## 2.0 Existing Conditions and Potential Impacts

### 2.1 Summary of Resources

LPSP is situated at a natural ecotone, in the Arkansas Valley west of Pueblo, which marks the convergence of many singular ecological elements. These include the north-south overlap of shortgrass prairie and desert grassland zones and along the east-west transition between the plains and the foothills ecosystems. The resulting ecological complex, in combination with the large park area, supports a variety of soil types and topography as well as several regionally rare natural habitats such as riparian, open water, and juniper forests. This results in a higher level of biodiversity than that typically found at other Colorado State Parks (CPW 2017b).

LPSP preserves habitat for a myriad of wildlife species. The pinyon jay (*Gymnorhinus cyanocephalus*), eastern meadowlark (*Sturnella magna*), and black-billed magpie (*Pica hudsonia*) are just a few of the common resident birds, but the reservoir also attracts a variety of waterfowl and shorebirds. Mule deer (*Odocoileus hemionus*) are a common sight, as are cottontail rabbit (*Sylvilagus* sp.), jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), badger (*Taxidea taxus*), beaver (*Castor canadensis*), black-tailed prairie dog (*Cynomys ludovicianus*), and ground squirrel. The park is also home to several rare animals, such as the yellow-billed cuckoo (*Coccyzus americanus occidentalis*) and triploid checkered whiptail lizard (*Aspidoscelis neotesselata*). A colony of black-tailed prairie dogs can be found along the park's northern boundary. Historical records of the southern redbelly dace (*Chrosomus erythrogaster*), an extremely rare fish in Colorado, and the northern leopard frog (*Rana pipiens*) exist for observations of these species within the park boundary. Other rare species migrate or are intermittently seen in the park (CPW 2017b).

Rock layers visible at the park are the result of several different geologic processes, including the deposition of sedimentary rock, uplift creating the present Rocky Mountains, and erosion creating valleys and otherwise changing the landscape. The park is known for its geological and paleontological significance, and scientists as well as recreational visitors come to view the historic record and wide variety of fossils in the strata. Rocks at the park are used as a geologic time scale reference, helping determine the age of rocks in other locations around the world (CPW 2017b).

The park is the home of many and varied archaeological sites, some dating from prehistoric times but others that are much more recent; such as the towns that were submerged by Arkansas River water when the Pueblo Dam was constructed. Humans have lived in or traveled through the park for thousands of years, including Native populations, fur trappers, traders, Spanish explorers, and early settlers and ranchers. These people have left behind artifacts such as campfire remains and historic habitations (CPW 2017b).

The following sections provide more detail about the sensitive resources in the park and how trails that are not properly managed or maintained can impact these resources.

## 2.2 Vegetation

### 2.2.1 Rare Plants and Communities

LPSP and the adjacent SWA together provide the largest public land habitat base for 14 globally rare plants and communities which are found only in the Pueblo and Fremont County area. These areas were identified as a Potential Conservation Area (PCA) by the Colorado Natural Heritage Program (CNHP) and is being considered for designation as a State Natural Area by the Colorado Natural Areas Program (CNAP). CPW conducted rare plant inventories at LPSP in 1998, 1999, 2008, and 2010. The relatively undisturbed upland prairie areas provide habitat for half of all the animal species found in the park (CPW 2017b).

*PCAs highlight areas in the state contributing to Colorado's biological diversity. Their boundaries encompass rare species and natural plant communities and reports often contain valuable information on ecological conditions, unique ecological communities, and management recommendations.*

*CNAP is a statewide program focused on the recognition and protection of areas that contain at least one unique or high-quality natural feature of statewide significance.*

**Table 1** lists the rare plant communities and the CNHP-tracked rare plants that are found within the project areas. **Figure 6** displays known occurrences of some of the rare species tracked in the park based on CNHP and park data and **Maps 2.1 and 2.2** display more detailed information. **Figure 1** displays photos of some rare plants at the Park. Rare plant communities often include rare plants and/or combinations of species that are not commonly associated with one another. Species and communities tracked by CNHP are assigned conservation ranks based upon their relative degree of rarity or imperilment. Conservation ranks are assigned both in terms of a species' abundance within Colorado (S or State rank) and over its entire range (G or Global rank).

Recreation activities on trails may affect rare plants and communities in multiple ways. Recreationalists can compact the soil and cause a loss of organic litter and mineral soil (Dawson et al. 1974; Leung & Marion 2000). These impacts can have indirect effects on the soil including reduced air space and moisture, accelerated erosion, and altered soil microbial activities (Leung & Marion 2000). These soil changes can lead to a loss of sensitive plant species, a loss of trees and shrubs due to root compaction, and decreased height and vigor of plants (Tonnesen & Ebersole 1997; Leung & Marion 2000).

Trampling of vegetation along trails is associated with increases in soil compaction and decreases in the number of local plant species (Monz et al. 1994; Tonnesen & Ebersole 1997). The resilience of plants and their ability to recover following trampling disturbance decreases in areas of lower soil fertility and moisture (Leung & Marion 2000), which is the environment of most of Lake Pueblo. The creation and maintenance of trail corridors removes trees and shrubs, allowing greater sunlight exposure that favors more sun-tolerant plants. This can cause changes in species composition where these sun-tolerant vegetation types, like grasses and sedges, replace more fragile shade-tolerant species (Dale & Weaver 1974; Douglas et al. 1975; Cole 1993) that may exist in shaded microclimates of LPSP. Trail width increases with an increase in the number of

users (width doubles with a 10-fold increase in use). Trails in open areas are wider than trails in forested areas (Dale & Weaver 1974). Much of LPSP is open grassland and shrubland and therefore is more likely to see increased trail widths with increased user numbers. Additionally, with dogs and horses on trails, the zone of trampling is increased because of their tendency to go off-trail (Nagy & Scotter 1974; Cole & Spildie 1998).

Soil disturbance and the loss of vegetative ground cover due to the creation of trails can lead to the establishment of exotic plant species (Potito & Beatty 2005). Many weedy plants have seeds that stick to clothes and fur and trail users (people, dogs, horses, etc.) can spread exotic seeds from one area of the park to another. Studies have found that weeds established themselves more readily along trail corridors (Tyser & Worley 1992; Benninger-Truax et al. 1992; Marcus et al. 1998). Invasive plants alter the ecosystems they infest, sometimes completely changing the patterns of resource availability (Randall 1996). They compete with native plants for resources and are responsible for losses in biological diversity (Randall 1996). The addition of horses to the trails can increase the opportunity for non-native plant species to be introduced through horse droppings (Benninger 1989; Campbell & Gibson 2001; Wells & Lauenroth 2007) and the addition of dogs can also increase opportunities for non-native plants species (Sime 1999). The 2012 Lake Pueblo Weed Management Plan contains a list of weed species that are currently found in the project area and methods to control them (CPW 2012).

**Figure 1.** Some of the rare plants and communities of LPSP (clockwise starting at top left): dwarf milkweed, Rocky Mountain bladderpod, Barneby/Arkansas River feverfew, plains escarpment prairies.



Photo Credit:(CNHP 2017)

## 2.3 Wildlife

### 2.3.1 Sensitive Wildlife Species

LPSP and the adjacent Pueblo Reservoir SWA together provide a habitat base 19 sensitive wildlife species, including seven Tier 1 and ten Tier 2 sensitive wildlife species of greatest conservation need (SGCN) as ranked by the Colorado State Wildlife Action Plan (SWAP) (CPW 2015). **Table 2** lists the sensitive wildlife species that have previously been documented within the project areas and other sensitive species that could occur within these areas. SGCN species are ranked by the SWAP into Tier 1 and Tier 2 based on highest conservation priority. Also, species tracked by CNHP are assigned conservation ranks based upon their relative degree of rarity or imperilment. Conservation ranks are assigned both in terms of a species' abundance within Colorado (S or State rank) and over its entire range (G or Global rank). **Figure 6** displays known occurrences of some of the rare species tracked in the park based on CNHP and park data and **Maps 2.1 and 2.2** display more detailed information. Some of the species which data exists for and were included in the analysis are discussed in further detail in following sections. Raptors are considered sensitive but are discussed in **Section 2.3.2**.

The park contains extraordinary bird diversity, with 112 species documented in the park (Jones 2011). A total of 11 rare bird species could occur in the park, including the western yellow-billed cuckoo, a Tier 1 species. While LPSP contains the eastern subspecies, the Western distinct population segment (WDPS) is a proposed federally-threatened species under the Endangered Species Act (ESA). The WDPS under the current listing of the population that occurs west of the Continental Divide. Pueblo Reservoir is in what is considered a transitional area between the Western (listed) and Eastern yellow-billed cuckoo (not listed). There are currently no ESA protections for the yellow-billed cuckoo at LPSP, however the species is protected under the Migratory Bird Treaty Act (MBTA). This species was documented during the 2011 breeding bird survey at LPSP (Jones 2011). The park provides many habitats used by the rare species present in the park. Riparian shrublands are especially sensitive breeding and nesting areas for many of the species, including western yellow-billed cuckoo. A discussion of their importance and potential degradation can be found in **Section 2.3.4**.

The triploid checkered whiptail (SWAP Tier 1 species) is endemic to southeastern Colorado and is the only rare reptile species found in the park. Whiptails prefer arroyos, canyons and tributaries, and riparian areas, but are also prevalent in upland grasslands containing native shrubs (Hammerson 1999). Whiptails also tend to use southeast-facing slopes during the winter months for hibernation (Hammerson 1999). The most productive whiptail habitat in the park are the shale slopes between riparian areas and uplands (CPW 2010). Populations have declined in recent years due to habitat destruction and alteration (Hammerson 1999).

Four different rare mammal species have previously been documented or could occur in the park. Black-tailed prairie dogs, are a SWAP Tier 2 species and are considered a keystone species because of their importance in ecosystems (Kotliar et al. 1999). Burrowing owls (*Athene cunicularia*), which are threatened in Colorado and a SWAP Tier 1 species, rely on prairie dog burrows more than burrows of other animals for nesting (Kotliar et al. 1999; Klute et al. 2003). Other rare mammals that could occur or have previously been documented in the park include Botta's pocket gopher (*Thomomys bottae*) (SWAP Tier 2 species), Townsend's big-eared bat (*Corynorhinus townsendii*) (SWAP Tier 1 species), and swift fox (*Vulpes velox*) (SWAP Tier 2 species).

Two amphibian species of concern are found in the park: northern leopard frog (SWAP Tier 1 species) and plains leopard frog (*Rana blairi*) (SWAP Tier 2 species). Both species prefer wetland or riparian areas. Northern leopard frogs can use a variety of aquatic habitats including wetlands, pools, and slow-moving or still water along streams and rivers. These areas are especially sensitive to disturbance and should be protected to preserve the few small wetland habitat areas for these species.

One fish species could be present in the park. The southern red-belly dace (SWAP Tier 1 species) was previously documented and is displayed in the CNHP data on **Map 2.3**. Southern redbelly dace prefers small, low-order streams where the habitat includes permanent springs, seeps, and mats of vegetation.

**Figure 2.** Some sensitive wildlife species found at LPSP include (clockwise starting at top left): northern leopard frog triploid checkered whiptail, yellow-billed cuckoo, and black-tailed prairie dog.



Photo Credit: Northern leopard frog – CPW, triploid checkered whiptail – CNHP, Yellow-billed cuckoo – Cornell University, black-tailed prairie dog - USGS

All sensitive wildlife species discussed could potentially be impacted by increased trail use from hiking, biking, and equestrian use. Habitat degradation could occur from vegetation removal, soil compaction, and noxious weed introduction. Additionally, species could directly be impacted by the presence of recreationists disturbing important breeding and nesting habitats or influencing breeding and nesting behaviors and success rates. A review found that a high percentage of recreation ecology studies showed trail use from hiking, biking, and equestrian activities negatively impacted birds, including physiological changes, behavioral changes, species

abundance declines, and lower reproductive success (Steven et al. 2011). Since habitat for these species is limited within the park, it is critical to manage the areas used by the species for their success.

### 2.3.2 Raptors

Several raptor species are documented to nest in LPSP, many of them near trails under evaluation. In recent years, red-tailed hawks (*Buteo jamaicensis*), great horned owls (*Bubo virginianus*), osprey (*Pandion haliaetus*), and burrowing owl (*Athene cunicularia*) have nested in the identified project areas.

Disturbances to nesting raptors can result in complete desertion of the nest, eggs, and young (Richardson & Miller 1997). Even the temporary departure of an agitated adult can lead to overheating, chilling, or desiccation of eggs or young, predation on eggs or young, or missed feedings (Suter & Jones 1981). The enforcement of CPW spatial and temporal buffer zones can protect nesting raptors from the effects of human disturbances. It is strongly recommended that seasonal closures be implemented for trails that are within the buffer zone of an active nest. The trails that need management attention for nesting raptors may vary by year because raptors may reuse their previous nest, take over another species nest, or build a new nest in a new location. It is CPW policy to treat raptor nests that have been active within the past five years as active. This entails instituting proactive closures to ensure that nesting habitat is available at recently active nesting sites. Recreation activities near a nest in the early nesting season can remove a nest from consideration by a raptor, reducing opportunities for raptor breeding success. LPSP has a team of volunteer raptor monitors that monitor the locations of active nests in the Park.

**Table 3** contains CPW's recommended buffer distances and seasonal closures by species. Seasonal trail closure recommendations are detailed in **Section 5.1.1**.

### 2.3.3 Roost / Rookery

There is a cluster of dead trees present in the Reservoir at the western end of the SWA trails. **Figure 6** displays the sensitive resources in the Park. A monitoring volunteer noted on May 31, 2016 that no nests remained on the snags in the water but that double-crested cormorants (*Phalacrocorax auritus*) were seen perched on the snags. This roost/rookery should continue to be monitored, and if it becomes and remains active, considerations should be made for trails within the recommended 300-meter rookery buffer.

### 2.3.4 Riparian Shrubland Bird Habitat

Riparian areas are of limited extent within the park yet are perhaps the most important habitat type for wildlife, especially birds. Ecotone Corporation surveyed LPSP's vegetative communities in 2010, and riparian habitat was mapped during this time. **Figure 6** displays the sensitive resources in the Park. **Maps 2.1 and 2.2** display more detailed information.

Riparian communities contain a higher number of bird species than adjacent upland vegetative communities (Knopf et al. 1988). Eighty-two percent of all breeding bird species in northern Colorado occur in riparian vegetation (Knopf 1985). The three-leaved sumac or skunkbush (*Rhus trilobata*) Riparian Shrubland plant community is fully tracked by CNHP and has a ranking of Globally and State imperiled (See **Section 2.2.1**). This shrubland habitat provides good cover

and nesting habitat for songbirds. Sumac berries also provide birds food during the fall and winter, when other food sources are unavailable.

Recreational activities along trails effect bird movement and behavior causing birds to avoid these areas (Miller et al. 1998; Bennett & Zuelke 1999; Steven et al. 2011). Birds expend valuable energy when flushed from foraging and nesting grounds, which is particularly dangerous in the winter months when food is scarce or during nesting season, when young are in the nest (Knight & Cole 1995; Sime 1999). Birds that relocate temporarily or permanently from their habitat to avoid humans are displaced from their nests, young, food, water, and shelter. If displacement occurs repeatedly, an individual's health and fitness may be compromised and could lead to a higher risk of mortality (Gabrielson & Smith 1995). During the nesting season, incubating birds feed minimally which depletes their energy reserves (Monaghan & Nager 1997). When birds are flushed away from their nests it can result in irreversible energy losses, improper incubation, or the loss of eggs and young (Gabrielson & Smith 1995; Hanson 2000). There are federal regulations that address the conservation of the nesting attempts and success of birds, including the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (See relevant regulations in **Appendix E**).

**Figure 3.** CNHP fully tracked three-leaved sumac/skunkbush present at LPSP.



*Photo Credit: CNHP*

Research has shown that human presence can impact composition and abundance of songbird communities within 75 meters from recreational trails (Miller et al. 1998). Songbirds are less likely to establish nesting territories near trails (Gutzeiller et al. 1997). Beside the fragmentation of habitat that occurs if a trail bisects riparian shrubland, this 75-meter buffer of disturbance results in additional habitat loss when songbirds avoid this zone. Because each bird species needs a unique amount of habitat and resources during nesting season to successfully raise their young, if trails cross within 75 meters of a riparian shrubland, it may make the core habitat unusable for most bird species (Johnson & Igl 2001).

The addition of dogs on trails can double the amount of disturbance to birds (Sime 1999). In a study conducted by Banks and Bryant (2007), hikers walking dogs on leash caused a 41 percent reduction in the numbers of bird individuals detected and a 35 percent reduction in bird species richness within 50 meters of trails. Ground dwelling birds were the most affected in this study,

with a 50 percent reduction in species richness with the presence of dogs (Banks & Bryant 2007). Dogs can also directly kill wildlife or injure wildlife enough to cause their subsequent death (Chester 2005).

Trails that cut through riparian shrubland habitat create corridors that allow predators and brood parasites to more easily access songbird nests (Robinson 1988). Hickman (1990) and Rich et al. (1994) found that avian nest predators are attracted to open, narrow corridors like trails. A review conducted by Patron (1994) found that 57 percent of studies investigating the influence of habitat edges on nest predation showed elevated levels of predation on natural nests near habitat edges. Brood parasitism, or the laying of eggs in another species nest, by brown-headed cowbirds is considered an important element in reducing reproductive success in songbirds, especially near habitat edges (Robinson 1988; Johnson & Temple 1990). Brown-headed cowbirds have been observed during bird surveys in the park (Jones 2011).

## 2.4 Soils

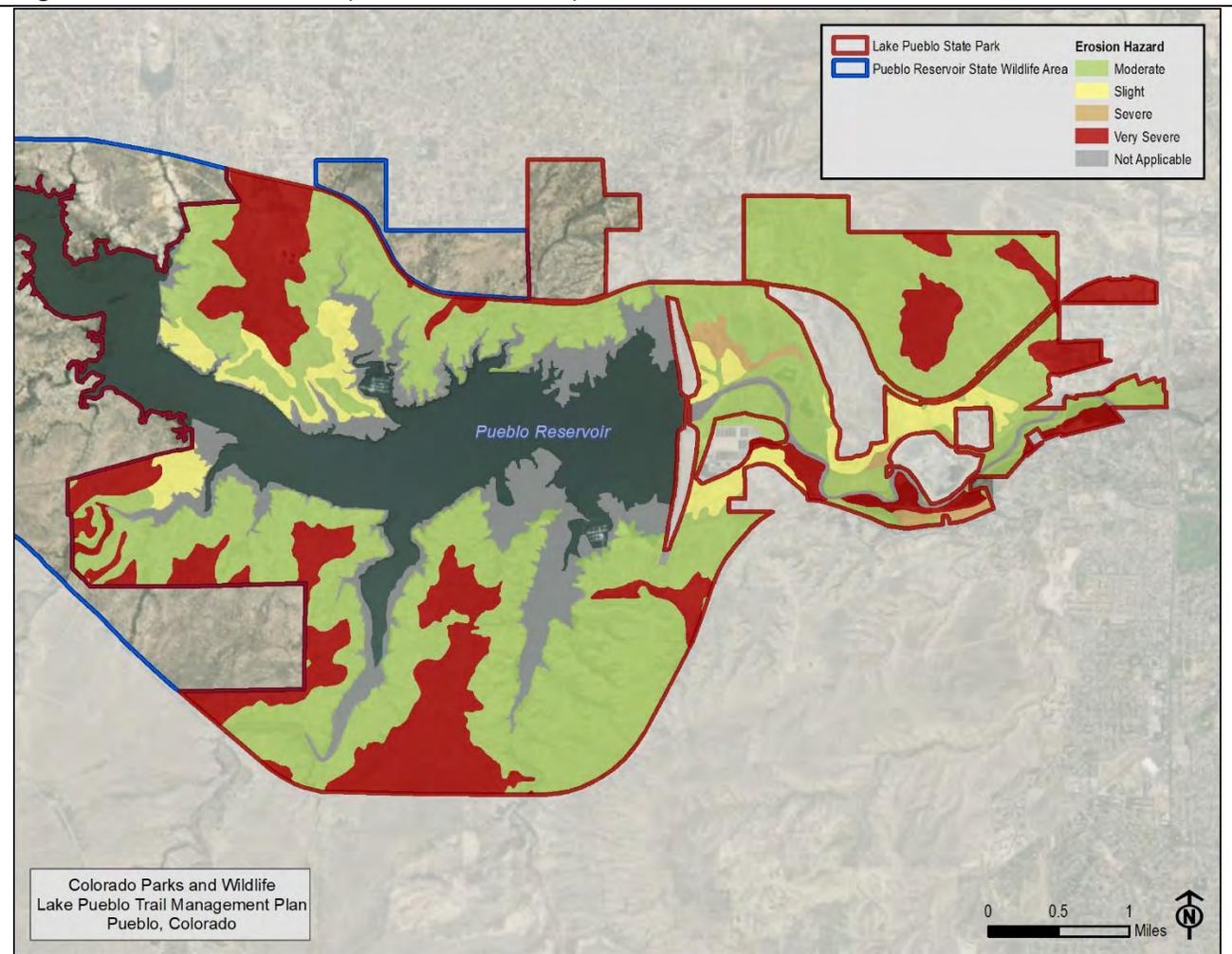
A wide variety of soil types are present at LPSP that are varied and complex. They include loamy plains, limestone breaks, sandy bottomland, salt meadows, and saline overflows (CPW 2017b). **Figure 4** shows the erosion potential (or hazard) for the soils in the park and the identified trail management project areas and **Map 2.4** shows more detailed information. Data is not available for the North Shore trails area, however. **Figure 4** shows that erosion potential is severe in areas that overlap with the South Shore Trails area. Erosion potential is also severe in areas that overlap with the Paved Trails project area and could influence the condition of these trails, but only have slight erosion potential in the COL Trails project area.

Soils support vegetation and are of critical importance to the ecological health of the park. Erosion is more likely to be of management concern where vegetation is removed, or on steep slopes. Soils that are susceptible to erosion are difficult to revegetate and may remain unvegetated and therefore even more susceptible to erosion. Weeds may out compete native species after the soils have been disturbed (CPW 2017b).

The soils at Lake Pueblo are particularly prone to damage due to their character because they are derived from chalky limestones and shales. The semi-arid climate also limits vegetation growth, contributing to areas that are sensitive to recreation impacts. These factors contribute to persistent, visually prominent disruption of soils. It is likely that additional damage to soils will occur if visitation is not managed in northern areas of the park where soils are particularly prone to disruption. Additionally, trails aligned upslopes can create erosion issues that would not otherwise exist (CPW 2017b).

It is anticipated that as use levels increase, disturbance of soils will also increase. Development adjacent to the park will result in increased runoff creating a higher potential for erosion. If additional social trails continue to develop, erosion impacts will result throughout the park. The magnitude of change will likely be directly related to the direction of travel on slopes and the intensity of development and use. Soil impacts must be managed to control negative use impacts (CPW 2017b).

**Figure 4.** Soil erosion hazard present in LPSP map.



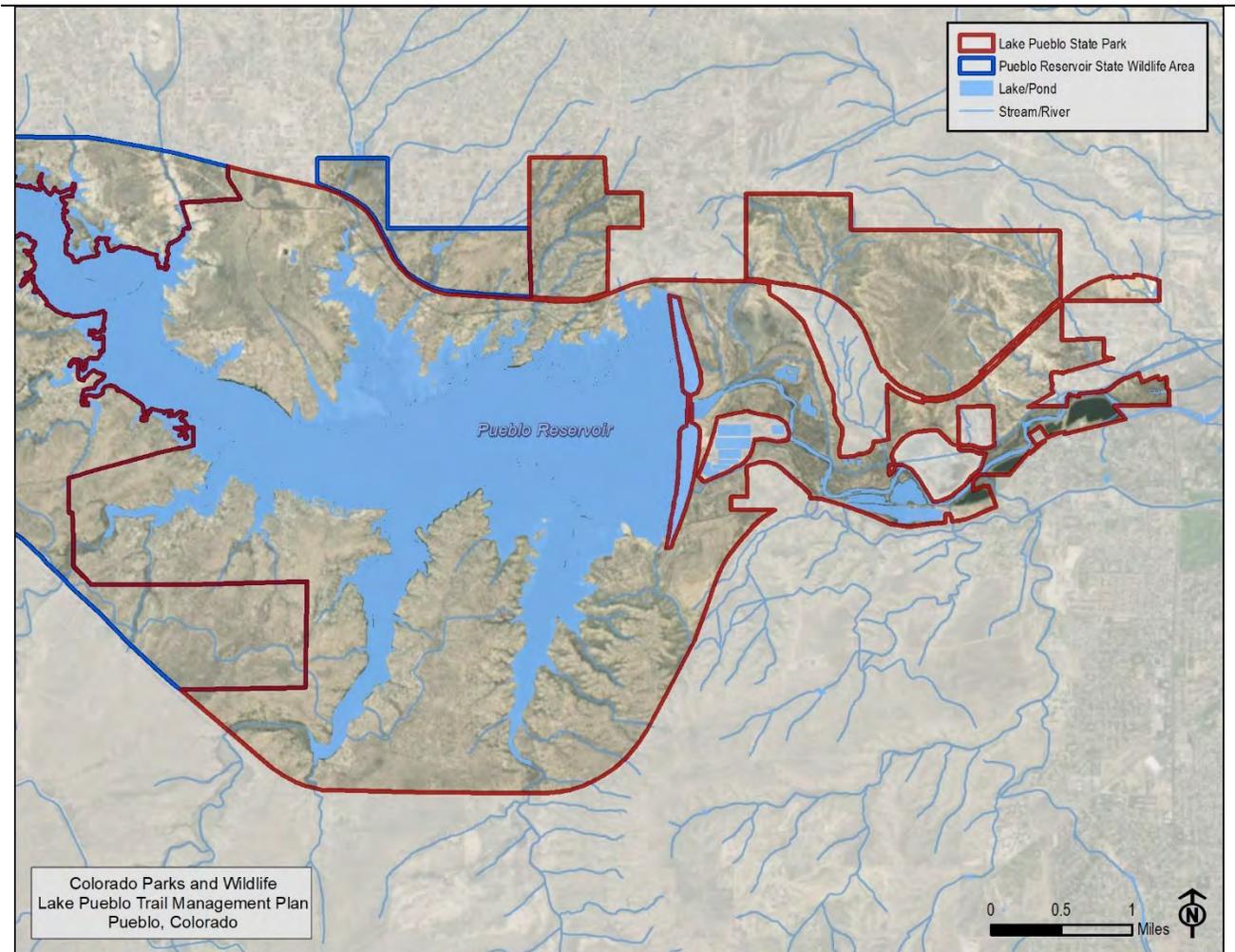
## 2.5 Water Resources

Pueblo Reservoir occupies the majority of LPSP and was constructed between 1970 and 1975 as part of the Fryingpan-Arkansas Project. The reservoir was built for a variety of reasons, most importantly to provide water for agricultural irrigation. The Arkansas River provides most of the reservoir’s water; however, Bogg’s, Rock, Peck, and Turkey Creeks and several unnamed intermittent drainages also contribute. The total volume of the reservoir is 357,700 acre-feet when filled to its maximum level at an elevation of 4,898 feet. In addition to the reservoir, water resources include the major drainages and off-site drainages of Liberty Creek on the west side of the Honor Farm, which drains to the Arkansas River and the Chain of Lakes (CPW 2017b). **Figure 5** displays the major water resources present in the park and **Map 2.4** shows more detailed information.

Wetland areas at the park are critical for fish and wildlife habitat, flood control, shoreline anchoring, erosion control, and aesthetic values. However, wetland and riparian areas at the park are uncommon and cover less area today than before construction of the dam and inundation of the Arkansas River Floodplain. The variety of wetland habitats includes perennial and intermittent

drainages, reservoir shoreline, pond, and ditch banks. Drainages supporting wetlands include the Arkansas River and Bogg's, Rock, and Peck creeks on the south side of the reservoir and Turkey Creek and unnamed drainages on the north side of the reservoir (CPW 2017b).

**Figure 5.** Water Resources Present at Lake Pueblo State Park.



As population in the park area increases and visitation intensifies, more people will visit for recreation and the increased visitation numbers may impact water resources. Incised drainages and erosion along the reservoir shoreline and incoming tributaries have the potential to effect water quality at the park. Erosion increases sediment loading into the reservoir. Also, as visitation increases the number of social trails may increase. These social trails are likely to be concentrated along the reservoir shore and streambanks because of visitors' desire to walk or ride along the water. Such trails may destroy shoreline vegetation, which often leads to erosion and problems with noxious weeds (CPW 2017b).

## 2.6 Paleontological Resources

LPSP contains internationally famous geological and paleontological locations. Paleontological sites on federal land are protected by the Paleontological Resources Preservation Act signed into law on March 30, 2009 (See relevant regulations in **Appendix E**). Fossils found at PSP cannot

be collected without a permit issued by Reclamation. One new genus and 20 new species of fossil mollusks have been discovered at the park. Fossils in the park have also furthered our knowledge of Cretaceous rock layers and marine animal evolution and extinction. Lake Pueblo's highly sensitive paleontological resources were mapped in 2013 by Dr. Karen Houck's team from University of Colorado - Denver. The most sensitive paleontological layer in the South Side Trails area of Lake Pueblo is the Juana Lopez Member within the Carlile Shale formation (Houck et al 2013). Shale soils are known to expand and contract and are highly erosive. Erosion of shale layers in this unique formation produces irreversible damage to this nonrenewable resource.

The Carlile formation formed during the Cretaceous Period, about 128 to 86 million years ago, when Colorado was covered by a seaway. The Juana Lopez Member of the Carlile Shale formation is a thin (about 2.5 feet thick) layer of sand and fossil fragments that were deposited near the shoreline when the sea level began to rise. This layer of limestone is rated with high significance because it contains many different species of fossils (Houck et al 2013). **Figure 6** displays the sensitive resources in the Park. **Maps 2.1 and 2.2** show more detailed information.

## 2.7 Cultural Resources

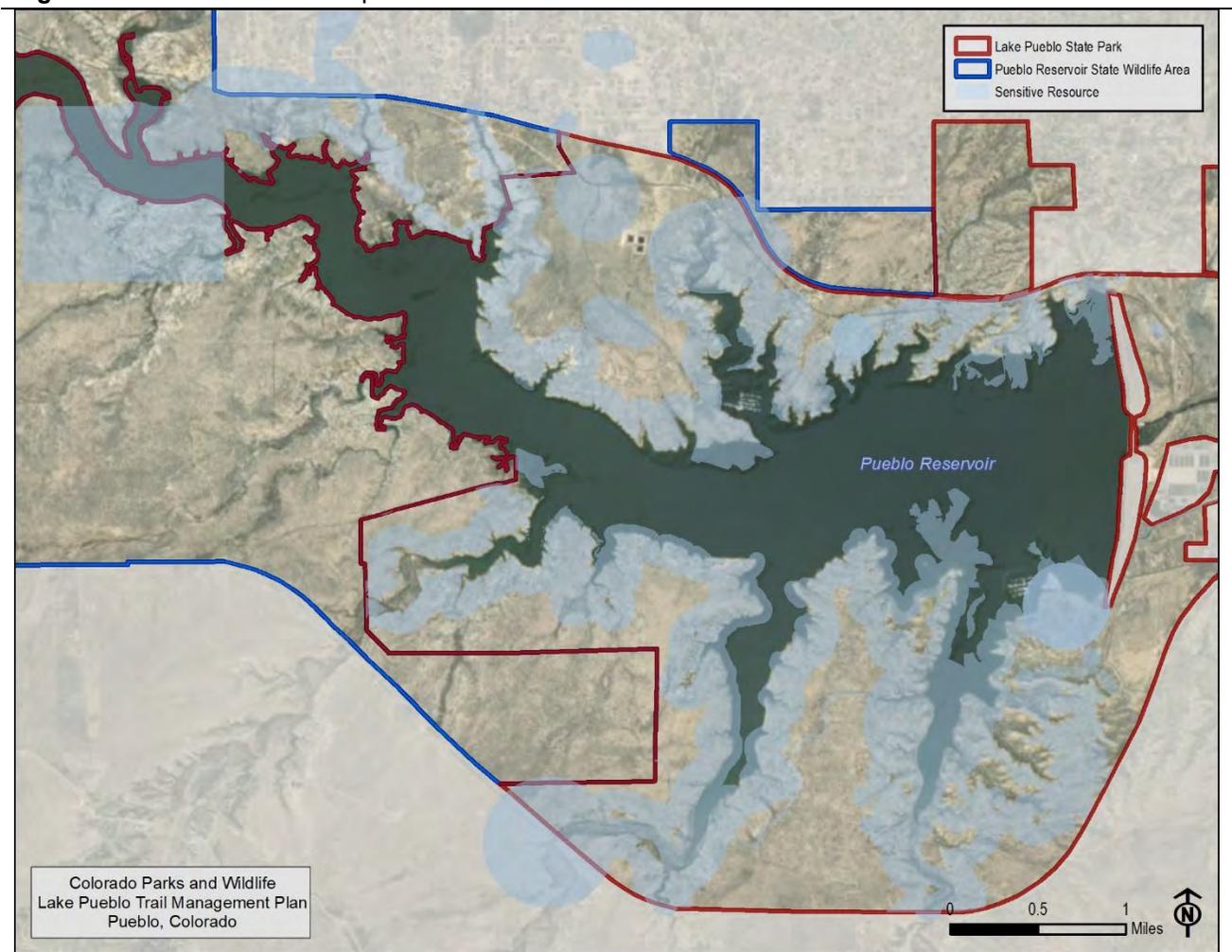
LPSP contains numerous cultural resources that are protected by the NHPA and the Archaeological Resources Protection Act (ARPA), among several other policies and regulations (See relevant regulations in **Appendix E**). LPSP is situated along the Arkansas River, which has been an important travel corridor since the area was settled more than 11,000 years ago. In the past both Native American and European explorers, farmers, homesteaders, nomads, settlers, trappers, and traders continuously exploited the area's rich natural resources, and today LPSP retains evidence of this extensive prehistoric and historic land-use in several important archaeological sites. The Arkansas River provided much more than fish to early people. The riverine environment provided edible plants, a gathering point for animals, and a relatively temperate climate in the cold months. There are numerous sources of stone for tools located upriver and Plain's peoples would have traveled through the location of the park to reach them. The park is also tied to the history of the city of Pueblo which played a major role in the settlement of Colorado. In the historic era, the park was the site of farmsteads and stone quarries. LPSP is situated in an ideal environment for prehistoric and historic occupation. It contains areas of very high site density, as well as areas with almost no archaeological sites. With high visitation and continued development, there are sure to be additional archaeological discoveries made within the park. Sites in the park range from prehistoric to historic water conveyance systems (CPW 2017b).

The archaeology of the Pueblo area combines the Central Plains, Intermountain, and Southwestern native groups. Future work at Pueblo has the potential to increase scientific knowledge and provide public outlets for information about the area's past. The most recent cultural survey at LPSP was completed in 2009 by Cultural Resource Analysts, Inc. (CRAI). The following impact analysis was based on the results of these surveys and the management recommendations that CRAI provided, as well as additional data collected by Reclamation and data from the Colorado Office of Archaeology and Historic Preservation Compass database (CPW 2017b).

Through careful planning and stewardship, and by watching human and natural impacts to the recorded sites, it should be possible to maintain the current condition of Lake Pueblo's

archaeological resources. The Antiquities Act and Archaeological Resources Protection Act prohibit artifact collection or disturbance without a permit from Reclamation (See relevant regulations in **Appendix E**). Recreational impacts are mostly preventable by making it clear that they are not tolerated. This can be accomplished routing trails around cultural sites, using signage at trailheads explaining the need to stay on trails, and explaining the various laws protecting archaeological resources. Recreational impacts can be assessed through periodic monitoring of these sensitive resources. In cases where erosion threatens a sensitive site, an effort will be made to stabilize the soils or an archaeologist should be brought in to mitigate the effects (CPW 2017b). **Figure 6** displays the sensitive resources in the Park. **Maps 2.1 and 2.2** show more detailed information

**Figure 6.** Sensitive Resources present in the North and South Shore areas.



### 3.0 Trail Assessment Methods

This section outlines the methods for conducting field data collection, analysis, and review. Methods for the resource intersect assessment and trail condition assessment are outlined in respective sections. Additionally, information about the methods for the COL trail plan are detailed.

### 3.1 Trail Mapping

One project goal was to map all trails in the project areas for further assessments and to create a comprehensive park trail database. To begin, data and aerial imagery were reviewed using ArcGIS programs. Park trails were digitized using Environmental Systems Research Institute (ESRI) world aerial imagery and through using maps created by the local mountain bike community. The result of the process was an ArcGIS line file of all the presumed designated and undesignated trails within the identified project areas.

The line files generated from the digitizing process were uploaded to Global Positioning System (GPS) units and field verified by walking all mapped lines. Trails were mapped with ESRI ArcCollector software using a tablet or phone. Trails were mapped and field-verified while consecutively completing the trail problem point mapping. Some trails digitized from aerial imagery did not actually exist or were identified as other features (fence lines, animal trails, etc.). These trails were removed or recorded in the master Geographic Information System (GIS) trails data. Additionally, new trails that were not digitized originally during the desktop review were identified and mapped in the field by walking a GPS line. These trails were added to the master GIS trails data.

Trails were named first by the general area they were in with a number. Within the areas, trails were subdivided into segments based on intersections with other trails to allow for easier trail management recommendations in the future. These segments were given the number for the area, and then a lowercase letter (e.g. 1a). When a trail was named by the public and crossed several other trails, it was still divided and given a letter (e.g. Luna Lane a, Luna Lane b, etc.).

### 3.2 Natural and Cultural Resource Assessment

The goal of the natural and cultural resource assessment was to analyze existing resource data and the intersection of the newly mapped trails data. Areas where resources may be impacted by trail activity within the North and South Shore trails project areas were identified. The natural and cultural resource assessment began by gathering data from various LPSP specific resource surveys completed over several years by the CPW Resource Stewardship Program staff and contractor specialists. Resource information and locations were compiled and reviewed. Literature review was completed on tolerance of sensitive resources to trail disturbances and potential impacts that could be incurred. GPS data from resource surveys was overlaid with mapped trails in the park. **Table 4** displays the GIS resource datasets used for the analysis and buffers to prevent disturbances.

Natural and cultural resources were primary reasons for recommending reroutes and closures for trails. Resources that cannot be relocated, such as paleontological sites, cultural sites, and rare plants often resulted in trail closures or reroutes.

Cultural sites that were assessed by archaeologists as “Not Eligible/Significant” were determined to not hold enough scientific and/or historic significance for a listing on the National Register of Historic Places due to their condition, common-ness, or other reasons, and were not considered in the analysis. “Listed/Eligible” cultural sites were considered in the analysis and resulted in trail closures or reroutes. Criteria for these assessments are established by National and State Registers of Historic Places (NRHP/SRHP). Additionally, assessments are recognized and

officially determined by the State Historic Preservation Office (SHPO) and the Office of Archaeology and Historic Preservation (OAHP). Cultural Sensitivity Zones created by archaeologists were also used for the assessment. These zones are created based upon the density, eligibility, or suspected presence of cultural resources. Areas with a known or suspected high density of cultural resources (e.g. more than one per 50 acres) are identified as High Sensitivity Zones. They can also be defined by landforms, large areas, or 100-foot buffers around the boundaries of sites that are significant or suspected to be significant. High sensitivity areas have either been surveyed to current OAHP standards or are strongly suspected to contain a high density of cultural resources based on predictive modeling. High Cultural Sensitivity Zones were widespread in trail areas and therefore were not used to close or reroute trails. However, these areas were considered when analyzing redundant trails and influenced a decision to reduce the number of trails in an area.

Rare plant occurrences were analyzed in relation to mapped trails. If the rare plant buffer intersected with a trail, the trail was considered for reroute or closure. Rare plant communities are present in large areas and therefore trail reroutes, and closures were not always be recommended. The approach for these areas included discouraging widespread social trail creation that results in greater impacts to the larger vegetation community. Recommendations would include removing redundant trails or creating barriers to discourage traveling off existing trails within the identified vegetation community.

Wildlife resources were also considered when analyzing trail intersection with sensitive resource locations. Raptor nests active within the last five years were buffered using species specific distances and using the last known species to occur at each location (**Table 3**). This raptor buffer data was then applied to trail location data and recommendations for potential seasonal closures were identified. Other wildlife data was considered but it was understood that wildlife move, and occurrence data does not necessarily mean a sensitive species individual will always be present at the specified location in the GIS data. Therefore, sensitive wildlife species data was considered but analysis did not always result in trail closures or reroutes. Often, redundant trails were eliminated to reduce increased activity and disturbance in areas where sensitive species may occur. This concept was applied to redundant trails in riparian habitat, where it is recognized that riparian habitats provide critical resources for wildlife species.

Riparian and wetland areas were designated by using existing vegetation community data, which was buffered by 75 meters. If riparian mapping data did not exist for an area, such as the SWA in the North Shore Trails area, streams from the National Hydrography Dataset (NHD) were buffered by ten meters to serve as approximation of riparian habitat locations. These habitat areas were then analyzed using the 75-meter buffer above. Trails that intersected with these areas were often removed if trail redundancy was identified or rerouted to ensure the trails in riparian areas were crossing riparian habitat at a 90-degree angle to reduce the total impact to this critical wildlife habitat. The 75-meter riparian area buffer, on its own, did not result in the closure of any trails.

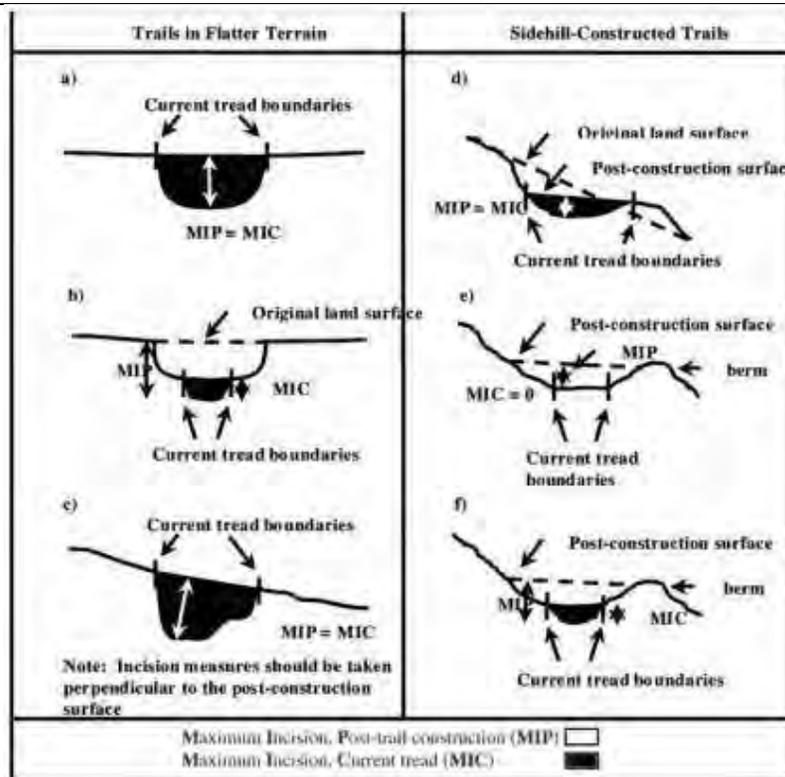
### **3.3 Natural Surface Trail Condition Assessment**

To accurately identify the physical condition of trails and problems present, a mixed methods assessment approach was used in the North and South Shore areas. The method combined creating monitoring point sample locations and conducting an “on-the-ground” problem assessment of trail problems.

### 3.3.1 Data Collection

Locations of points identifying poor physical condition for natural surface trails were collected for the following trail conditions: animal activity, bedrock exposure, debris/windfall trees, erosion, line of sight, recreation infrastructure, root exposure, safety concerns, surface depression, trail braiding and vegetation encroachment. Definitions for these trail condition categories are found on the following page. Back-up data sheets were created by technicians in the field in case mapping technology malfunctioned. Attributes collected in the GPS database can be seen in **Table 5** and data sheets are provided in **Appendix C**.

**Figure 7.** Diagrams illustrating the application of maximum incision measurements for trails in flat vs. sloping terrain.



Source: (Marion et al. 2006)

Data was collected on the width at current treads at the midpoint of the problem, maximum depth at the midpoint of the problem, and photos up and down the trail. Measurements were taken to the nearest inch using a metal tape measure for width measurements and a metal tape measure and string used to measure depth. A string was placed at the edges of the current trail tread, held taught, and the depth to the maximum incision point was taken for depth. The maximum incision point at the current trail treads as opposed to the post construction treads has been found to provide a more accurate measure of trail condition (Marion et al. 2006). **Figure 7**, taken from Marion et al. 2006, illustrates the difference between maximum incision post construction and current tread. These measures were taken so that regular monitor points with measurements could be established and revisited periodically in the future.

Monitoring points were collected when a problem point did not exist along a trail for 800 meters or longer. These points are intended to monitor the condition of areas that did not have recorded problems at the time of the surveys by comparing photos. Photos were recorded with points and cardinal directions were noted.

The South Shore area assessment surveys took place during November 2017 and January 2018. The North Shore area assessment surveys took place in October 2018.

### 3.3.2 Problem Point Definitions

Trail problems types for natural surface trails are defined below. Details on measurements taken in the field can be found in **Table 5**.

#### 3.3.2.1 Erosion

The presence of a drainage path that cuts across the trail, along the trail, or parallels the trail, causing movement of soil from the trail downhill, or an incision that follows the trail path (**Figure 8**).

#### 3.3.2.2 Recreation Infrastructure

Recreation infrastructure includes any structures or additions on the trail including ramps, jumps, or berms, or anything that could add to the amount of maintenance needed for the trail. This infrastructure can be an official part of the trail system or added “unofficially” by trail users. To qualify in this category, recreation infrastructure needs further upkeep and/or maintenance. If a trail appears to have been modified but the modifications do not appear to need maintenance, a problem point was not taken. This point is only to be collected if added infrastructure clearly came from human construction and requires maintenance. An example of something that would not be included is rocks that appear to have been moved to create a bike feature but likely will not require upkeep.

#### 3.3.2.3 Water Pooling

An area where accumulation of water is persistent (not just due to rainfall within the last day), puddles are created, and creates a saturation zone on the trail that could promote travel off trail around the area when wet ground is present. Trails measurements taken included trail width at the problem site, width of the problem, length of the problem, depth of the problem, trail width 10 feet from the problem, and trail depth 10 feet from the problem. These latter measurements (10 feet from the problem) are used to compare the water pooling problem to the ‘normal’ trail condition adjacent to the trail problem.

#### 3.3.2.4 Trail Braiding<sup>1</sup>

Trail braiding often is a result of an obstacle blocking the trail or poor trail alignment, promoting off trail travel and creating a new travel route (**Figure 8**). This category includes trail braiding that does not produce a new clearly defined trail. Instead, some foot or bike tracks will be present off the current treads. A well-used trail that is clearly defined should be considered a new social trail instead of trail braiding. If braiding was present, it was measured where braiding was farthest from the trail tread.

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<sup>1</sup> Some different definitions were used in this study between groups. Some considered trails that would be classified as new social trails to be braiding.

### 3.3.2.5 Bedrock Exposure

Bedrock exposure occurs on trails when there is a loss of topsoil/surface material. Data was only collected on this problem type when over three linear feet of exposed bedrock was measured due to erosion from trail use or construction (based on Verreault 2014). This condition indicator is most important in locations with higher amounts of organic soil content.

### 3.3.2.6 Root Exposure<sup>1</sup>

Root exposure measurements were taken when exposed roots measured six or more inches in length along the trail (based on Verreault 2004) (**Figure 8**). Numbers can be scaled after to give an outlook on the relative problem in the study area. This measurement can be used to monitor erosion and as an indicator of tree/forest health.

**Figure 8.** Example of trail braiding (left) and erosion and root exposure (right) on natural surface trails in LPSP.



*Photo Credit: CPW*

### 3.3.2.7 Surface Depression

Surface depressions were documented when potholes or other depressional features unrelated to erosion were found on trails.

### 3.3.2.8 Vegetation Encroachment

Occurs when vegetation has grown from the side of the trail into the travel way of the trail or when vegetation roots and leaves are present within the designated trail path. Vegetation growth may need to be trimmed back away from the trail or uprooted if growing in the trail path or causing potential public safety issues.

### 3.3.2.9 Debris/Windfall Trees

Debris and windfall trees were classified as materials such as large trash items or woody debris crossed the trail, blocking or obstructing access to a trail.

### 3.3.2.10 Line of Sight

A safety issue found on trails when a trail is improperly routed and those traversing the trail cannot see trail users travelling from the opposite direction.

#### 3.3.2.11 Safety

Safety concerns were somewhat subjective and were taken when the observer noted a potential safety concern. This covers any trail feature that could present a hazard to users. Examples include steep drop-offs very near to the trail tread or narrow trails with nearby drop-offs on one or both sides. This information will be passed on to management and maintenance teams so they may make a safety assessment of the trail with their expertise. If a line of sight point was taken, no safety point was taken, and it is assumed there is a safety concern.

#### 3.3.2.12 Animal Activity

Animal activity points were taken when burrows, nests, or other features were constructed by animals and overlapped with portions of the trail. Animal activity on trails has the potential to cause safety issues for recreationists and the animals. Most points mapped within this feature were burrows on the tread of the trail.

### 3.3.3 *GIS Data Analysis*

Following field work, GPS data were uploaded to Arc Online and downloaded into ArcGIS. Data was reviewed for accuracy. Some points for root and bedrock exposure were removed after field work because the problem areas were shorter than the minimum required distance discussed above. Data was organized and all attributes were filled in when possible to ensure data was clean and complete.

Georeferenced photos from the 2017 field work were then plotted on the same map and were sorted through to associate them with problems in the area. In 2018, all photos were taken with GPS problem points, and therefore are tied directly to the GPS points.

### 3.3.4 *Trail Problem Ranking System*

Measurement data collected in the field was exported to an excel spreadsheet that generated a scoring/ranking system for trail condition problems. These scores can be used to gauge the problems relative to the problems observed in this survey. Scoring was done for each problem and then those scores were weighted so they could be compared between problems based on established management and maintenance priorities. Weights given to each problem type are provided in **Table 6**. Erosion was given the highest weight due to an increase in safety concern with the issue. These final scores aim to inform management and maintenance of the trails at LPSP specifically. Scores for trails in LPSP are not comparable to scores for trails in other locations due to differences in soil type, recreation uses, recreation densities, and other local resource values.

Vegetation encroachment, safety, animal activity, debris/windfall trees, line of sight, and other problems were not scored in the ranking system. These problem points will still be addressed in the management recommendations but were not given a severity ranking due to a lack of comparable quantifiable measures. For the maintenance prioritization (discussed in **Section 3.3.4.1**), these points were ranked according to the order of severity by problem type and were included in the maintenance prioritization.

### 3.3.4.1 Maintenance Prioritization Calculation

Trail maintenance priorities were created by evaluating three criteria:

1. Density of problems per mile of trail segment
2. The average problem scores per trail segment
3. The sum of the “other problem” scores

These three factors were individually scored and then summed to create an overall trail maintenance score. To generate the score, the methods described below were followed.

The total number of problems identified along a trail segment (i.e. Luna Lane a) was found and then divided by the mileage of the segment to obtain a density of problems per mile. Trail segment problems per mile were then inversely ranked. The trail segment with the lowest number of problems per mile was ranked “1” indicating the lowest score and the segment with the highest density of problems had the highest number, indicating the highest score. An example of the attributes is provided below. This is an example and not actual rankings provided in the data.

Trail Segment Name	Problems Per Mile	Inverse Rank
NT4i	407.44364927800	4
NT3j	164.85901014300	3
NT15b	118.35224125100	2
NT7s	89.26714921340	1

A second calculation was conducted to determine the severity of problems along a trail segment by averaging the ranking of all problems. This calculation only included problem scores that were ranked in the scoring system (erosion, bedrock exposure, roots, braiding, surface depression, water pooling, infrastructure). These were then inversely ranked also, so that the trail with the highest average trail problem score was ranked last, with the highest number associated with it, indicating that it should receive management consideration first. The trail segment with the lowest average problem severity score was ranked “1”. An example of the attributes is provided below. This is an example and not actual rankings provided in the data.

Trail Segment Name	Average Problem Score	Inverse Rank
NT15b	3.5	3
NT3j	3.0	2
NT7s	2.0	1
NT4i	2.0	1

Finally, the problems without a severity ranking (vegetation encroachment, safety, animal activity, debris/windfall trees, line of sight, and other problems) were given a ranking based on their management priority importance (**Table 7**). The numbers were summed for segments with multiple problems present. An example of the attributes is provided below. This is an example and not actual rankings provided in the data.

Trail Segment Name	Other Problem	Other Problem Score
NT15b	Line of Sight (8)	8

NT3j	Animal Activity (6), Vegetation Encroachment (4)	10
NT7s	None (0)	0
NT4i	Safety (10)	10

These three calculations and rankings were used to prioritize maintenance areas for the two project areas. The North and South Shores were prioritized separately from one another. The maintenance score was found by the following calculation:

$$\begin{array}{r}
 \text{Inverse rank} \\
 \text{of problems} \\
 \text{per mile}
 \end{array}
 +
 \begin{array}{r}
 \text{Inverse rank of average} \\
 \text{severity score for scored} \\
 \text{problems} \\
 \text{(erosion, bedrock} \\
 \text{exposure, roots, braiding,} \\
 \text{surface depression, water} \\
 \text{pooling, infrastructure)}
 \end{array}
 +
 \begin{array}{r}
 \text{Sum of other "non-} \\
 \text{scored" problems rank} \\
 \text{(veg encroachment, safety,} \\
 \text{animal activity,} \\
 \text{debris/windfall trees, line of} \\
 \text{sight, and other problems)}
 \end{array}
 =
 \begin{array}{r}
 \text{Maintenance} \\
 \text{Score}
 \end{array}$$

The resulting maintenance score was then ranked, with the highest score being first priority for maintenance. This maintenance rank can be used to prioritize maintenance by trail segment of the worst areas in the North and South Shore trail areas. An example of the attributes is provided below. This is an example and not actual rankings provided in the data. Maintenance priorities for the two areas can be seen in **Sections 5.1.2 and 5.2.2**.

Trail Segment Name	Problems Per Mile Inverse Rank	Average Problem Score Inverse Rank	Other Problem Score	Maintenance Score	Maintenance Rank
NT15b	2	3	8	13	2
NT3j	3	2	10	15	1
NT7s	1	1	0	2	3
NT4i	4	1	10	15	1

### 3.4 Paved Surface Trail Condition Assessment

#### 3.4.1 Data Collection

Trail problems types for paved surface trails are defined below. Details on measurements taken in the field can be found in **Table 5**. Paved Trails data was collected November through December 2018.

##### 3.4.1.1 Erosion

The presence of an erosion path in the soil neighboring a paved trail that places eroded materials on the trail or an erosion gully that parallels the trail, causing movement of soil onto the trail, or an incision that parallels the trail path destabilizing the soil subsurface that supports the pavement. Additionally, this condition included areas where erosion removed pieces of pavement along joints between slabs or small circular patterns on the pavement (**Figure 9**).

### 3.4.1.2 Surface Cracking

A crack in the pavement that is often a result of poor construction or pavement material quality (**Figure 9**). Surface Cracking” when no vertical change in the pavement height is present, but cracks in the pavement exist. If a change in pavement height (either concave or convex) is observed, this is considered “surface buckling” (see **Section 3.4.1.4** below) within the context of this plan. Delineations between these two problem types are made to help prioritize maintenance and repairs, as “Surface Buckling” poses a greater public safety hazard than “Surface Cracking”.

### 3.4.1.3 Water Pooling

An area where accumulation of water is persistent (not just due to rainfall within the last day), puddles are created, and creates a saturation zone in the trail that could promote travel off trail around the area when wet ground is present.

**Figure 9.** Example of erosion (left) and surface cracking (right) on paved trails in LPSP.



*Photo Credit: CPW*

### 3.4.1.4 Surface Buckling

An area in the pavement that is cracked and is either vertically raised or lowered, where the crack area is not level with the surrounding pavement. Surface buckling is a safety concern for pedestrians and bikers using the trail.

### 3.4.1.5 Surrounding Height Difference

An area on the edge of the pavement where the surrounding ground is either raised above or lowered below the trail surface elevation. When the neighboring ground does not match trail surface height a safety concern exists for pedestrians and bikers that leave and re-enter the trail.

### 3.4.1.6 Vegetation Encroachment

Occurs when vegetation has grown from the side of the trail into the walkway of the trail or when vegetation roots and leaves are present upon the designated trail path. Vegetation growth may need to be trimmed back away from the trail or uprooted if growing in the trail path to improve public safety and to provide a more enjoyable trail experience.

### 3.4.1.7 Safety

Safety concerns were somewhat subjective and were taken when the observer noted a possible safety concern. This covers any trail feature that could present a hazard to users. Examples

include steep drop-offs or narrow trails with drop-offs on one or both sides of the trail. This information will be passed on to management and maintenance teams, so they may make a safety assessment of the trail using their expertise. If surface buckling or surrounding height difference points were taken, no safety point was taken, and it is assumed there is a safety concern.

### 3.4.2 GIS Data Analysis

Following field work, GPS data were uploaded to Arc Online and downloaded into ArcGIS 10.5. Data was reviewed for accuracy. Data was organized and all attributes were entered to ensure data was clean and complete. All photos were taken with GPS problem points, and therefore are tied directly to the GPS points.

### 3.4.3 Trail Problem Ranking System

As with the natural surface trails, measurements collected in the field were exported to an excel spreadsheet that generated a scoring system. These scores are used to gauge the severity of site-specific problems relative to the problems observed in other areas of the trails. This was done for each problem and then scores were weighted so they could be compared between problems to establish management priorities. Weights given to each problem type are provided in **Table 8**. Surface buckling was given the highest weight due to high safety concerns with the issue. These final scores aim to inform management of the trails at LPSP.

Vegetation encroachment and safety were not scored in the ranking system. These problem points will still be addressed in the management recommendations but were not ranked according to severity. For the maintenance prioritization (discussed in **Section 3.4.3.1**), these points were ranked according to the level of public safety concern each issue presents.

#### 3.4.3.1 Maintenance Prioritization Calculation

Like the natural surface trails, trail maintenance priorities were created by evaluating three criteria:

1. Density of problems per mile of trail segment
2. The average problem scores per trail segment
3. The sum of the “other problem” scores

These three factors were individually scored and then summed to create an overall trail maintenance score. To generate the score, the methods described below were followed. Please see **Section 3.3.4.1** for example calculations of the methods.

The total number of problems identified along a trail segment (i.e. Luna Lane a) was found and then divided by the mileage of the segment to obtain a density of problems per mile. Trail segment problems per mile were then inversely ranked. The trail segment with the lowest number of problems per mile was ranked “1” indicating the lowest score and the segment with the highest density of problems had the highest number, indicating the highest score.

A second calculation was conducted to determine the severity of problems along a trail segment by averaging the ranking of all problems. This calculation only included problem scores that were ranked in the scoring system (erosion, bedrock exposure, roots, braiding, surface depression, water pooling, infrastructure). These were then inversely ranked also, so that the trail with the

highest average trail problem score was ranked last, with the highest number associated with it, indicating that it should receive management consideration first. The trail segment with the lowest average problem severity score was ranked “1”.

Finally, the problems without a severity ranking (vegetation encroachment, safety) were given a ranking based on their management priority importance (**Table 7**). The numbers were summed for segments with multiple problems present.

These three calculations and rankings were used to prioritize maintenance areas for the project area. The maintenance score was found by the following calculation:

$$\begin{array}{rcccl}
 \text{Inverse rank of} & & \text{Inverse rank of average} & & \text{Sum of other “non-} \\
 \text{problems per} & + & \text{severity score for scored} & + & \text{scored” problems} \\
 \text{mile} & & \text{problems} & & \text{rank} & = & \text{Maintenance} \\
 & & \text{(erosion, surface crack,} & & \text{(veg encroachment,} & & \text{Score} \\
 & & \text{surface buckling, surrounding} & & \text{safety)} & & \\
 & & \text{height difference, water} & & & & \\
 & & \text{pooling)} & & & & 
 \end{array}$$

The resulting maintenance score was then ranked, with the highest score being first priority for maintenance. This maintenance rank can be used to prioritize maintenance by trail segment of the worst areas in the Paved Trail project area. Maintenance priorities for the area can be seen in **Section 5.3.1**.

### 3.5 Chain of Lakes Trails

Trail mapping for the COL trail plan followed methods outlined in **Section 3.1**. Technicians also mapped potential barriers to trail development, such as downed trees and fences along existing social trails in the COL area. Data from the City of Pueblo was also obtained for city-managed trails, including the Arkansas River trail. After trails were mapped, trail data from all sources was overlaid with property boundaries and aerial imagery. Existing routes were evaluated and analyzed to ensure that trail recommendations would provide access to recreationalists to all COL ponds within CPW property boundaries. Existing social trails were then selected to become designated park trails, and redundant, unnecessary trails were identified for closure or maintenance.

## 4.0 Trail Assessment Results

### 4.1 North Shore Trails Analysis

#### 4.1.1 Trails

Mapping trails in the North Shore Trails area resulted in finding 15 miles of trails. All two tracks and service roads were already mapped within the area (**Maps 4.1 – 4.3**). Evidence of trail use by hikers, bikers, and horses was noted during the surveys.

#### 4.1.2 *Natural and Cultural Resource Assessment*

Several trails intersect with natural and cultural resources found within the North Shore Trails area.

##### 4.1.2.1 Vegetation

Overlaying rare plant points and polygons and rare community polygon data with North Shore Trails identified several miles of trails directly intersect with vegetation resources with conservation significance. Trails were found to intersect with three locations of rare plant points, totaling 0.03 miles of trails. When overlaid with the rare plant and community polygon layer, a total of 8.5 miles of trails were found to intersect with resources and potential habitat based on occurrences. **Map 4.4** displays the intersect locations of the resources with mapped trails.

##### 4.1.2.2 Wildlife

Overlaying sensitive wildlife species, raptor nest buffers, riparian shrubland bird habitat, and roost/rookery data with North Shore Trails identified several miles of trails that directly intersect with wildlife resources with conservation significance. No buffers of raptor nests active within the past five years overlapped with these trails. Habitat areas for black-tailed prairie dog and Colorado checkered whiptail overlap with 1.05 miles of trails in the North Shore Trails area. An occurrence for southern red-belly dace fish is within close proximity of trails but does not intersect with any trails. Riparian wildlife habitat intersects with 2.57 miles of trails, of which 0.22 miles is a sensitive three-leaf sumac riparian shrubland community. Finally, 1.17 miles of trails overlap with the roost / rookery buffer. However, this resource was not considered within this plan for trail closure recommendations as the roost/rookery is not currently active. If the rookery/roost becomes active, management considerations should be addressed at that time. **Map 4.4** displays the intersect locations of the resources with mapped trails.

##### 4.1.2.3 Paleontological Resources

Overlaying paleontological resource site data with North Shore Trails identified a total of 0.03 miles of trails directly intersects with paleontological resources with conservation significance. A total of five paleontological sites are present, but only one site overlapped with trails in the North Shore Trails area. This point sits almost directly in the center of a trail. Two other sites are very close to trails and are centrally located within the North Shore Trails area. **Map 4.4** displays the intersect locations of the resources with mapped trails.

##### 4.1.2.4 Cultural Resources

Overlaying cultural resource site and cultural sensitivity zone data with North Shore Trails identified a total of 0.17 miles of trails directly intersect with cultural resource sites and 2.87 miles of trails directly intersect with cultural sensitivity zones. No eligible cultural sites overlapped with trails in the North Shore Trails area. Four ineligible sites and one of unknown eligibility overlap with trails in the southeastern end of the North Shore Trails area. The site with unknown eligibility resulted in two trails being closed, which is discussed in more detail in **Section 5.1.1**. Cultural sensitivity areas overlap with many of the trails but were not used as a sole reason to close a trail. **Map 4.4** displays the intersect locations of the resources with mapped trails.

#### 4.1.3 *Natural Surface Trails Condition Assessment*

The natural surface trails condition assessment for the North Shore Trails area resulted in the documentation of 333 problem points. No monitoring points were documented as a result of the

survey due to the density and frequency of problem points recorded. **Table 9** summarizes the number of problems by problem type and the average ranking recorded and **Table 10** summarizes the number and type of problems by trail in the North Shore Trails area. Overall, erosion issues were the most documented problem type with 139 points recorded. Erosion was also calculated to have the highest average problem ranking. Bedrock exposure was the second most-commonly documented problem (62 points), followed by root exposure (47 points). These three issues were expected to be the most common for natural surface trails in the park. The North Shore Trails area has highly erosive soils and it is not surprising that high levels of recreational activity have resulted in a high frequency of these three issues. **Maps 4.5 through 4.10** display the locations of problem points ranked in the system.

Problems not ranked in the system include animal activity, debris/windfall trees, line of sight, safety concerns, and vegetation encroachment. Safety concerns were the most commonly documented other issue type, with 13 locations recorded. All other points, not ranked, can be seen on **Map 4.11**.

**Figure 10.** Trail NT3j had two problems documented over its short distance of 0.01 miles, including this erosional feature (left) and NT1c had the highest average severity score due to a large depression ranked a five out of five(right).



Photo Credit:CPW

Ranked trail problems were analyzed by density and severity within trail segments. This analysis aims to assist in prioritizing maintenance actions in the North Shore Trails area. Overall, 33 of 126 trail segments were classified in the “worst” category, with a trail problem point density ranging from 34 to 407 points per mile. Generally, problem density was highest on trails NT10c, NT3j, and NT4i (**Map 4.12**). These three trails and others were ranked as very high due to only a few points being documented over a short distance **Figure 10**. Problem severity was highest on trail NT1c, with it being the only trail with an average ranking of five (**Map 4.13**). This ranking is a result of NT1c having one large depression that was ranked as a five **Figure 10**. Five trails out of 126 had an average ranking of four out of five. Four of the five trails are “NT3” trails, which are located in the northwest corner of the North Shore Trails area. These trails are caused by people walking into the area down steep slopes from the railroad tracks; erosion is the problem associated with these social trails.

## 4.2 South Shore Trails Analysis

### 4.2.1 Trails

Trail analysis of the South Shore Trails area recorded 53 miles of trails and 4.9 miles of two track roads (**Map 4.14 – 4.16**). Evidence of trail use by hikers, bikers, and horses was noted during the surveys.

### 4.2.2 Natural and Cultural Resource Assessment

Several trails intersect with natural and cultural resources found within the South Shore Trails area.

#### 4.2.2.1 Vegetation

Overlaying rare plant points and polygons and rare community polygon data with South Shore Trails found that several miles of trails directly intersect with vegetation resources with conservation significance. Trails did not intersect with any locations of rare plant points or the 10-meter buffer for each location. The 10-meter buffer follows the rare plant management BMP used in this analysis. When overlaid with the rare plant and community polygon layer, a total of 2.96 miles of trails were found to intersect with resources. This data layer represents occurrence records buffered by various distances and potential habitat based on occurrences. **Map 4.17** displays the intersect locations of these vegetation resources with mapped trails.

#### 4.2.2.2 Wildlife

Overlaying data for sensitive wildlife species, raptor nest buffers, and riparian shrubland bird habitat with South Shore Trails found several miles of trail that directly intersect resources with conservation interest. Buffers of nests for four nests intersect with six miles of trail in the South Shore Trails area. Habitat areas for Colorado checkered whiptail overlap with 0.11 miles of trails in the South Shore Trails area. A total of 15.7 miles of trails overlaps with riparian areas, of which 6.1 miles is the sensitive three-leaved sumac riparian shrubland wildlife habitat. **Map 4.17** displays the intersect locations of the resources with mapped trails.

#### 4.2.2.3 Paleontological Resources

Overlaying paleontological resource site data with South Shore Trails found that a total of 0.11 miles of trails directly intersect with resources. A total of six paleontological sites are present, and five of the six sites overlap with trails in the South Shore Trails area (Houck et al. n.d.). **Map 4.17** displays the intersect locations of the resources with mapped trails.

**Figure 11.** Geologic strata and shale formations that preserve past conditions and specimens at the park.



Photo Credit: CPW

#### 4.2.2.4 Cultural Resources

Overlaying cultural resource site and cultural sensitivity zone data with South Shore Trails found that a total of 1.32 miles of trails

directly intersect with cultural resource sites and 28.6 miles of trails directly intersect with cultural sensitivity zones. Trails overlap with a cultural resource location twelve times, with eleven of these sites being eligible sites. These areas are discussed in more detail below. Cultural sensitivity areas overlap with many of the trails but were not considered when providing trail closure and reroute recommendations. **Map 4.17** displays the intersect locations of the resources with mapped trails.

### **Culturally significant sites**

There are currently four historic properties in the South Shore area of LPSP that require attention regarding mitigating the influence of trail recreation on these non-renewable resources. These sites should be avoided whenever possible. Ground disturbing projects and activities in or near these can adversely affect the scientific integrity of these sites. Therefore, it is recommended that all ground disturbing activities within LPSP should be conducted at least 100 feet away from historic properties (CPW 2017b). This 100-foot buffer is a management recommendation from the Lake Pueblo Stewardship Plan (CPW 2017b) and should be used to avoid ground disturbing activities to historic properties. The use of this buffer distance is to ensure that artifacts on the fringe of the sites are not destroyed and so that projects near these sites do not negatively influence the nearby cultural resources. There are 12 trails that cross or come within 100 feet of historic properties. Ten of these are related to the Arkansas Valley Conduit and Canal.

### **Historic Sites**

There are several trails that cross the Arkansas Valley Conduit Canal near the South Shore camping area. Most of the trails on the north side of the Arkansas Valley Conduit Canal, spur out of individual camping areas and cross through the canal in an attempt to meet up with the trails on the other side. Similarly, Inner Limits, Pedro's Point, Outer Limits, Pronghorn, and Voodoo Trails all cross the conduit, however these are buried segments of the resource and impact is minimal to non-existent.

### **Prehistoric Sites**

The Arkansas Point, Roller Coaster, and The Duke trails either intersect or bound historic property (prehistoric camp site). Portions of these trails will be rerouted to maintain the cultural and scientific values of this area. Skull Canyon and Quick Draw trails also intersect or come within 100 feet of another open camp site of unknown eligibility. Rerouting of these five trails to ensure the integrity of this site is maintained is identified within this plan.

#### **4.2.3 Natural Surface Trails Condition Assessment**

The physical condition assessment for the natural surface trails in the South Shore Trails area resulted in the documentation of 267 problem points. A total of 29 monitoring points were recorded with photos as a result of the surveys in the South Shore project area. **Table 11** summarizes the number of problems by problem type and the average ranking and **Table 12** summarizes the number and type of problems by trail in the South Shore Trails area. Overall, erosion issues were the most documented problem type with 93 points recorded. Erosion and recreation infrastructure were calculated to have the highest average ranking scores (4.2 out of 5). Root exposure was the second most-commonly documented problem (75 points), followed by trail braiding (40 points). Like the North Shore, the South Shore Trails area has highly erosive soils and it is not surprising that trail alignments and high levels of recreational activity have resulted in the high frequency of

these issues. **Maps 4.18** through **4.23** display the locations of problem points ranked in the system.

Problems not ranked in the system include animal activity, debris/windfall trees, and safety concerns. Safety concerns were the most commonly documented other issue type, with nine locations recorded. All other points, not ranked in the system, are on **Map 4.24**. **Map 4.25** displays the monitoring points recorded for the South Shore Trails area.

Ranked trail problems were analyzed by density and severity within trail segments. This analysis prioritizes maintenance activities based on rankings in the South Shore Trails area. Overall, 10 of 175 trail segments were classified in the “worst” category, with a trail problem point density ranging from 34 to 94.84 points per mile. Generally, problem density was highest on trails ST7, Staircase b, and Staircase d (**Map 4.26**). These three trails had relatively high numbers of problems considering their lengths. Staircase d was documented to have 12 problem points and is only 0.14 miles long. Problem severity was highest on trails South Shore d and ST1a, with them being the only two trails with an average ranking of five (**Map 4.27**). These two trails had several severe erosion features present.

### **4.3 Paved Trails Condition Assessment**

The Paved Trails area condition assessment mapped and evaluated 12.6 miles of trails. Most service roads and two tracks were already mapped by CPW and totaled approximately 5.38 miles within the Paved Trails project area (**Maps 4.28 – 4.30**). Evidence of trail use by hikers and bikers was noted during the surveys.

The paved surface trails condition assessment documented 147 problem points. **Table 13** summarizes the number of problems by problem type and the average ranking and **Table 14** summarizes the number and type of problems by trail in the Paved Trails area. Overall, surface crack issues were the most documented problem type with 79 points recorded. Surrounding height difference was the second most-commonly documented problem (30 points), followed by erosion (25 points). Surface buckling was calculated to be the worst paved trail condition issue, having the highest average ranking (4.26 out of 5). **Maps 4.31** through **4.35** display the locations of problem points ranked in the system.

Vegetation encroachment points were the only “other” documented points, and eight points in total were documented. These points can be seen on **Map 4.36**.

Ranked trail problems were analyzed by density and severity within trail segments. This analysis aims to assist in prioritizing maintenance activities in the South Shore Trails area. Overall, only two of 36 trail segments were classified in the “worst” category, with a trail problem point density ranging from 34 to 71.05 points per mile. Problem density was highest on trails PT1b and PT2a, both of which are located near the swim beach area (**Map 4.37**). Problem severity was highest on trail PT7a, with it being the only trail with an average ranking of five (**Map 4.38**). This trail has one identified surface crack location with a ranking of five, making the average also five.

### **4.4 Chain of Lakes Trail Mapping**

Trail mapping identified approximately 8.5 miles of social trails directly within the COL project area, and a total of 11.5 miles of social trails east of the Pueblo Reservoir Dam that are not all

considered part of the COL area. Most service roads and two tracks were already mapped by CPW and totaled approximately four miles within the COL project area. Many of the social trails are located along the Arkansas River or the ponds and numerous short social trails branch off, towards the water bodies. Official trails are not present in the COL, which drives the creation of a considerable number of social trails in the area. Although formalizing trails will reduce the overall number of trails present, many of the trails are created by recreationists attempting to access water bodies and will likely continue to exist until access, formal closure, and reclamation efforts are implemented. **Map 4.39** displays the COL project area, social trails within the area, and other relevant features.

## 5.0 Trail Maintenance and Management Recommendations

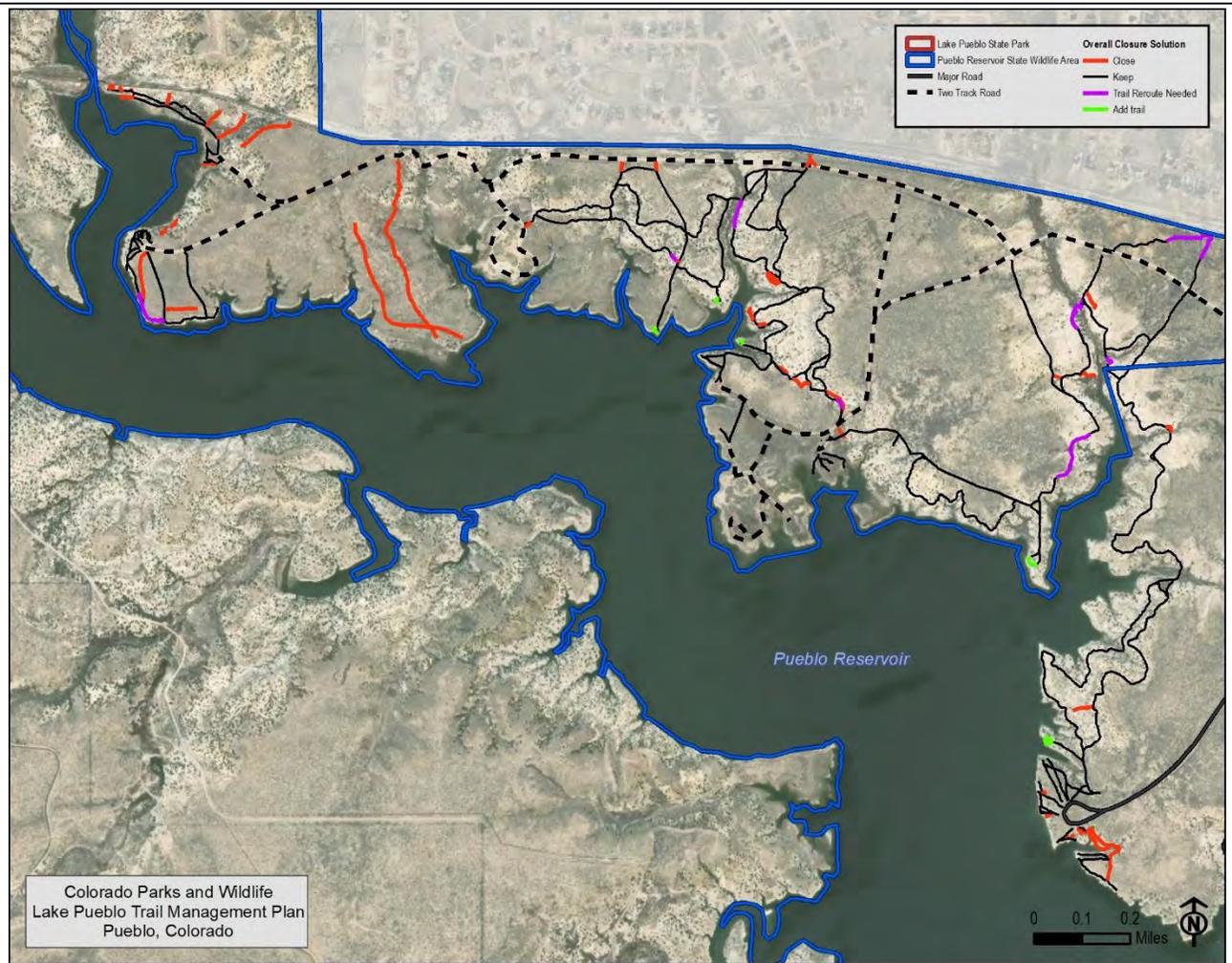
### 5.1 North Shore Trails Analysis

It is important to note that the Pueblo Reservoir SWA portion of the study area in this plan is currently managed by CPW Area 11 for the purpose of fishing and hunting access. This location is owned, as with many areas within LPSP, by the Bureau of Reclamation. Due to changes in use (high number of social trails from hiking, biking, dog walking, and other recreational uses) within the SWA over the years, there have been some discussions on the potential to convert the northeast portion of the SWA to State Park managed property. The recommendations in this plan were created only to address this future potential management change and would only be acted upon if the management of this portion of the SWA was to change from fishing and hunting access to park managed recreational use.

#### 5.1.1 Trail Closures

Trail closures were primarily recommended as a result of an intersect with resource features of high conservation value or that have regulatory or legal protections. Several rare plant occurrences and one paleontological site directly intersect with trails. These trails are therefore planned for closure or for reroute around these features. Trails are also planned for closure due to associated unauthorized parking areas being closed, a redundancy of trails in sensitive areas, or providing illegal access into the park. As a result of the analysis, it is recommended that 2.9 miles (15,360 ft) of trails be permanently closed out of a total of 15 miles of trails. With the recommended removal due to the above factors, 80 percent of existing trail system will remain in the North Shore Trails area. The 2.9 miles includes the permanent closure of 2.3 miles (12,052 ft) and rerouting 0.6 miles (3,307 ft) of trails. Rerouted trails are discussed in more detail in Section 5.1.2 below. The majority of the trails recommended for closure are small off-shoots of major trails or small trails that lead into the park and provide illegal access. Closure of major mountain biking, hiking, and equestrian trails is not recommended unless an intersect with a sensitive or legally protected resource exists. In most instances, these trails are rerouted around the resources to continue access for recreationists. **Figure 12** displays an overview of trail closures. **Table 15** provides a list of the recommended permanent trail closures and **Maps 5.1 through 5.9** are more detailed maps of the trail closure locations. **Figure 13** provides a summary of the trail mileage resulting from the analysis and this plan.

**Figure 12.** North Shore trail closure and reroute recommendations map.



Permanent trail closures will be implemented as resources become available into the future and will likely take several months to years. The process will require financial and equipment resources, coordination among park staff and cooperation with trail users. Trail closures will be indicated by placing trail barriers and signage indicating the trail is closed to use by recreationists. Closed trails may be revegetated to natural conditions by following the provided best management practices in **Appendix F**.

*Seasonal trail closures will only be implemented if a nest or other wildlife species is considered ACTIVE for the season by LPSP monitoring efforts.*

Several osprey platforms exist near the North Shore trails but have not been active in the past five years. A discussion of relocating the platforms to a different area was occurring during the drafting of this plan addressing potential future impacts of trail users on active osprey nests. No other raptor nest buffers intersect with trails in the North Shore, and therefore no other seasonal closures are identified. When seasonal trail closures are necessary, trail barriers and temporary signage will be placed stating the trail is temporarily unavailable for use.

### 5.1.2 Trail Reroutes

Routing existing social trails around sensitive areas is necessary in some locations. Although 2.9 miles of trails are planned for closure as a result of the resource intersect analysis, 0.6 miles (3,307 ft) of closed trails will be rerouted and 0.1 miles (700 ft) of added trails are identified for the North Shore. The mileage of added trails that will provide reroutes will be unknown until reroutes are completed, as reroutes paths will be created at a future date after consultation with professional technical trails experts. With the currently known added trails, the trail system will provide a total of 12.2 miles of trail being available, essentially keeping 81 percent of trail mileage on the North Shore.

The mileage available will increase once appropriate reroutes are identified and added to the system. The need for trail reroutes are identified for areas that intersect with sensitive resources, safety concerns, and riparian areas. New trails have been proposed to provide “loops” on the end of trails that are considered “out and backs” and are used by mountain bikers and equestrians.

Existing social trails that are identified to be rerouted will be permanently closed after a reroute alignment for the trail is identified and constructed. Therefore, routes will only be closed after a viable reroute has been implemented in the park. This process will occur over the life of this plan and will require financial, equipment, and human resources, and coordination among park staff and cooperation with trail users.

**Figure 12** displays an overview of where trail reroutes are needed as well as added trails. **Table 16** provides a list of reroutes and trail additions and **Maps 5.1** through **5.9** are more detailed maps of the trail reroute locations. **Figure 13** provides a summary of the trail mileage resulting from the analysis and this plan.

**Figure 13.** North Shore trail mileage summary.

Trails Type	Mileage
Existing trails	15
Permanent trail closures	-2.3
Permanent trail closures that will be rerouted	-0.6
Added trails (loops)	+0.1
<b>Total Trail Mileage Proposed</b>	<b>12.2*</b>
	<b>(81% of existing trails)</b>

\*Mileage will increase once appropriate reroutes for trails are identified.

### 5.1.3 Trail Maintenance

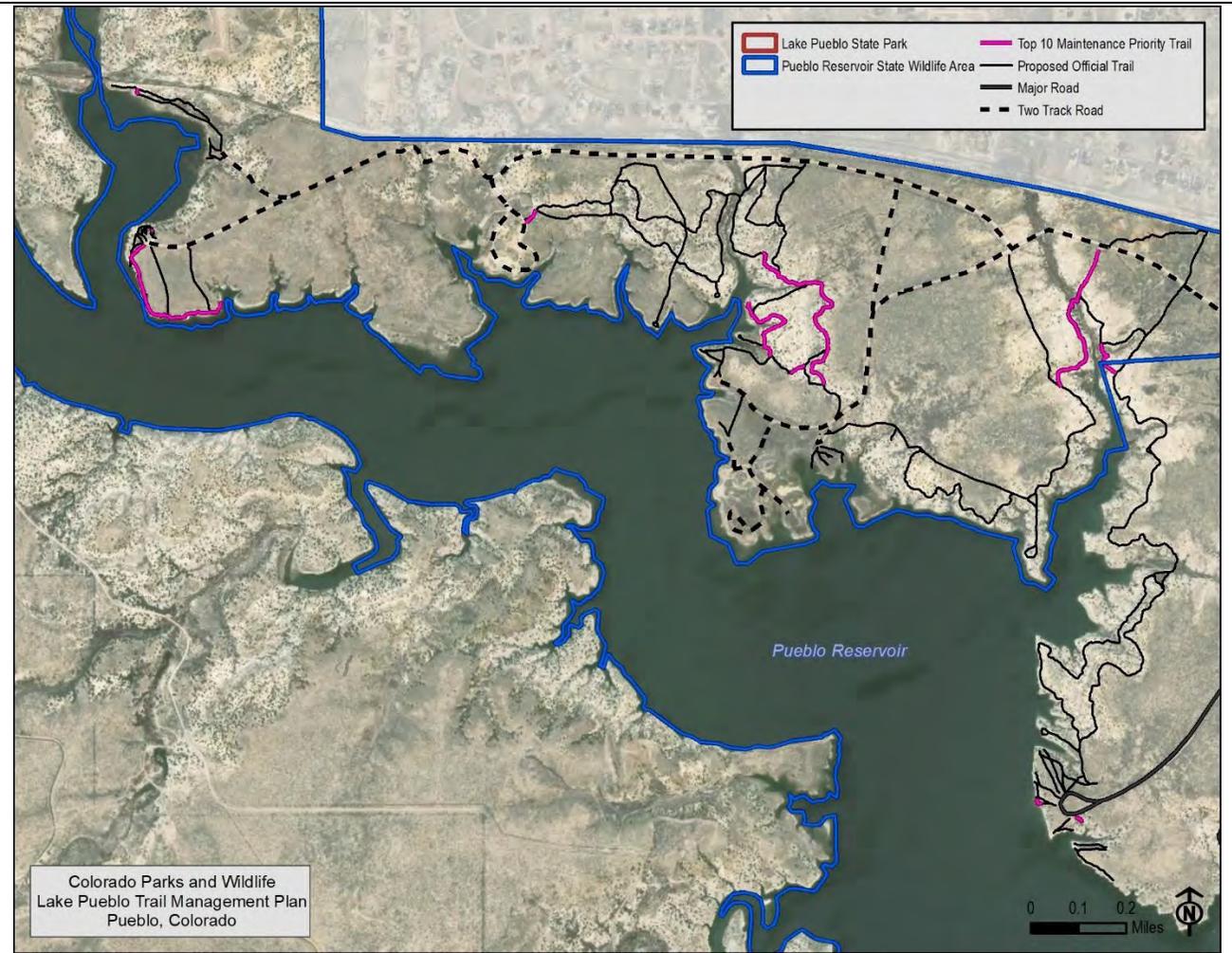
Trail maintenance issues were ranked according to the methods outlined in **Section 3.3.4.1**. Trail maintenance is required due to trail condition problems and other problems identified such as safety concerns and vegetation encroachment. Trails that are recommended to be entirely closed were not included in the trail maintenance ranking. Trails with a portion identified for closure have remaining trail segments still included in the maintenance ranking system. Trails were for maintenance actions and the full list of maintenance priorities can be viewed in **Table 17**. Additionally, **Table 17** provides the problem point density score and the average problem score rankings by trail. **Figure 14** below provides the top 10 trails requiring maintenance in these three categories and **Figure 15** displays the top 10 trails needing maintenance according to the overall

trail maintenance rank. Some of the trails resulted in the same maintenance score, which then resulted in the same maintenance rank. Therefore, duplicate ranks can be seen in the list. In these situations, any of the trails with the same maintenance rank will be chosen for priority by trail managers. **Map 5.10** displays the top 20 trail maintenance priorities.

**Figure 14.** Top 10 North Shore Trails needing maintenance list.

Rank Number	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
1	NT7f	NT4i	NT1c
2	NT10d	NT3j	NT13g
			NT3b
			NT3f
			NT3a
3	NT10g	NT15b	NT15b
			Tykes Trail a
4	NT1d	NT7s	NT3h
5	NT15b	NT4f	NT7o
			NT3j
			NT10g
			NT9b
			NT11e
			NT6f
			NT11a
			NT14b
6	NT3j	NT10g	Tykes Trail d
			NT6c
7	Tykes Trail a	Tykes Trail a	NT7d
8	NT13g NT7o	NT10d	NT7g
			NT11f
9	NT4i	NT13g	NT7f
			NT7h
			NT10a
			NT11g
			NT7a
			NT7e
10	NT7s	NT11f	Tykes Trail b
			NT10d

**Figure 15.** Top 10 overall trail maintenance needs in the North Shore map.



#### 5.1.4 Proposed Trails

All the trails in the North Shore trails area were considered “Social Trails” at the time of the drafting of this plan. This plan proposes to formalize 12.6 miles of the existing trails and add loops or reroutes amounting to 0.6 miles. A total of 13.2 miles of trails are therefore proposed in total. **Maps 5.1** through **5.9** display the proposed official trails, reroutes, and additions that would compose the North Shore Trails system.

#### 5.1.5 Park Infrastructure

The North Shore Trails area will require the addition and removal of several features to ensure the proposed trail system is functional. The recommendations provided in this section are highly dependent upon the transfer of land from the SWA to LPSP. LPSP will be unable to implement any of the actions if the land is not under the park’s management. All recommended infrastructure additions and removals can be seen on **Figure 19**, with more details provided on **Maps 5.11** through **5.13**.

##### 5.1.5.1 Parking Lots

Ten parking lots in the North Shore Trails area are recommended to maintain for recreationist parking. These parking lots already exist and need maintenance and improvements. The parking

lots currently present in the SWA are primarily gravel or dirt and are likely to require repairs and restoration. Two other parking lots are present in the North Shore Trails area and are recommended for removal. These are likely user-created, are excessive for what is required for the visitation to the area, and they promote the creation of new, unnecessary social trails.

#### 5.1.5.2 Trailhead Signage and Maps

Three trailhead signs and trail system maps are recommended for the North Shore Trails area. One is located at trail NT6a on the western side of the North Shore, which connects to Luna Lane and Tykes Trail. The second site is centrally located within the North Shore and connects the northwestern and the eastern major trails systems. The third location is in the southeastern portion of the North Shore and is to be located in the existing paved parking lot.

All three of the locations would require a large trails map, with the trails system, location of facilities, and trail signs to encourage people to use the designated trails resulting from this report. An example map can be seen in **Figure 16**, from Highline Lake Park.

**Figure 16.** Example of a trail systems map that should be installed in LPSP.



*Photo Credit: CPW*

#### 5.1.5.3 Restrooms

One restroom facility is proposed for the North Shore Trails area and is located in the parking lot and trailhead proposed for the central portion of the project area.

#### 5.1.5.4 Bridges

Three bridges are proposed for implementation. All three are recommended for proper riparian and wetland crossings and to provide a safer and more enjoyable recreation experience and to protect wetland habitat. Bridges are located on NT10d, NT11b, and NT10g. The crossing at NT10d is especially unsafe for visitors and should be prioritized. Currently, there is water present and visitors are using several logs to cross the water feature. **Figure 17** below displays the current riparian area crossings present at these locations.

**Figure 17.** Areas in need of bridge crossings over riparian or wetland zones: NT10d (left), NT10g (center), and NT11b (right).



*Photo Credit:CPW*

#### 5.1.5.5 Steps

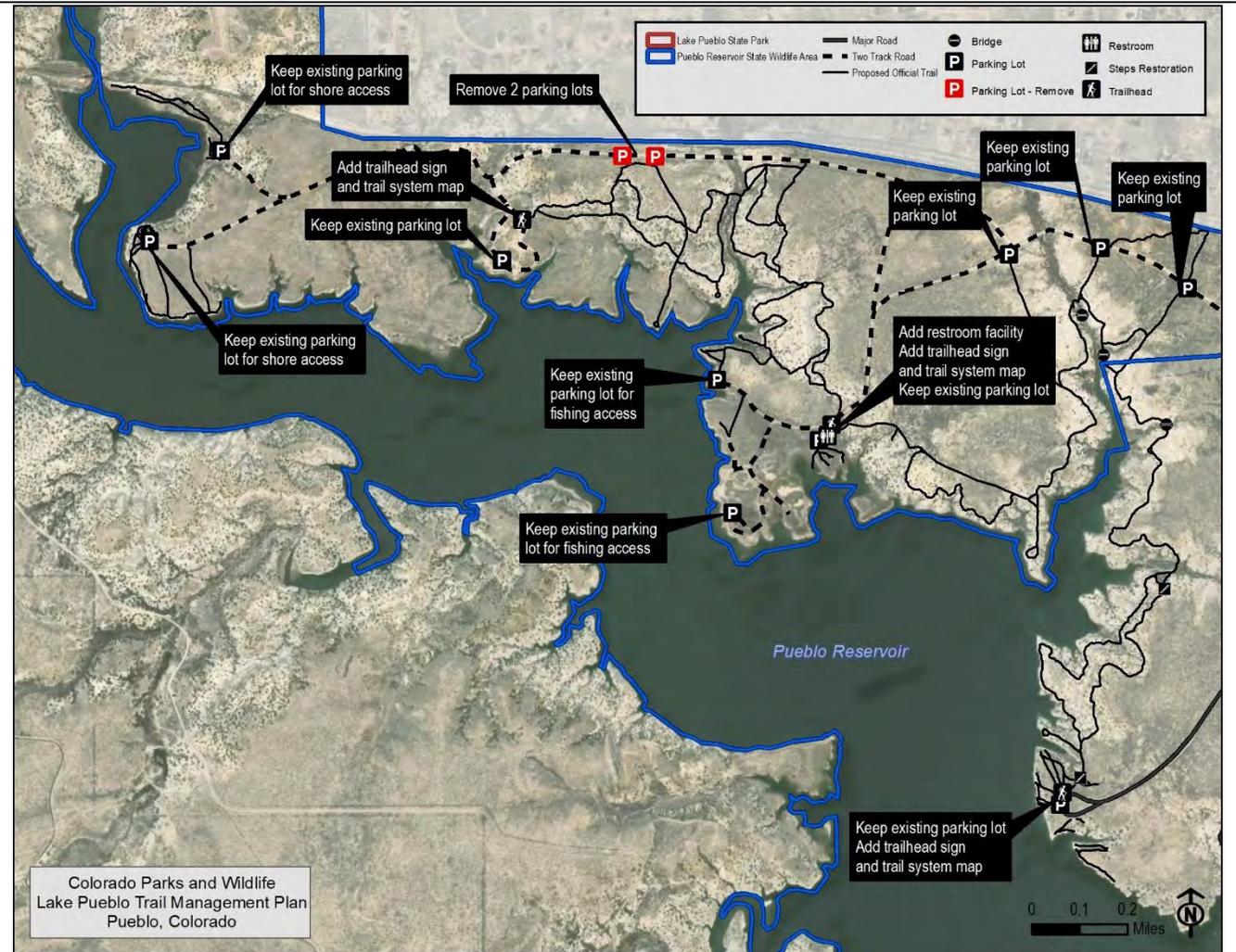
Two existing sets of steps need restoration. Both locations are on the east side of the North Shore Trails project area and are on trails NT11d and NT11e. The two areas are highly degraded and are very eroded due to recreation use and poor local soil quality. **Figure 18** below displays the current condition of these two areas.

**Figure 18.** Areas in need of step restoration: NT11d (left) and NT11e (right).



*Photo Credit:CPW*

Figure 19. North Shore proposed infrastructure map.



## 5.2 South Shore Trails Analysis

### 5.2.1 Trail Closures

As with the North Shore, trail removal was identified as a result of an intersect with resource features of conservation significance. Several paleontological and cultural sites directly intersect with trails in the South Shore. These trails were identified for closure or reroutes. Trails were also closed due to trail redundancy in sensitive habitat areas or intersects with other significant resources.

As a result of the resource intersect analysis, 5.1 miles (27,143 ft) of trails are identified for permanent closure and reclamation out of a total of 53 miles of trails. This result maintains 90 percent of existing trails in the South Shore Trails area. The 5.1 miles includes the permanent closure of 4.1 miles (21,863 ft) and rerouting approximately 1 mile (5,280 ft) of trails. Rerouted trails are discussed in more detail in **Section 5.2.2** below. Closure of major mountain biking,

hiking, and equestrian trails is not identified unless an intersect with a significant resource occurs. Whenever possible, these trails are rerouted around the significant resources (instead of closed) and still provide recreation access similar to what currently exists. **Figure 20** displays an overview of trail closures. **Table 18** provides a list of the recommended permanent trail closures and **Maps 5.14** through **5.19** are more detailed maps of the trail closure locations. **Figure 23** provides a summary of the trail mileage resulting from the analysis and this plan.

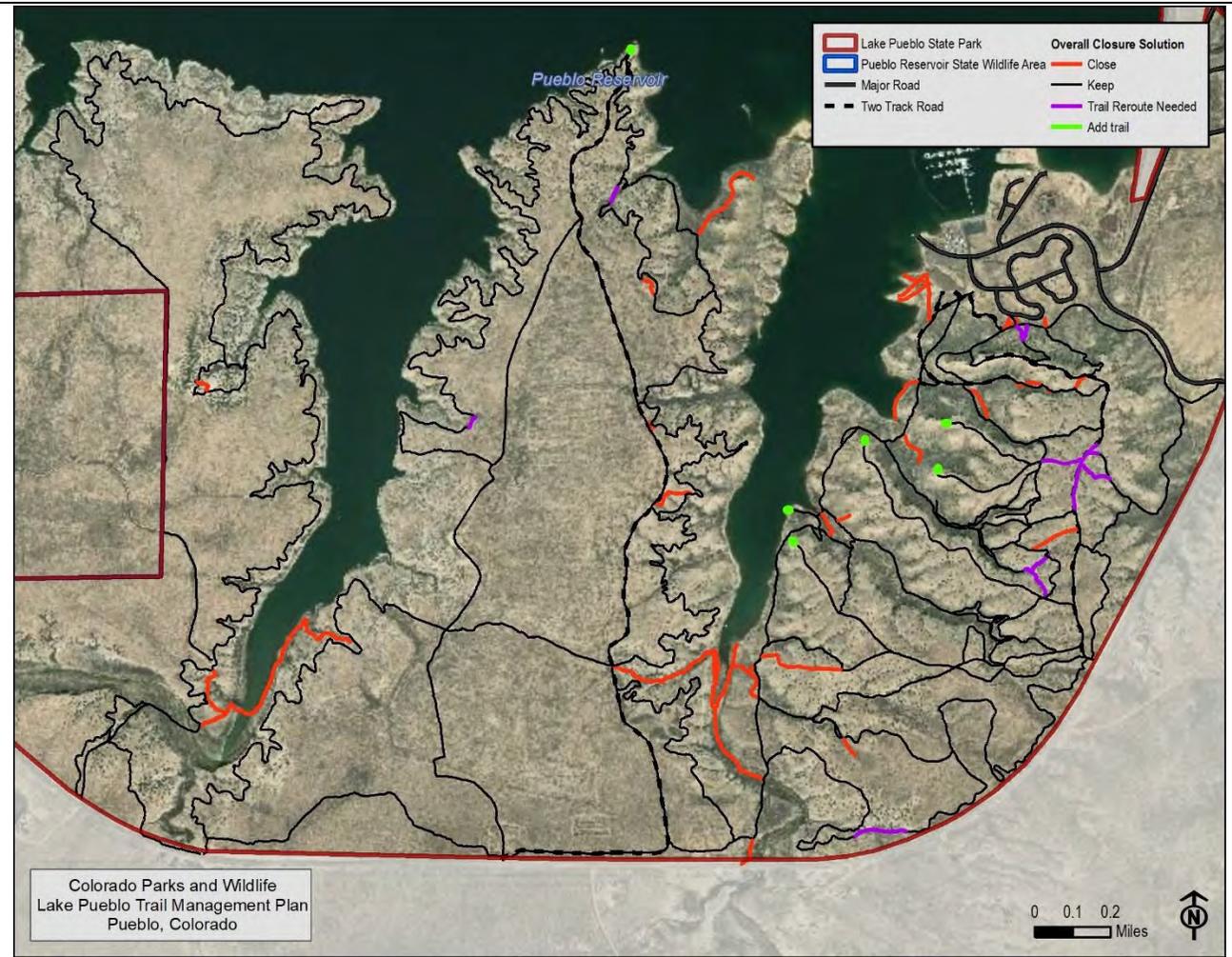
Permanent trail closures will be implemented as resources become available into the future and will likely take several months to years. The process will require financial and equipment resources, coordination among park staff, and cooperation with trail users. Trail closures will be indicated by placing trail barriers and signage stating the trail is closed to use by recreationists. Trails may be revegetated to natural conditions by following the provided best management practices in **Appendix F**.

Some trail closures may be difficult to implement initially, particularly the Arkansas Point Trail. This trail is heavily used by a range of recreationists and provides connectivity to many of the other trails in the South Shore. Identifying a reroute for this section of the trail should be top priority when consulting trail design experts. Trail reroutes are discussed in more detail in **Section 5.2.2** below.

*Seasonal trail closures will only be implemented if a nest or other wildlife species is considered ACTIVE for the season by LPSP monitoring efforts.*

Seasonal closures for the conservation of nesting birds is recommended for only 5.9 miles (30,936 ft) of 53 miles of trails in the South Shore Trails area (11 percent of trails). It is critical to note, as previously discussed, these trails will only be seasonally closed if the raptor nests identified are deemed active by monitoring efforts. Trails are recommended for seasonal closures due to the presence of two red-tailed hawk nests and two great horned owl nests. The great horned owl nest location in the southern portion of the area is surrounded by trails that are identified for permanent trail closure. Trails that intersect with the red-tailed hawk no disturbance” buffer should be closed from February 15 through July 15 and trails that intersect with the great horned owl no disturbance buffer should be closed December 1 through September 30. When seasonal trail closures are necessary, trail barriers and temporary signage will be placed stating the trail is temporarily unavailable for use. **Table 19** provides a list of the recommended seasonal trail closures and **Map 5.20** displays the locations of seasonal trail closures.

**Figure 20.** South Shore trail closure and reroute recommendations map.



### 5.2.2 Trail Reroutes

Routing existing social trails around sensitive areas is necessary in some locations. Although 5.1 miles of trails are identified for closure as a result of the resource intersect analysis, approximately 1 mile (5,280 ft) of closed trails will be rerouted and 0.27 miles (1,457 ft) of added trails are currently recommended for the South Shore. The mileage of added trails that will provide reroutes will be unknown until reroutes are completed, as reroutes paths will be created at a future date after consultation with professional technical trails experts. With the currently known added trails, the trail system will provide with 48.2 miles of trails available, keeping 91 percent of the original user-created social trail mileage on the South Shore.

The mileage available will increase once appropriate reroutes are identified and added to the system. The need for trail reroutes are identified in locations where trails intersect with sensitive resources. New trails have been proposed to provide “loops” on the end of trails that are considered “out and backs” on trails used by mountain bikers and equestrians.

Existing social trails that are identified to be rerouted will be permanently closed after a reroute alignment for the trail is identified and constructed. Therefore, routes will only be closed after a viable reroute has been implemented in the park. This process will occur over the life of this plan

and will require financial, equipment, and human resources, and coordination among park staff and cooperation with trail users.

**Figure 20** displays an overview of locations where trail reroutes are needed as well as added trails. **Table 20** provides a list of reroutes and trail additions and **Maps 5.14** through **5.19** are more detailed maps of the trail reroute locations. **Figure 21** provides a summary of the trail mileage resulting from the analysis and this plan.

**Figure 21.** South Shore Trail Mileage Summary.

Trails Type	Mileage
Existing trails	53
Permanent trail closures	-4.1
Permanent trail closures that will be rerouted	-1
Added trails (loops)	+0.27
<b>Total Trail Mileage Proposed</b>	<b>48.2*</b>
	<b>(91% of existing trails)</b>

\*Mileage will increase once appropriate reroutes for trails are identified.

### 5.2.3 Trail Maintenance

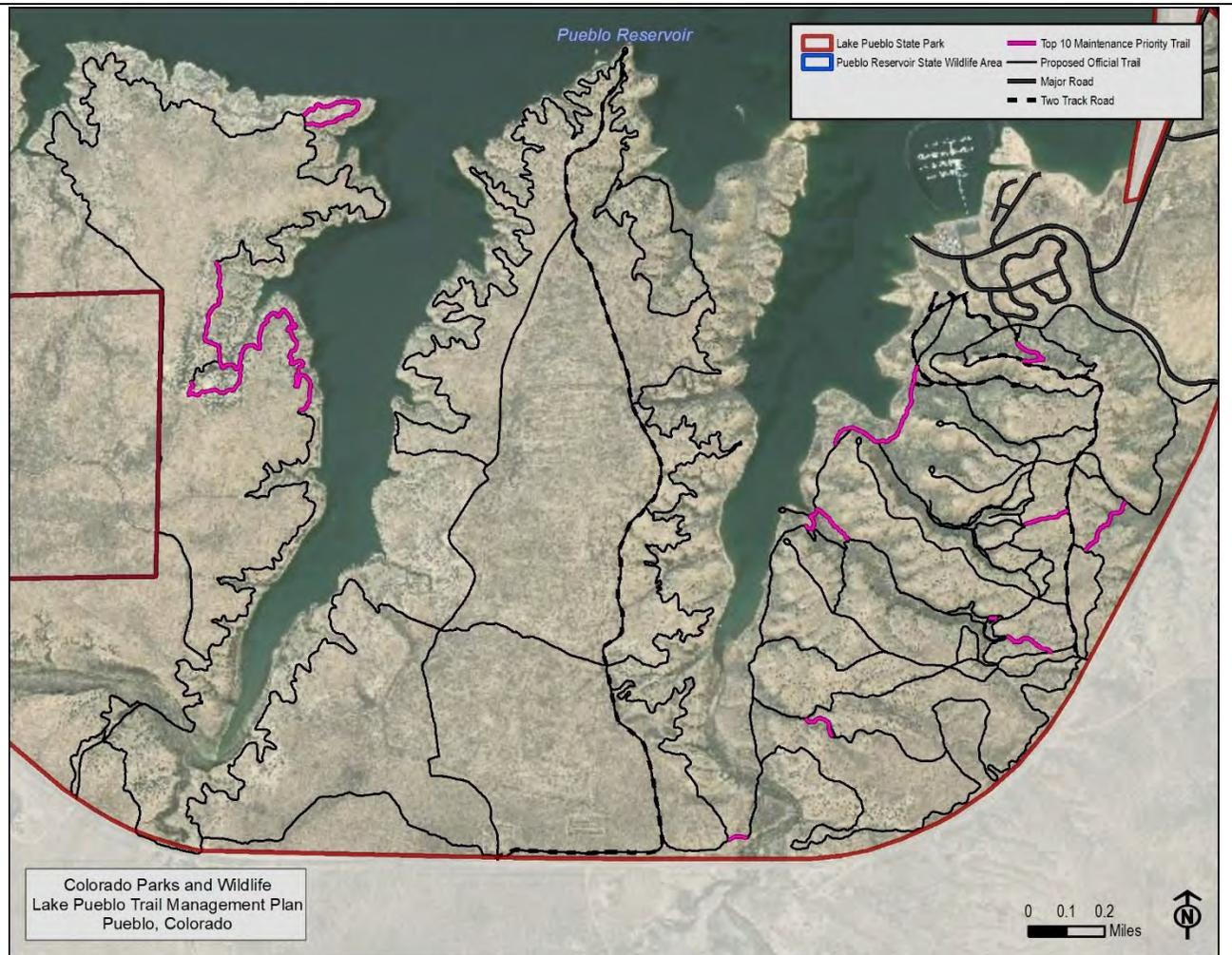
Trail maintenance issues were ranked according to the methods outlined in **Section 3.3.4.1**. Trail maintenance actions are required due to trail condition problems, safety concerns and vegetation encroachment. Trails that are identified for closure in their entirety were not included in the trail maintenance ranking. For trails where only a portion was identified for closure, the remaining trail segments were still included in the maintenance ranking system. Trails were ranked for maintenance actions and the full list of maintenance priorities can be viewed in **Table 21**. Additionally, **Table 21** provides the problem point density score and the average problem score rankings by trail. **Figure 22** below provides the top 10 trails requiring maintenance in these three categories and **Figure 23** displays the top 10 trails needing maintenance according to the overall trail maintenance rank. Some trails had the same maintenance score and rank. Therefore, duplicate ranks can be seen in the list. In these situations, trails with the same maintenance rank may be chosen for priority by management. **Map 5.21** displays the top 20 trail maintenance priorities in more detail.

**Figure 22.** Top 10 South Shore Trails needing maintenance list.

Rank Number	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
1	Staircase d Rattlesnake b South Shore c	Staircase d	South Shore d ST1a
2	South Shore f ST18b	Dead Dog a	Driftwood
3	Keyhole Canyon a	Rattlesnake b	Cuatro Cinco e South Shore c South Shore f
4	Dead Dog a	South Shore c	Keyhole Canyon a South Shore e Voodoo Loop a

5	South Shore d Pedros Point e	ST21b	Voodoo Loop b
6	ST1c	ST1c	Keyhole Canyon b ST18b
7	ST21b	ST18b	Staircase d
8	Broken Hip a Voodoo Loop c Voodoo Loop f	Pedros Point e	Broken Hip a Free Ride a Rattlesnake a Hooters Canyon a Cuatro Cinco c
9	Voodoo Loop e	South Shore f	Voodoo Trail a
10	Rodeo	Skull Canyon c	Voodoo Loop c The Duke c

**Figure 23.** Top 10 overall trail maintenance needs in the South Shore map.



### 5.2.3.1 Recreational Infrastructure Maintenance

The South Shore hosts several unsanctioned user-built recreational structures. These items must be formalized by the park as they are on park property and therefore subject the park to liability of recreationists using the features. **Figure 24** below lists the South Shore infrastructure items and the trails they are located on. **Map 4.26** display the locations of the items. All recreation infrastructure must be formalized and therefore all are a priority for maintenance in the South Shore.

**Figure 24.** Recreation infrastructure present in the South Shore requiring formalization.

Trail	Infrastructure Type	Problem Score
Driftwood	Bridge	5
Driftwood	Bridge	5
Driftwood	Bridge	5
Free Ride a	Bridge	5
Keyhole Canyon a	Bridge	5
Log Drop	Bike Jump	4
Log Drop	Bike Jump	4
Quick Draw	Bridge	5
Rattlesnake a	Bridge	5
Rattlesnake a	Bike Jump	2
Roller Coaster g	Wall	2
South Shore d	Culvert / Pipe	5
ST21b	Bike Jump	2
ST7	Stairs	5
Staircase b	Stairs	5
Staircase b	Culvert / Pipe	3
Staircase d	Wall	4
Staircase d	Stairs	5
Staircase d	Stairs	5
Staircase d	Stairs	5
Voodoo Loop f	Other	5
Voodoo Loop f	Other	5
Voodoo Trail a	Bridge	3
Water Tower b	Bike Jump	2
Waterfall	Bridge	4

### 5.2.4 Proposed Trails

All the trails in the South Shore trails area are considered “Social Trails” currently. This plan proposes to formalize 47.1 miles of the existing trails and add loops amounting to 26 miles. A total of 47.4 miles of trails are therefore proposed in total. In the future, the proposed natural trails in the South Shore will be evaluated for ADA accessibility and some trails will become ADA approved. The process will involve trail maintenance work to ensure trails meet the ADA standards, or designating trails that already easily meet trail standards. Trail standards can be reviewed in **Appendix H** (United States Access Board 2014). **Maps 5.14** through **5.19** display the proposed official trails, reroutes, and additions that would compose the South Shore Trails system.

### 5.2.5 Infrastructure Needs

The South Shore Trails project area will require the addition of several features to ensure the proposed trail system is functional. Currently, the only trail use parking lots exist within the Arkansas Point Campground and South Marina parking areas. All recommended infrastructure additions can be seen on **Figure 27**, with more details provided on **Maps 5.22** through **5.24**.

#### 5.2.5.1 Parking Lots

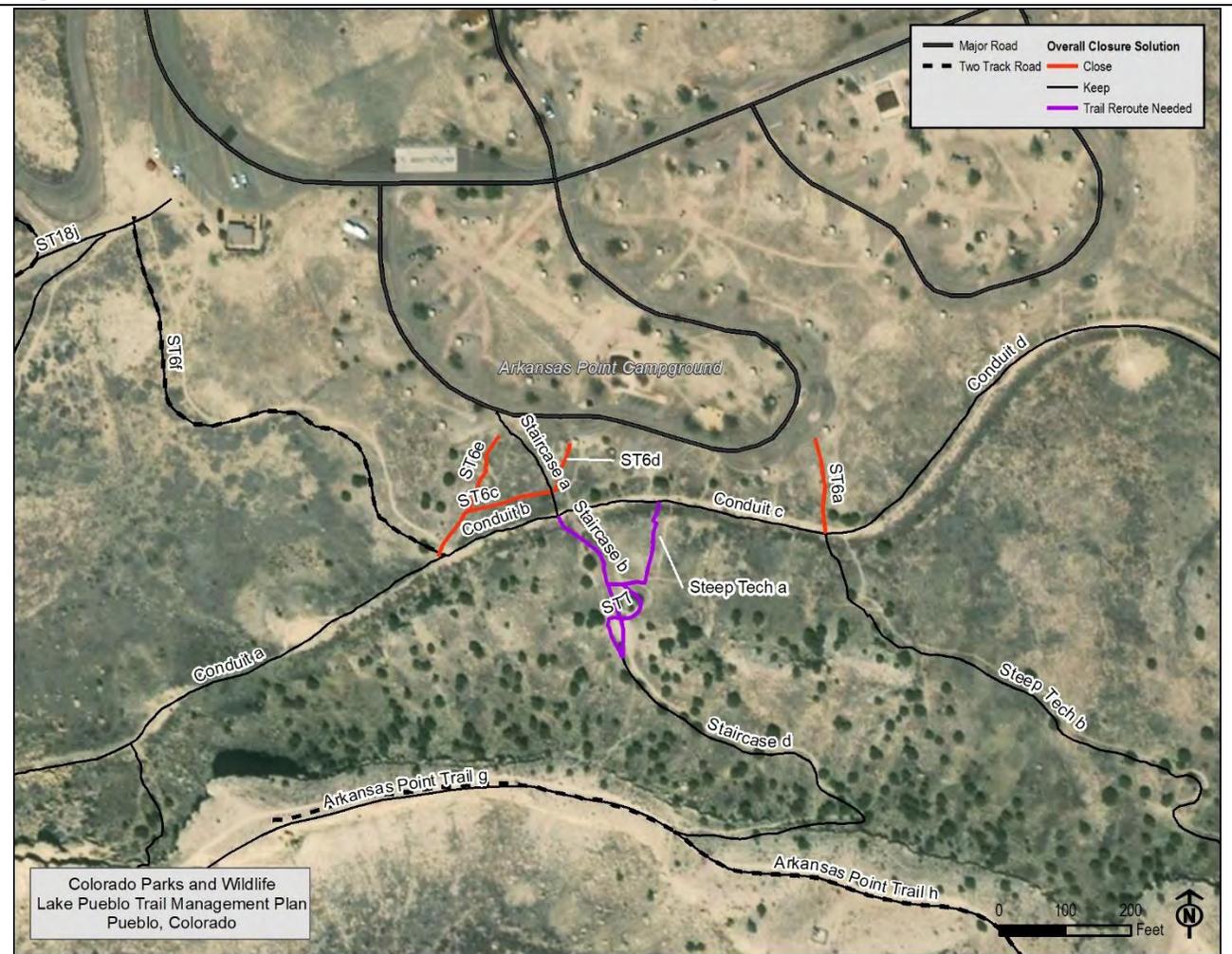
Four parking lots are proposed for development in the South Shore project area. These four parking lots currently exist, but three are on the highway right-of-way and were not legally developed. The Arkansas River Campground parking lot in the northeast portion of the South Shore currently is already formalized but needs to be expanded to accommodate the potential for an increased number of visitors. The three parking lots proposed for future development are along Highway 96 and are used regularly by visitors but need to be planned and developed so that they are not in the right-of-way. These parking lots are currently located in the Colorado Department of Transportation right of way for Highway 96. Of these three parking lots, the western-most and eastern-most lots currently serve the bulk of trail users that visit the area. Currently, the middle parking lot along Highway 96 is typically used for CPW emergency access. All three access points are planned as formalized entry points for visitors. Some, or all, of these parking lots will be considered for the future accommodation of horse trailers.

#### 5.2.5.2 Trailhead Signage and Maps

Trailhead signage and trail system maps are proposed for three of the four South Shore parking lots. A trailhead and signage are not planned for the middle parking area along Highway 96 that is currently used as CPW emergency access. Trailhead signage should be provided at the Arkansas Point Trailhead, as well as the proposed eastern and western Highway 96 parking areas to ensure recreationalists use designated trails. A trails system map is proposed for all three parking locations planned for formalization/expansion. The trails system map would contain information about the extensive trail system present and highlight the formalized trails resulting from this plan. **Figure 16** displays an example of what the trail system map could look like (**Section 5.1.5.2**).

Trailhead signage and formalized access is also proposed from the Arkansas Point Campground, near Staircase Trail and the existing restroom facility. This area is congested with several trails and a formalized access point from the campground to the Arkansas Point trails area should be created. Trails in this area (Staircase b and c, Steep Tech a, ST7) should be evaluated and a formal access trail identified to provide the best path for recreationists attempting to access the trail system. **Figure 25** displays a zoomed map of this area. Formalization of the access trails in this area will consider the history of Staircase and Steep Tech, as these are the first formally built trails in this system.

**Figure 25.** Map of access area from the Arkansas Point Campground.



### 5.2.5.3 Restrooms

One new restroom facility is planned to be added to the South Shore in the eastern “Red Gate” parking lot area. This plan proposes to make the “Red Gate” parking lot the main visitation area for access along Highway 96. Placing a restroom in this location would increase the function of this area and provide for the high volume of people expected to access the area via this location.

### 5.2.5.4 Fencing

Fencing surrounding the Arkansas Point Trail near the cultural site should be installed to prevent visitors from riding off trail in the area and potentially damaging cultural and natural resources. Fencing along the westernmost edge of the Voodoo Loop area is also proposed to deter further expansion of undesignated trails into the adjacent SWA property.

#### 5.2.5.5 Bridges

Two bridges are proposed to improve access and protect resource values. One bridge is proposed along Highway 96, near the western parking lot so that recreationists do not need to trail along the highway. The second bridge is located on Voodoo Trail f and would cross through Rock Creek, so that recreationists do not need to cross the drainage.

#### 5.2.5.6 Pay Stations

A self-service pay station/kiosk (iron ranger) is planned for the “Red Gate” parking lot and the proposed western Highway 96 trailhead. Currently, no pay station is available unless you enter the park from the main south park entrance. Colorado is seeing unprecedented population increases, and LPSP is estimated to receive over two million visitors a year. As the park becomes even more popular, it is in CPW’s best interest to manage and control access to the South Shore area by constructing iron rangers in these locations. **Figure 26** shows an example of an iron ranger pay station.

**Figure 26.** Example of an “iron ranger” pay station that should be installed in LPSP in the South Shore and COL areas.

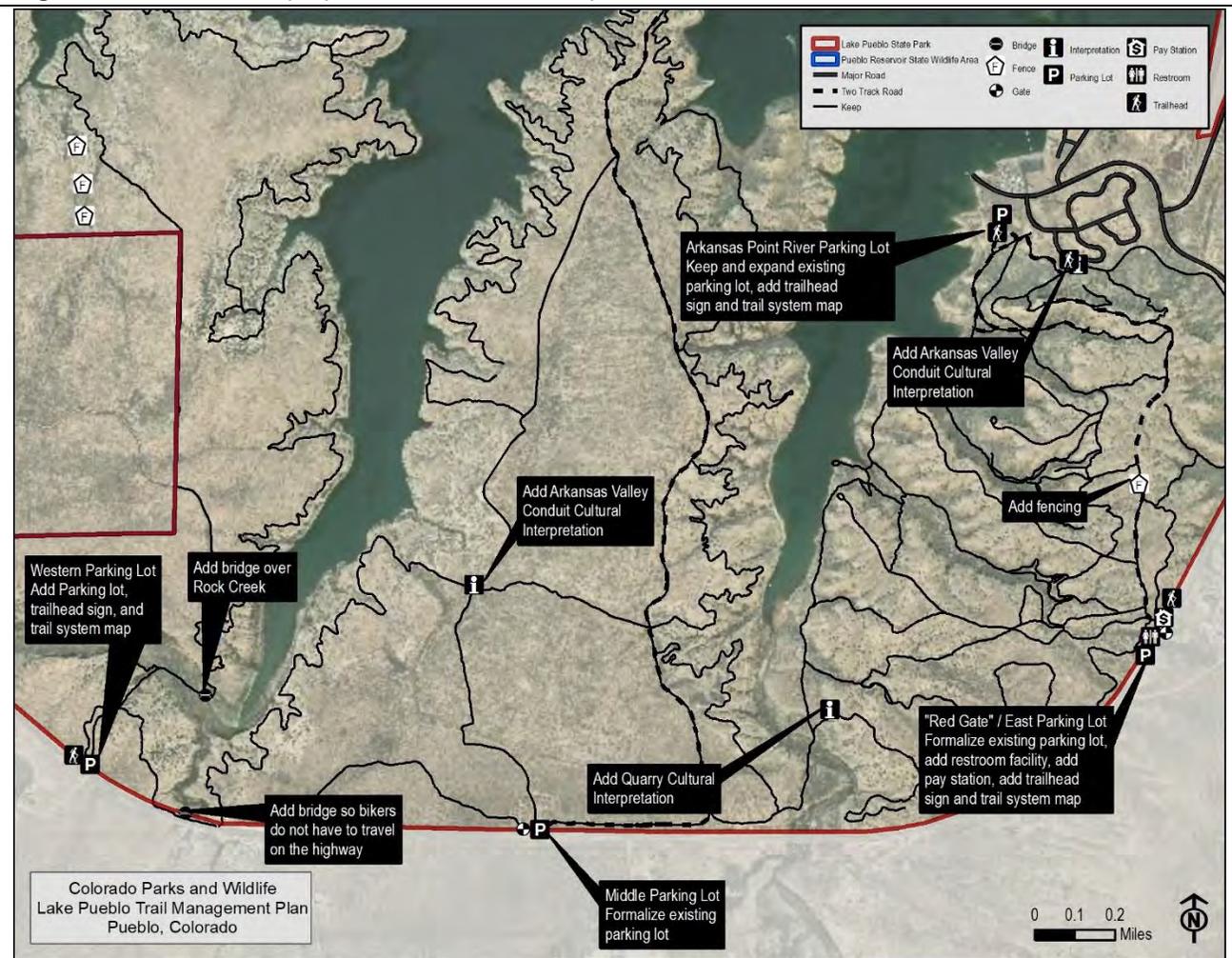


*Photo Credit: CPW*

#### 5.2.5.7 Interpretation

Three interpretation features are planned for the South Shore Trails area to highlight the important cultural resources present. Site one is planned for the south western portion of the project area, east of Rock Creek, where Pronghorn, Voodoo Trail a, and Outer Limits d meet. This site will provide interpretation on the Arkansas Valley Conduit, which runs through the area. The second site will be located near the Arkansas Point Campground Trailhead and will also provide information on the Arkansas Valley Conduit. Interpretive signs should explain the significance, engineering, and construction process of the Arkansas Valley Conduit. The last site is located on Cuatro Cinco f and will provide information on the historic quarry at this location.

**Figure 27.** South Shore proposed infrastructure map.



### 5.3 Paved Trails Analysis

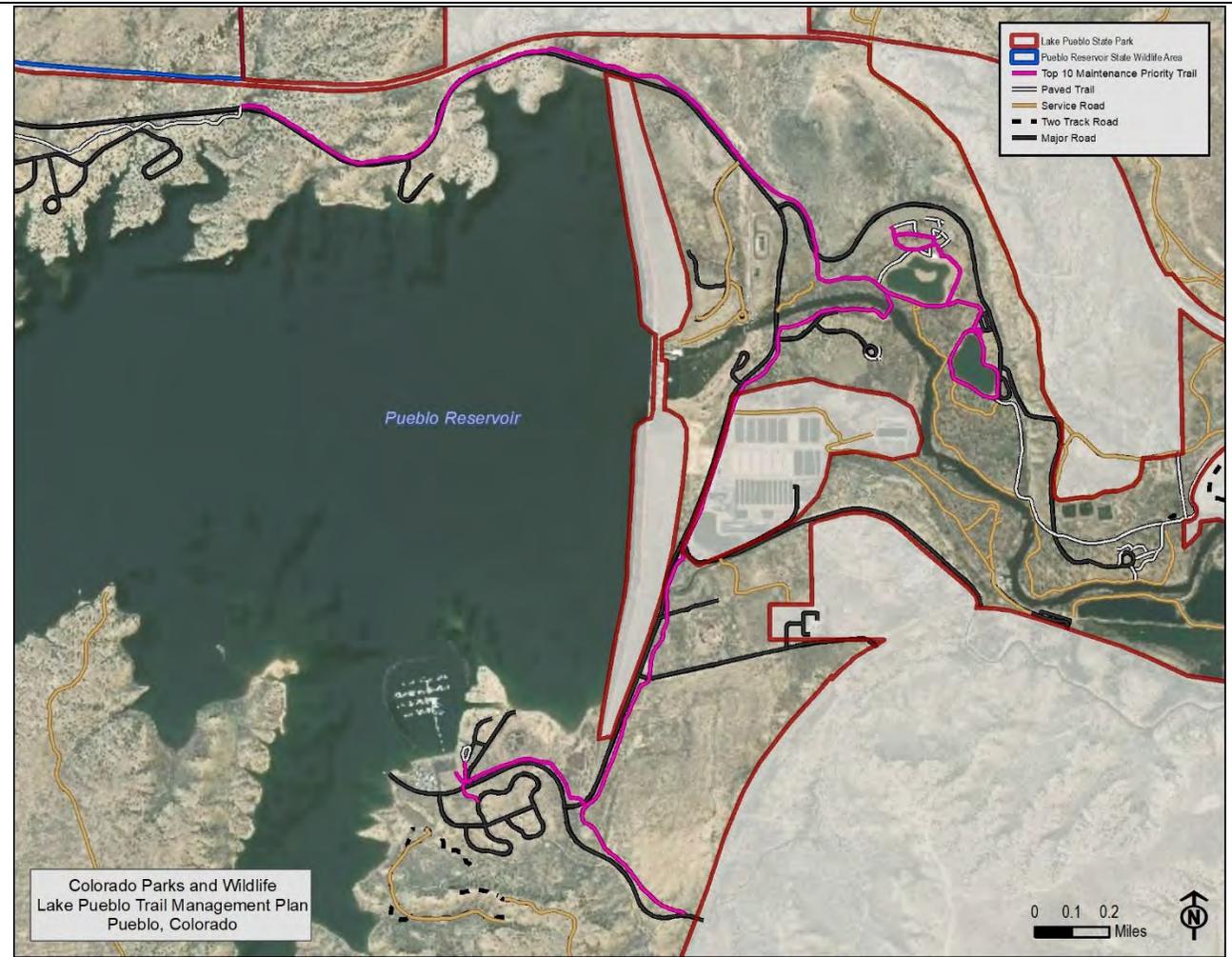
#### 5.3.1 Trail Maintenance

Trail maintenance issues were ranked according to the methods outlined in **Section 3.4.3.1**. Trail maintenance is required due to trail condition problems and other problems identified such as vegetation encroachment. No trails in the Paved Trails project area were recommended to be closed as a result of the analysis. Therefore, all trails are included in the maintenance ranking system developed. Trails were ranked for maintenance actions and the full list of maintenance priorities can be viewed in **Table 22**. **Figure 28** below provides the top 10 trails requiring maintenance in these three categories and **Figure 29** displays a map of the top 10 trails needing maintenance according to the overall trail maintenance rank. Some of the trails resulted in the same maintenance score, which then resulted in the same maintenance rank. Therefore, duplicate ranks can be seen in the list. In these situations, any of the trails with the same maintenance rank may be chosen for priority. **Map 5.25** displays the top ten trail maintenance priorities in more detail

**Figure 28.** Top 10 Paved Trails needing maintenance list.

Rank Number	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
1	Pueblo Reservoir Trail h	PT2a	PT7a
2	PT2a PT1b	PT1b	Pueblo Reservoir Trail e
3	PT3b	Pueblo Reservoir Trail c	PT3b Pueblo Reservoir Trail h
4	Pueblo Reservoir Trail d	PT3b	PT3a
5	Pueblo Reservoir Trail c	Pueblo Reservoir Trail f	PT1b
6	PT7a Pueblo Reservoir Trail e	Pueblo Reservoir Trail d	PT2a
7	Pueblo Reservoir Trail i	PT7a	Pueblo Reservoir Trail i
8	PT3a	Pueblo Reservoir Trail i	Pueblo Reservoir Trail d
9	Pueblo Reservoir Trail f	Pueblo Reservoir Trail g	Pueblo Reservoir Trail c
10	Pueblo Reservoir Trail g	Pueblo Reservoir Trail h	Pueblo Reservoir Trail g

**Figure 29.** Top 10 overall trail maintenance needs in the Paved Trails Area map.



### 5.3.2 Infrastructure Needs

#### 5.3.2.1 ADA Signage

Currently, several miles of trails in the paved trails area are considered ADA accessible. Signage displaying ADA access should be established at the beginning of trails. Trail signage must display the following information (United States Access Board 2014):

1. Length of the trail or trail segment;
2. Surface type;
3. Typical and minimum tread width;
4. Typical and maximum running slope; and
5. Typical and maximum cross slope.

**Map 5.26** displays the paved trails with slopes greater than 5 percent.

## 5.4 Chain of Lakes Trail Plan

### 5.4.1 Proposed Trails

Of the 8.5 miles of trails and four miles of service roads, a total of 9.2 miles are proposed to be official trails in the COL project area. The proposed trail system was created from existing social trails and service roads present in COL. These trails were chosen due to their ability to provide the best access to water features, other popular features (i.e. the Nature Center), and connection to paved trails such as the City's Arkansas River Trail. Trails were not proposed to cross through the area previously known as the Litvak Property to honor the previous owner's will that no trails would be built in the area. Additionally, this area contains a heron rookery that, if it is actively used by birds, should not be disturbed by trail users. **Figure 30** displays the proposed new trail system for the COL area, with more details provided on **Map 5.27**.

### 5.4.2 Park Infrastructure

The COL project area will require the addition of several features to ensure the proposed trail system is functional. All recommended infrastructure additions can be seen on **Map 5.27**.

#### 5.4.2.1 Parking Lots

Two parking lots are proposed for development in the COL project area. Both parking lots already exist but need to be formalized. The first parking lot is located near Pond 2 and the second is located near Pond 4. The lot near Pond 2 is already heavily utilized by recreationalists for access to the area. The lot near Pond 4 is also utilized currently but is planned to be the main lot for the area in the future.

#### 5.4.2.2 Trailhead Signage and Maps

Trailhead signage and trail system maps are proposed for the two parking lots. Trailhead signage should be provided at both parking lots to ensure recreationalists use designated trails. A trails system map is only proposed for the parking lot near Pond 4, as it is proposed to be a large lot and more people are expected to use the area. The trails system map would contain information about the extensive trail system present and highlight the formalized trails resulting from this plan. An example map can be seen in **Figure 16 (Section 5.1.5.2)**, from Highline Lake Park.

#### 5.4.2.3 Restrooms

One restroom facility will be added to the COL in the Pond 4 parking lot area. The plan is to make the Pond 4 parking lot the main visitation area. Therefore, placing a restroom in this location would increase the functioning of this area and provide for the high volume of people expected to visit the area. One restroom currently exists on the north side of the Arkansas River across from Pond 2 parking in the Osprey Picnic area, but visitors must cross the river via the Valco Bridge to access it.

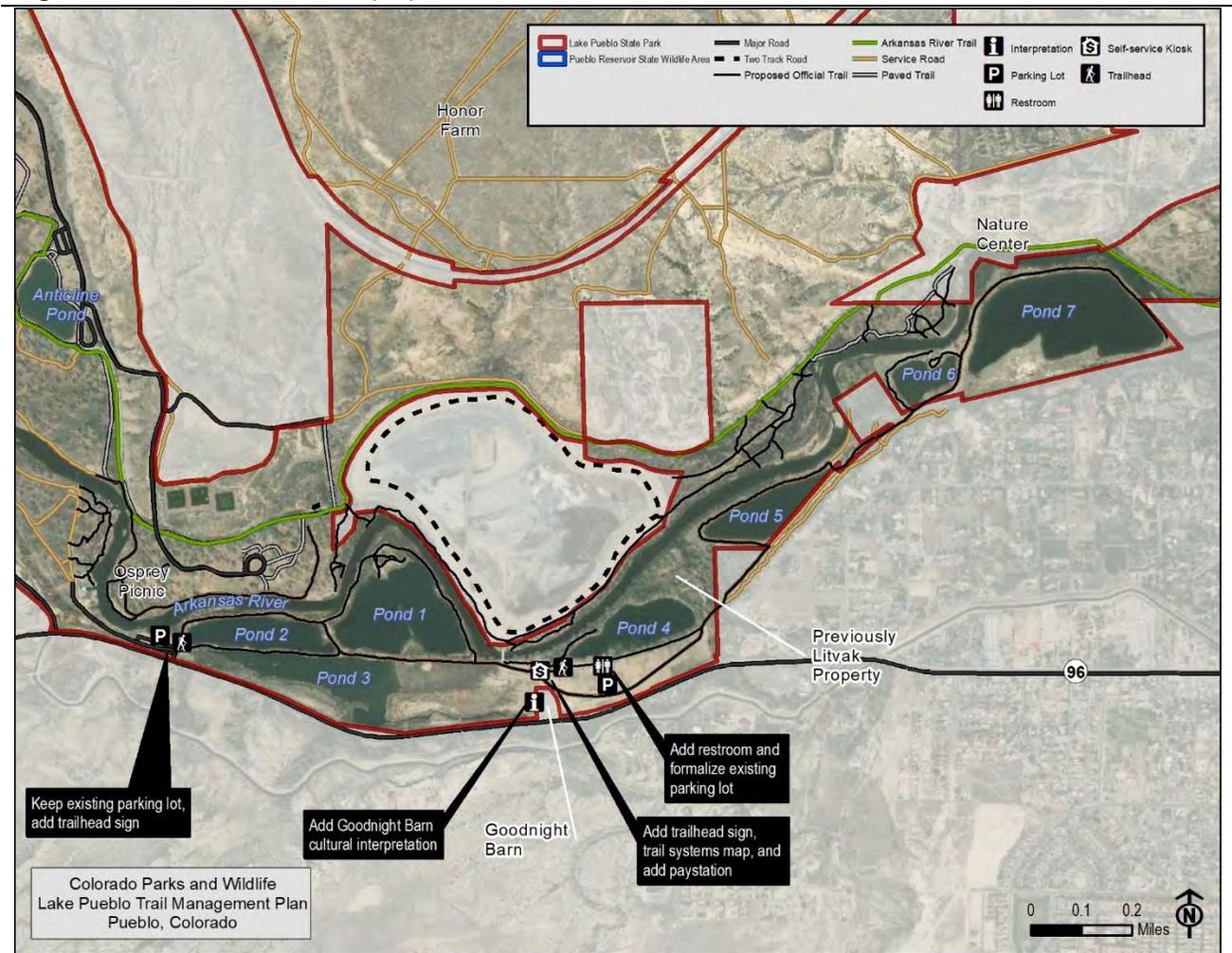
#### 5.4.2.4 Pay Stations

A self-service pay station/kiosk is planned for the Pond 4 parking lot. Currently, no pay station is present unless you enter the park from the main entrance, west of COL. Colorado is seeing unprecedented population increases, and LPSP is estimated to receive over 2 million visitors a year. As the park becomes even more popular, it is in CPW's best interest to manage and control access to the COL area by constructing iron rangers in this area for recreationalists only visiting the COL area. **Figure 26** shows an example of an iron ranger pay station (**Section 5.2.5.6**).

### 5.4.2.5 Interpretation

An interpretation feature is planned for the eastern end of the parking lot at Pond 4, adjacent to the Goodnight Barn. The Goodnight Barn is a historic structure and is a large feature visible by many park visitors. Although it is not located on LPSP property, visitors are still able to see the structure and are often curious about it. Coordination with the City of Pueblo and Goodnight Barn Historic Preservation Committee should occur to prepare an interpretive exhibit on LPSP property.

**Figure 30.** Chain of Lakes area proposed infrastructure and trails.



## 6.0 Conclusions and Future Recommendations

### 6.1 Natural and Cultural Resource Monitoring and Management Recommendations

#### 6.1.1 Rare Plants and Communities

- Existing trails should be rerouted around sensitive plant communities.

- ▶ The implementation of a long-term monitoring program for rare plants and plant communities is recommended by the Lake Pueblo Stewardship Plan (CPW 2017b). Mapping the location and extent of rare plants/communities every year could be performed by Lake Pueblo's volunteer rare plant monitors to determine if additional trail reroutes or seasonal closures are necessary. Monitoring protocols can be provided by the CPW Resource Stewardship Program or Natural Areas Program.
- ▶ Regular management of invasive plant species should be conducted along trails. The local trail community should be asked to assist with weed removal. The Lake Pueblo Weed Management Plan (CPW 2012) (CPW 2012) indicates which species can be hand pulled as well as identifying other methods for invasive species control. Areas where trails have been closed or rerouted must be reclaimed using local native plant species. Revegetation with seeds collected in the surrounding areas of the park will increase the survivorship of the resulting plants. Seed collection is a volunteer project that the local trail community can support. Best management practices (BMPs) for trail revegetation are provided in (**Appendix F**).

### 6.1.2 Sensitive Wildlife Species

#### **Riparian Shrubland Bird Habitat**

- ▶ The implementation of a long-term monitoring program for riparian vegetation health and extent is recommended by the Lake Pueblo Stewardship Plan (CPW 2017b). The Resource Stewardship Program will map the vegetation at the park every ten to 15 years. Volunteer monitoring efforts will be necessary to provide information useful for adaptive management of this important vegetation community.
- ▶ Trail segments that intersect with or are within 75 meters (Miller et al. 1998) of Riparian Shrubland songbird habitat should be rerouted wherever possible to maximize the acreage of this most productive wildlife habitat.
- ▶ All dogs should always be leashed (per C.R.S. 33-15-102(1) #100-b.16) and their waste picked up (per C.R.S. 33-15-102(1) #100-b.19). During raptor and songbird breeding season some trails/areas may need to be closed.

#### **Sensitive Wildlife Species**

- ▶ The implementation of a long-term monitoring program for rare animal locations is recommended by the Lake Pueblo Stewardship Plan (CPW 2017b). Regular avian and herptile surveys performed by volunteers can be done at little to no cost through partnerships with local interest groups.
- ▶ Trails should be placed to avoid south or southeast facing shale slopes, and riparian shrublands to protect habitat for the triploid checkered whiptail.
- ▶ Trails should avoid intersecting riparian shrubland to protect yellow-billed cuckoo habitat.
- ▶ Trails should avoid crossing through wetlands to protect habitat for amphibians, including species like the rare northern leopard frog.

#### **Raptor Species**

- ▶ Park Management should work with CPW's Resource Stewardship Program and Lake Pueblo's volunteer raptor monitoring team throughout the year to determine where active raptor nests are located.

- ▶ Buffers may need to be placed around active raptor nests during the nesting period. These spatial and temporal buffers are based on the species occupying the active nests. Considerations of species sensitivity, line of sight from a trail to a nest, and elevation above/below the nest are made through collaboration with Resource Stewardship and other CPW biologists to reduce the size of buffers based upon the local topography and the individual species present to minimize the effects of temporary closures on recreation access.
- ▶ Trails that are impacted by an active buffer may need to be closed temporarily while nests are active to protect raptors from disturbance to enable maximum breeding success and to comply with the Migratory Bird Treaty Act and other bird conservation policies
- ▶ Seasonal closure signs should be posted at the trailheads of affected trails. The Resource Stewardship Program can often lend appropriate signage and outreach messaging to closures.

### 1.1.1 Paleontological Resources

- ▶ The implementation of a long-term monitoring program of sensitive geological/paleontological strata for erosion events is recommended by the Lake Pueblo Stewardship Plan (CPW 2017b).
- ▶ Excavation and trail construction should be avoided these formations. The number of trails that cut perpendicular to this layer should be minimized. Trails that run parallel to this layer may need rerouting to avoid erosion.
- ▶ Any ground disturbance of layers containing sensitive paleontological resources should be overseen by accredited paleontologist.
- ▶ Outcrops should be protected from vandalism and unauthorized fossil collecting by routing trails away from accessible areas and enforcing regulations prohibiting off trail use.
- ▶ Educational outreach and signs are needed to explain to Park visitors that fossil collecting is illegal and does irreparable damage to the scientific value of this nonrenewable resource.

### 6.1.3 Cultural Resources

- ▶ All trails within 100 feet of a culturally significant/eligible site should be closed or rerouted outside this 100-foot buffer to protect the site. Trails that cross or run along the Arkansas Valley Conduit (South Shore) may be an exception since they hold a high value for education and interpretation.
- ▶ Trails within 100 feet of culturally significant/eligible sites should be regularly monitored to assess continued impact on the sites. This can be done by utilizing the members of the Colorado Archaeological Society (CAS). CAS in collaboration with the Office of the State Archaeologist of Colorado (OSAC) is in the process of developing a Site Stewardship program in which trained volunteers are employed to conduct monitoring activities such as the ones recommended here. The Resource Stewardship Office should be contacted to help set this up. It should be noted that these monitoring activities are different from the monitoring activities that a certified archaeologist permitted by Reclamation would oversee during ground disturbing projects.
- ▶ An archaeological monitor (not CAS) needs to be present for any ground disturbing trail work that is conducted within a High Sensitivity Zone.

- ▶ Any trail crossings of the Arkansas Valley Conduit need to be constructed so that people are safe and impact on the site is minimized (South Shore).
- ▶ Educational signs are needed: to inform the public that cultural resources are protected under state and federal laws including: the Antiquities Act, Archaeological Resources Protection Act of 1979, the National Historic Preservation Act- Section 106 Compliance, the Native American Graves Protection and Repatriation Act, as well as Colorado’s Historical, Prehistorical, And Archaeological Resources Act (§ CRS 24-80-401-411 and 24-80 Part 4 (4-401, 24-80-403 – 24-80-411) and Part 13 (24-80-1302 24-80-1303, and 24-80-1305). Outreach materials should also convey the message that artifacts are a non-renewable resource and collecting artifacts can eliminate the scientific value of an archaeological site and is illegal on federal land without a permit from Reclamation.
- ▶ Designating and maintaining official trails, providing land or wood bridges to cross the canal, as well as providing interpretive signage that discusses the history of the resource, may help to reduce the impact on the “Officially Eligible” site and minimize safety hazards in the area. Periodic monitoring of these areas is recommended to determine if continued activities in these areas are exposing and/or exposing the segments.
- ▶ Reclamation should be consulted regarding the most appropriate ways to close and revegetate these areas; this may include gates, particularly on the Arkansas Point trail. Also, periodic photo monitoring of the area may be necessary to ensure that people are staying on the newly designated trails.

## 6.2 Other Trail Recommendations

### 6.2.1 Trail Construction

- ▶ Slope the width of the tread and use water diversion structures to keep water off the trail and reduce erosion.
- ▶ Best Management Practices for trail construction, maintenance, and closures should be followed. Examples are provided in **Appendix F**.

### 6.2.2 Safety

- ▶ Construction of bridges, ramps, retaining walls, and steps should be designed by professional engineers and approved by CPW trail coordinators and/or development professionals to ensure that new trail infrastructure is stable and properly constructed to provide no additional risk to trail users.
- ▶ Place ADA signage on appropriate trails so that visitors with disabilities may safely travel on appropriate trails within the park. Assess opportunities for ADA accessibility on natural surface trails.
- ▶ It is desirable that the maximum grade of the trail tread should not exceed 12 percent and the average maximum grade of the trail should not exceed eight percent.

### 6.2.3 Usage

- ▶ All dogs must always be leashed (per C.R.S. 33-15-102(1) #100-b.16) and their waste picked up (per C.R.S. 33-15-102(1) #100-b.19).

- ▶ Designate trail uses such as: multi-use, no mountain bikes, no equestrian, no dogs based upon trail construction design and route alignment to identify the safest and most appropriate uses.
- ▶ The goal of this plan is to have as many trails designated as multiple use trails as possible.

#### **6.2.4 Proposed New Signage and Signage Improvements**

- ▶ “Stay on Trail” signs to discourage the creation of more social trails, and in sensitive wildlife areas like riparian songbird buffers. It is especially important to place this signage in areas that are conducive to off-trail use.
- ▶ Trailhead signs indicating permitted uses (multi-use, bikes, hikers, horses, dogs, etc.).
- ▶ Directional signs and trail system map at main trailheads and in other strategic locations as dictated by trail routes, use, and to ease navigation of the trail system
- ▶ Seasonal closure signs and closed trail maps at the heads of closed trails and place maps of trail closures at all main trailheads and access points.
- ▶ Trail courtesy and user etiquette signs for multi-use trails.
- ▶ Implement signage for ADA accessible trails so visitors are aware of what trails may be used for visitors with disabilities.

### **6.3 North Shore Trails Area**

#### **6.3.1 Conclusions**

The North Shore Trails area consists of 15 miles of previously unmapped social trails. Of these trails, 2.9 miles of trail are recommended for closure and 0.1 miles of trails are recommended for addition. This results in a total of 12.2 miles of trail being available, essentially keeping 81 percent of trail mileage on the North Shore.

Many trails in the area of interest appear to be shoreline access routes for fishing and other activities. We identify formalization of shoreline access routes. Multiple social trails appear to be created by residents of the adjacent neighborhood accessing the SWA by crossing the railroad tracks between the SWA and the neighborhood. These routes should be closed in the interest of public safety, trespass, and liability. There is a significant amount of trash scattered around the north shore area, and there is considerable damage from erosion and unregulated recreation. Substantial effort needs to be invested into remediation and restoration of the SWA. We are confident that the local community, including the adjacent neighborhood, can be successfully engaged in cleanup efforts.

The sensitive resource analysis was completed using the best available data and aerial maps of the project area. However, the full extent of some resources is unknown. Long-term monitoring of fossils, rare plants and plant communities, high quality vegetation, riparian vegetation, rare wildlife, high-sensitivity cultural areas, and raptor nests is recommended by the Lake Pueblo Stewardship Plan (CPW 2017b). If the locations of sensitive species change or if the existence of trails contributes to the degradation of the park’s sensitive natural and cultural resources, then further management of trails through reroutes or closures (permanent or seasonal) may be necessary in the future to conserve significant resources.

Trail erosion and needed infrastructure in the form of bridges appears to be the most abundant and costly problems in the North Shore trail system. The greatest density of problems occurs on the northwestern the central, and the eastern sides of the trail system. The northwestern side is near the railroad tracks, where people access the SWA illegally. This issue desperately needs to be addressed for safety reasons, continuous trail degradation, and for income for the park. The other two areas are primarily located in high-use areas with erosive soils, resulting in repeating erosion issues. As this system was created by users, attention to trail construction and route finding were not always as scrutinized as with a trail created by someone with trail expertise. Rerouting and trail maintenance are needed for the future success of this area. Efforts to close redundant social trails, other select social trails, and to encourage staying on the trail need to be undertaken across the trail system.

The SWA portion of the study area in this plan is currently managed by CPW Area 11. Due to the change in use within the SWA over the years, there has been some discussion to convert the northeast portion of the SWA to park managed property with more of a recreation access focus. The recommendations in this plan would only be acted upon if the management of this portion of the SWA was to change from wildlife to park use.

### 6.3.2 *Future Recommendations (if Managed by LPSP)*

- ▶ Implement the permanent trail closures, seasonal trail closures, trail reroutes, and trail additions provided in **Section 5.1**.
- ▶ Add infrastructure recommendations provided in **Section 5.1.5**.
- ▶ Address maintenance issues in the priority order provided in this report (**Table 17**).
- ▶ Consider relocating the inactive osprey platforms to areas where a 400-foot buffer of the nests will not intersect with a trail. This will reduce future conflicts with the trails system.
- ▶ Assess opportunities to designate or design ADA accessible trails.
- ▶ Provide names for trails that currently do not have names.
- ▶ The intent for the trails in the North Shore is that they be multi-use. However, in the future, the park needs to provide information on what trails are recommended for certain usage types (mountain biking, equestrian, hiking).
- ▶ A future analysis of trail capacity for use and special events should occur before any event planning occurs.
- ▶ Consider the future construction of the planned Nichols Pedestrian Bridge connecting the North Shore of the park to Pueblo West. This bridge would run parallel to the existing automobile bridge. The area may require additional infrastructure and the addition of this pedestrian access could create new social trails in the future. Be sure to implement preventive techniques for the area around the bridge if/when it is built.
- ▶ Potentially use the area where trails NT2a and NT2b will be closed as a designated hunting area. The area provides a large, open grassland near the reservoir that could be used for various hunting activities.

## 6.4 South Shore Trails Area

### 6.4.1 Conclusions

The South Shore Trails area consists of 53 miles of previously unmapped social trails. Of these trails, 5.1 miles of trail are recommended for closure and 0.27 miles of trails are recommended for addition. This results in a total of 48.2 miles of trail being available, essentially keeping 91 percent of trail mileage on the South Shore (**Section 5.2**). Seasonal closures due to nesting birds are only identified for 5.9 miles of 53 miles of trails in the South Shore Trails area if the raptor nests are active (11 percent of trails) (**Section 5.2.1**).

Many trails in the area of interest appear to be a result of mountain biking, equestrian, and hiking. We recommend formalization of many of the available routes to provide recreational opportunities for visitors. There is considerable damage from erosion and unregulated recreation. Formalizing trails and providing information on the official trails system will likely result in the decrease in social trail creation because users will ideally only use trails designated by CPW and Reclamation Bureau. Substantial effort needs to be invested into remediation and restoration of trails recommended for closure. We are confident that the local community and stakeholders, can be successfully engaged in future efforts.

Our sensitive resource analysis was completed using the best available data and aerial maps of the project area. However, the full extent of some of these resources is unknown. Full subsurface extent of cultural resources is also unknown. Long-term monitoring of fossils, rare plants and plant communities, high quality vegetation, riparian vegetation, rare wildlife, and raptor nests is recommended by the Lake Pueblo Stewardship Plan (CPW 2017b). If the locations of sensitive species change or if the existence of trails contributes to the degradation of the park's sensitive natural and cultural resources, then further management of trails through reroutes or closures (permanent or seasonal) may be necessary in the future to conserve significant resources.

Like the North Shore, trail erosion and needed infrastructure in the form of bridges appear to be the most abundant and costly problems in the South Shore trail system. The greatest density of problems occurs on the eastern and southern sides of the trail system. These locations are closest to the trailheads or current trail access points and likely see more use. As this system was created by users, attention to trail construction and route finding were not always as scrutinized as with a trail created by someone with trail building expertise. Rerouting and trail maintenance are needed for the future success of this area. Accordingly, permanent bridges and crossing areas did not exist for many of the trails, which resulted in the creation of multiple social trails as people use different crossing areas. Efforts to close redundant social trails, other select social trails, and to encourage staying on the trail need to be undertaken across the trail system.

### 6.4.2 Future Recommendations

- ▶ Implement the permanent trail closures, seasonal trail closures, trail reroutes, and trail additions provided in **Section 5.2**.
- ▶ Add infrastructure recommendations provided in **Section 5.2.5**.
- ▶ Address maintenance issues in the priority order provided in this report (**Table 21**).
- ▶ Create names for trails that currently do not have names.

- ▶ The intent for the trails in the South Shore is that they be multi-use. However, in the future, the park must provide information on what trails are recommended for certain usage types (mountain biking, equestrian, hiking).
- ▶ Assess opportunities to designate or design ADA accessible trails.
- ▶ A future analysis of trail capacity for use and special events should occur before any event planning occurs.

## 6.5 Paved Trails Area

### 6.5.1 Conclusions

The Paved Trails area consists of 12.6 miles of paved trails. Most service roads and two tracks were already mapped by CPW and totaled approximately 5.38 miles within the Paved Trails project area. All the trails in this area will remain open but require maintenance for deteriorating pavement. The analysis of the issues with the pavement resulted in documented 147 points and prioritizing pavement segments based on the frequency of problems and the severity of problems documented. The maintenance priority rank provided in this document will assist in addressing maintenance issues in a practical and efficient way moving forward.

### 6.5.2 Future Recommendations

- ▶ Add infrastructure recommendations provided in **Section 5.3.2**, including ADA signage for ADA approved trails. Along the paved the Arkansas River Trail, signage should be installed to indicate which portions of this trail are ADA accessible. Information about natural surface trail ADA accessibility requirements can be found in **Appendix H**.
- ▶ Address maintenance issues in the priority order provided in this report (**Table 22**).
- ▶ Create an additional “problem point” type for paved trails for future analyses. This feature type would include water flowing over a trail and then creating an erosional feature on the side of a trail that results in a surrounding height difference. For this report, erosion and surrounding height difference were both documented in these areas, but in the future, it could be considered one category.

## 6.6 Chain of Lakes Trails Plan

### 6.6.1 Conclusions

Trail mapping resulted in identifying approximately 8.5 miles of social trails directly within the COL project area. Most service roads and two tracks were already mapped by CPW and totaled approximately four miles within the COL project area. Many of the social trails are located along the Arkansas River or the ponds and numerous short social trails branch off, towards the water bodies. Official trails are not present in the COL, which drives the creation of a considerable number of social trails in the area. Of the 8.5 miles of trails and four miles of service roads, a total of 9.2 miles are proposed to be official trails in the COL project area. The COL project area will require the addition of several infrastructure features to ensure the proposed trail system is functional, so the implementation of the infrastructure recommendations is critical.

### 6.6.2 Future Recommendations

- ▶ Implement the permanent trail closures and trail additions.

- ▶ Add infrastructure recommendations provided in **Section 5.4.2**.
- ▶ Assess opportunities to designate or design ADA accessible trails.
- ▶ Create names for trails that currently do not have names.
- ▶ Currently, Ponds 1, 2, and 3 are open to the public. It is the goal of the park to have Pond 4 open by May 2019 and Pond 5 open by late summer of 2019.

## 7.0 References

- Banks PB, Bryant JV. 2007. Four-legged friend or foe? Dog walking displaces native birds from natural areas. *Biology Letters* **3**:611–613.
- Bennett KA, Zuelke EF. 1999. The effects of recreation on birds: A literature review. Delaware Natural Heritage Program, Division of Fish and Wildlife, Department of Natural Resources and Environmental Control, Smyrna, Delaware.
- Benninger MC. 1989. Trails as conduits of movement for plant species in coniferous forests of Rocky Mountain National Park, Colorado. M.S. Thesis. Miami University.
- Benninger-Truax M, Vankat JL, Schaefer RL. 1992. Trail corridors as habitat and conduits for movement of plant species in Rocky Mountain National Park, Colorado, USA. *Landscape Ecology* **6**:269–278.
- BLM. 2008. Kanab Field Office Record of Decision and Approved Resource Management Plan. Appendix 2, Attachment 2. Bureau of Land Management, Utah State Office, Salt Lake City, UT.
- BOSMP, Land Stewardship Consulting. 2013. Ecological Best Management Practices for Trail Planning and Design, Construction, Maintenance, and Closure. City of Boulder Open Space and Mountain Parks Department, Boulder, CO. Available from [https://www-static.bouldercolorado.gov/docs/Ecological\\_BMPs\\_for\\_OSMP\\_trails-1-201504241317.pdf](https://www-static.bouldercolorado.gov/docs/Ecological_BMPs_for_OSMP_trails-1-201504241317.pdf).
- Campbell JE, Gibson DJ. 2001. The effect of seeds of exotic species transported via horse dung on vegetation along trail corridors. *Plant Ecology (formerly Vegetatio)* **157**:23–35.
- Chester T. 2005. The effect of dogs on wildlife. Available from <http://tchester.org/srp/lists/dogs.html> (accessed March 25, 2016).
- CNHP. 2017. Colorado Rare Plant Guide. Available from <https://cnhp.colostate.edu/rareplants/list.asp?list=master> (accessed April 18, 2018).
- Cole DN. 1993. Trampling effects on mountain vegetation in Washington, Colorado, New Hampshire, and North Carolina. Page 56. Research Paper INT-464. USDA Forest Service, Intermountain Research Station, Ogden, UT.
- Cole DN, Spildie DR. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management*:61–71.
- Cornell Lab of Ornithology. 2016. Birds of North American Online. Available from <http://bna.birds.cornell.edu/bna> (accessed April 1, 2016).
- CPW. 2008. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. Colorado Parks and Wildlife.
- CPW. 2010. Lake Pueblo State Park Sensitive Species Survey Report. Colorado Parks and Wildlife, Denver, CO.
- CPW. 2012. Lake Pueblo State Park Weed Management Plan. Colorado Parks and Wildlife, Denver, CO.
- CPW. 2015. State Wildlife Action Plan. Colorado Parks and Wildlife. Available from [https://cpw.state.co.us/Documents/WildlifeSpecies/SWAP/CO\\_SWAP\\_MainDocOnly.pdf](https://cpw.state.co.us/Documents/WildlifeSpecies/SWAP/CO_SWAP_MainDocOnly.pdf).
- CPW. 2016. Lake Pueblo State Park Supplemental Park Management Plan. Colorado Parks and Wildlife.
- CPW. 2017a. Lake Pueblo State Park: Fact Sheet for Fiscal Year 2017. Colorado Parks and Wildlife. Available \_\_\_\_\_

- <https://cpw.state.co.us/placestogo/parks/LakePueblo/Documents/LakePuebloFactSheet.pdf> (accessed January 16, 2019).
- CPW. 2017b. Lake Pueblo State Park Resource Stewardship Plan DRAFT. Colorado Parks and Wildlife, Denver, CO.
- Dale D, Weaver T. 1974. Trampling effects on vegetation of the trail corridors of North Rocky Mountain forests. *Journal of Applied Ecology*:767–772.
- Dawson JO, Hinz PN, Gordon JC. 1974. Hiking-trail impact on Iowa stream valley forest preserves. *Iowa State Journal of Research*:329–337.
- Douglas GW, Nagy JAS, Scotter GW. 1975. Effects of human and horse trampling on natural vegetation, Waterton Lakes National Park. Page 129. Canadian Wildlife Service, Edmonton, Alberta.
- Gabrielson GW, Smith EN. 1995. Physiological responses of wildlife to disturbance. Pages 95–107 in R. L. Knight and K. J. Gutzwiller, editors. *Wildlife and Recreationists: Coexistence Through Management and Research*. Island Press, Washington, DC, USA.
- Gutzeiller KJ, Kroese EA, Anderson ST, Wilkins CA. 1997. Does human intrusion alter the seasonal timing of avian song during breeding periods? *The Auk* **114**:55–65.
- Hammerson G. 1999. *Amphibians and reptiles of Colorado* Second. University Press of Colorado/Colorado Division of Wildlife.
- Hanson R. 2000. Loving birds to death. *Audubon* **102**:18.
- Hickman S. 1990. Evidence of edge species' attraction to nature trails within deciduous forest. *Natural Areas Journal* **10**:3–5.
- Houck K, Lockley M, Green C, Caldwell M, Giese T. (n.d.). Lake Pueblo Paleontology Report.
- Johnson DH, Igl LD. 2001. Area requirements of grassland birds: a regional perspective. *The Auk* **118**:24–34.
- Johnson RG, Temple SA. 1990. Nest predation and brood parasitism of tallgrass prairie birds. *The Journal of Wildlife Management* **54**:106–111.
- Jones S. 2011. Lake Pueblo State Park 2011 Bird Survey.
- Klute DS, Ayers LW, Green MT, Howe WH, Jones SL, Shaffer JA, Sheffield SR, Zimmerman TS. 2003. Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. Biological Technical Publication BTP-R6001-2003. US Department of the Interior, Fish and Wildlife Service, Washington, DC.
- Knight RL, Cole DN. 1995. Factors that influence wildlife responses to recreationists. Pages 71–79 in R. L. Knight and K. J. Gutzwiller, editors. *Wildlife and Recreationists: Coexistence Through Management and Research*. Island Press, Washington, DC, USA.
- Knopf FL. 1985. Significance of riparian vegetation to breeding birds across an altitudinal cline. Pages 105–111 in R. R. Johnson, C. D. Ziebell, P. F. Folliot, and R. H. Hamre, editors. *Riparian ecosystems and their management: reconciling conflicting uses*. USDA Forest Service General Technical Report RM-120.
- Knopf FL, Johnson RR, Rich T, Samson FB, Szaro RC. 1988. Conservation of riparian ecosystems in the United States. *The Wilson Bulletin* **100**:272–284.
- Kotliar CB, Baker AD, Plumb G. 1999. A critical review of assumptions about the prairie dog as a keystone species. *Environmental Management* **24**:177–192.
- Lake Pueblo Raptor Monitors. 2015. Lake Pueblo Raptor Monitoring Results.
- Leung Y, Marion JL. 2000. Recreation impacts and management in wilderness: A state-of-knowledge review. RMRS-P-15-VOL-5. USDA Forest Service Proceedings.
- Marcus WA, Milner G, Maxwell B. 1998. Spotted knapweed distribution in stock camps and trails of the Selway-Bitterroot Wilderness:12.

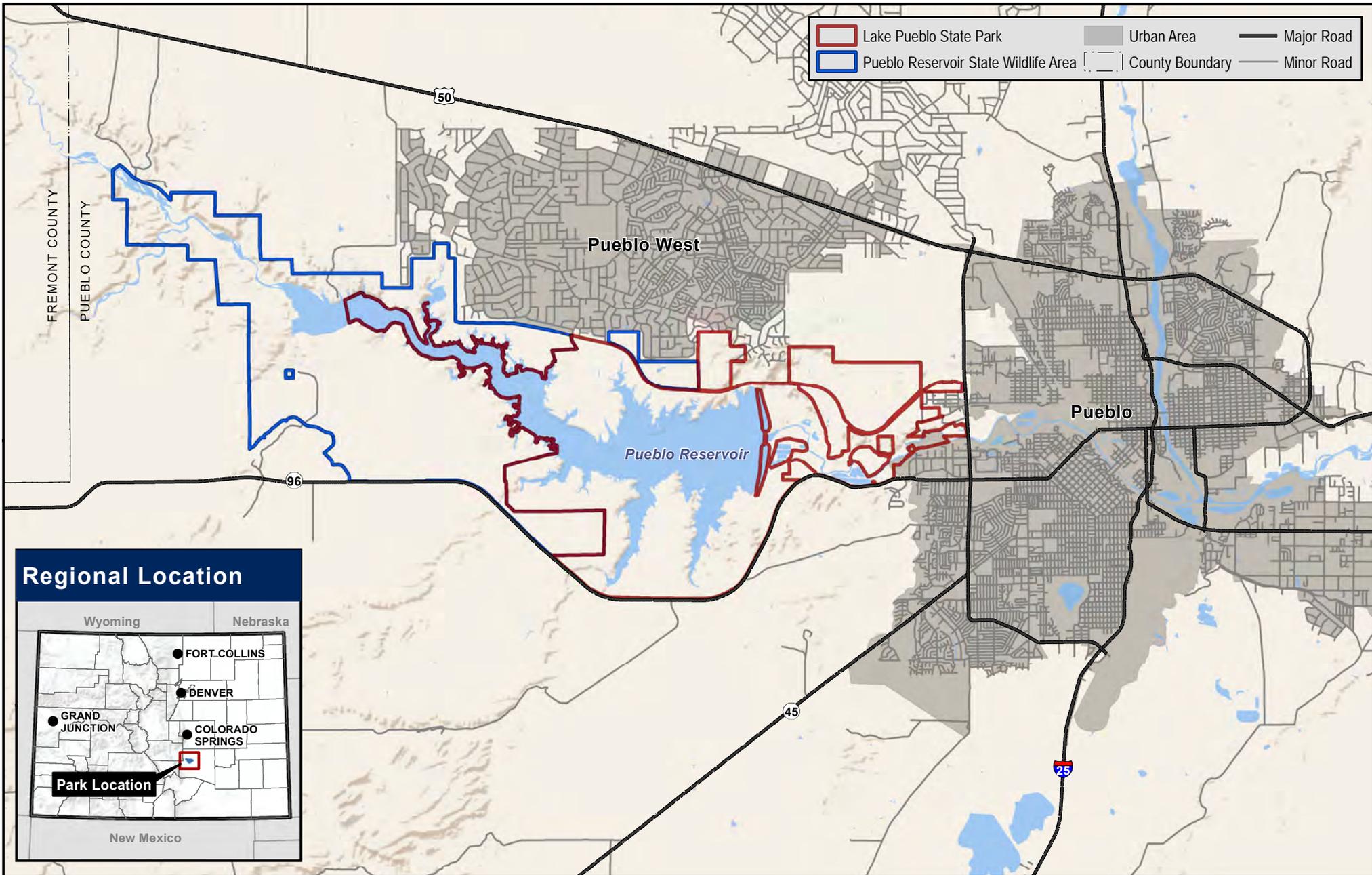
- Marion JL, Leung Y-F, Nepal SK. 2006. Monitoring Trail Conditions: New Methodological Considerations. *The George Wright Forum* **23**:14.
- Miller SG, Knight RL, Miller CK. 1998. Influence of recreational trails on breeding bird communities. *Ecological Applications* **8**:162–169.
- Monaghan P, Nager RG. 1997. Why don't birds lay more eggs? *Trends in Ecology and Evolution* **12**:270–274.
- Monz CA, Cole DN, Johnson LA, Spildie DR. 1994. Response of five native plant communities to trampling in the Winder River Range, Wyoming, USA. *Bulletin of the Ecological Society of America*:158.
- Nagy JA, Scotter GW. 1974. A quantitative assessment of the effects of human and horse trampling on natural areas, Waterton Lakes National Park. Page 145. Canadian Wildlife Service, Edmonton, Alberta.
- Patron PWC. 1994. The effect of edge on avian nest success: how strong is the evidence? *Conservation Biology* **8**:17–26.
- Pickering CM, Hill W, Newsome D, Leung Y-F. 2010. Comparing hiking, mountain biking and horse riding impacts on vegetation and soils in Australia and the United States of America. *Journal of Environmental Management* **91**:551–562.
- Potito AP, Beatty SW. 2005. Impacts of Recreation Trails on Exotic and Ruderal Species Distribution in Grassland Areas Along the Colorado Front Range. *Environmental Management* **36**:230–236.
- Randall JM. 1996. Weed control for the preservation of biological diversity **10**:370–383.
- Rich AC, Dobkins DS, Niles LJ. 1994. Defining forest fragmentation by corridor width: the influence of narrow, forest-dividing corridors on forest-nesting birds in southern New Jersey. *Conservation Biology* **8**:1109–1121.
- Richardson CT, Miller CK. 1997. Recommendations for protecting raptors from human disturbance: A review. *Wildlife Society Bulletin* **25**:634–638.
- Robinson SK. 1988. Reappraisal of the costs and benefits of habitat heterogeneity for nongame wildlife. *Transactions of the North American Wildlife and Natural Resources Conference* **53**:145–155.
- Sime CA. 1999. Domestic dogs in wildlife habitats. Pages 8.1-8.17 in G. Joslin and H. Youmans, editors. *Effects of recreation on Rocky Mountain wildlife: a review for Montana*. Committee on Effects of Recreation on Wildlife, Montana Chapter of The Wildlife Society, Helena, Montana.
- Steven R, Pickering C, Castley JG. 2011. A review of the impacts of nature based recreation on birds. *Journal of Environmental Management* **92**:2287–2294.
- Suter GW, Jones JL. 1981. Criteria for golden eagle, ferruginous hawk, and prairie falcon nest site protection. *Raptor Research* **15**:12–18.
- Tonnesen AS, Ebersole JJ. 1997. Human trampling effects on regeneration and age structures of *Pinus edulis* and *Juniperus monosperma*. *Great Basin Naturalist*:50–56.
- Tyser RW, Worley CA. 1992. Alien flora in grasslands adjacent to road and trail corridors in Glacier National Park, Montana. *Conservation Biology* **6**:253–262.
- United States Access Board. 2014. *Outdoor Developed Areas: A summary of accessibility standards for Federal outdoor developed areas*.
- USFWS. 2008. *Guidelines for Raptor Conservation in the Western US*. US Fish and Wildlife Service, Region 9.
- USFWS. 2013. *Wyoming Ecological Services. Raptors in Wyoming*. US Fish and Wildlife Service.

Verreault C. 2004. Environmental Assessment of Trails For the Responsible Management of Park Trails Gatineau Park.

Wells FH, Lauenroth WK. 2007. The Potential for Horses to Disperse Alien Plants Along Recreational Trails. *Rangeland Ecology & Management* **60**:574–577.

## Appendix A: Maps

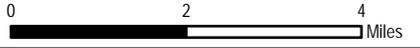
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## Lake Pueblo State Park Vicinity Map



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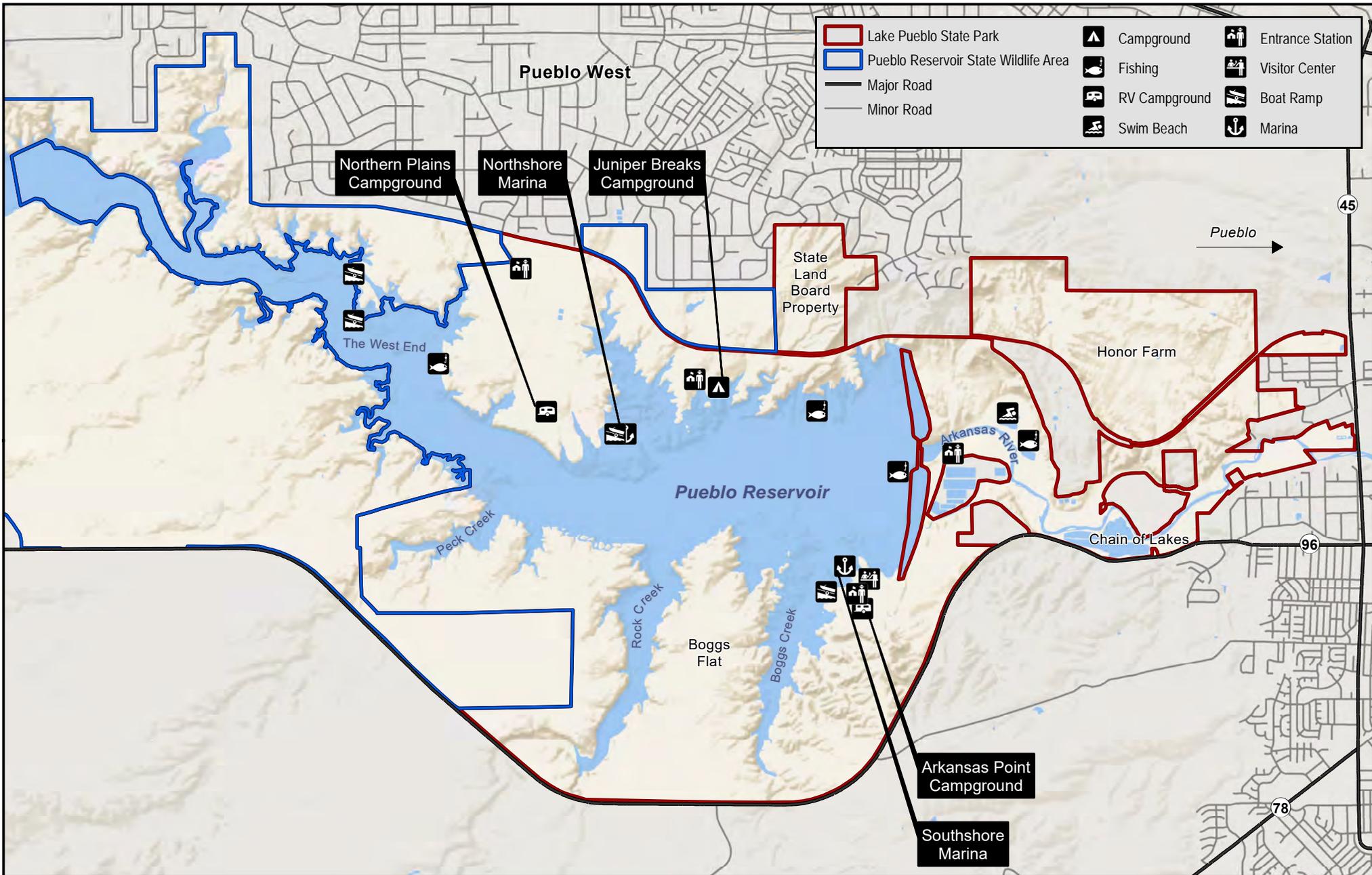
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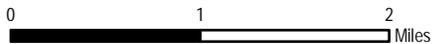
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# Lake Pueblo State Park Overview Map



MAP 1.2



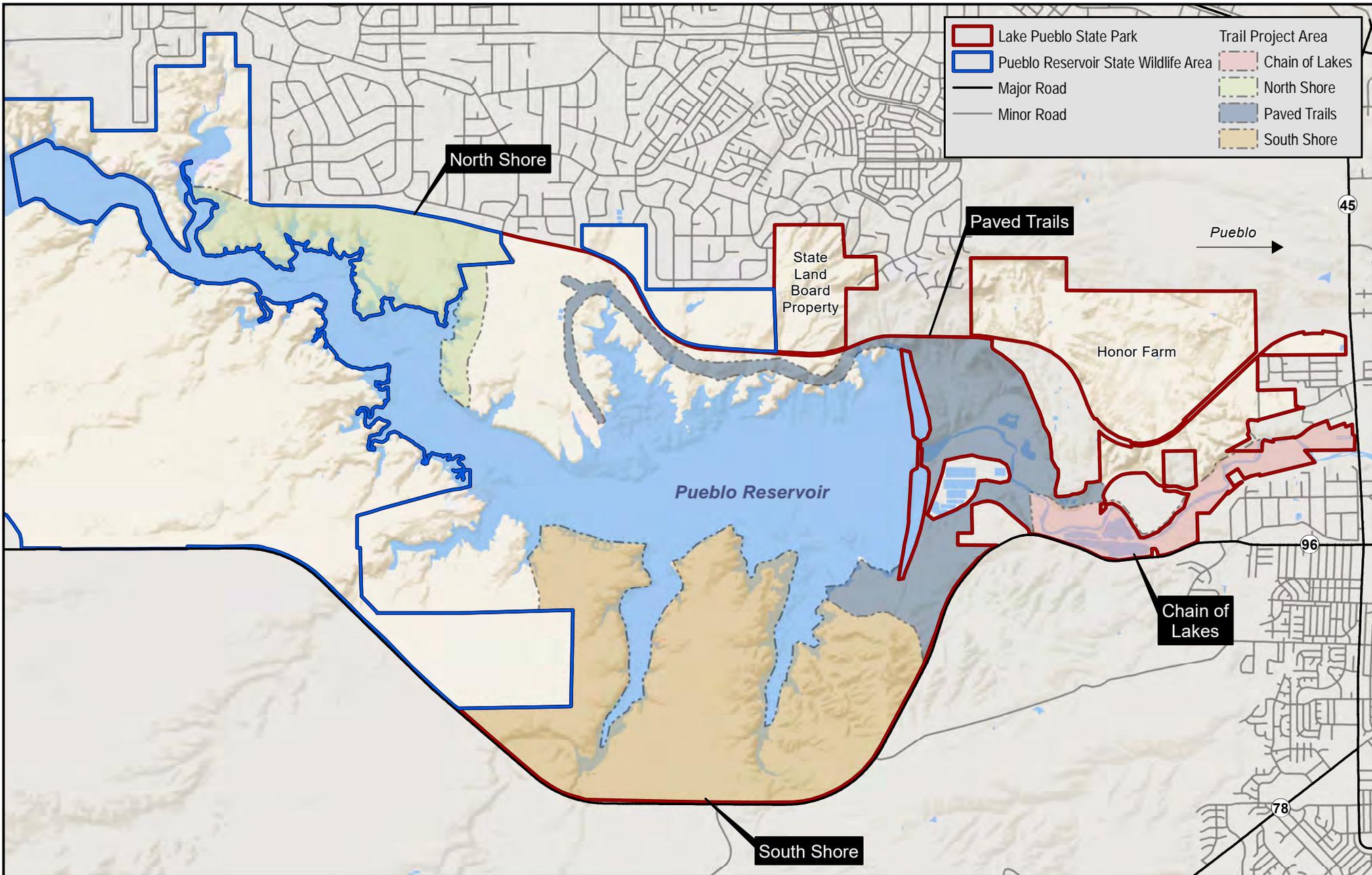
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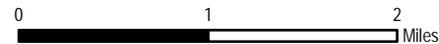
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# Trail Project Areas Map



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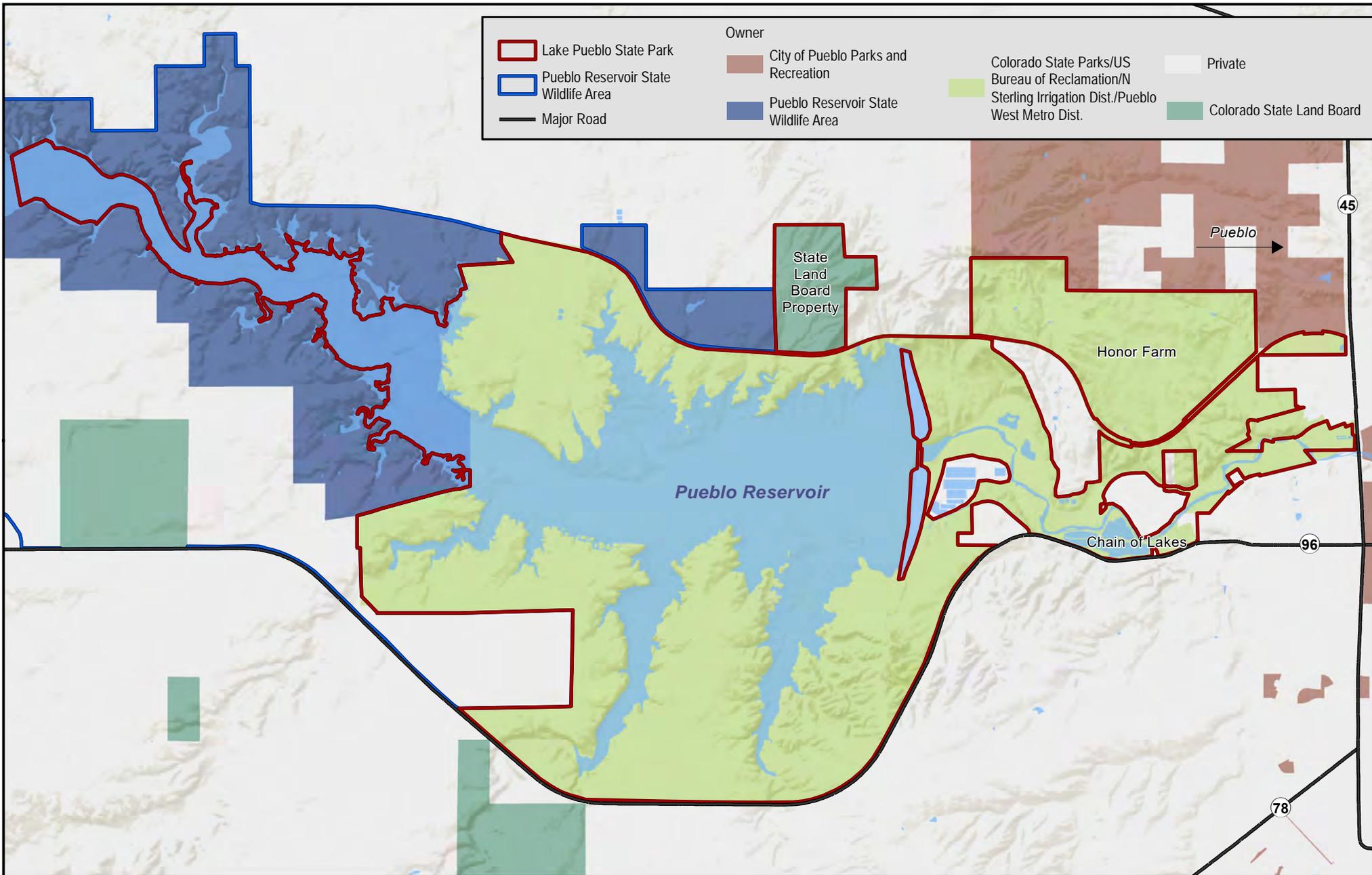
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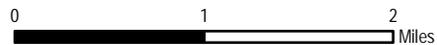
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# Land Ownership Map



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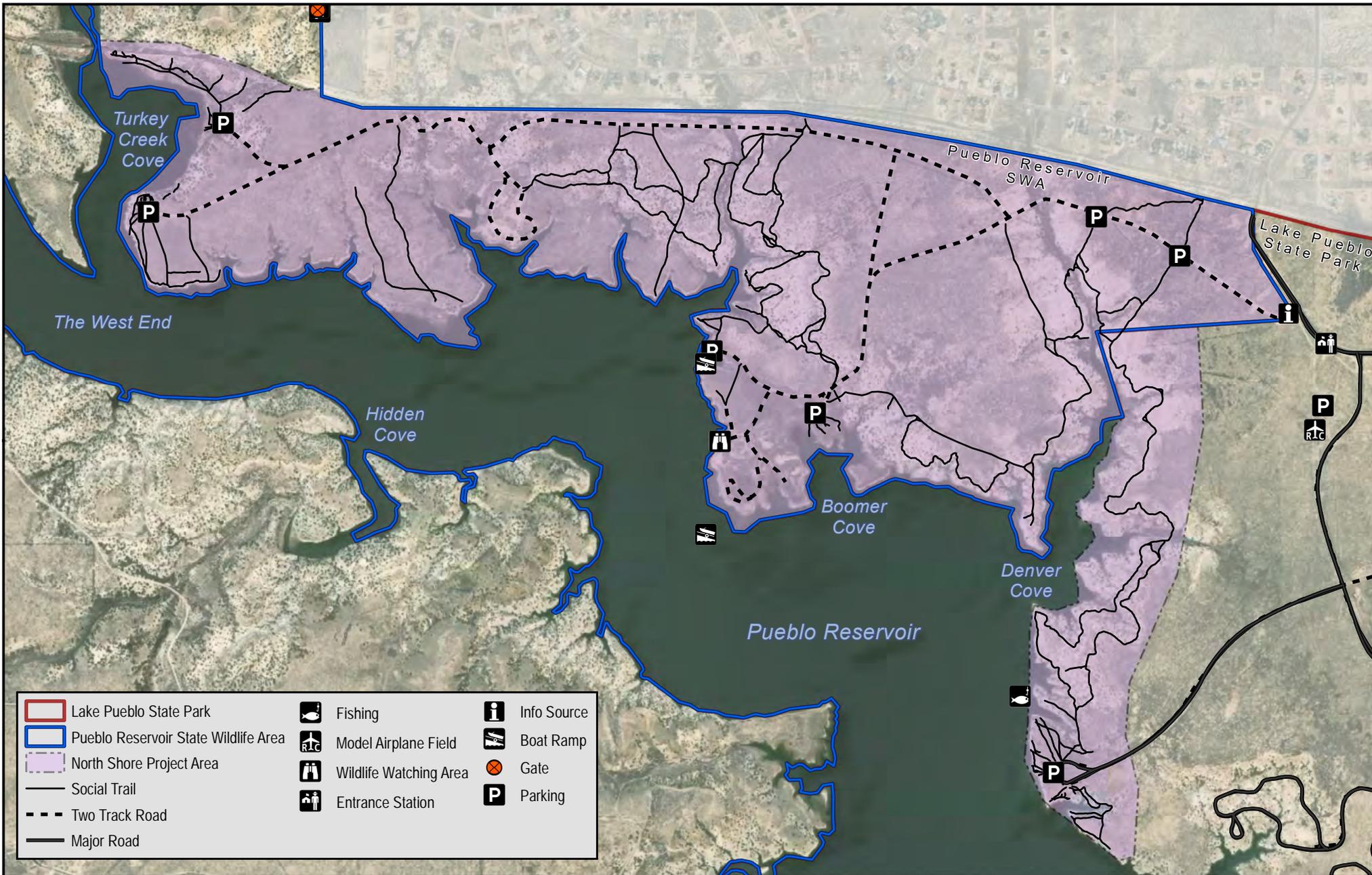
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# North Shore Overview Map



MAP 1.5



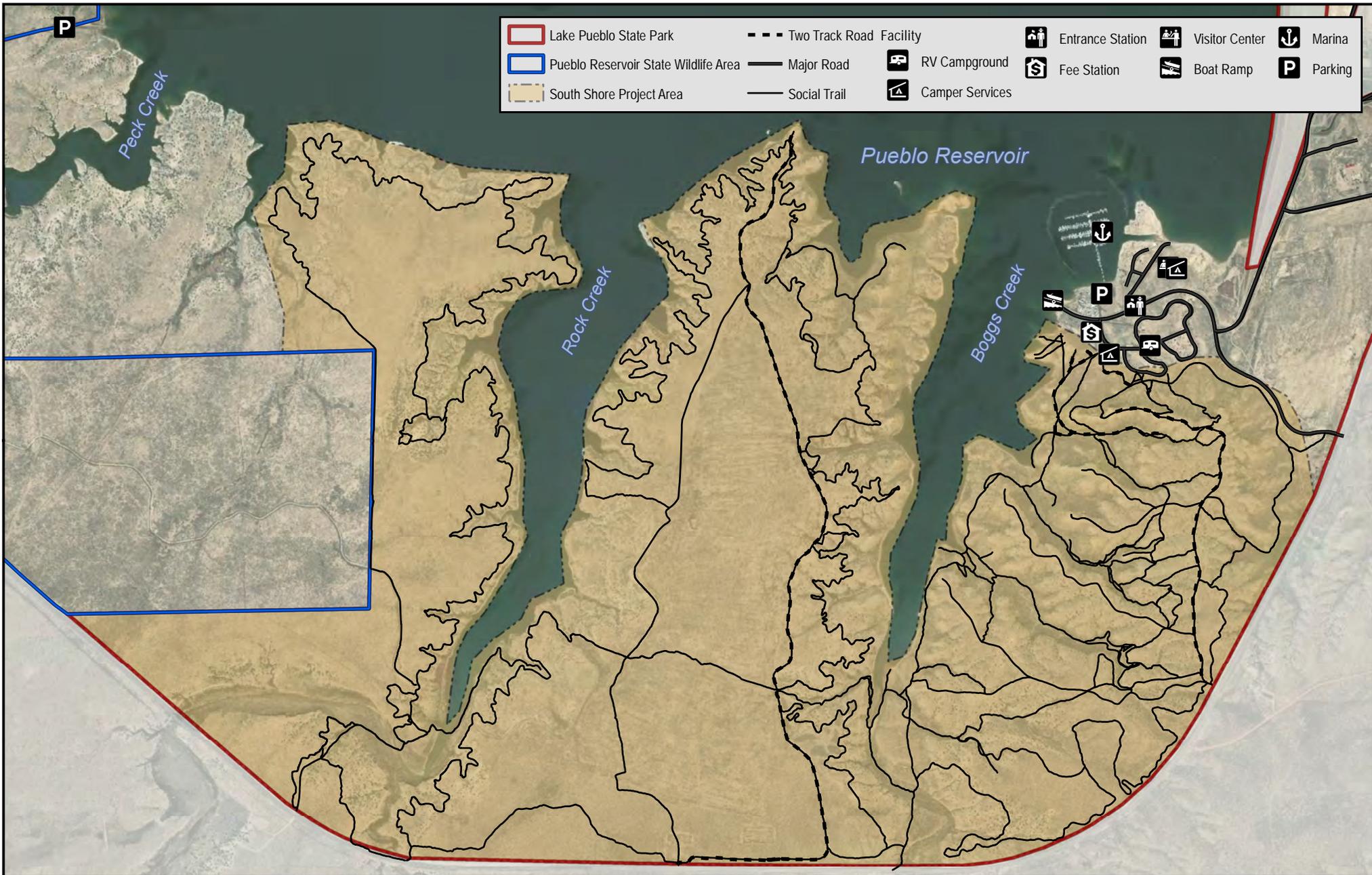
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## South Shore Overview Map



MAP 1.6



0 0.25 0.5  
Miles

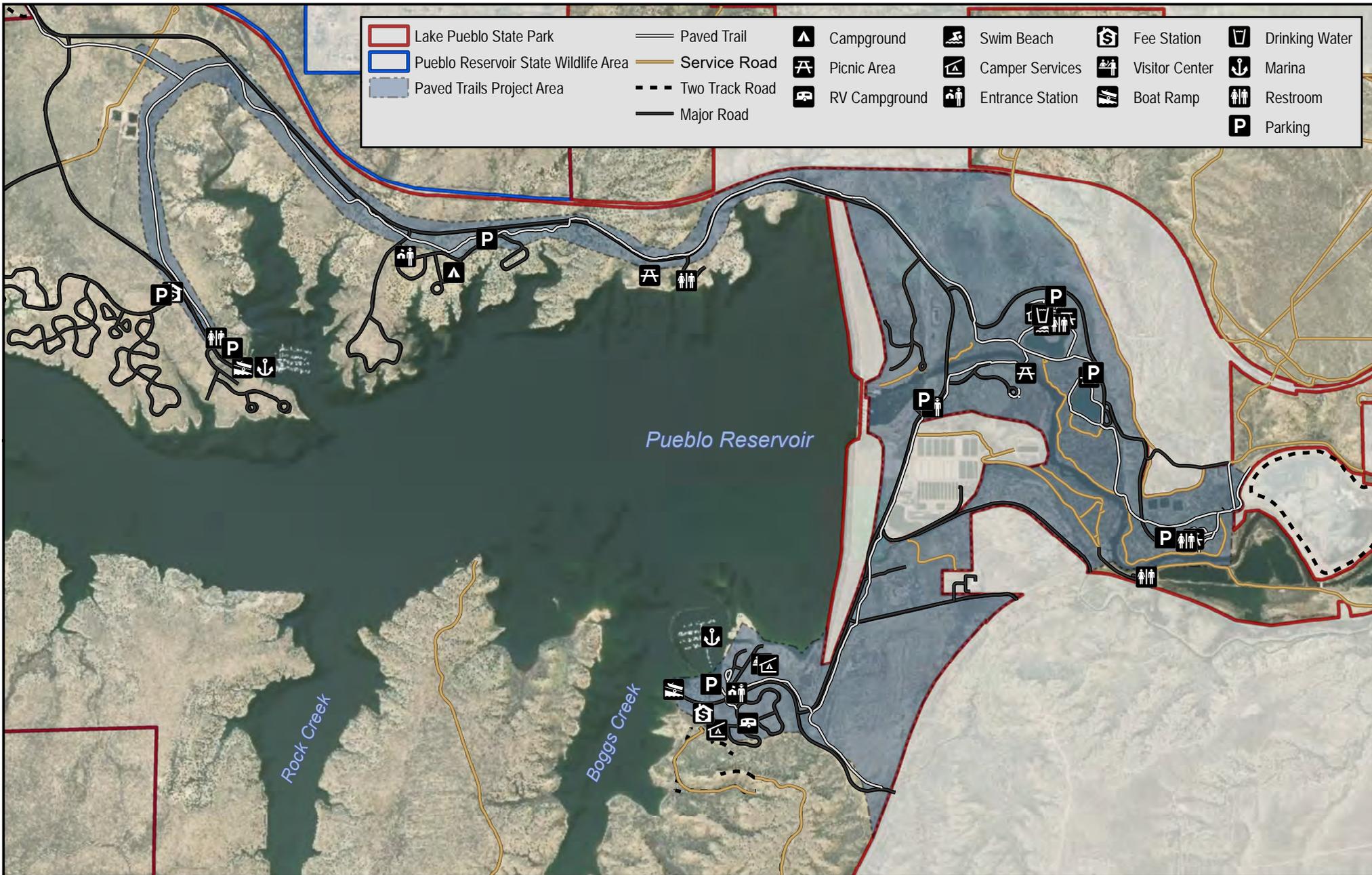
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Lake Pueblo State Park	Paved Trail	Campground	Swim Beach	Fee Station	Drinking Water
Pueblo Reservoir State Wildlife Area	Service Road	Picnic Area	Camper Services	Visitor Center	Marina
Paved Trails Project Area	Two Track Road	RV Campground	Entrance Station	Boat Ramp	Restroom
	Major Road				Parking

## Paved Trails Overview Map



MAP 1.7



0 0.3 0.6  
Miles

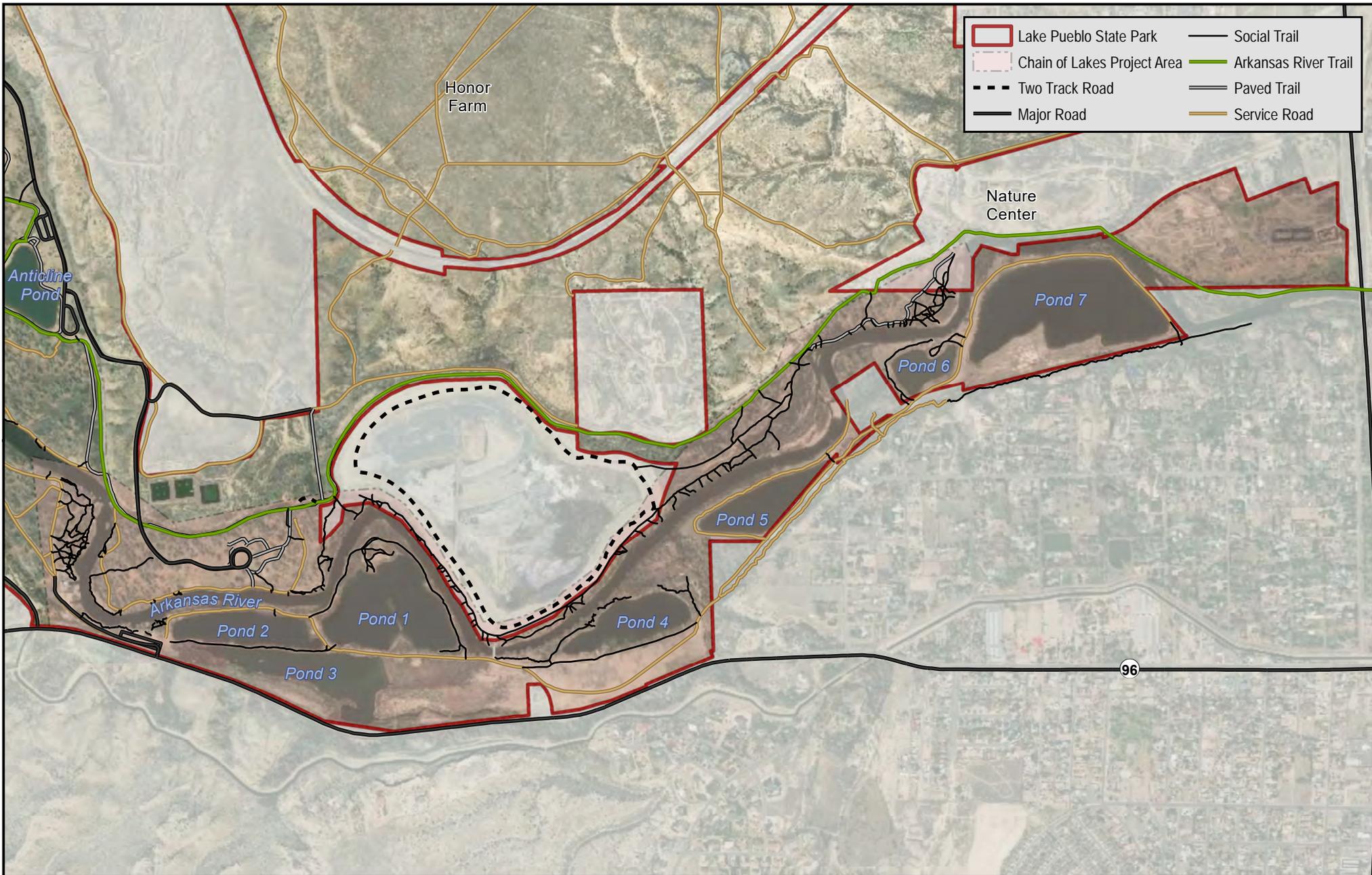
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## Chain of Lakes Overview Map



MAP 1.8



0 0.25 0.5  
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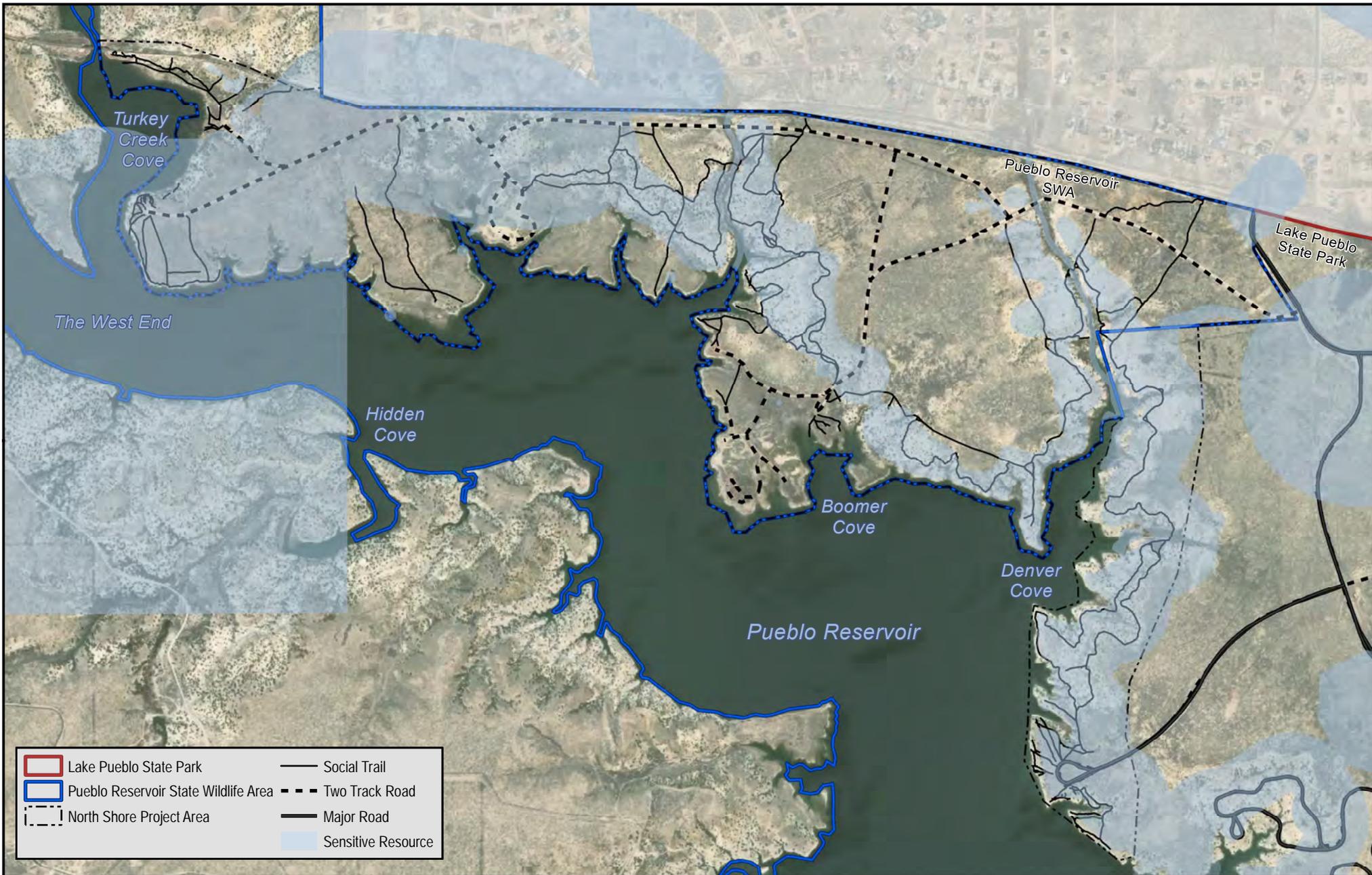
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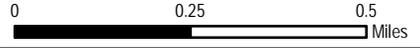
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# North Shore Sensitive Resources Map



MAP 2.1

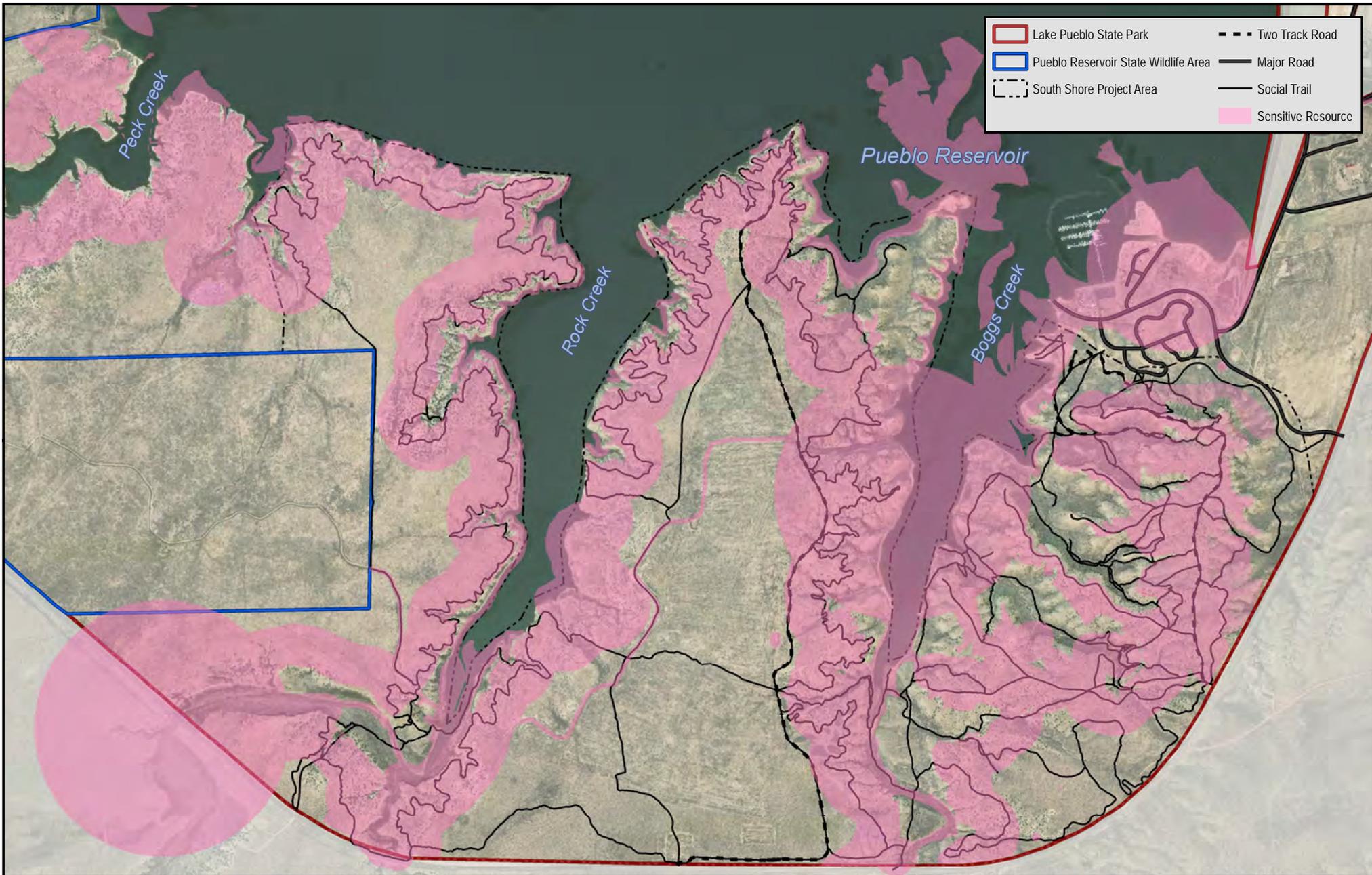


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- Lake Pueblo State Park
- Pueblo Reservoir State Wildlife Area
- South Shore Project Area
- Two Track Road
- Major Road
- Social Trail
- Sensitive Resource

## South Shore Sensitive Resources Map



MAP 2.2



0 0.25 0.5  
Miles

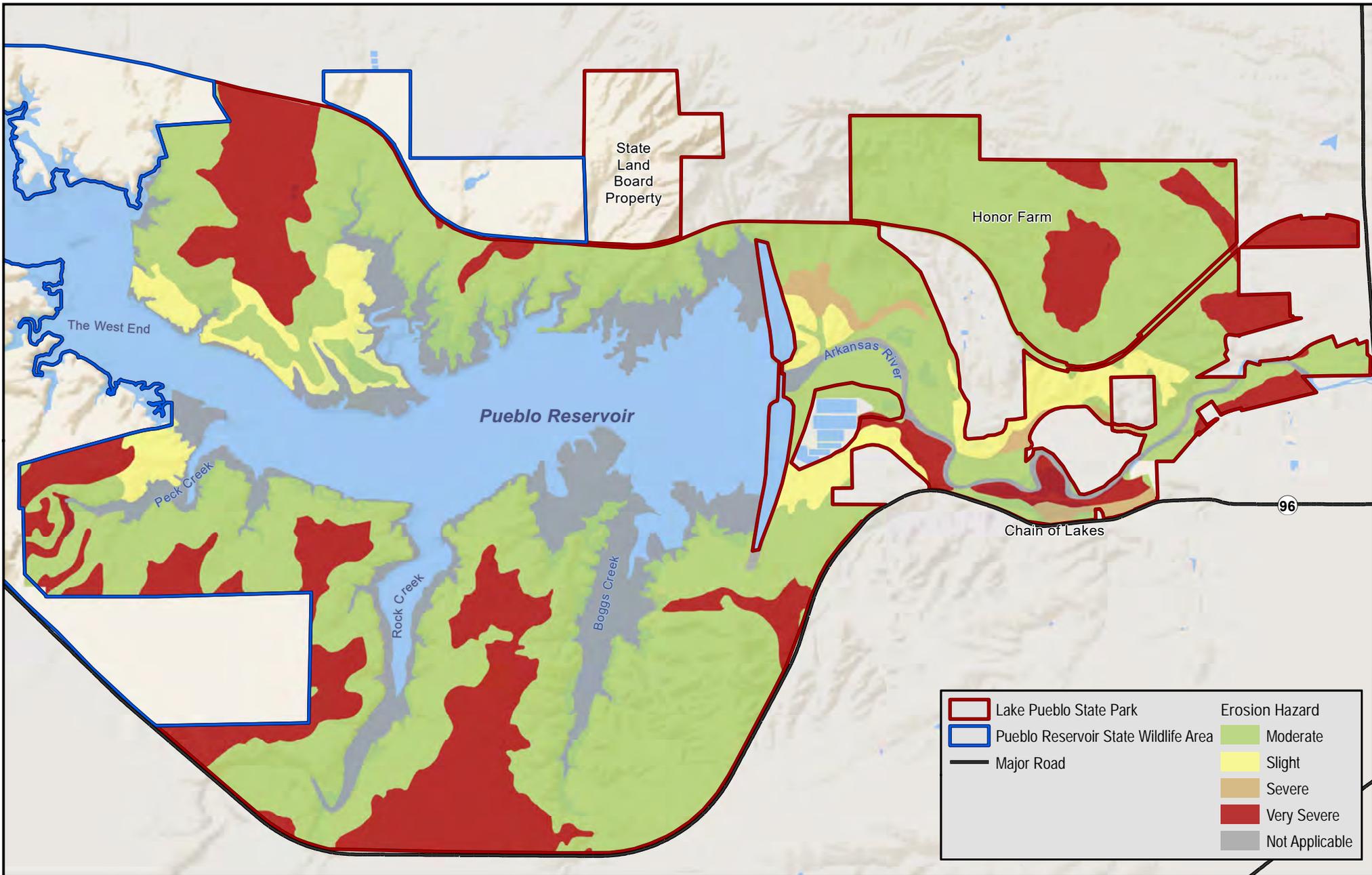
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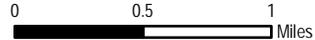


	Lake Pueblo State Park		Moderate
	Pueblo Reservoir State Wildlife Area		Slight
	Major Road		Severe
			Very Severe
			Not Applicable

# Lake Pueblo State Park Erosion Hazard Map



MAP 2.3



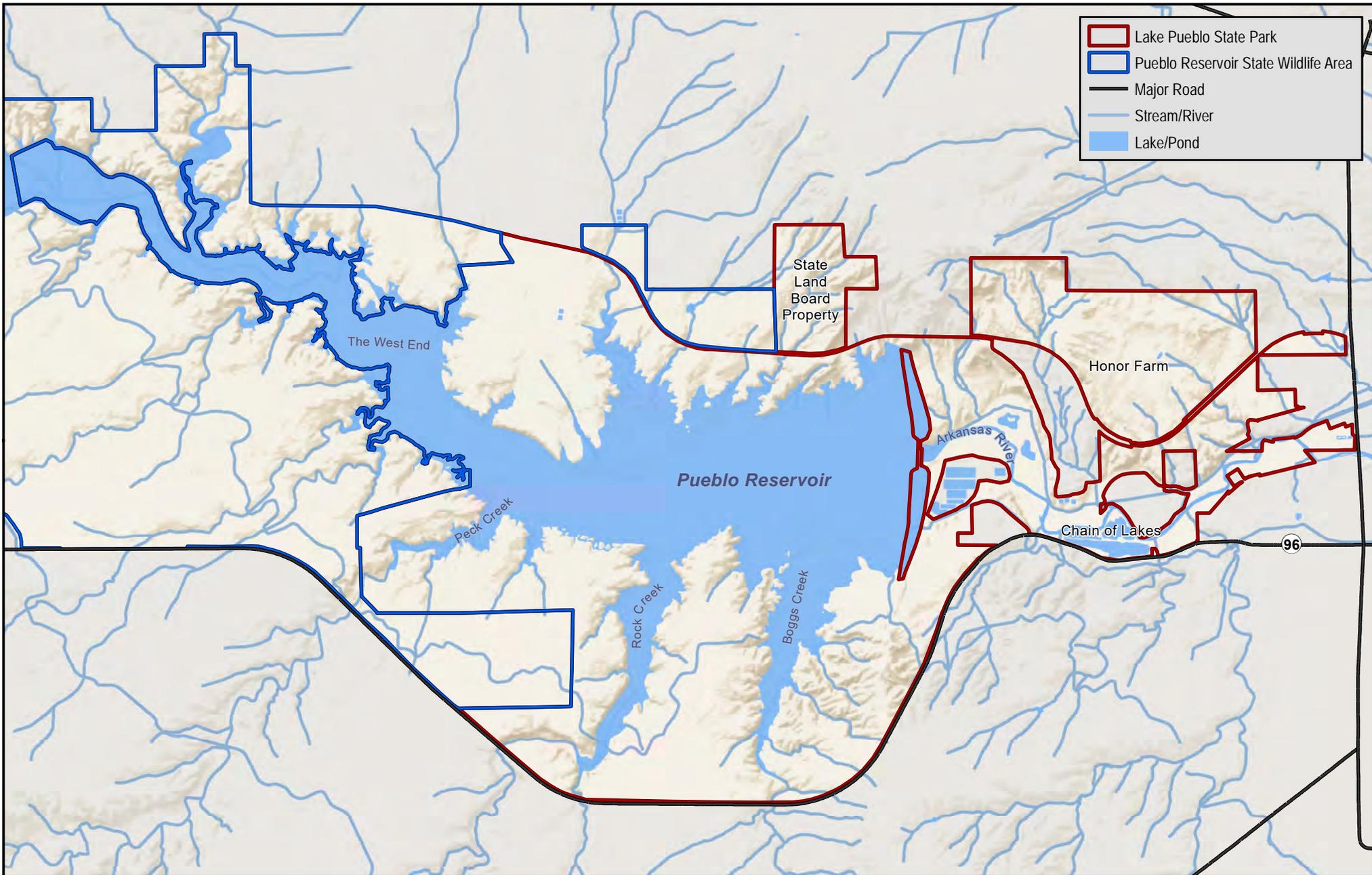
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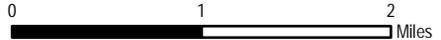


- Lake Pueblo State Park
- Pueblo Reservoir State Wildlife Area
- Major Road
- Stream/River
- Lake/Pond

## Lake Pueblo State Park Water Resources Map



MAP 2.4



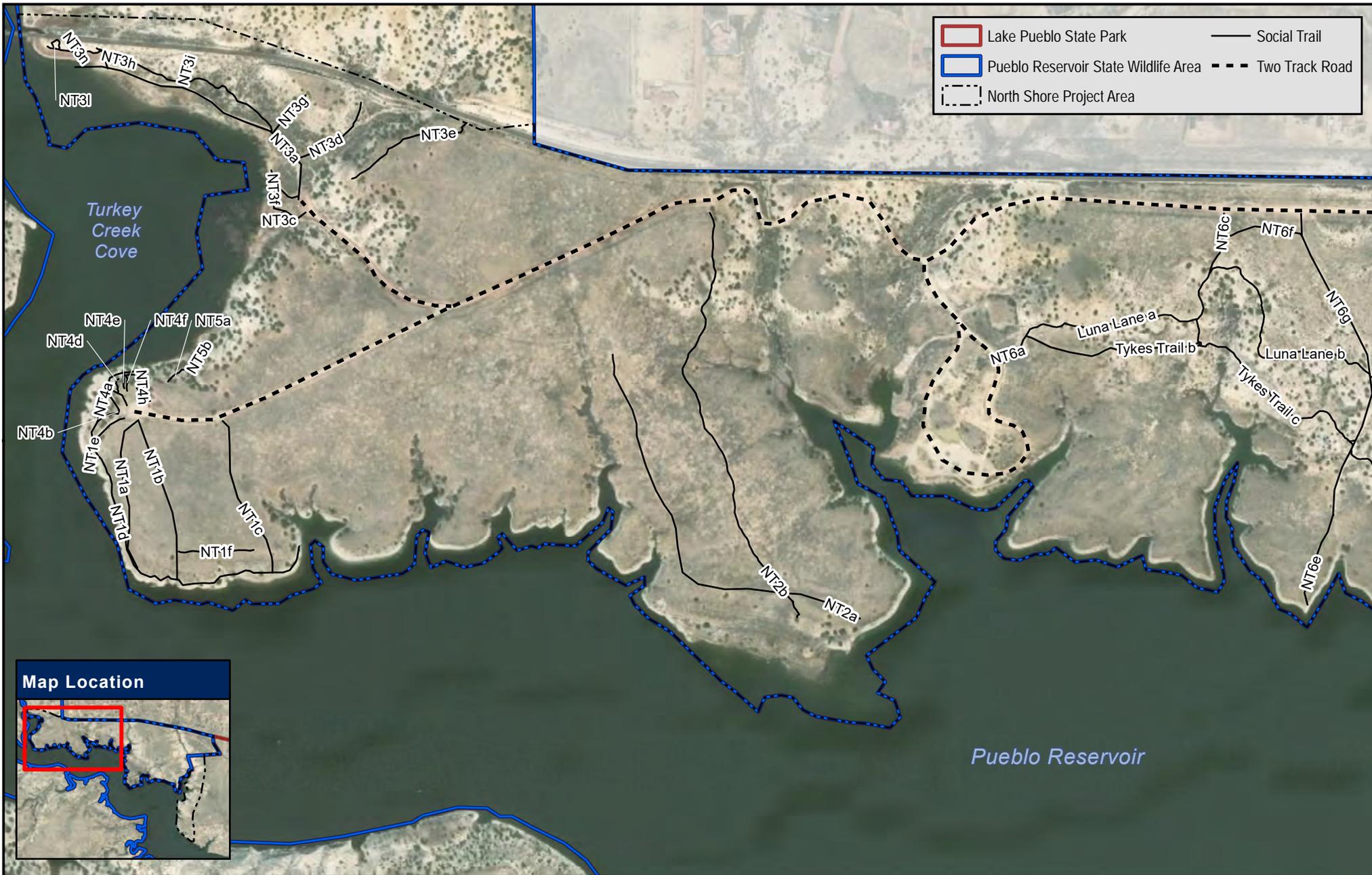
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# North Shore Trails Map (1)



MAP 4.1



0 0.1 0.2 Miles

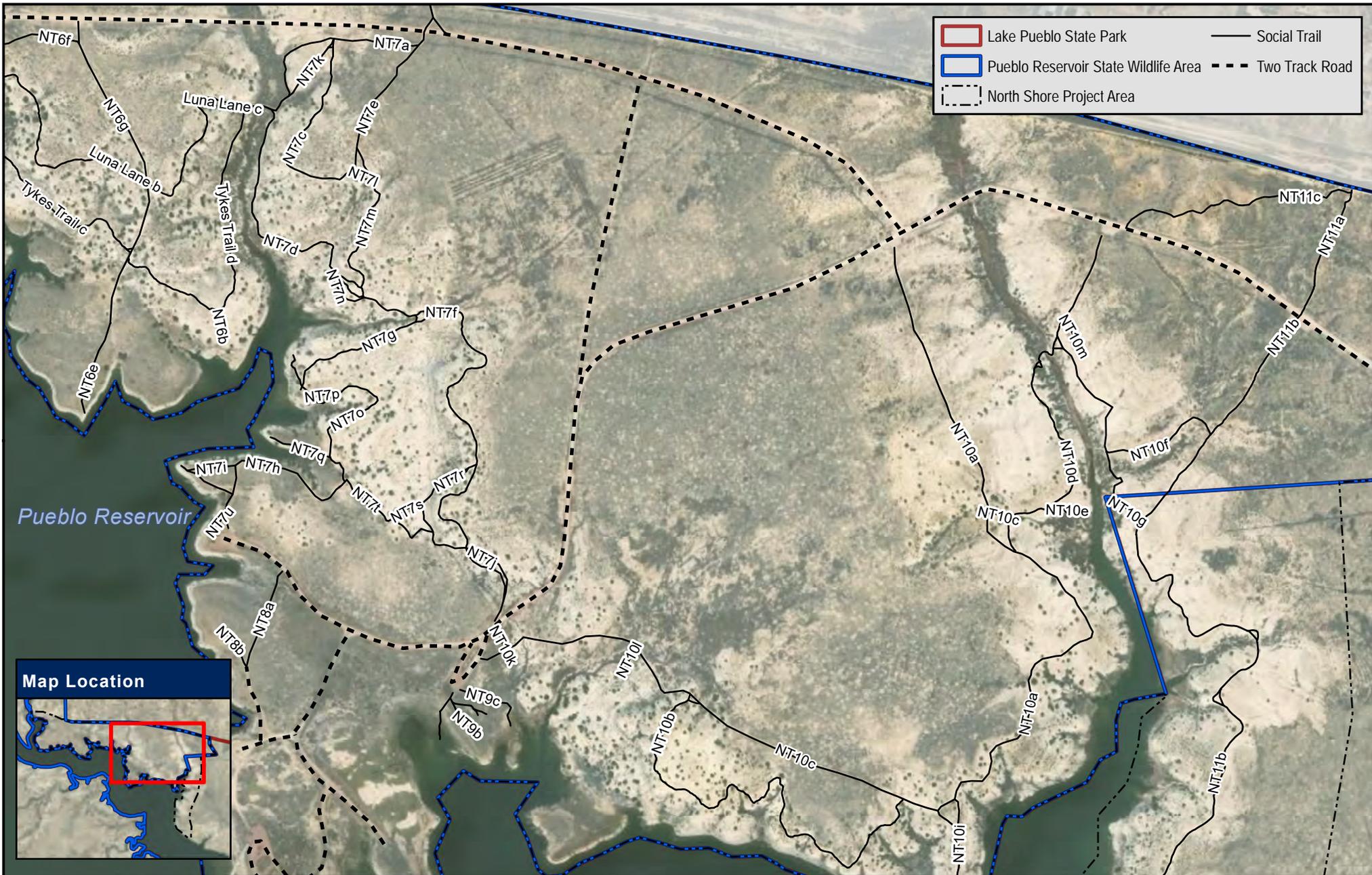
Colorado Parks and Wildlife  
Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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Map4\_1\_North\_Shore\_Trails  
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Map4\_1\_North\_Shore\_Trails.jpg  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

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3/18/2019 4:27:13 PM  
Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



## North Shore Trails Map (2)



MAP 4.2



0 0.1 0.2 Miles

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Data Sources-  
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USGS, Bing  
Additional Information-  
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	Lake Pueblo State Park		Social Trail
	Pueblo Reservoir State Wildlife Area		Major Road
	North Shore Project Area		

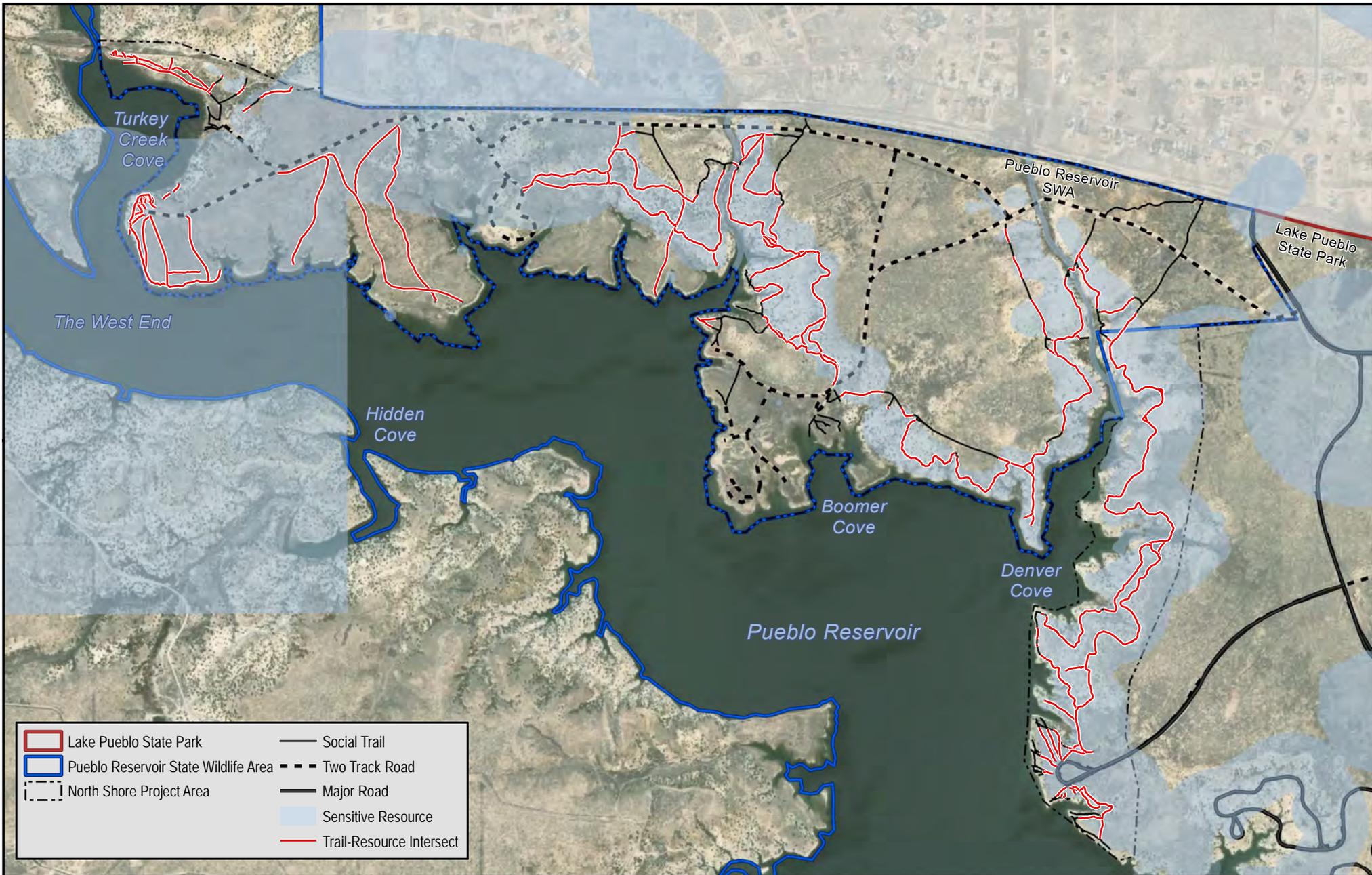


**Map Location**



**North Shore Trails Map (3)**

	<p>MAP 4.3</p>		<p>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p>	<p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document- Map4_3_North_Shore_Trails Adobe PDF- Map4_3_North_Shore_Trails.jpg Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</p>	<p>Date prepared- 3/18/2019 4:34:14 PM Data Sources- Colorado Parks and Wildlife, CDOT USGS, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1866 Units: Meters UTM Zone: 13 North</p>
		<p>Colorado Parks and Wildlife Lake Pueblo Trail Management Plan Pueblo, Colorado</p>				

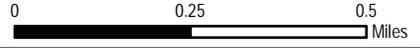


- Lake Pueblo State Park
- Pueblo Reservoir State Wildlife Area
- North Shore Project Area
- Social Trail
- Two Track Road
- Major Road
- Sensitive Resource
- Trail-Resource Intersect

## North Shore Trail Resource Intersects Map



MAP 4.4

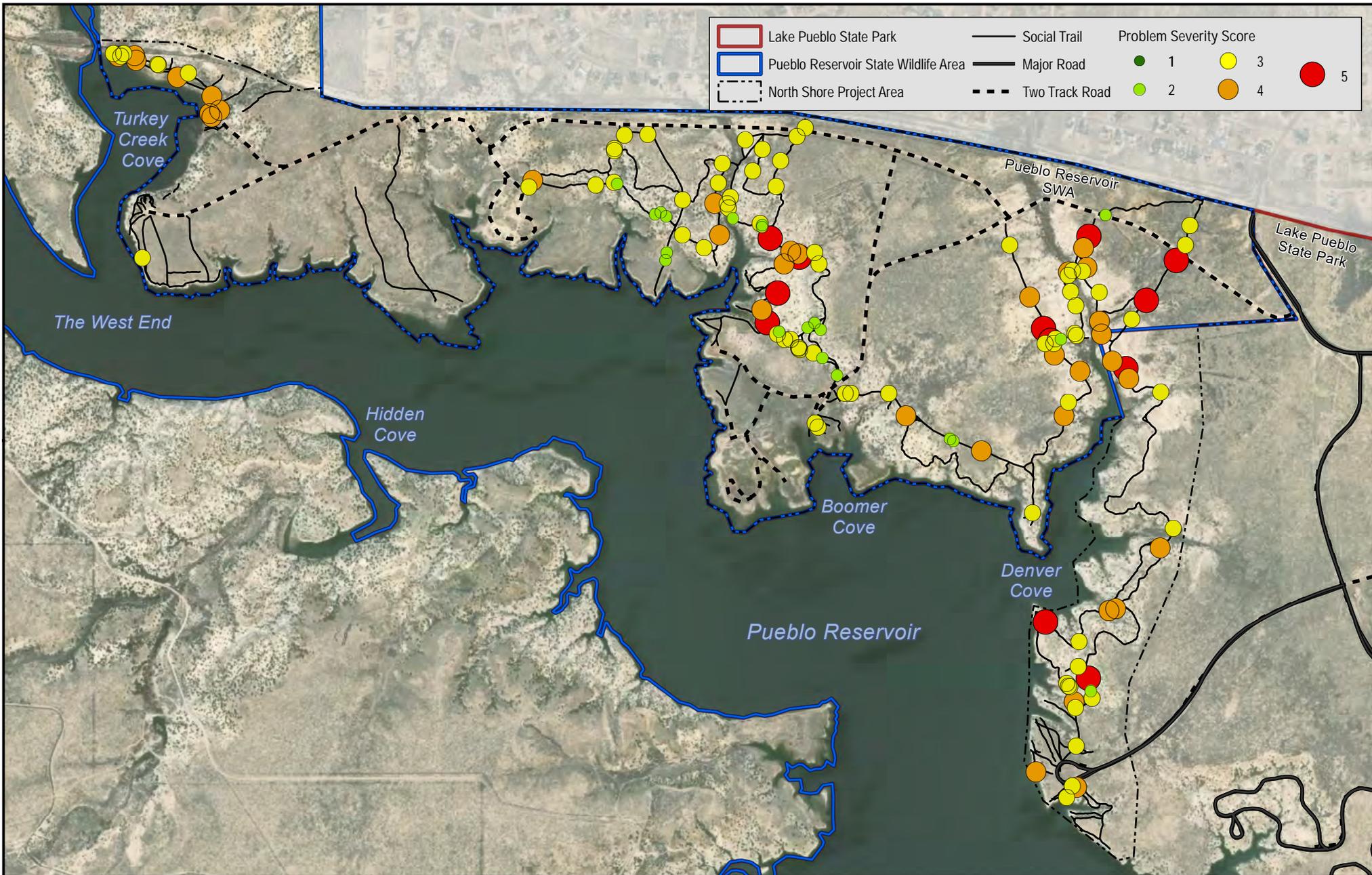


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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship  
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Colorado Parks and Wildlife, CDOT,  
USGS, Bing  
Additional Information-  
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Cartographic Information-  
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Units: Meters  
UTM Zone: 13 North



## North Shore Erosion Problem Points Map



MAP 4.5



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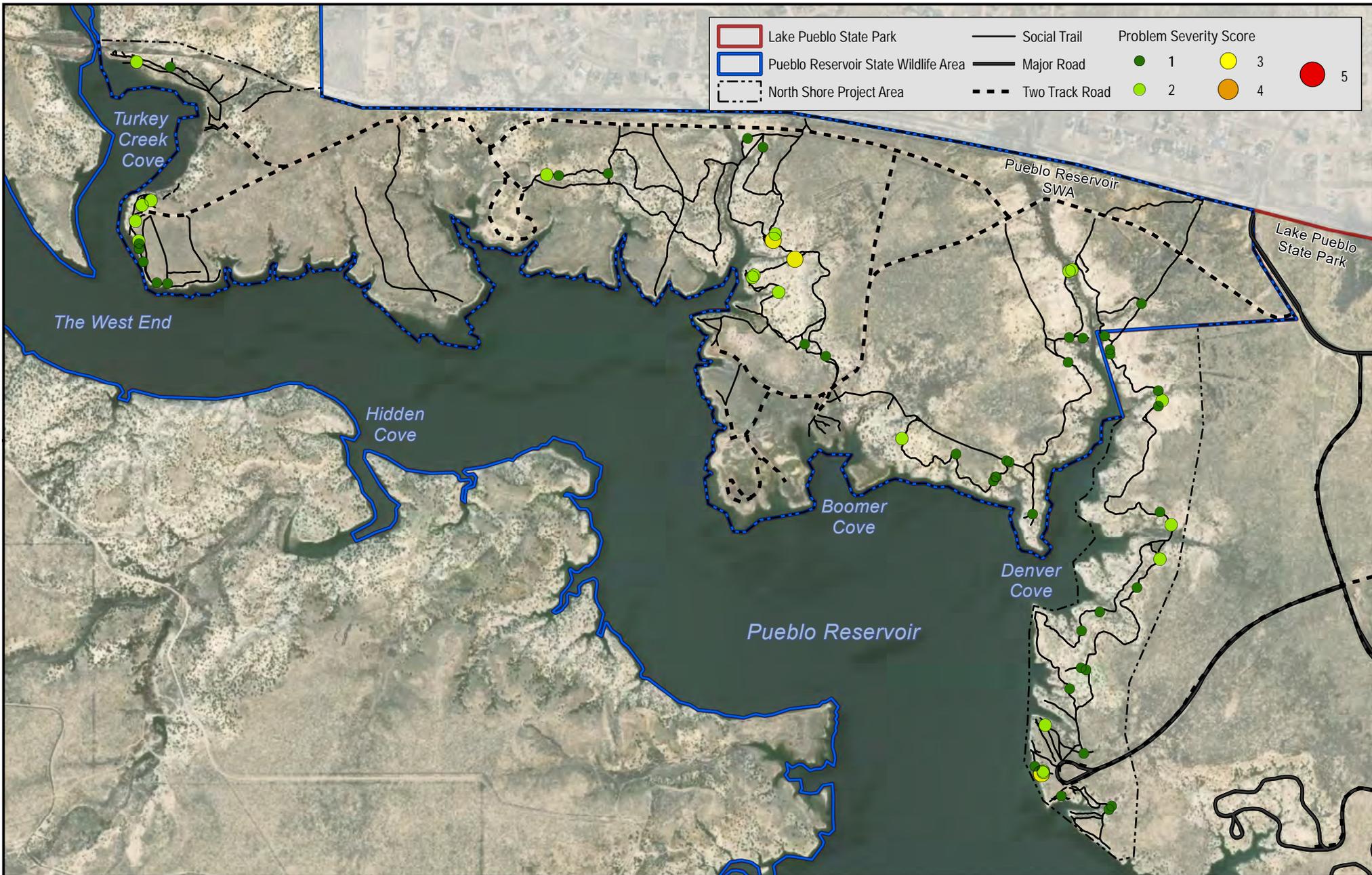
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Map prepared by- Melissa Greulich  
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Date prepared-  
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USGS, Bing  
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UTM Zone: 13 North



# North Shore Bedrock Exposure Problem Points Map



MAP 4.6



0 0.25 0.5 Miles

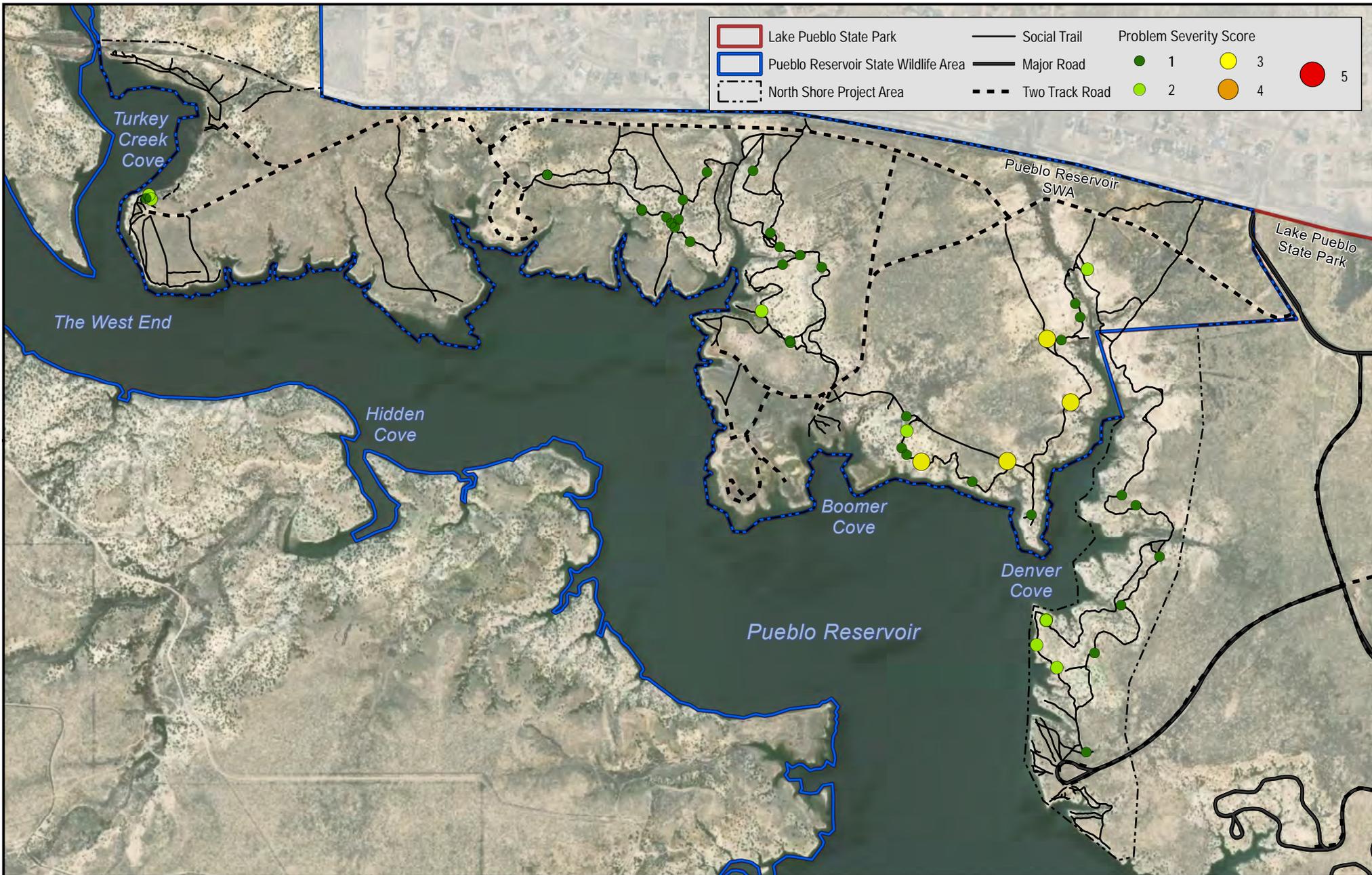
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Adobe PDF-  
Map4\_8\_North\_Shore\_Bedrock.jpg  
Map prepared by- Melissa Greulich  
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Resource Stewardship

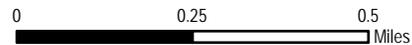
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Units: Meters  
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## North Shore Root Exposure Problem Points Map



MAP 4.7



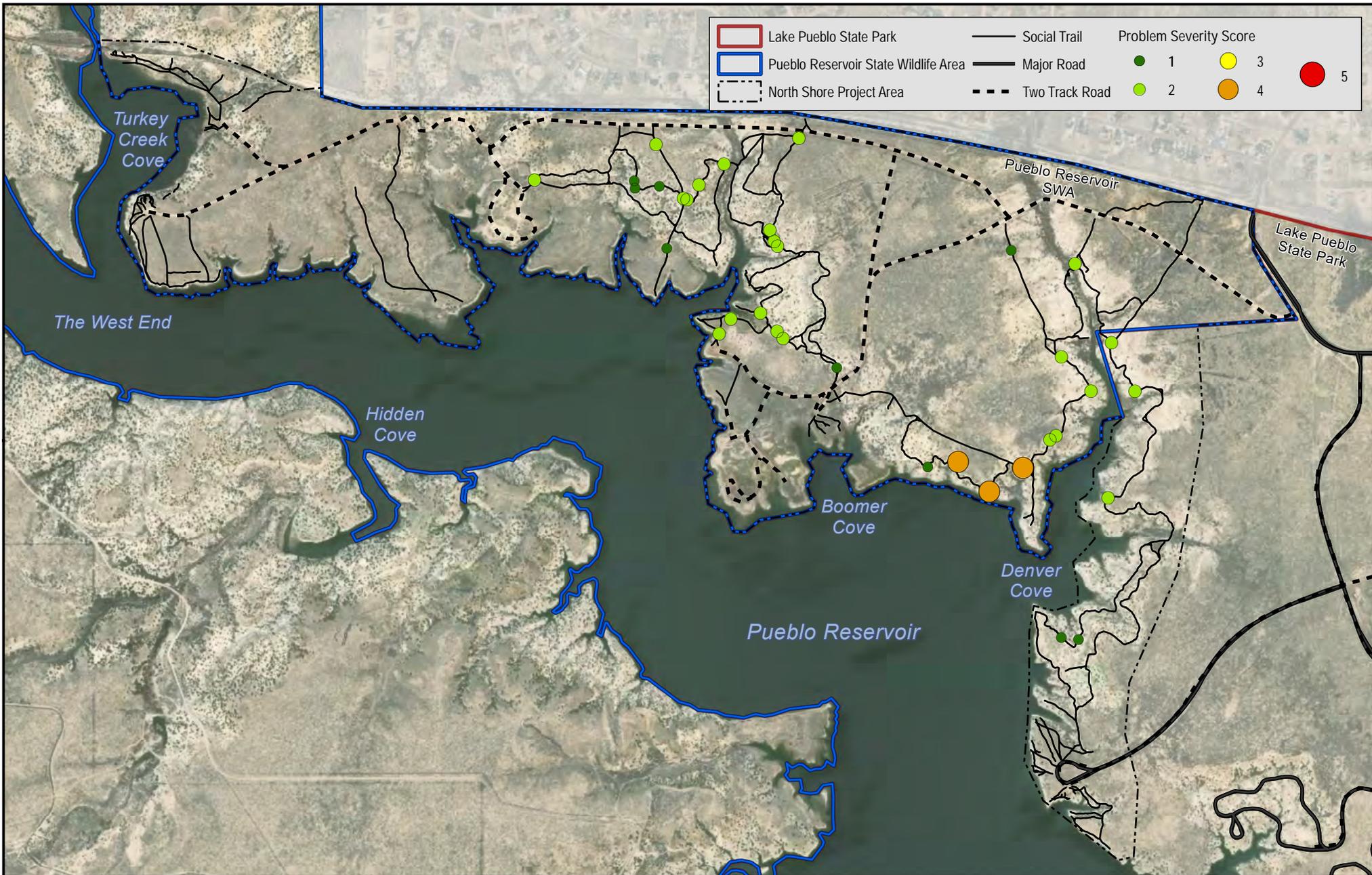
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Map Document-  
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Adobe PDF  
Map4\_9\_North\_Shore\_Roots.jpg  
Map prepared by- Melissa Greulich  
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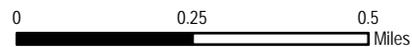
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UTM Zone: 13 North



## North Shore Trail Braiding Problem Points Map



MAP 4.8



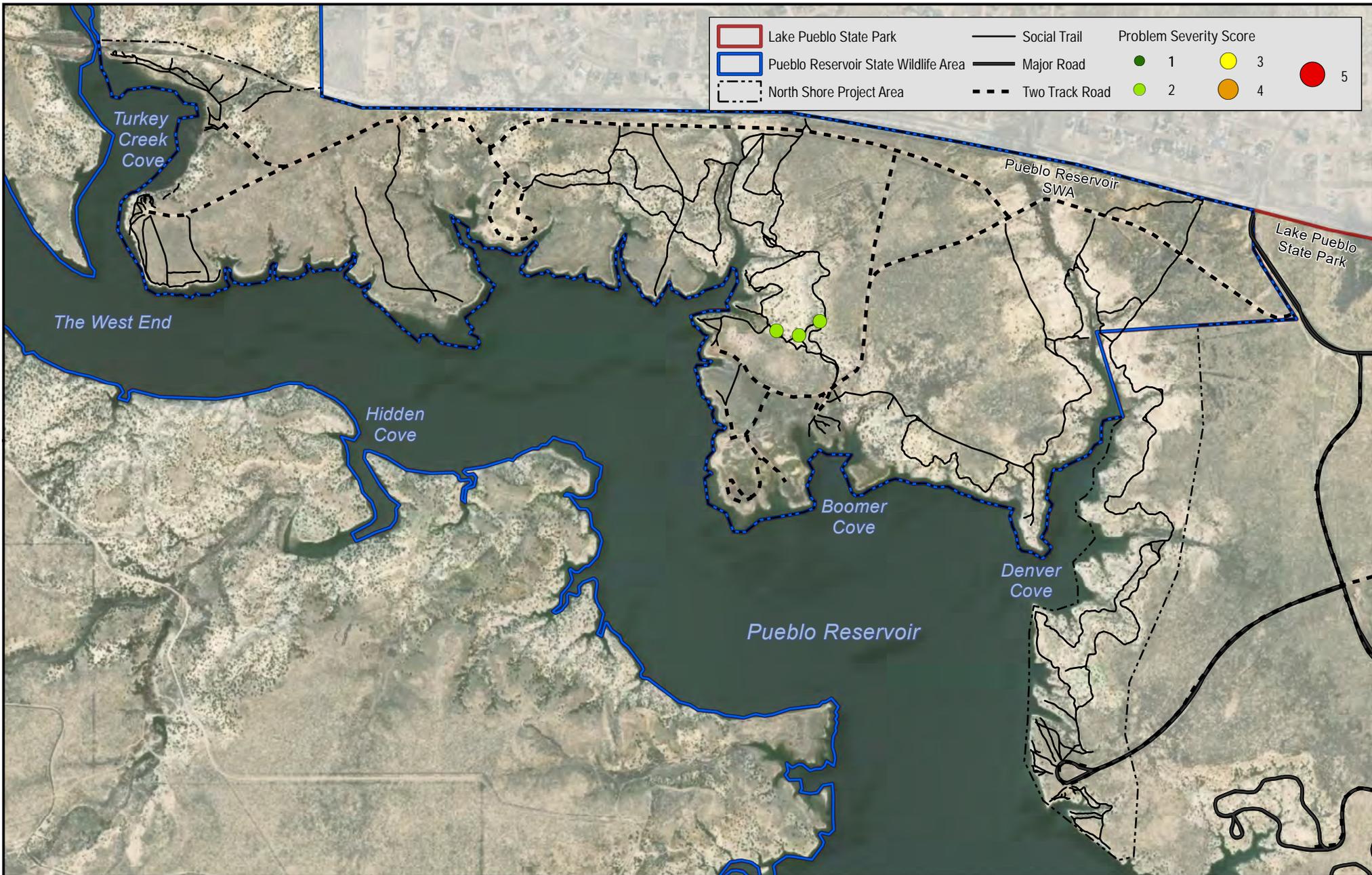
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Adobe PDF-  
Map4\_10\_North\_Shore\_Braiding.jpg  
Map prepared by: Melissa Greulich  
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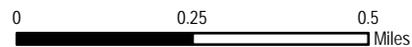
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## North Shore Recreation Infrastructure Problem Points Map



MAP 4.9



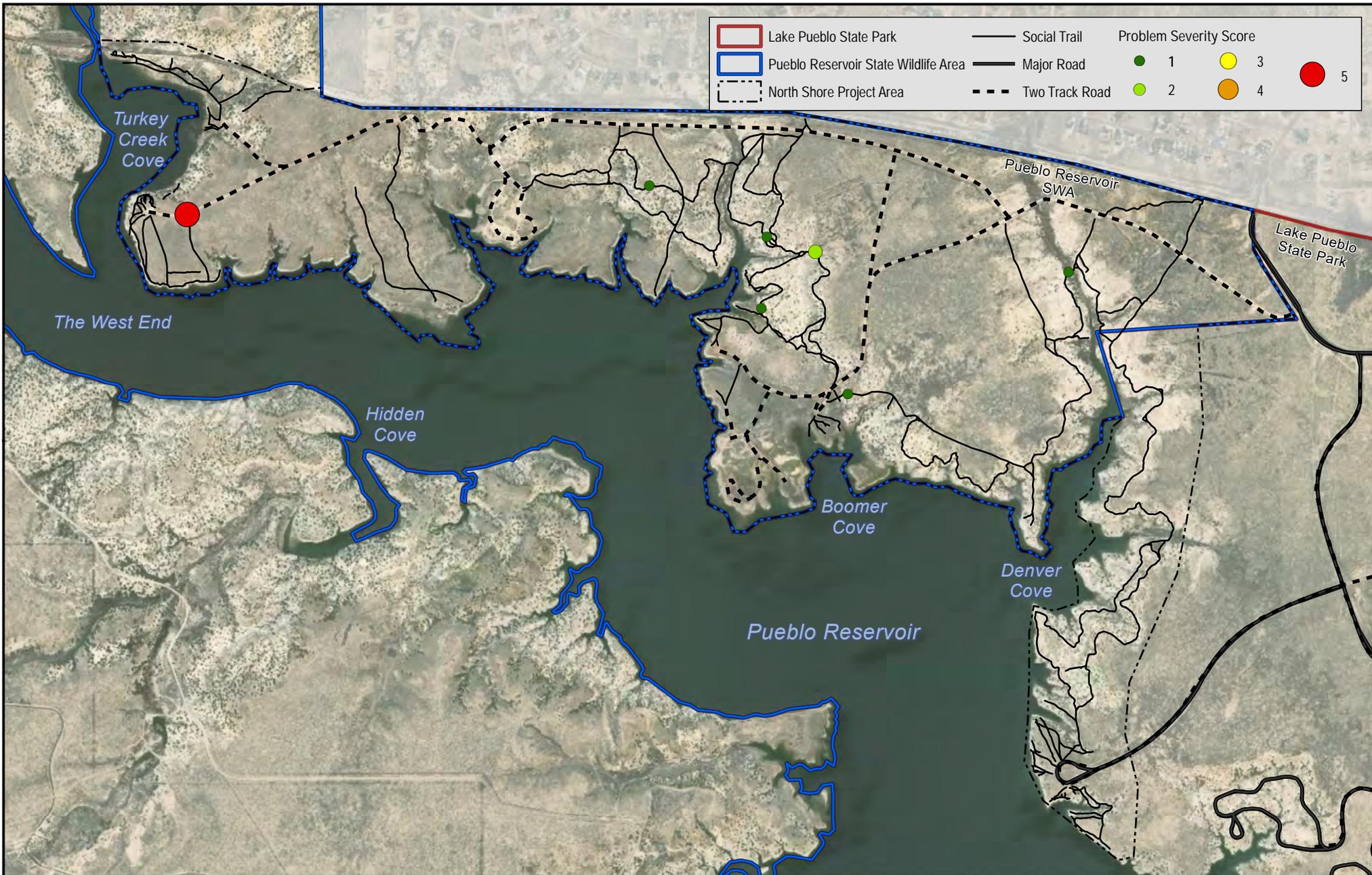
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Map prepared by: Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

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Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
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Units: Meters  
UTM Zone: 13 North



Lake Pueblo State Park	Social Trail	Problem Severity Score		
Pueblo Reservoir State Wildlife Area	Major Road	1	3	5
North Shore Project Area	Two Track Road	2	4	

## North Shore Surface Depression Problem Points Map



MAP 4.10



0 0.25 0.5 Miles

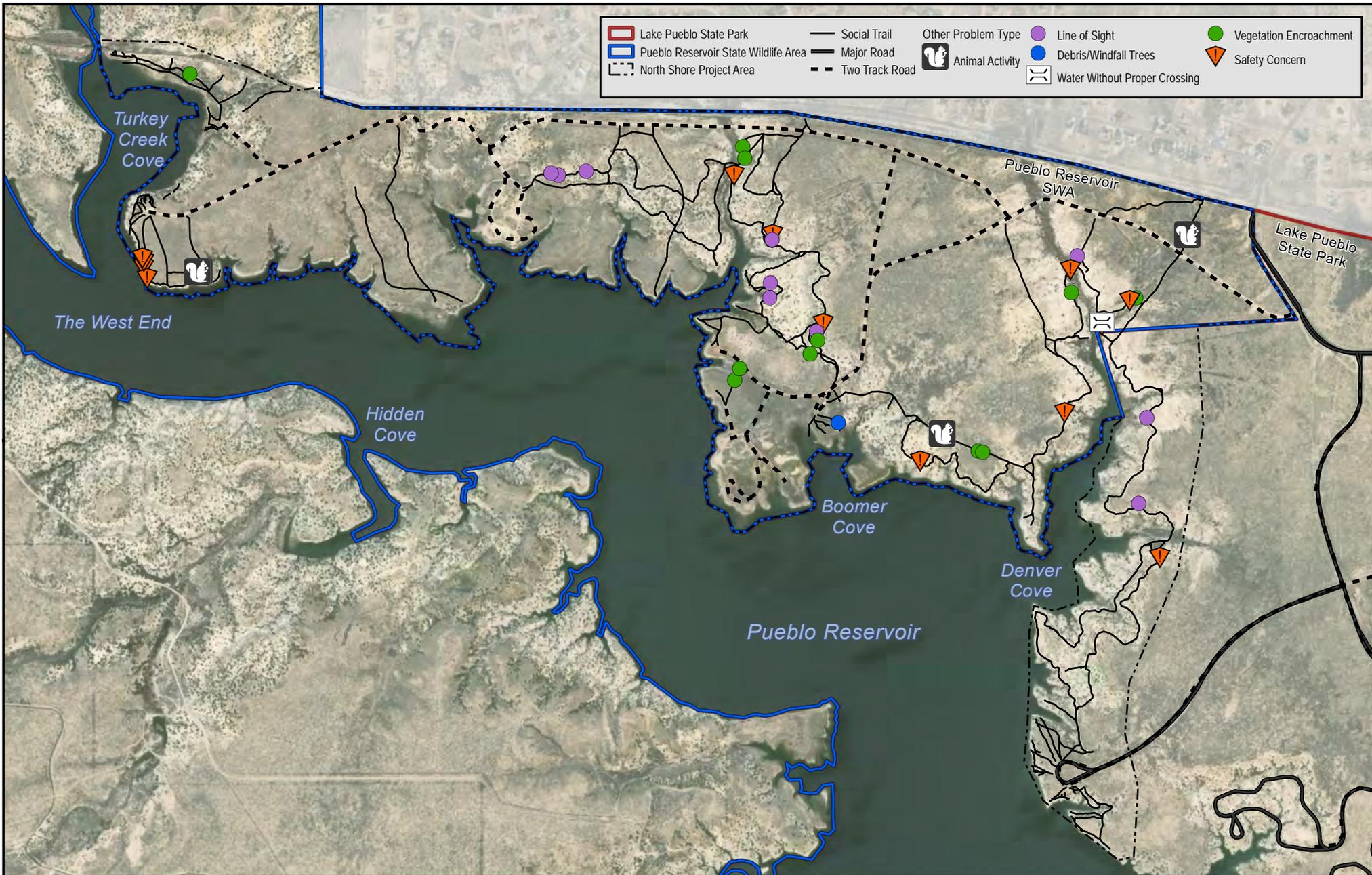
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Map Document-  
Map4\_12\_North\_Shore\_Depression  
Adobe PDF-  
Map4\_12\_North\_Shore\_Depression.jpg  
Map prepared by: Melissa Greulich  
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Date prepared-  
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Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
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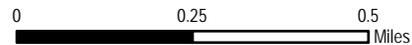


Lake Pueblo State Park	Social Trail	Other Problem Type	Line of Sight	Vegetation Encroachment
Pueblo Reservoir State Wildlife Area	Major Road	Animal Activity	Debris/Windfall Trees	Safety Concern
North Shore Project Area	Two Track Road	Water Without Proper Crossing		

## North Shore Other Problem Points Map



MAP 4.11



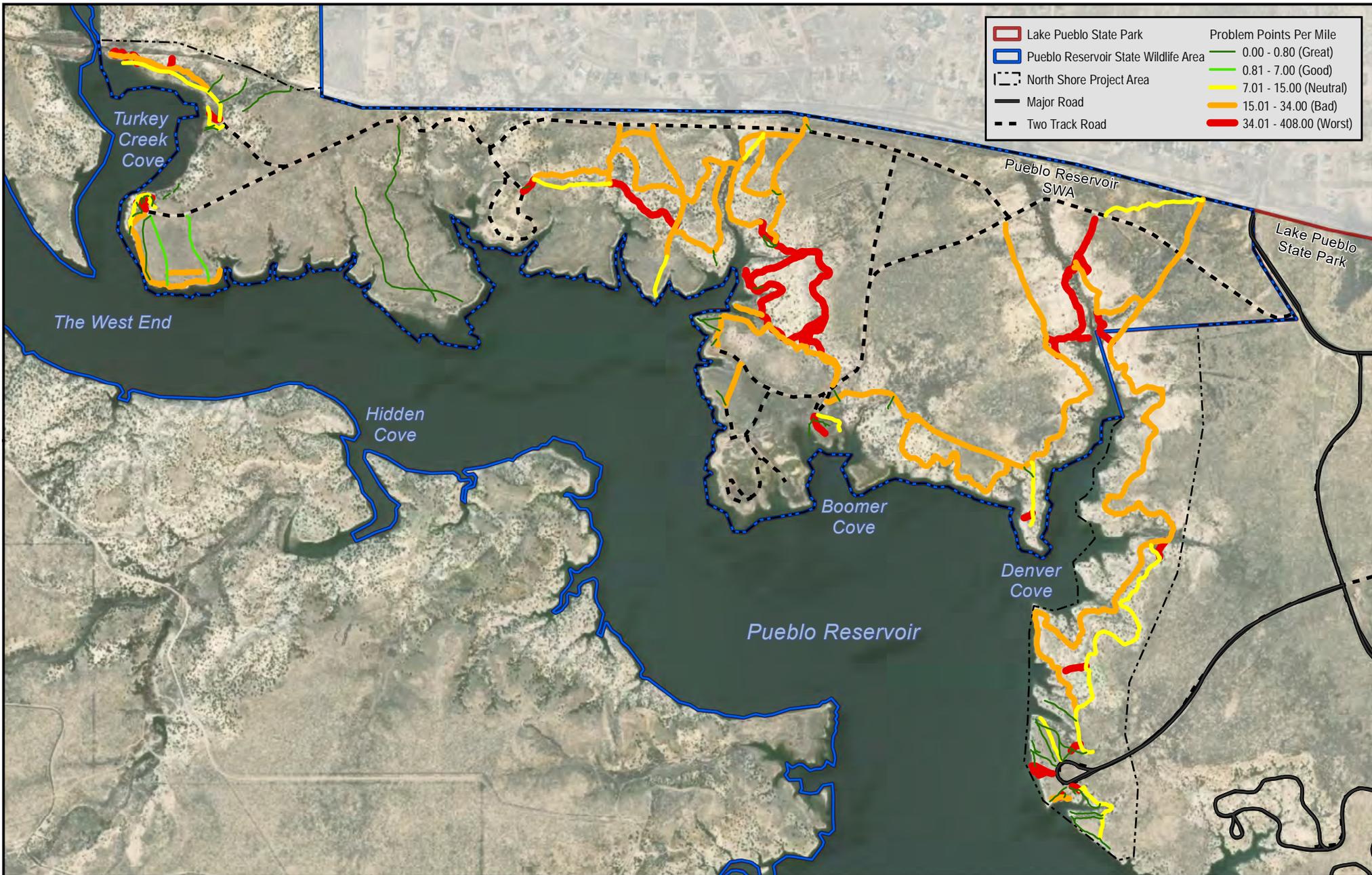
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Adobe PDF-  
Map4\_13\_North\_Shore\_Other\_Problems.jpg  
Map prepared by: Melissa Greulich  
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USGS, Bing  
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## North Shore Problems Points Per Trail Mile Map



MAP 4.12



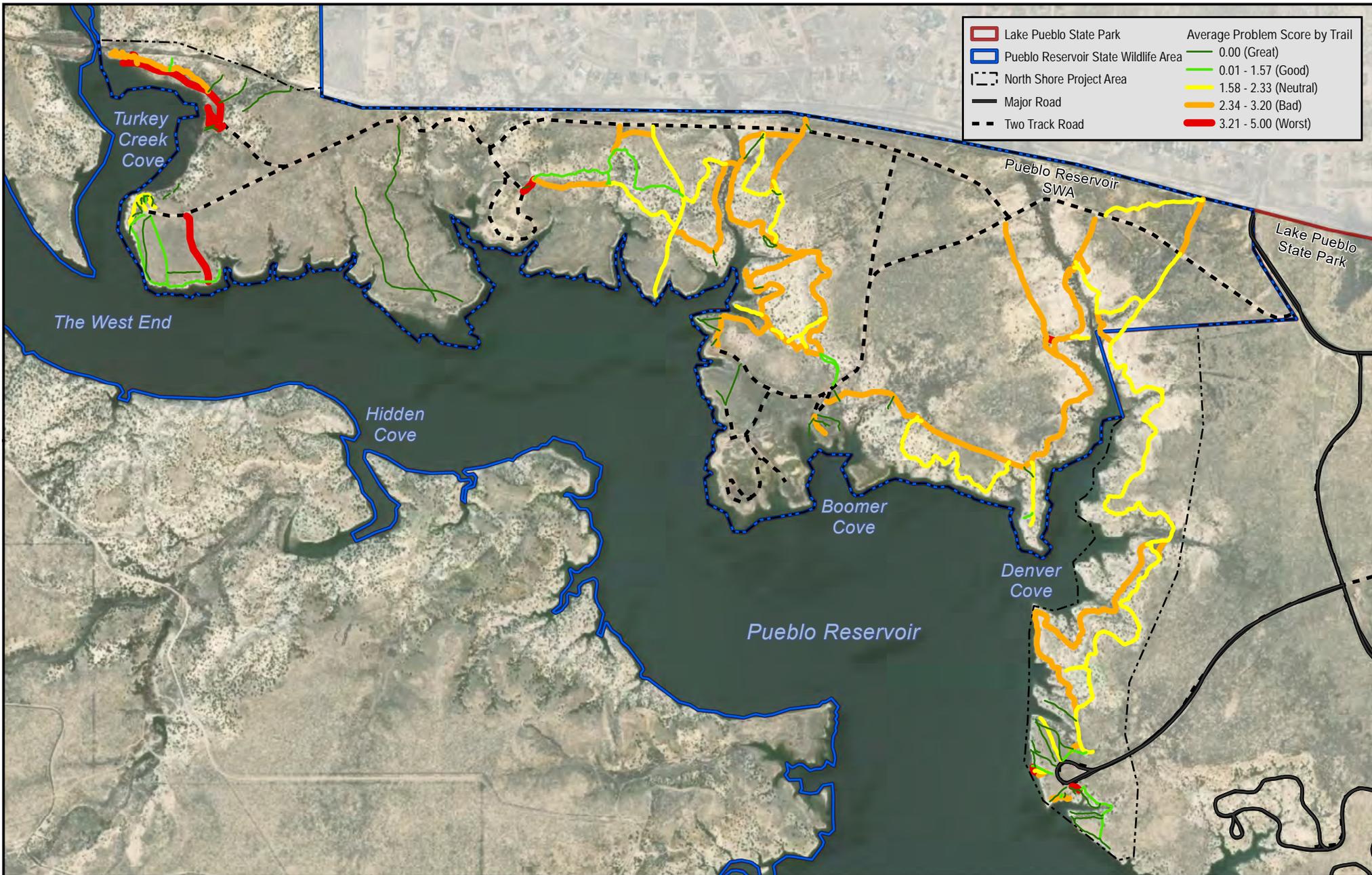
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Map Document-  
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Map prepared by: Melissa Greulich  
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Resource Stewardship

Date prepared-  
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USGS, Bing  
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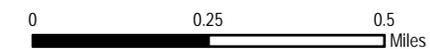


Lake Pueblo State Park	0.00 (Great)
Pueblo Reservoir State Wildlife Area	0.01 - 1.57 (Good)
North Shore Project Area	1.58 - 2.33 (Neutral)
Major Road	2.34 - 3.20 (Bad)
Two Track Road	3.21 - 5.00 (Worst)

## North Shore Average Problem Score by Trail Map



MAP 4.13



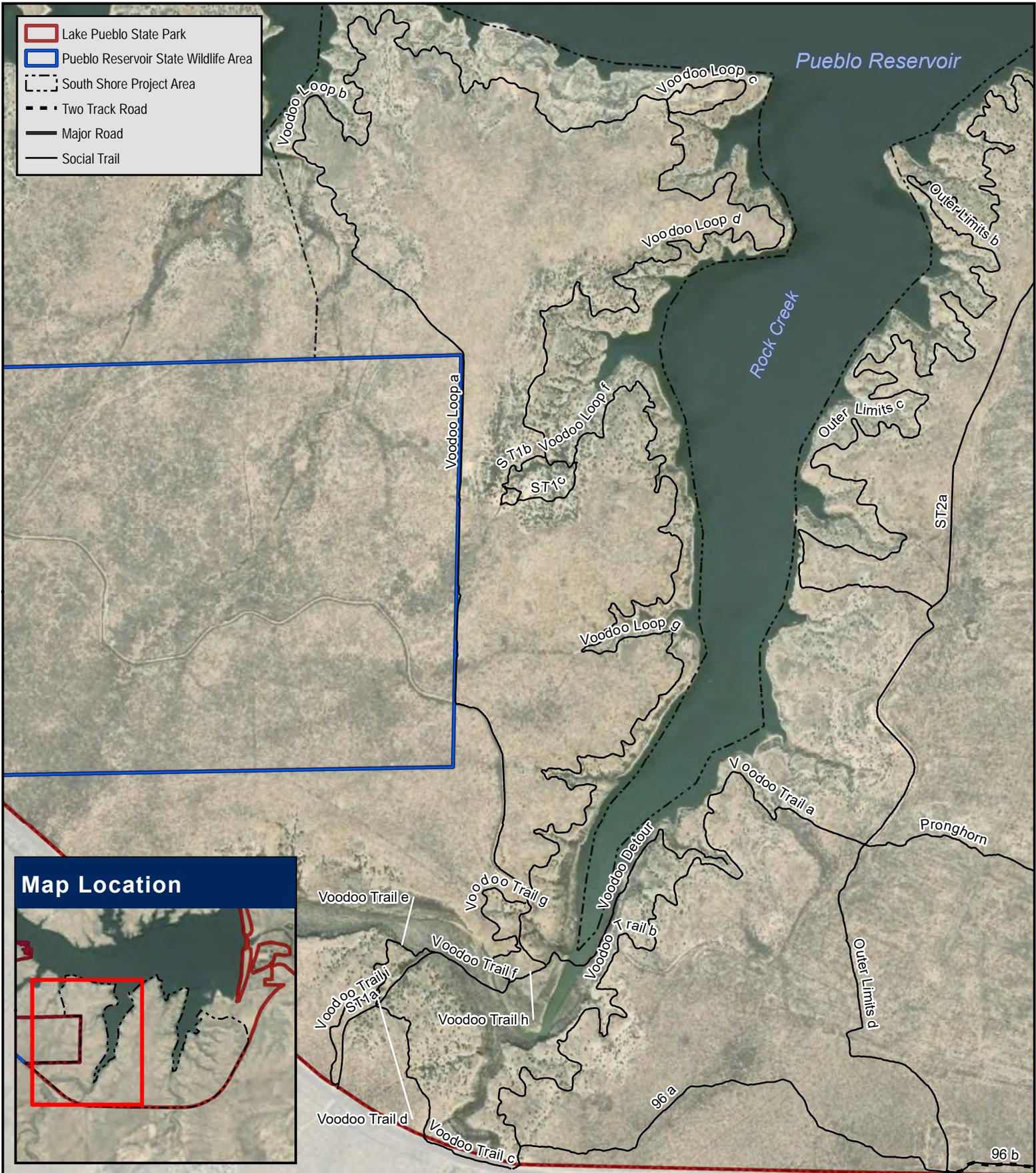
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Map Document- Map4\_15\_North\_Shore\_AvgProbScore  
Adobe PDF- Map4\_15\_North\_Shore\_AvgProbScore.jpg  
Map prepared by- Melissa Greulich  
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Date prepared- 3/26/2019 3:07:47 PM  
Data Sources- Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information- Color Aerial Imagery Flown 2015  
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# South Shore Trails Map (1)



MAP 4.14

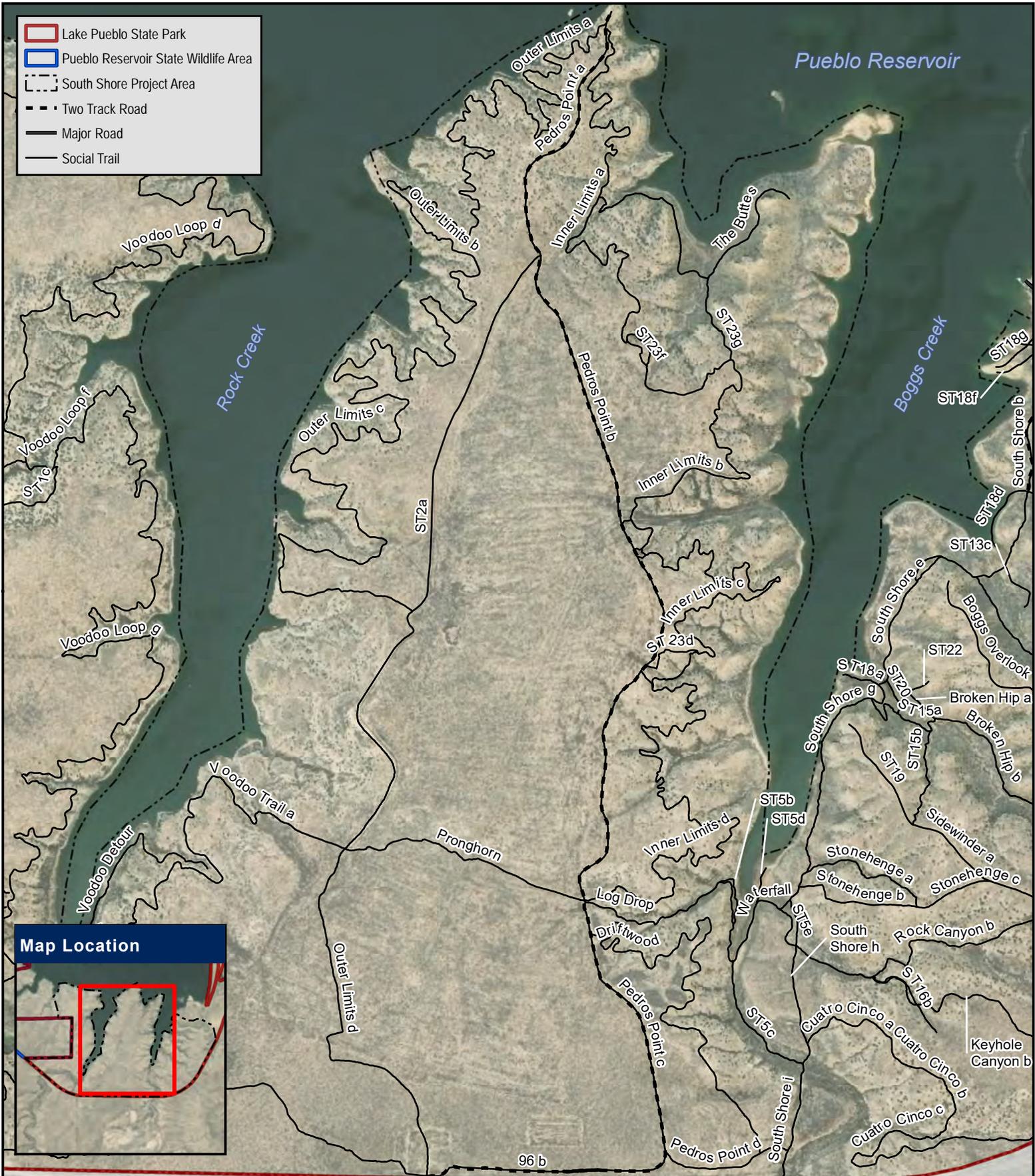
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Map4\_16\_South\_Shore\_Trails.jpg  
Map prepared by- Melissa Greulich  
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Additional Information-  
Color Aerial Imagery Flown 2015  
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Units: Meters  
UTM Zone: 13 North



- Lake Pueblo State Park
- Pueblo Reservoir State Wildlife Area
- South Shore Project Area
- Two Track Road
- Major Road
- Social Trail



## South Shore Trails Map (2)



MAP 4.15

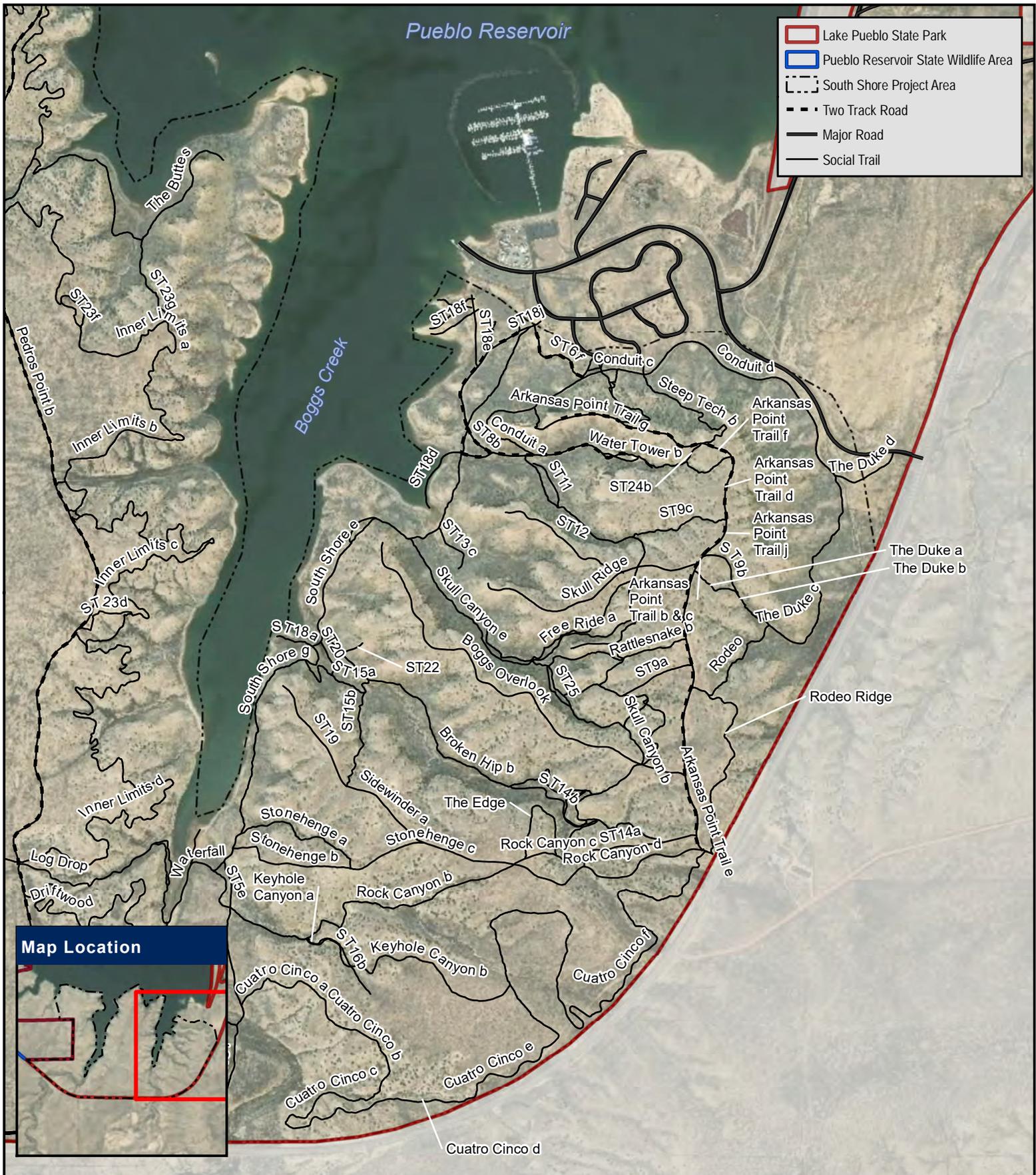
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Map4\_17\_South\_Shore\_Trails  
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Map prepared by- Melissa Greulich  
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Additional Information-  
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# South Shore Trails Map (3)



MAP 4.16

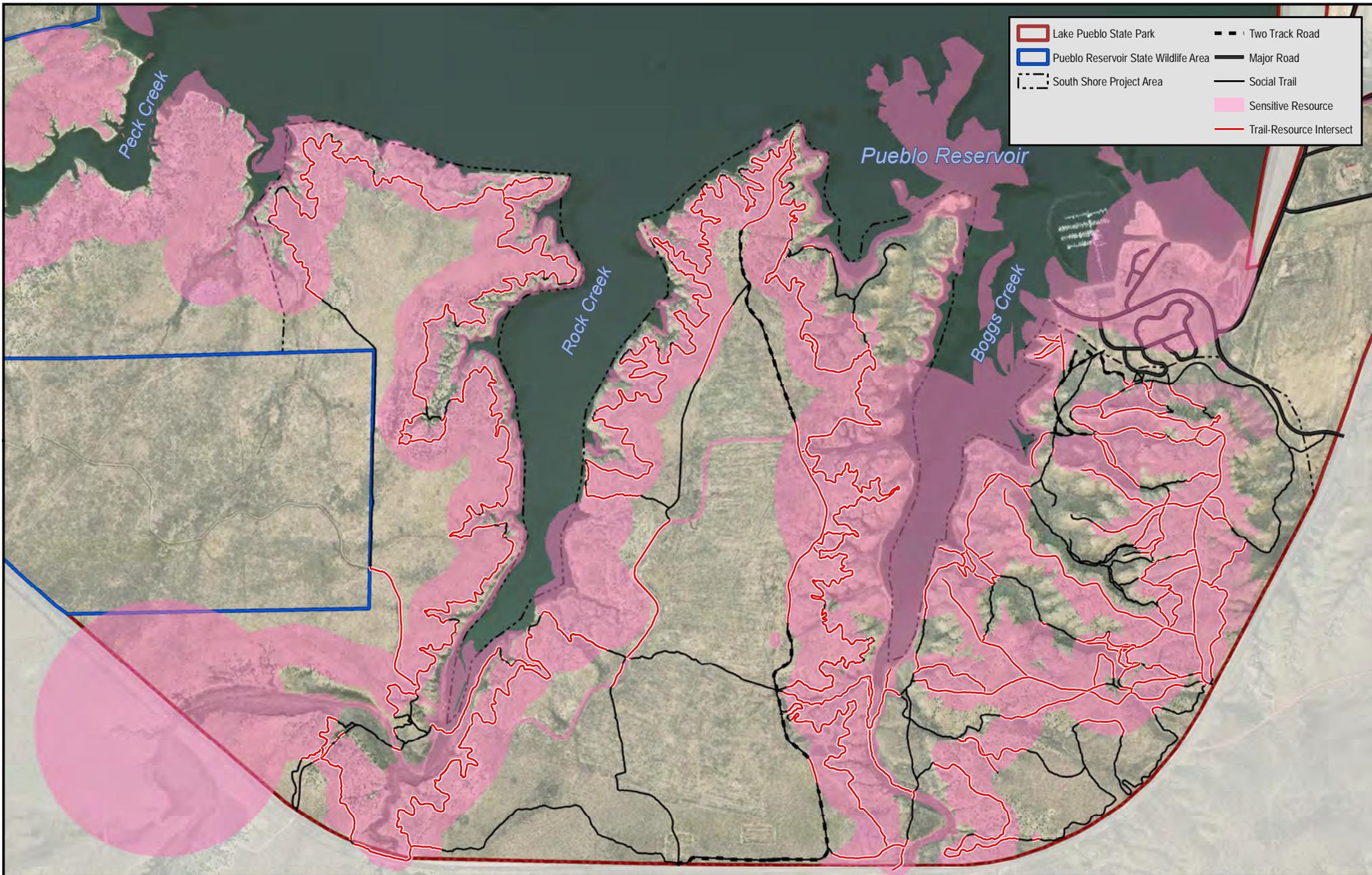
0 0.2 0.4 Miles

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Adobe PDF-  
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

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Data Sources-  
Colorado Parks and Wildlife, CDOT,  
USGS, Bing  
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Cartographic Information-  
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Units: Meters  
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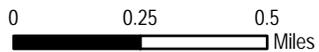
## South Shore Trail Resource Intersects Map



MAP 4.17



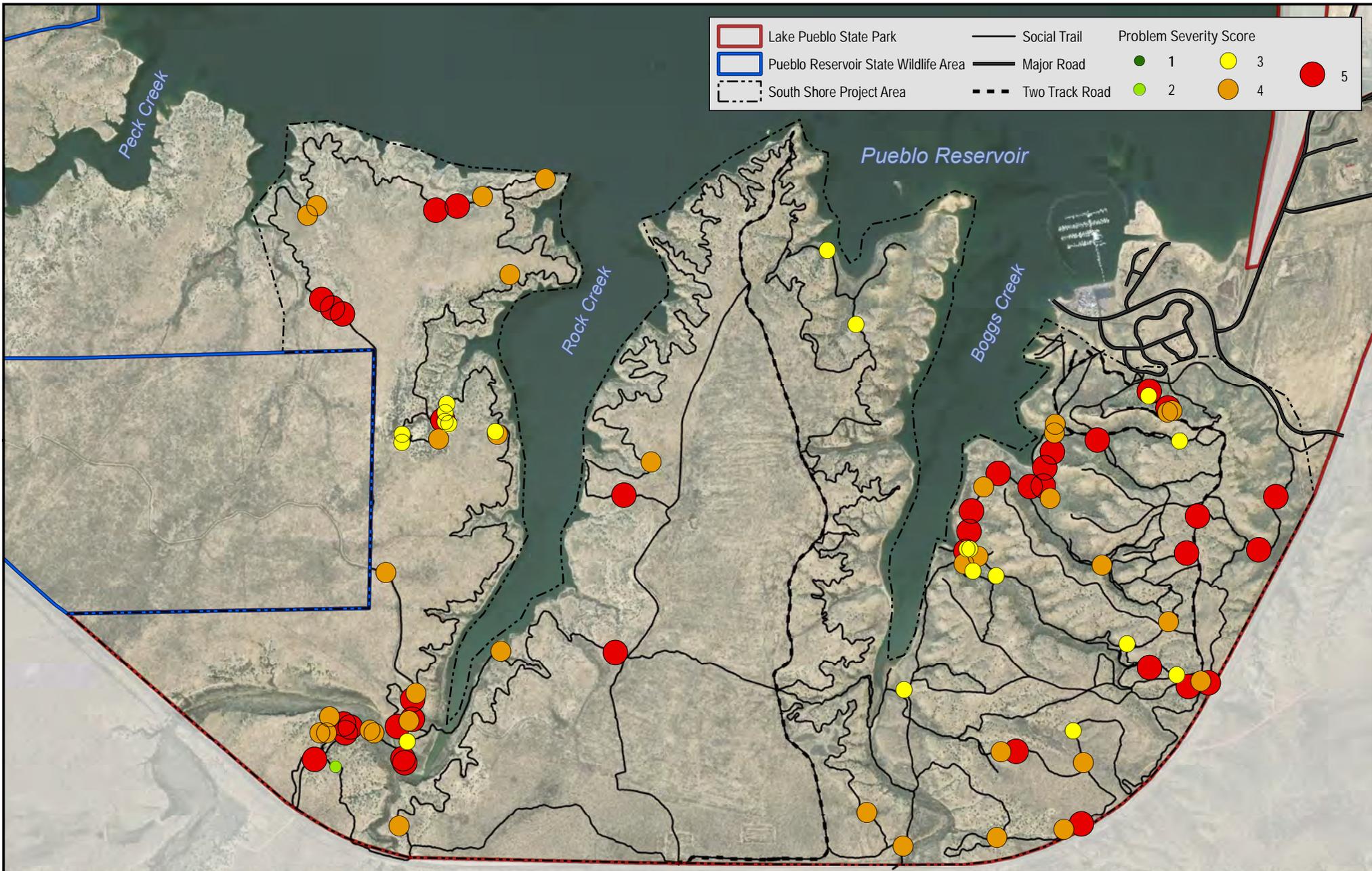
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 Colorado Parks and Wildlife  
 Resource Stewardship  
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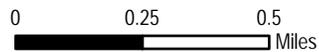
## South Shore Erosion Problem Points Map



MAP 4.18



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Lake Pueblo Trail Management Plan  
Pueblo, Colorado

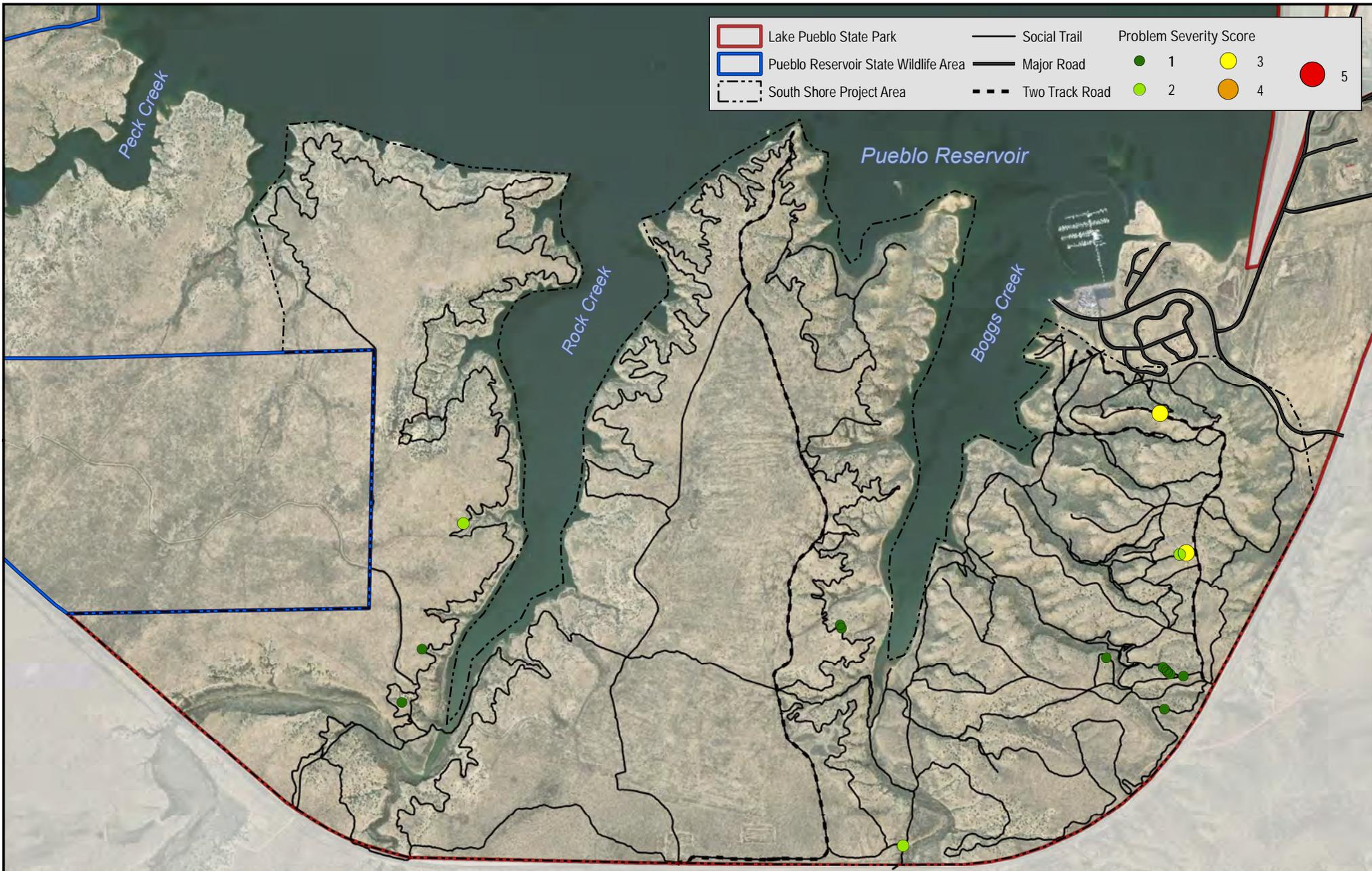


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Map prepared by- Melissa Greulich  
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Date prepared- 3/19/2019 9:20:46 AM  
Data Sources- Colorado Parks and Wildlife, CDOT  
JGS, Bing  
Additional Information- Color Aerial Imagery Flown 2015  
Cartographic Information- Map Datum: NAD83  
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Units: Meters  
UTM Zone: 13 North



Lake Pueblo State Park	Social Trail	Problem Severity Score		
Pueblo Reservoir State Wildlife Area	Major Road	1	3	5
South Shore Project Area	Two Track Road	2	4	

## South Shore Bedrock Problem Points Map



MAP 4.19

0 0.25 0.5 Miles

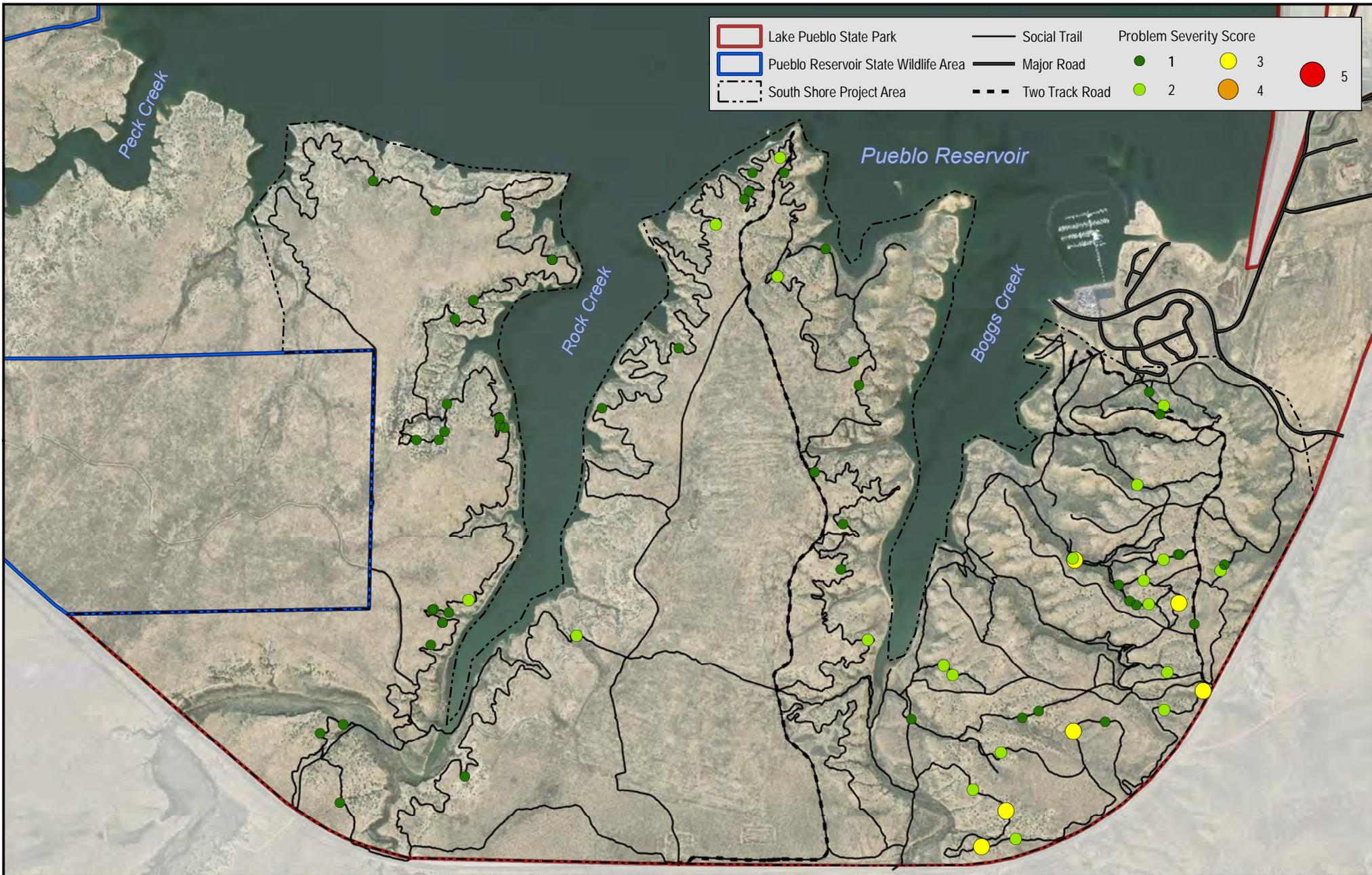
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Map prepared by- Melissa Greulich  
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Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



Lake Pueblo State Park	Social Trail	Problem Severity Score	
Pueblo Reservoir State Wildlife Area	Major Road	1	3
South Shore Project Area	Two Track Road	2	4
			5

## South Shore Root Exposure Problem Points Map



MAP 4.20

0 0.25 0.5 Miles

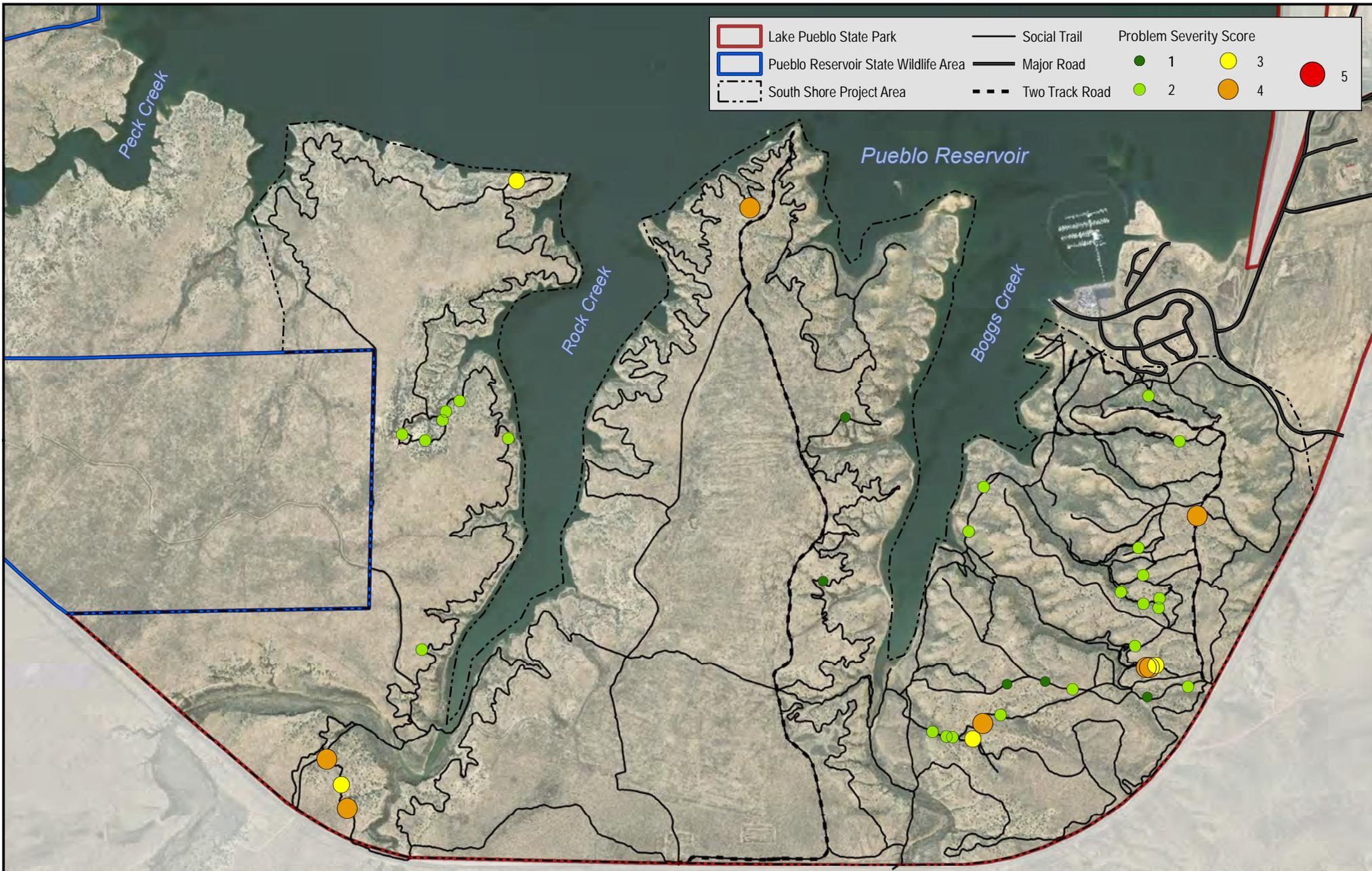
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Map Document-  
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Map prepared by- Melissa Greulich  
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Date prepared-  
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Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
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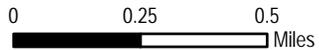
## South Shore Trail Braiding Problem Points Map



MAP 4.21



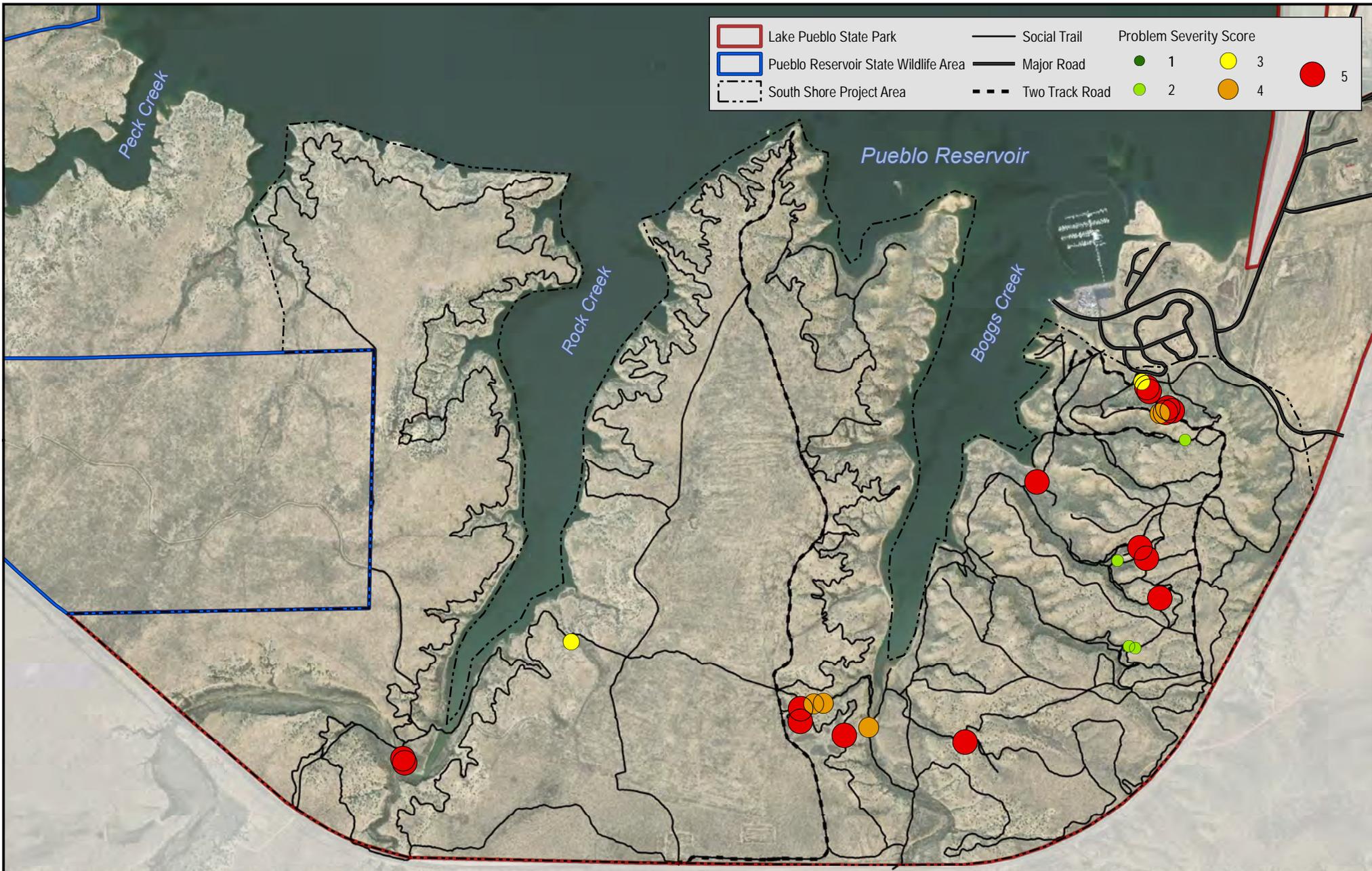
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship  
Additional Information-  
Color Aerial Imagery Flown 2015  
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## South Shore Recreation Infrastructure Problem Points Map



MAP 4.22



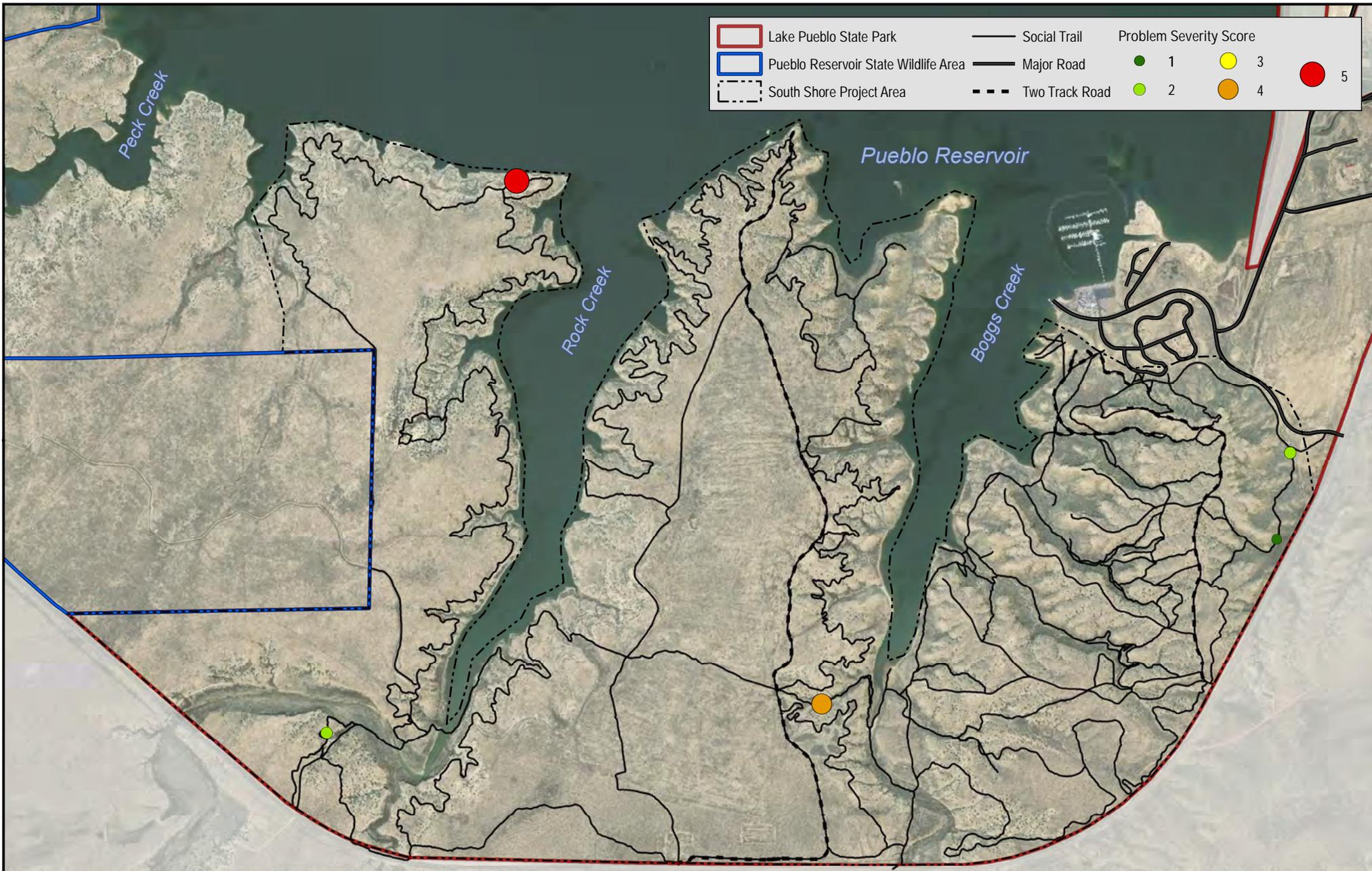
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0 0.25 0.5  
Miles

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Colorado Parks and Wildlife  
Resource Stewardship  
Additional Information-  
Color Aerial Imagery Flown 2015  
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## South Shore Water Pooling Problem Points Map



MAP 4.23



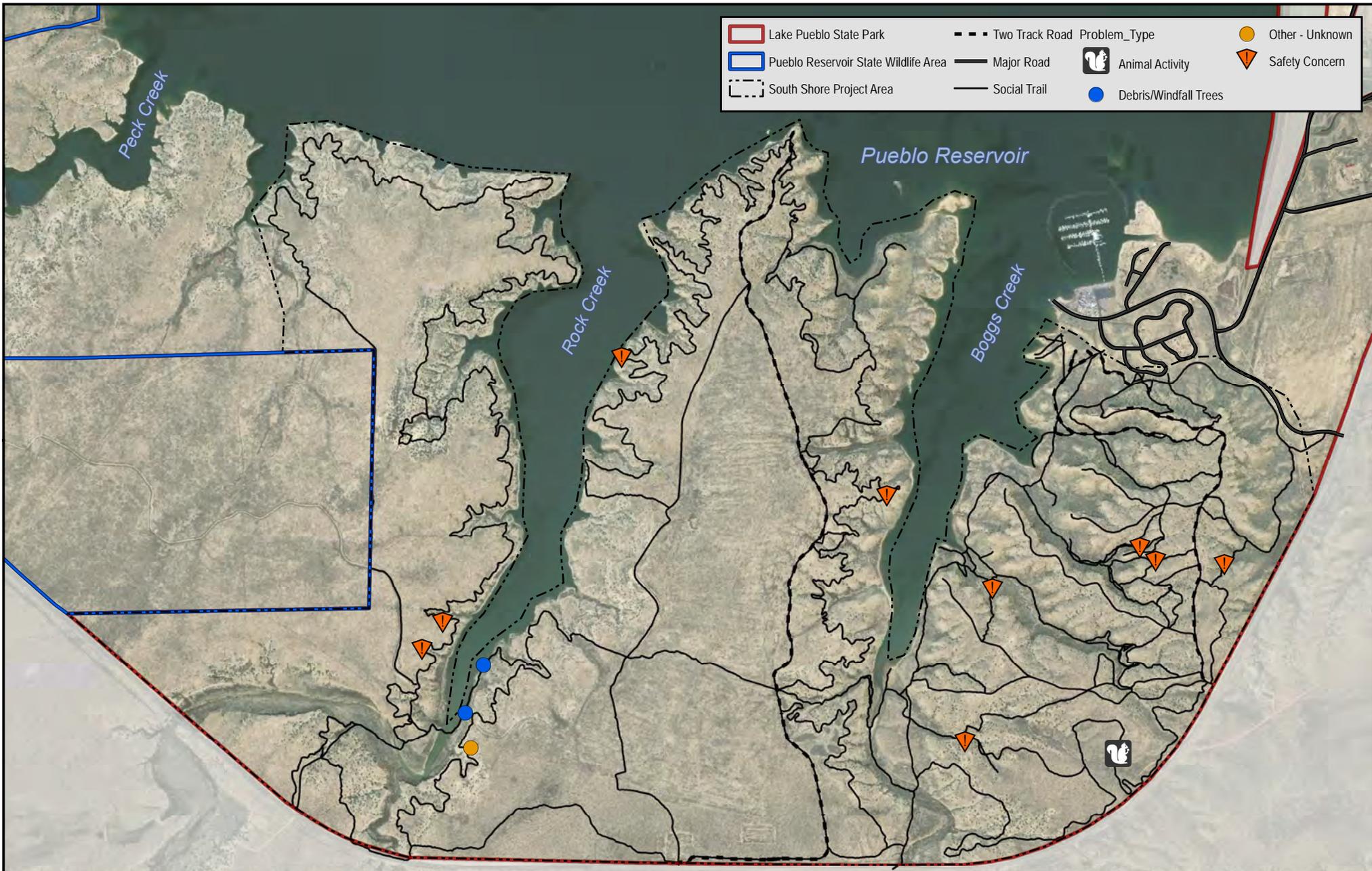
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0 0.25 0.5  
Miles

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Resource Stewardship  
Additional Information-  
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Cartographic Information-  
Map Datum: NAD83  
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Units: Meters  
UTM Zone: 13 North



Lake Pueblo State Park	Two Track Road	Animal Activity	Other - Unknown
Pueblo Reservoir State Wildlife Area	Major Road	Debris/Windfall Trees	Safety Concern
South Shore Project Area	Social Trail		

## South Shore Other Problem Points Map



MAP 4.24



0 0.25 0.5 Miles

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Pueblo, Colorado

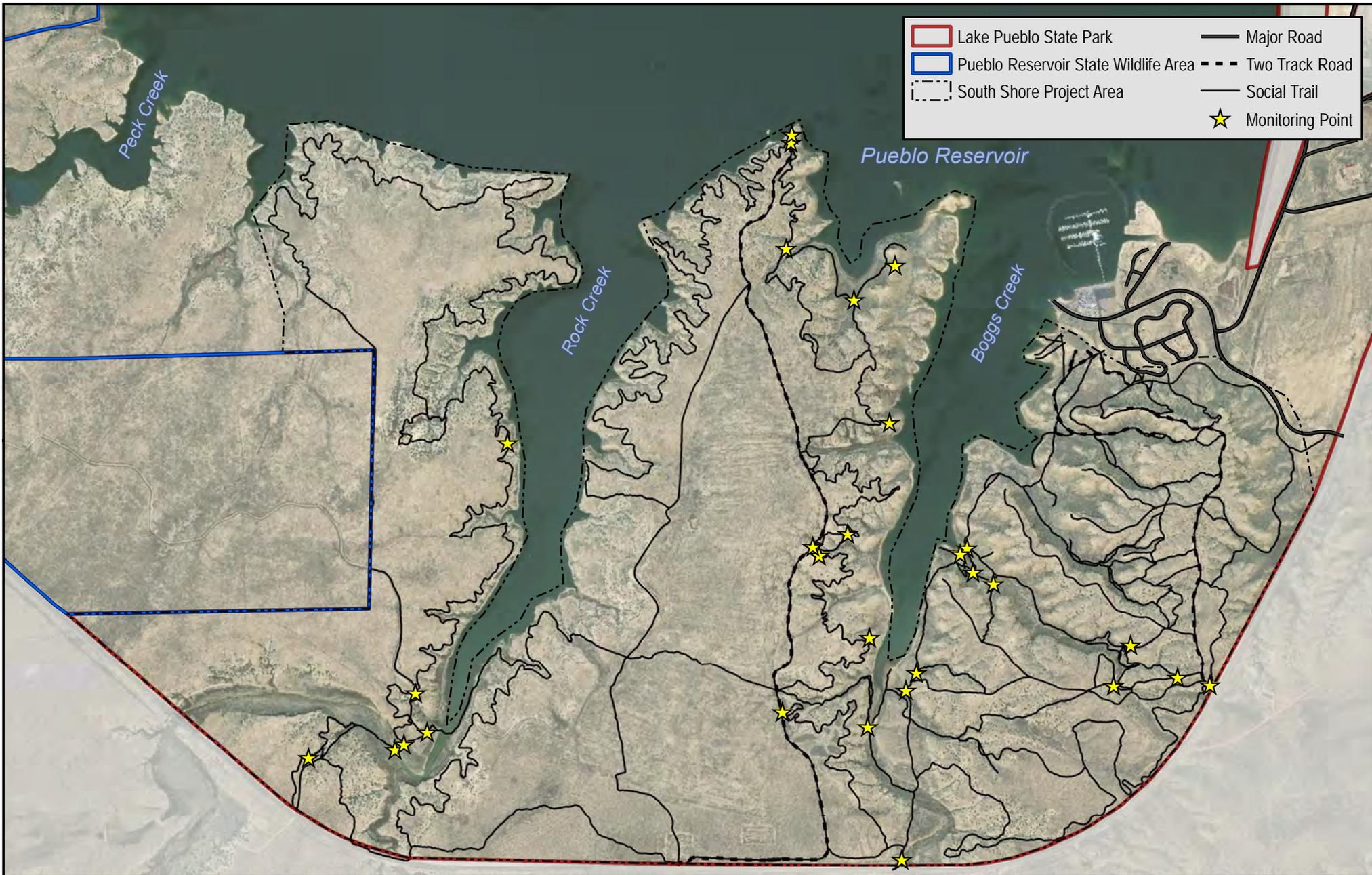
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Map Document-  
Map4\_28\_South\_Shore\_Other\_Problem\_Points  
Adobe PDF-  
Map4\_28\_South\_Shore\_Other\_Problem\_Points  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Additional Information-  
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UTM Zone: 13 North

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Data Sources-  
Colorado Parks and Wildlife, CDOT



	Lake Pueblo State Park		Major Road
	Pueblo Reservoir State Wildlife Area		Two Track Road
	South Shore Project Area		Social Trail
			Monitoring Point

## South Shore Monitoring Points Map



MAP 4.25



0 0.25 0.5  
Miles

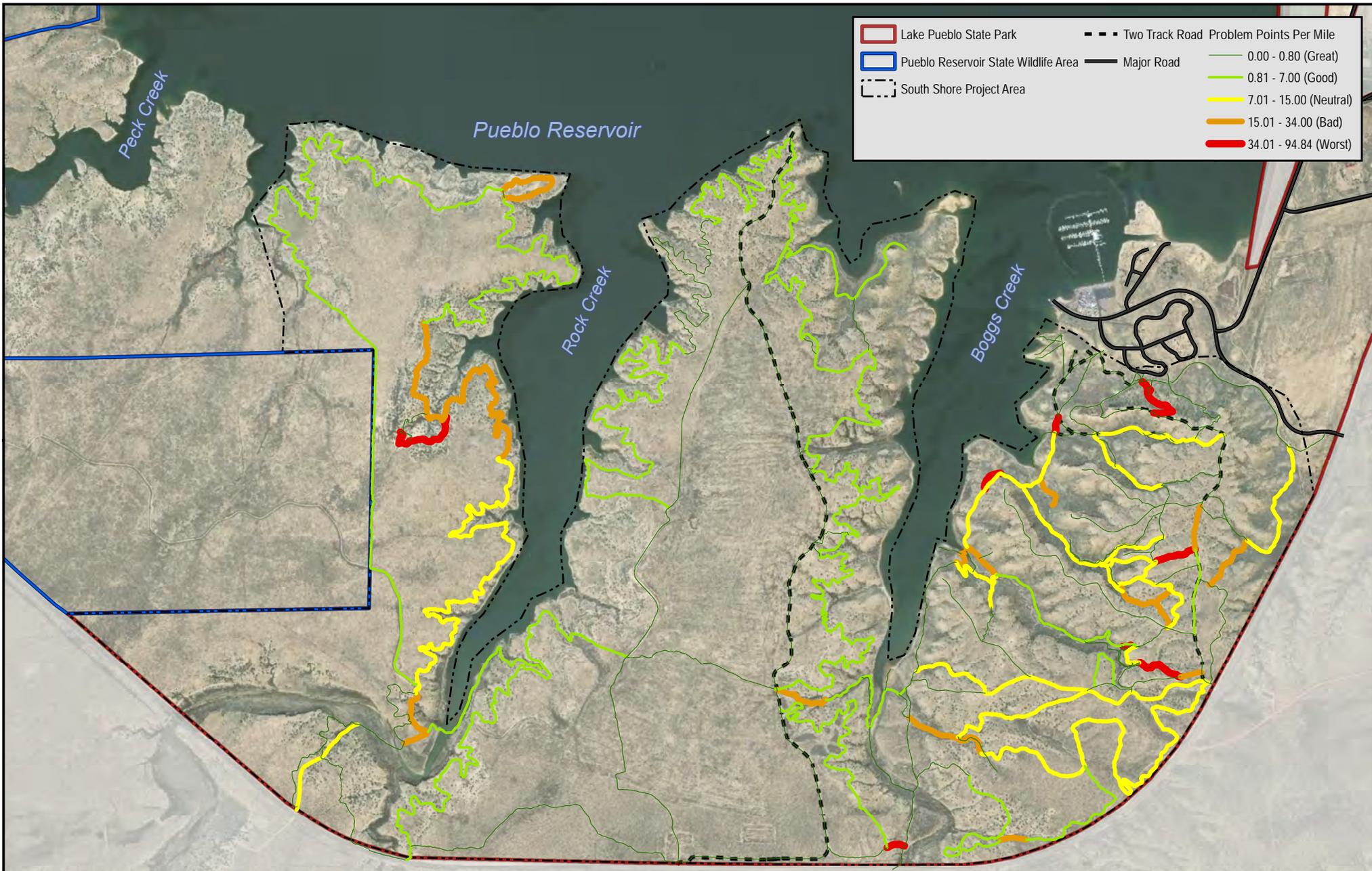
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Colorado Parks and Wildlife  
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USGS, Bing  
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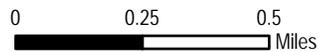
## South Shore Problem Points Per Mile Map



MAP 4.26



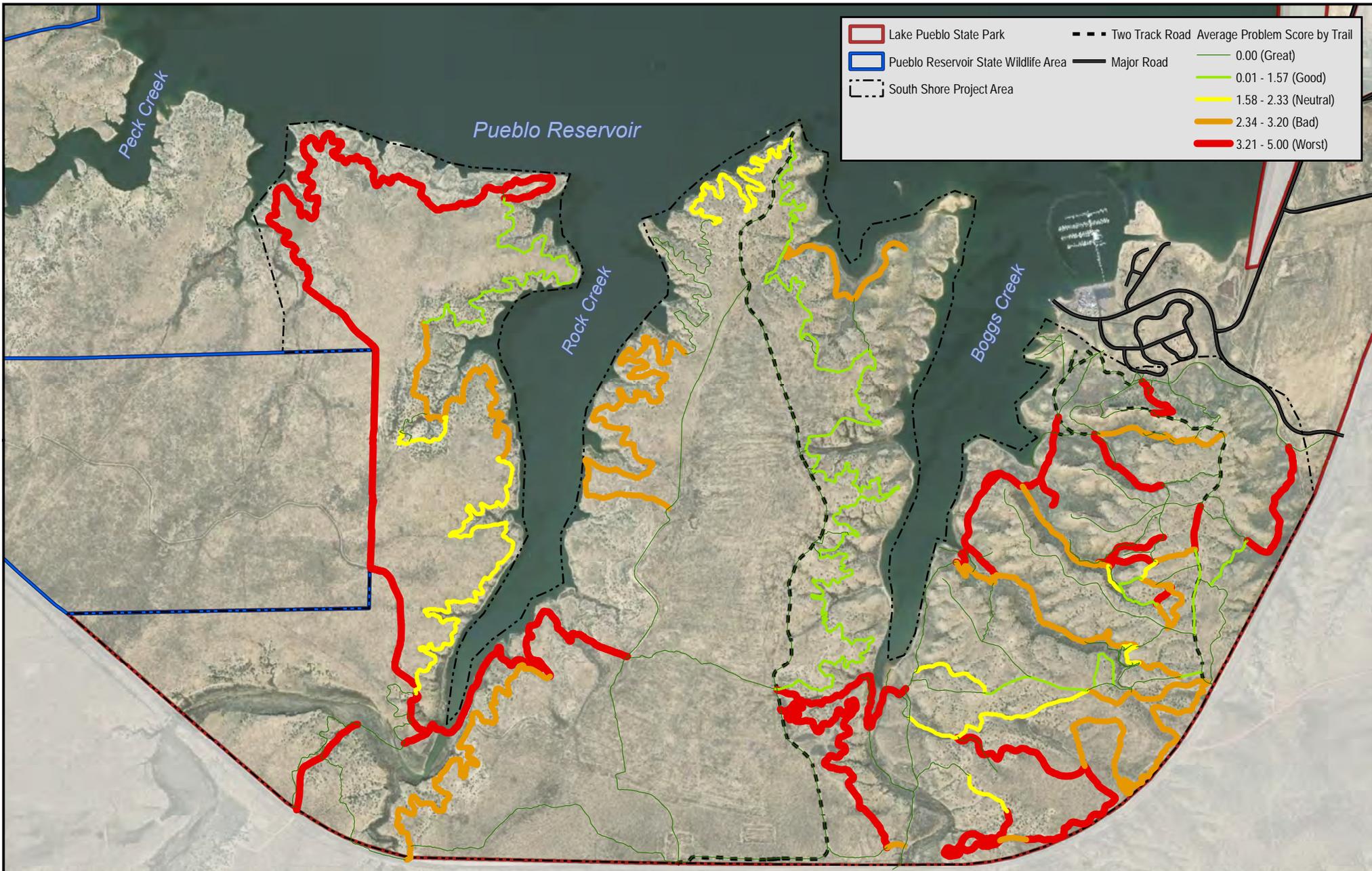
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Resource Stewardship  
Additional Information- Color Aerial Imagery Flown 2015  
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Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



Lake Pueblo State Park	Two Track Road	<b>Average Problem Score by Trail</b>
Pueblo Reservoir State Wildlife Area	Major Road	0.00 (Great)
South Shore Project Area		0.01 - 1.57 (Good)
		1.58 - 2.33 (Neutral)
		2.34 - 3.20 (Bad)
		3.21 - 5.00 (Worst)

## South Shore Average Problem Score by Trail Map



MAP 4.27



0 0.25 0.5  
Miles

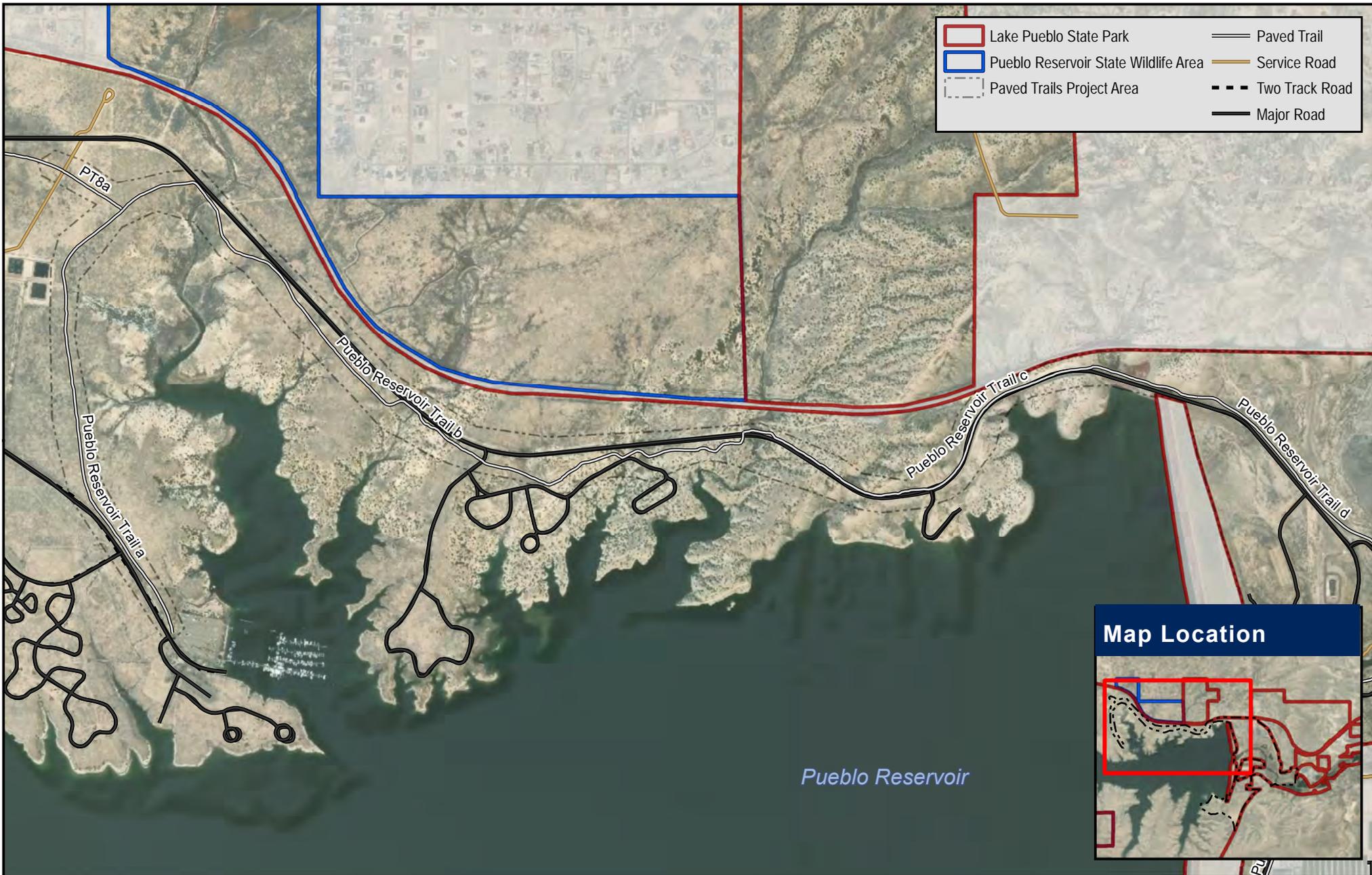
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Map prepared by- Melissa Greulich  
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Colorado Parks and Wildlife, CDOT  
Bing  
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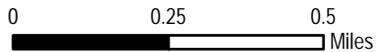
## Paved Trails Map (1)



MAP 4.28



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Pueblo, Colorado



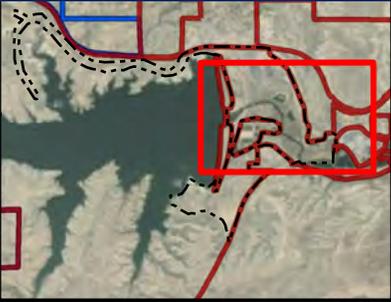
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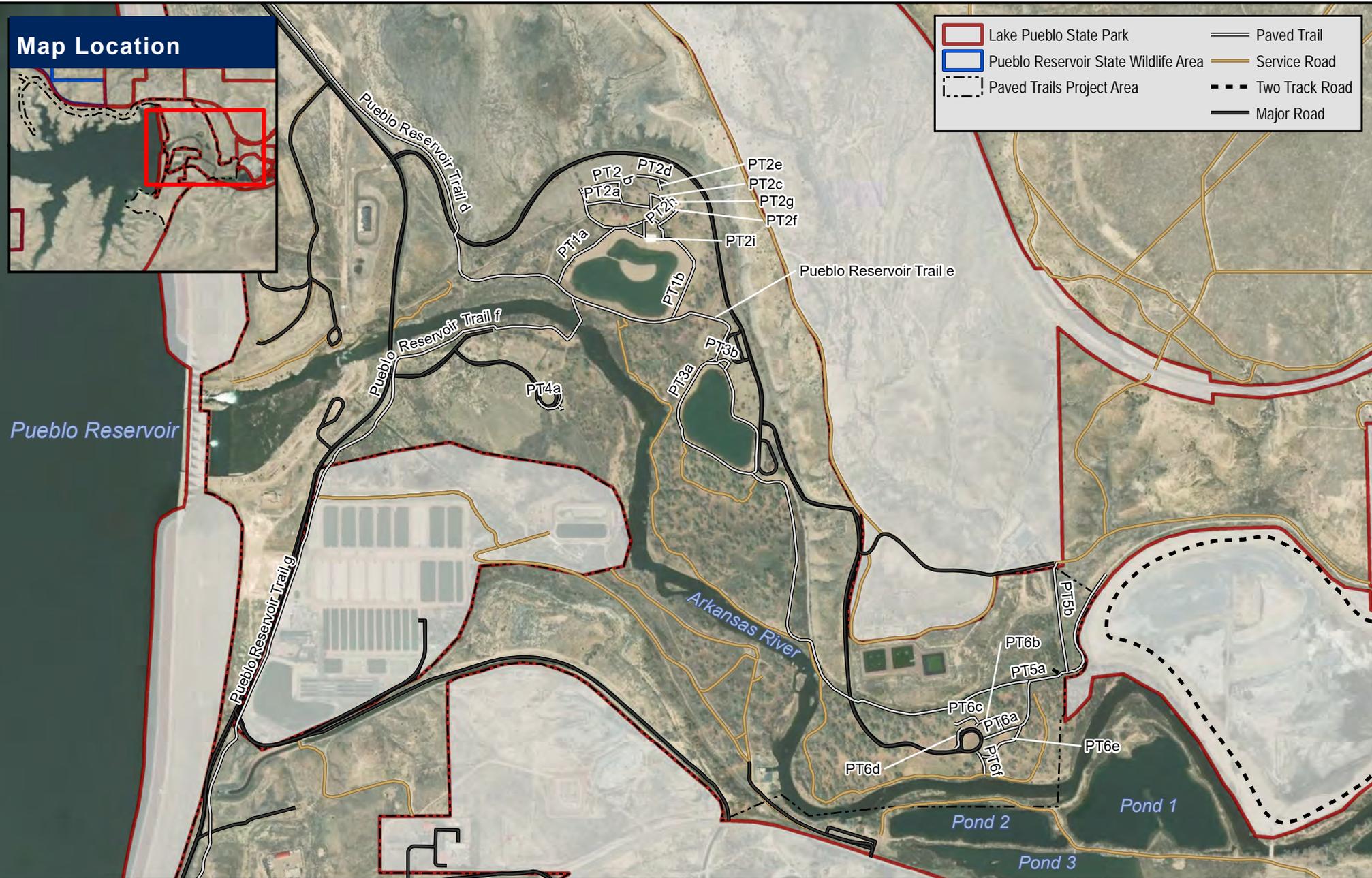
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

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Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
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Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North

### Map Location



	Lake Pueblo State Park		Paved Trail
	Pueblo Reservoir State Wildlife Area		Service Road
	Paved Trails Project Area		Two Track Road
			Major Road



## Paved Trails Map (2)



MAP 4.29



Colorado Parks and Wildlife  
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Pueblo, Colorado

0 0.25



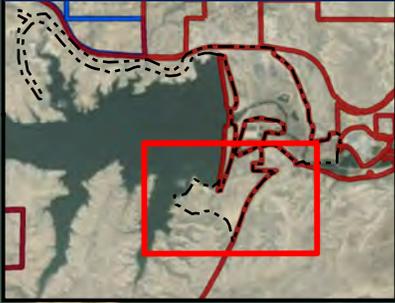
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Map Document-  
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Map4\_33\_Paved\_Trails.jpg  
Map prepared by- Melissa Greulich  
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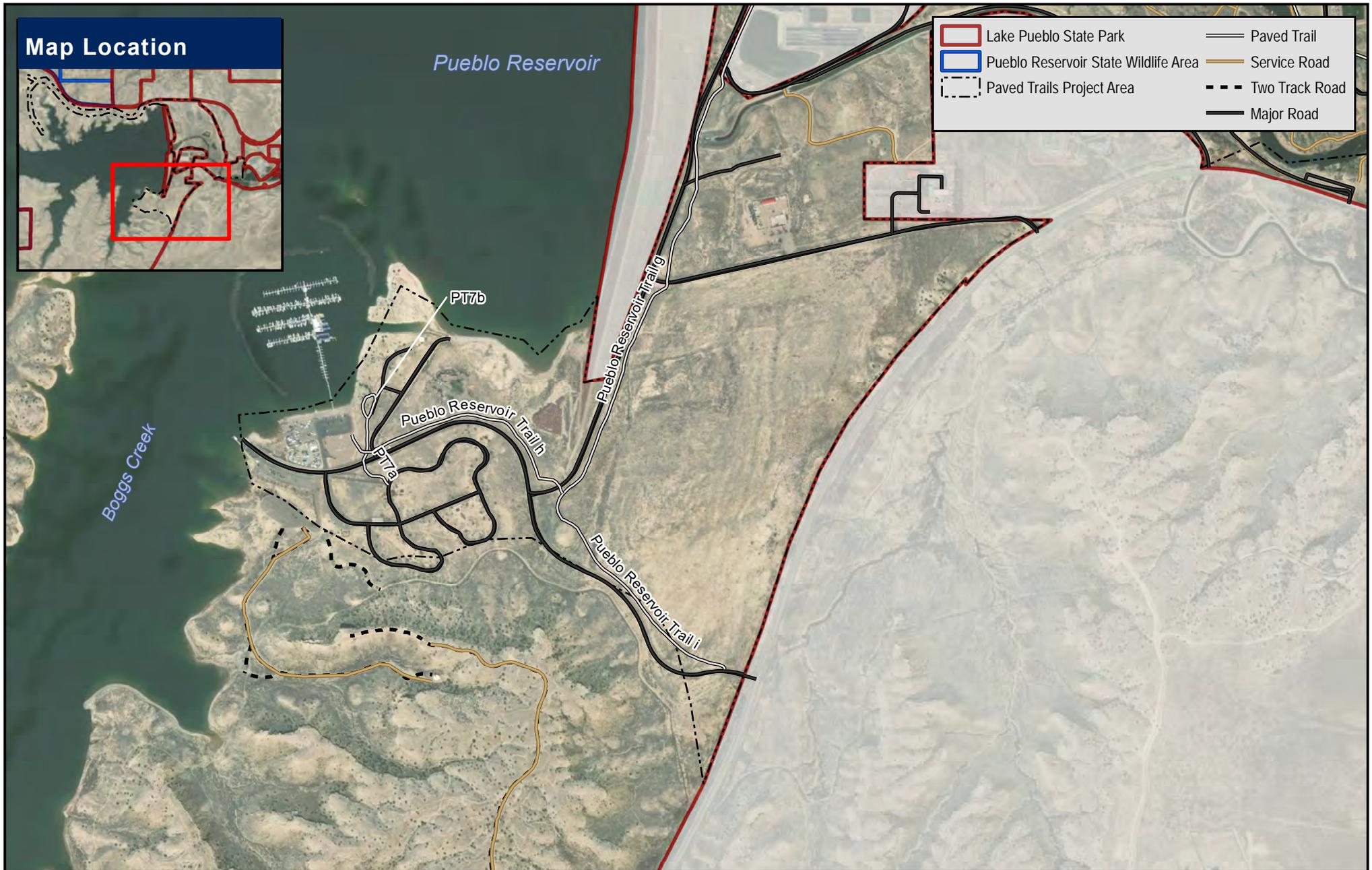
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USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
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Units: Meters  
UTM Zone: 13 North

# Map Location



Pueblo Reservoir

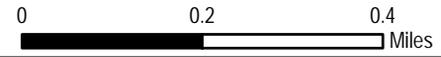
	Lake Pueblo State Park		Paved Trail
	Pueblo Reservoir State Wildlife Area		Service Road
	Paved Trails Project Area		Two Track Road
			Major Road



## Paved Trails Map (3)



MAP 4.30



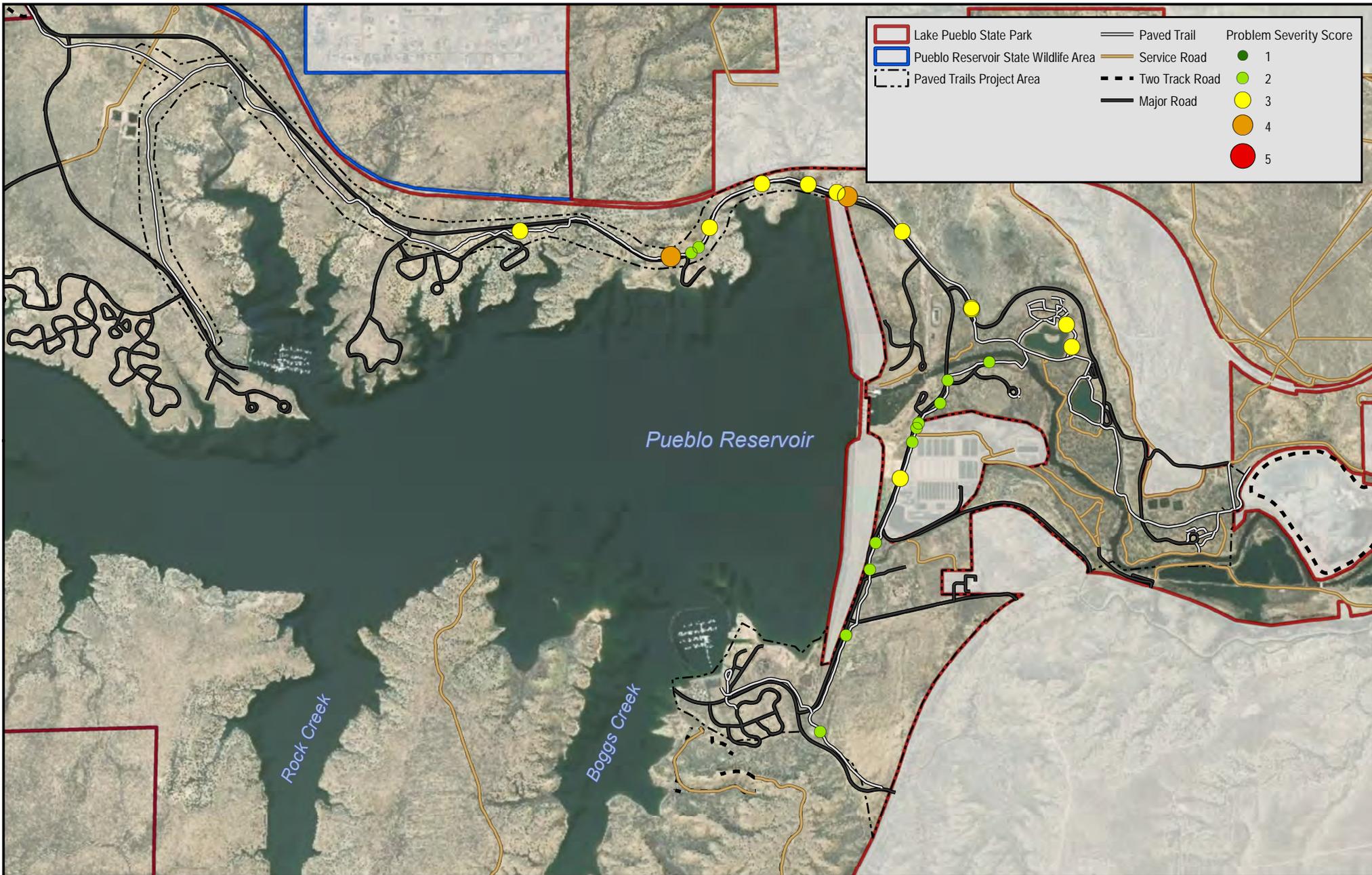
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 Map4\_34\_Paved\_Trails  
 Adobe PDF-  
 Map4\_34\_Paved\_Trails.jpg  
 Map prepared by- Melissa Greulich  
 Colorado Parks and Wildlife  
 Resource Stewardship

Date prepared-  
 4/17/2019 9:41:00 AM  
 Data Sources-  
 Colorado Parks and Wildlife, CDOT  
 USGS, Bing  
 Additional Information-  
 Color Aerial Imagery Flown 2015  
 Cartographic Information-  
 Map Datum: NAD83  
 Map Projection: UTM, Clarke 1866  
 Units: Meters  
 UTM Zone: 13 North



## Paved Trails Erosion Problem Points Map



MAP 4.31



0 0.5 1  
Miles

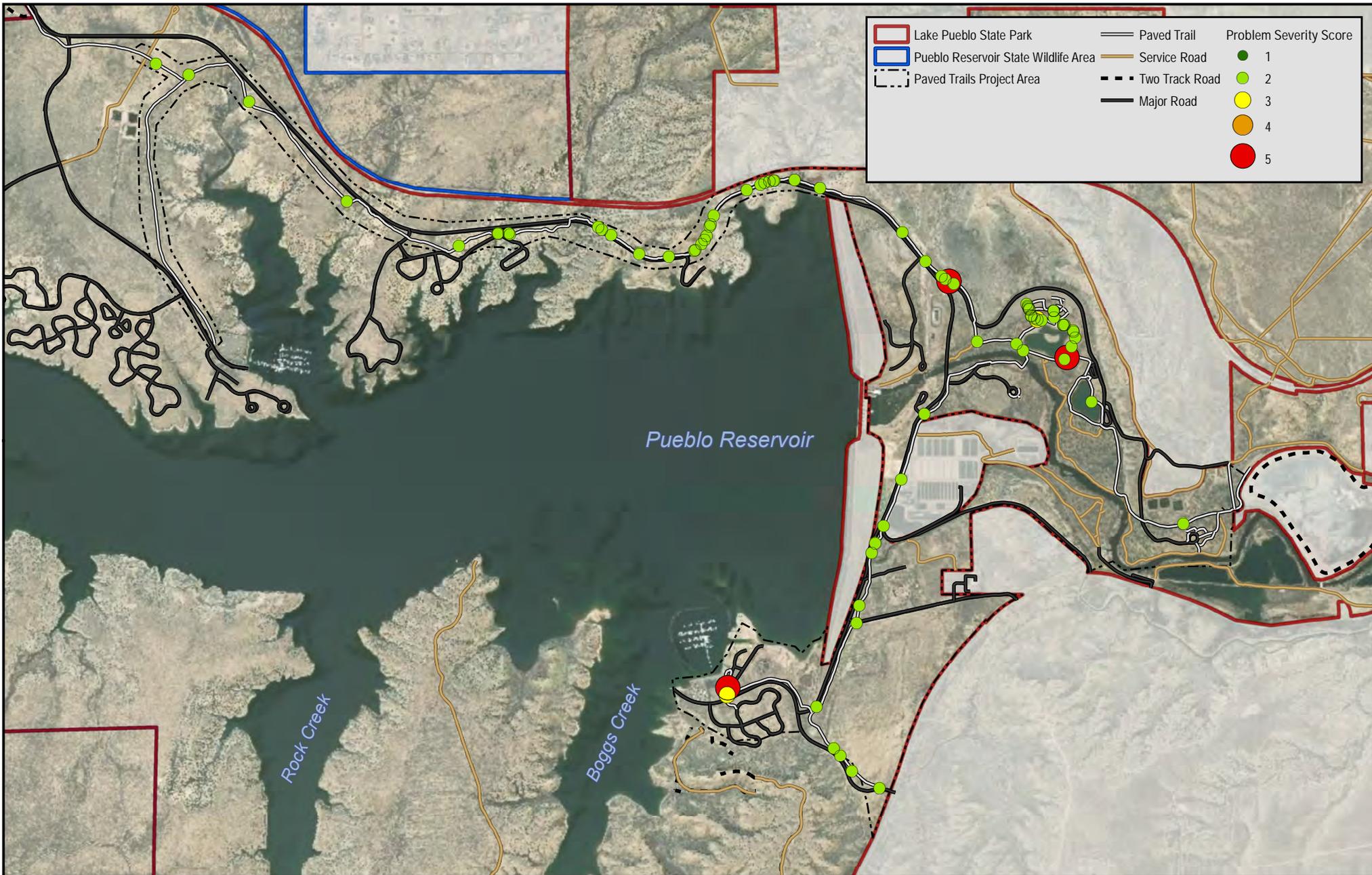
Colorado Parks and Wildlife  
Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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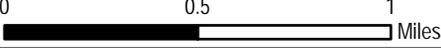
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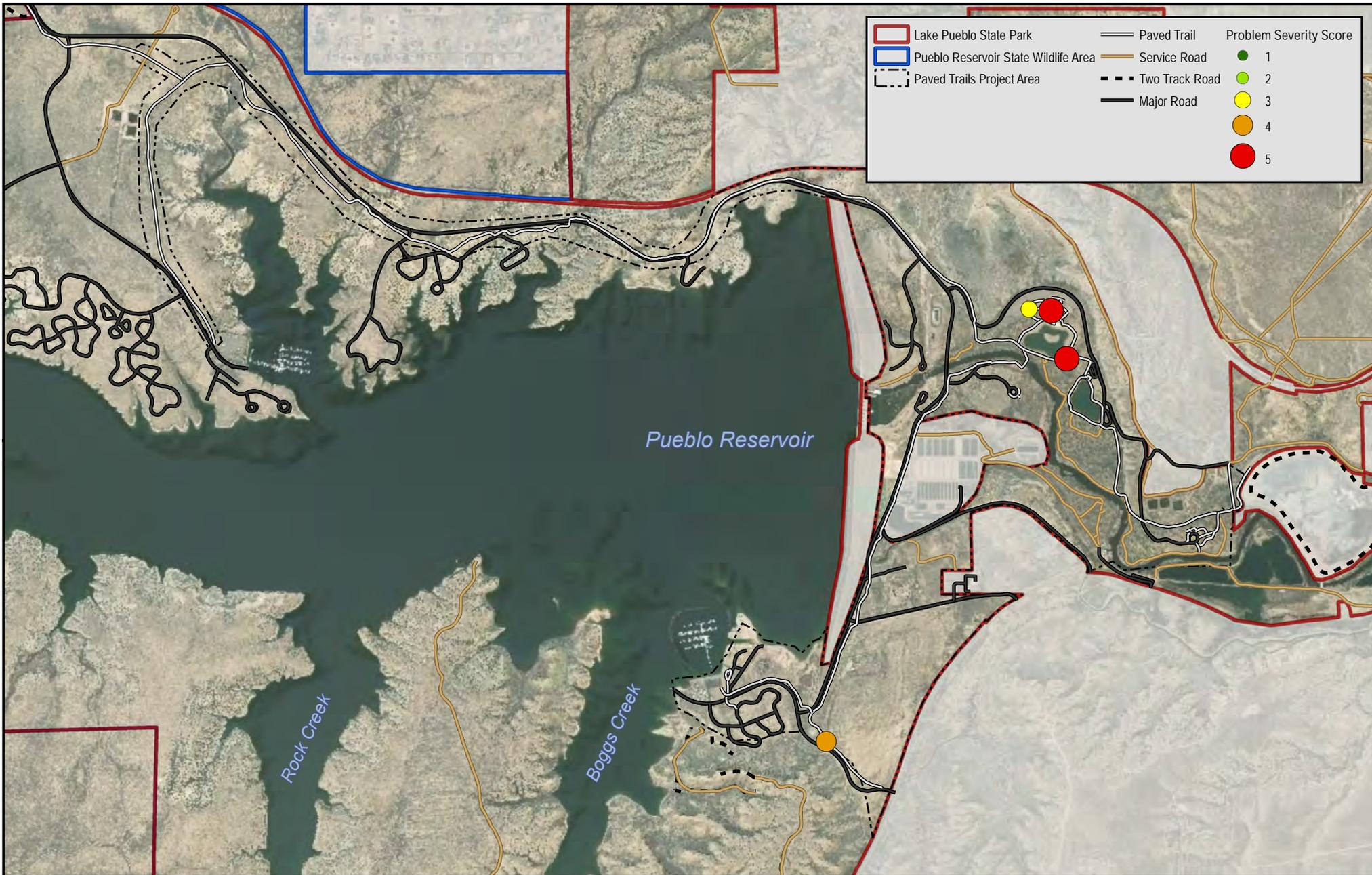
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Adobe PDF-  
Map4\_35\_Paved\_Trails\_Erosion.jpg  
Map prepared by- Melissa Greulich  
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Date prepared-  
4/17/2019 9:44:08 AM  
Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
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Units: Meters  
UTM Zone: 13 North



## Paved Trails Surface Crack Problem Points Map

	<b>MAP 4.32</b>		<p>Department of Natural Resources Disclaimer:          The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p> <p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document-          Map4_36_Paved_Trails_Crack          Adobe PDF-          Map4_36_Paved_Trails_Crack.jpg          Map prepared by- Melissa Greulich          Colorado Parks and Wildlife          Resource Stewardship</p> <p>Date prepared-          4/17/2019 9:47:03 AM          Data Sources-          Colorado Parks and Wildlife, CDOT          USGS, Bing          Additional Information-          Color Aerial Imagery Flown 2015          Cartographic Information-          Map Datum: NAD83          Map Projection: UTM, Clarke 1866          Units: Meters          UTM Zone: 13 North</p>
		<p><b>Colorado Parks and Wildlife</b>  <b>Lake Pueblo Trail Management Plan</b>  <b>Pueblo, Colorado</b></p>		



## Paved Trails Surface Buckle Problem Points Map



MAP 4.33



0 0.5 1  
Miles

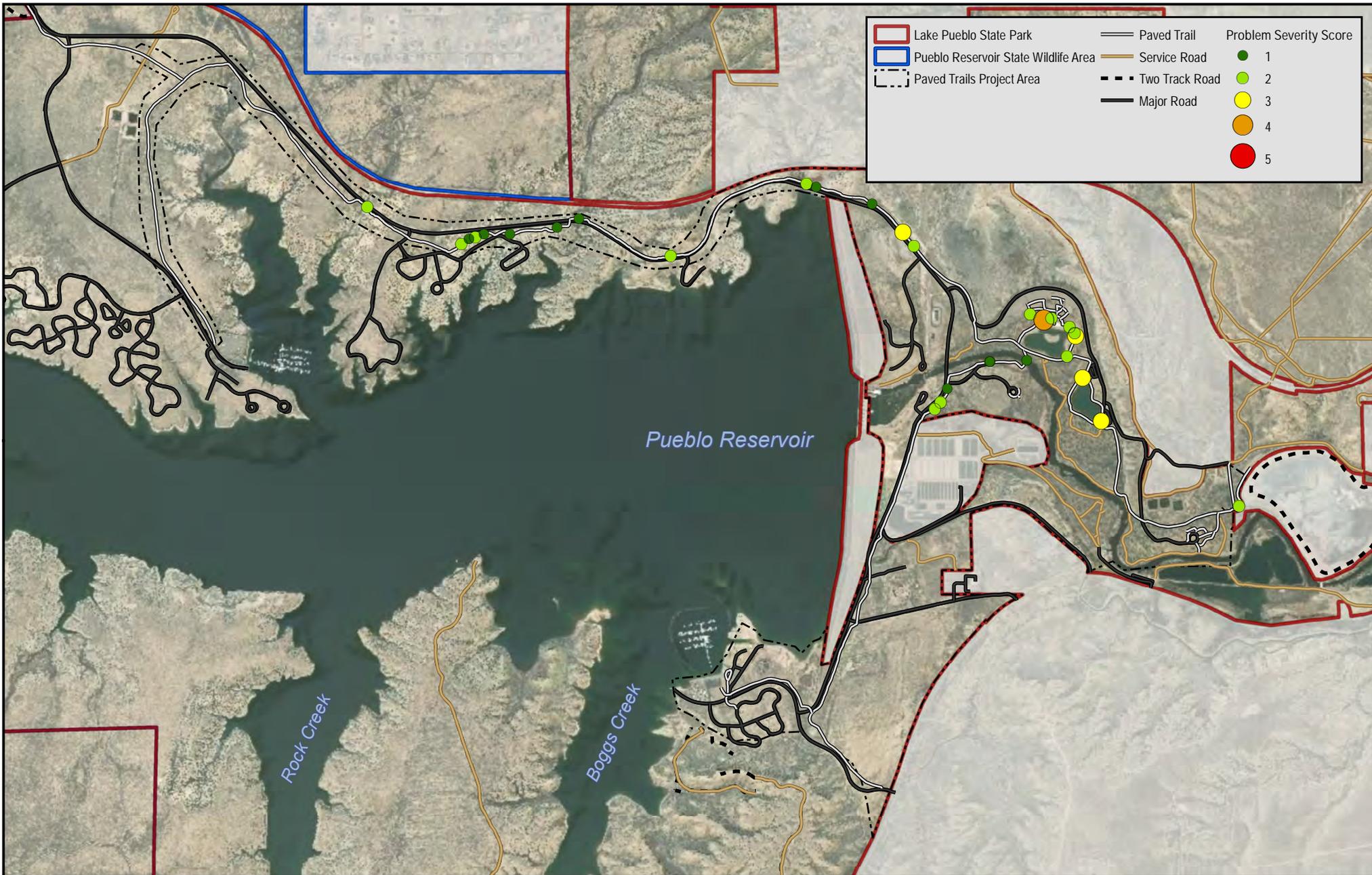
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Map Document-  
Map4\_37\_Paved\_Trails\_Buckle  
Adobe PDF-  
Map4\_37\_Paved\_Trails\_Buckle.jpg  
Map prepared by- Melissa Greulich  
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Resource Stewardship

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Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



## Paved Trails Surrounding Height Difference Problem Points Map



MAP 4.34

0 0.5 1  
Miles



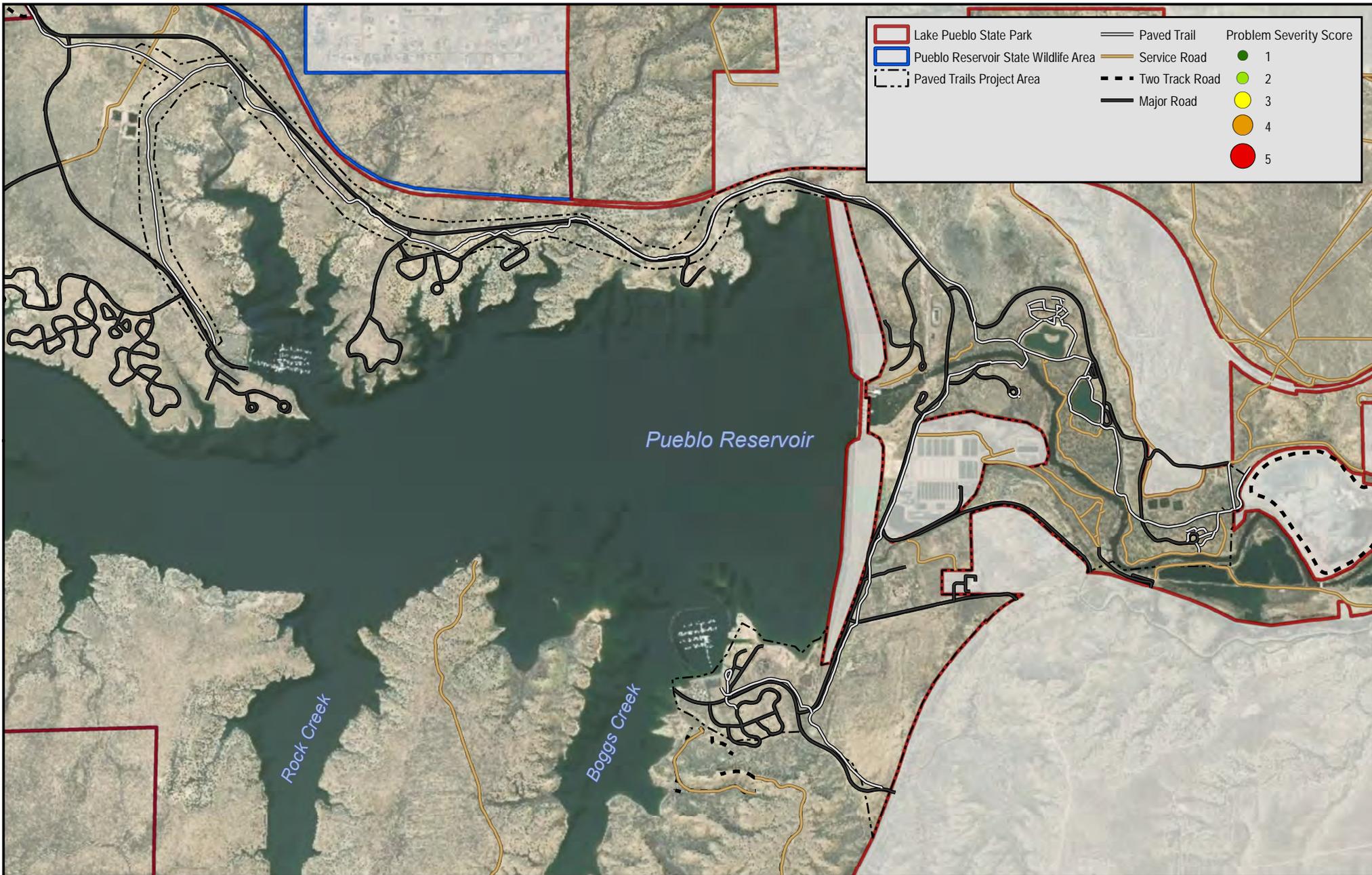
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Map4\_38\_Paved\_Trails\_SHD  
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

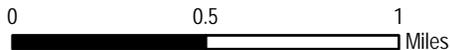
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USGS, Bing  
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Units: Meters  
UTM Zone: 13 North



## Paved Trails Water Pooling Problem Points Map



MAP 4.35



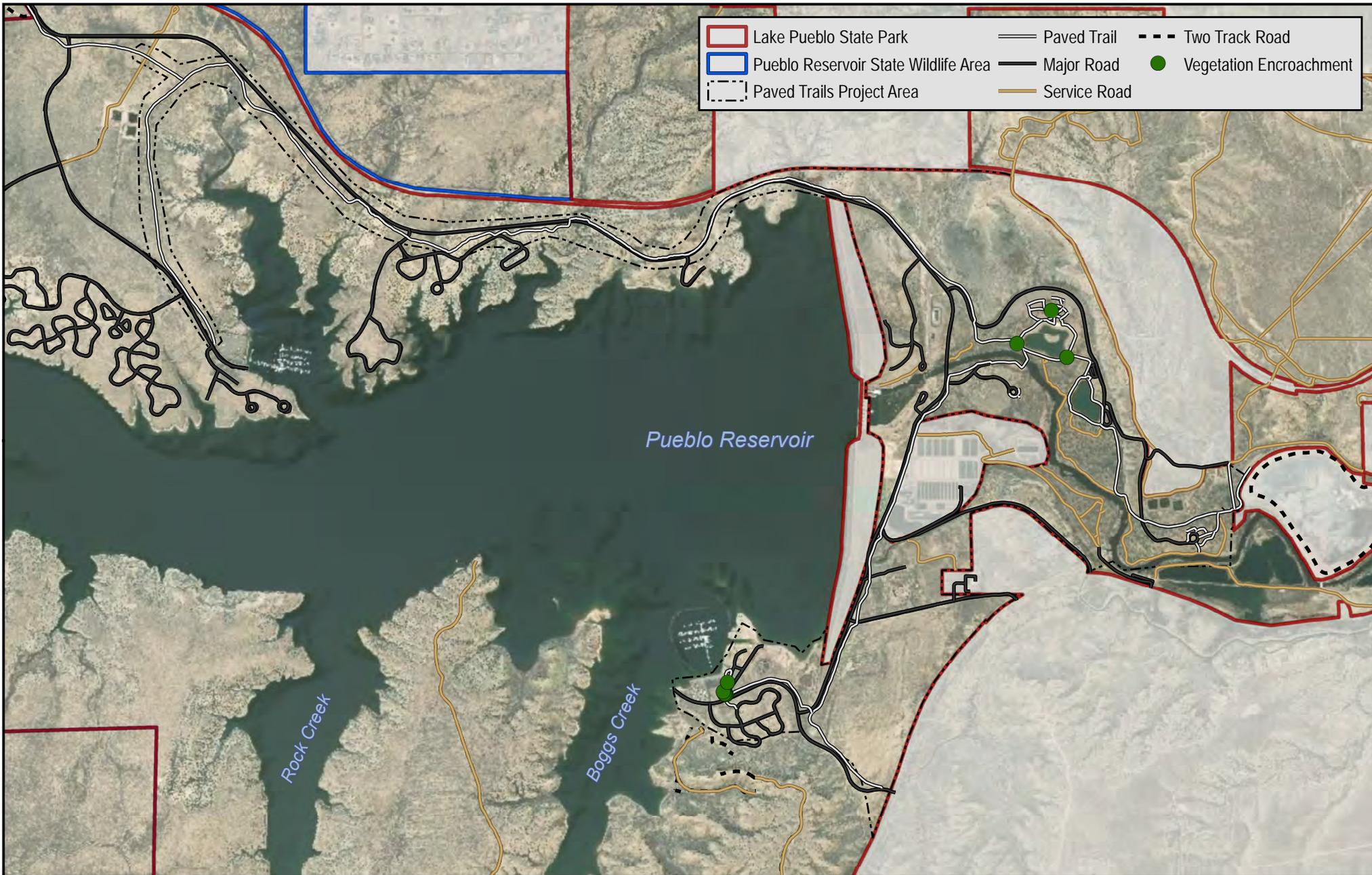
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Map Document-  
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Adobe PDF-  
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
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Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
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Units: Meters  
UTM Zone: 13 North



## Paved Trails Vegetation Encroachment Problem Points Map



MAP 4.36



0 0.5 1  
Miles

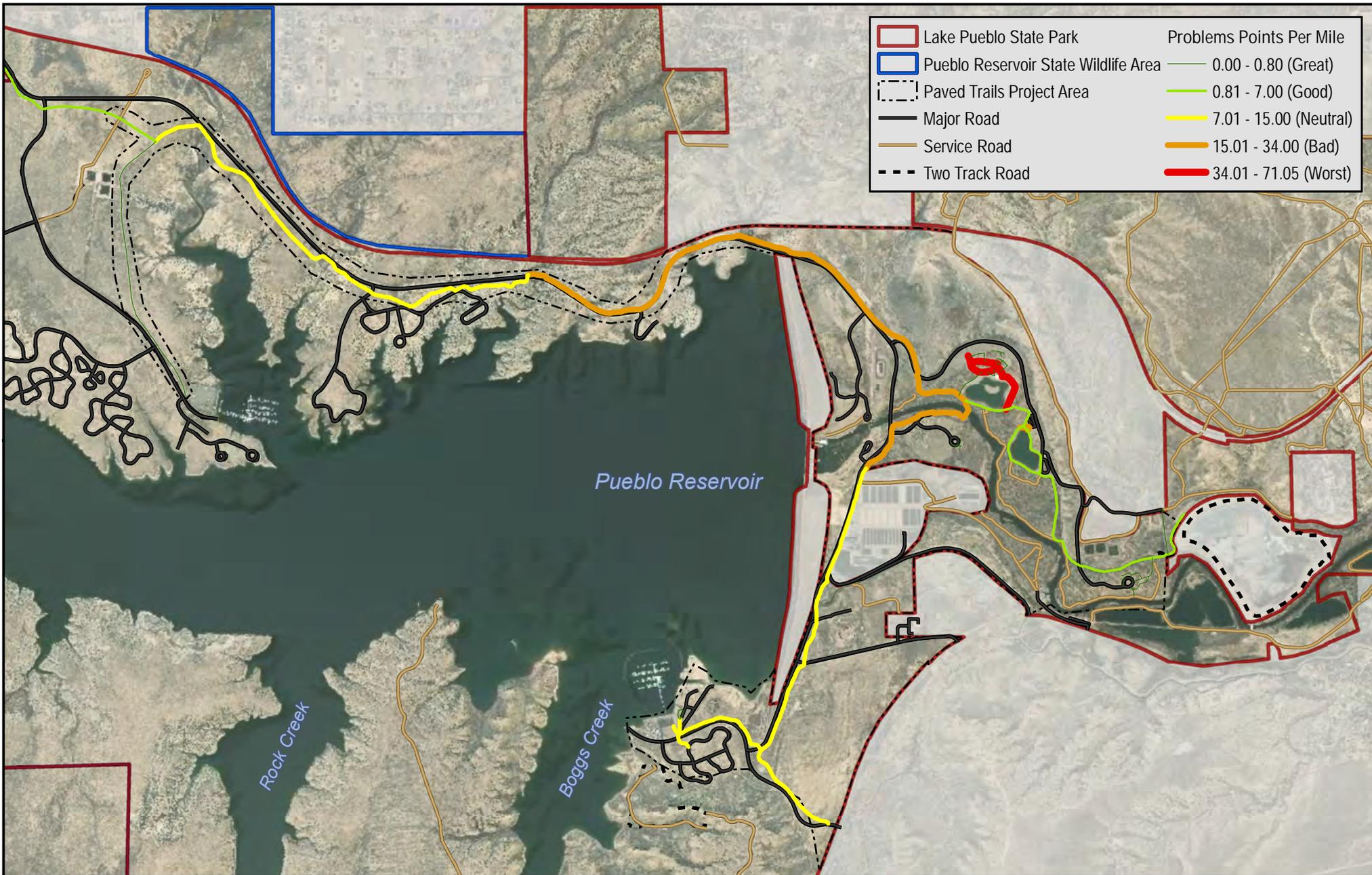
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

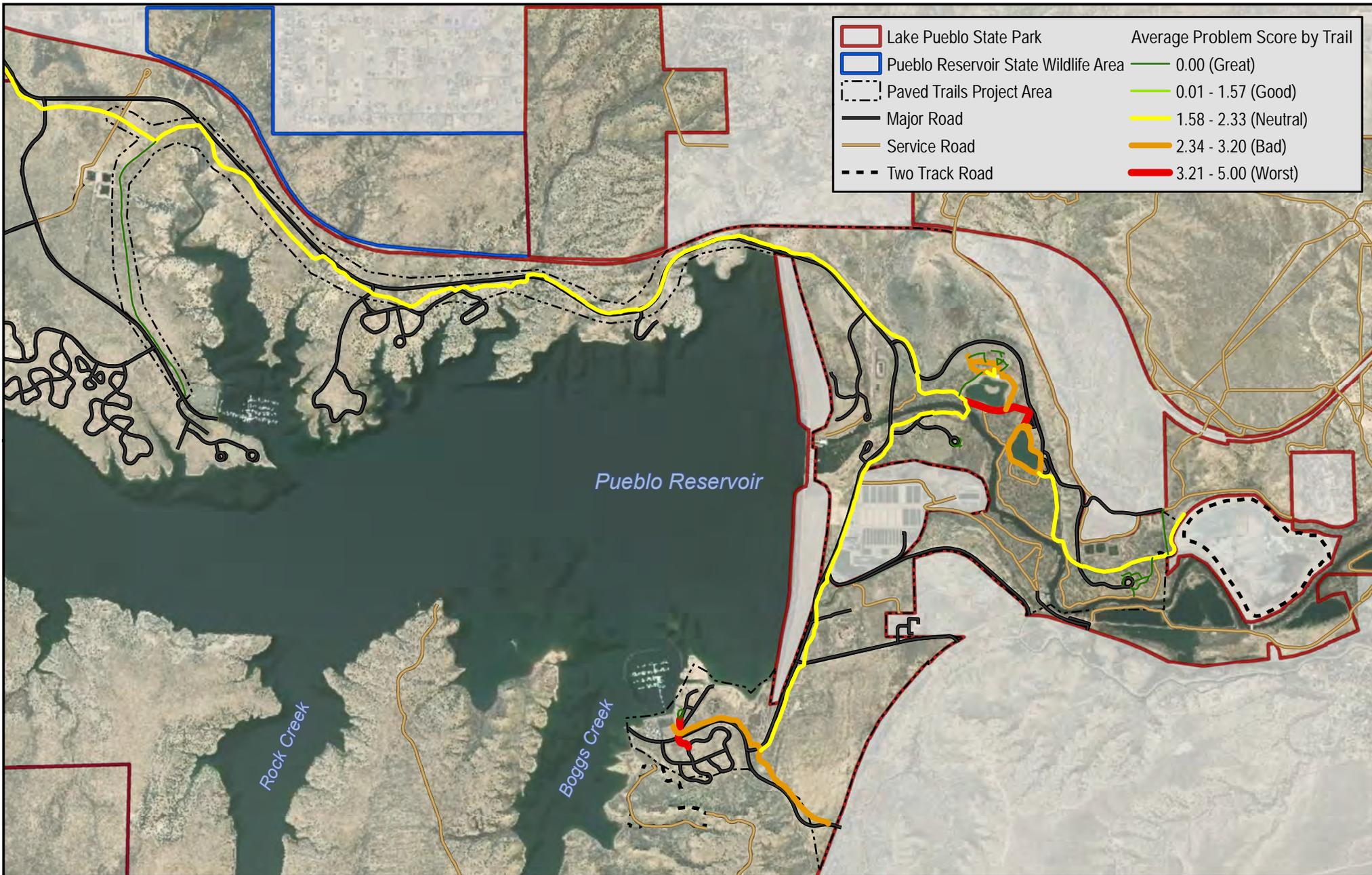
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Color Aerial Imagery Flown 2015  
Cartographic Information-  
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Units: Meters  
UTM Zone: 13 North



	Lake Pueblo State Park		0.00 - 0.80 (Great)
	Pueblo Reservoir State Wildlife Area		0.81 - 7.00 (Good)
	Paved Trails Project Area		7.01 - 15.00 (Neutral)
	Major Road		15.01 - 34.00 (Bad)
	Service Road		34.01 - 71.05 (Worst)
	Two Track Road		

## Paved Trails Problem Points Per Mile Map

	<b>MAP 4.37</b>		<p>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p> <p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document- 4/17/2019 10:18:47 AM Map4_41_Paved_Trails_ProbsPerMile Adobe PDF- Map4_41_Paved_Trails_ProbsPerMile.pdf Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</p> <p>Date prepared- 4/17/2019 10:18:47 AM Data Sources- Colorado Parks and Wildlife, CDOT, USGS, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1866 Units: Meters UTM Zone: 13 North</p>
		<p><b>Colorado Parks and Wildlife</b> Lake Pueblo Trail Management Plan Pueblo, Colorado</p>		



## Paved Trails Average Problem Score by Trail Map



MAP 4.38

0                      0.5                      1  
 Miles

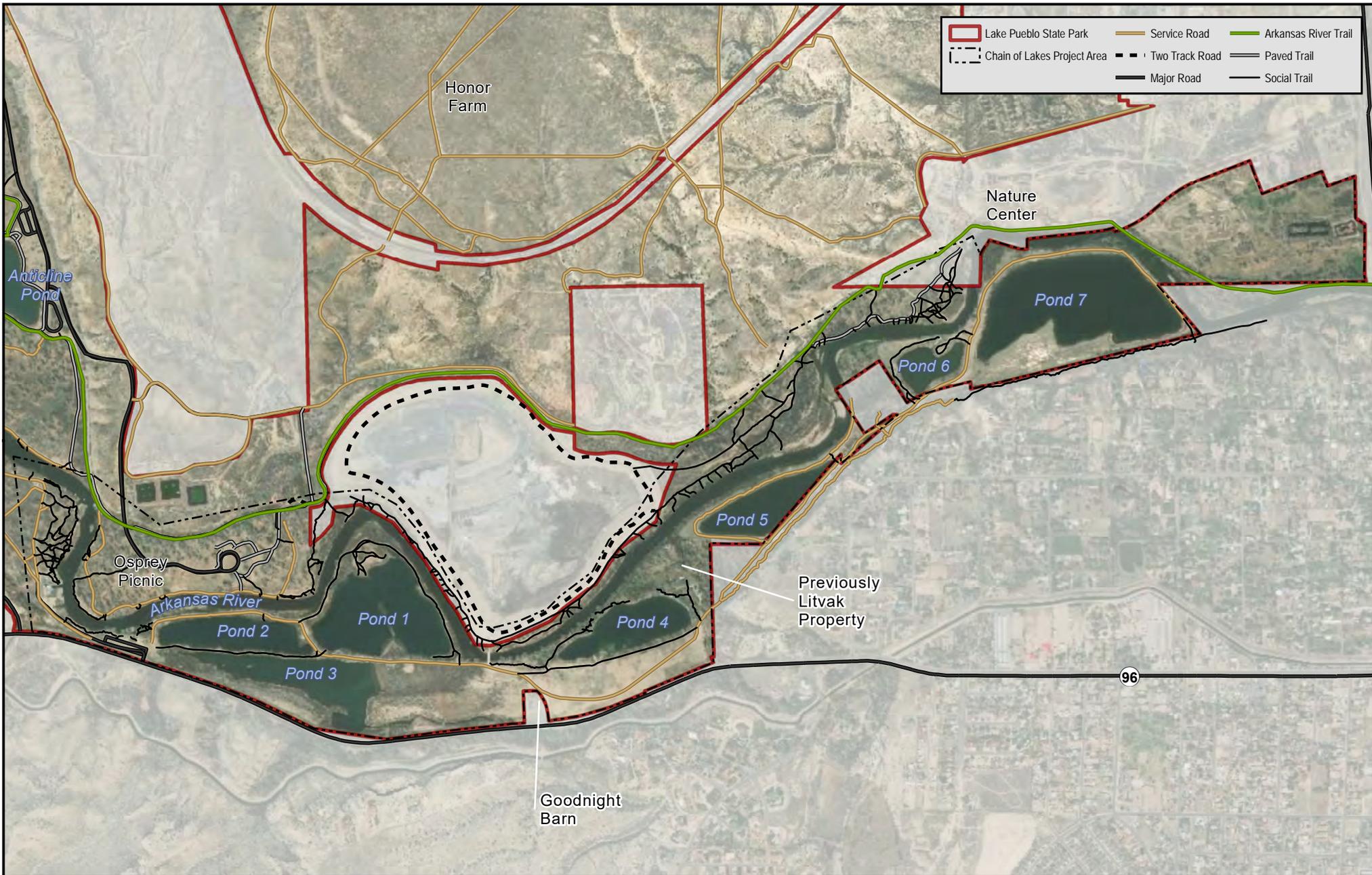
**Colorado Parks and Wildlife**  
 Lake Pueblo Trail Management Plan  
 Pueblo, Colorado

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 Adobe PDF- 4/17/2019 10:20:55 AM  
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 Map prepared by- Melissa Greulich  
 Colorado Parks and Wildlife  
 Resource Stewardship

Date prepared- 4/17/2019 10:20:55 AM  
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 Bing  
 Additional Information- Color Aerial Imagery Flown 2015  
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 Map Projection: UTM, Clarke 1866  
 Units: Meters  
 UTM Zone: 13 North



# Chain of Lakes Trails Map



MAP 4.39



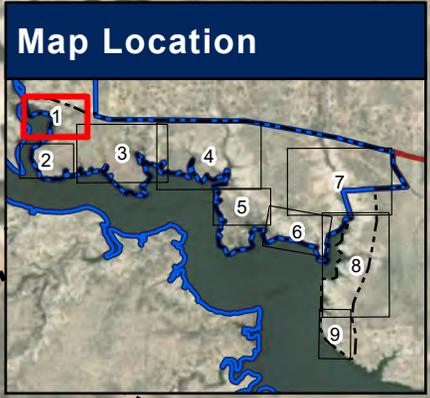
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Pueblo, Colorado

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Map Document-  
Map4\_43\_COL\_Trails  
Adobe PDF-  
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

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Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
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Units: Meters  
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# North Shore Trail Closures Map (1)



MAP 5.1



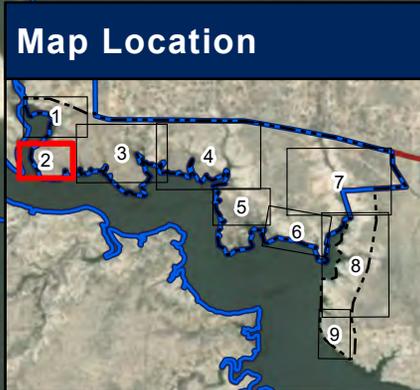
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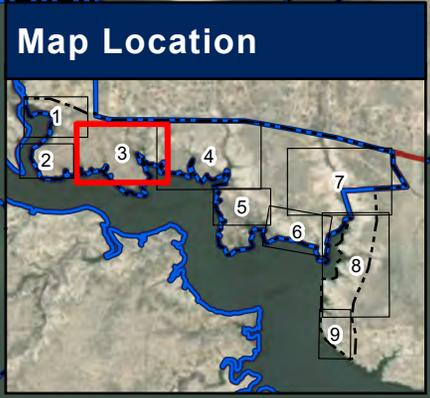
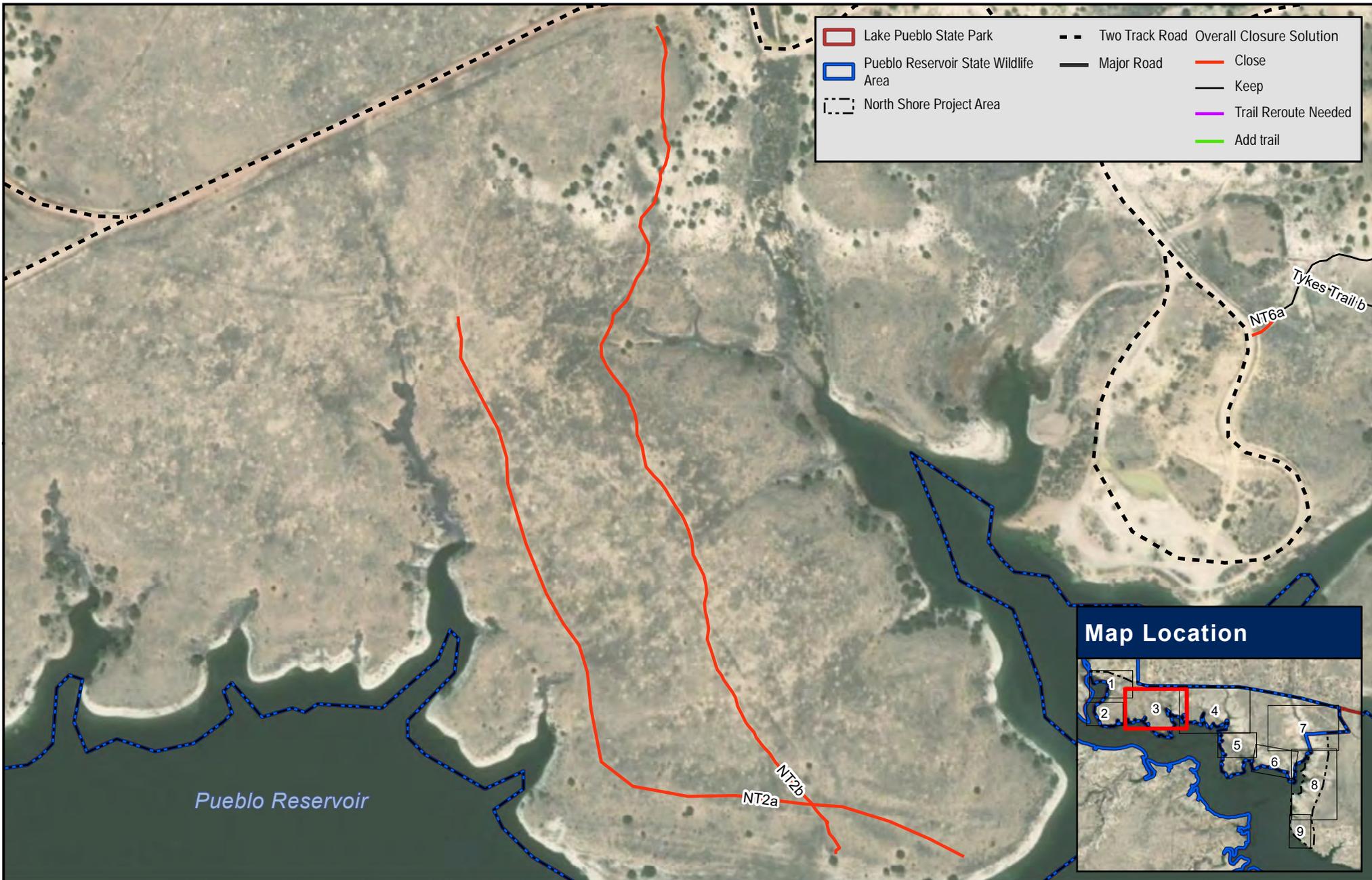
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Colorado Parks and Wildlife  
Resource Stewardship

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Data Sources-  
Colorado Parks and Wildlife, CDOT  
USCS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1886  
Units: Meters  
UTM Zone: 13 North



## North Shore Trail Closures Map (2)

	<p>MAP 5.2</p>	<p>0 150 300 Feet</p> <p>Colorado Parks and Wildlife Lake Pueblo Trail Management Plan Pueblo, Colorado</p>	<p>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p>	<p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document- Map5_2_North_Shore_Closures Adobe PDF- Map5_2_North_Shore_Closures.jpg Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</p>	<p>Date prepared- 5/24/2019 9:32:43 AM Data Sources- Colorado Parks and Wildlife, CDOT USGS, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1886 Units: Meters UTM Zone: 13 North</p>
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# North Shore Trail Closures Map (3)



MAP 5.3



Colorado Parks and Wildlife  
Lake Pueblo Trail Management Plan  
Pueblo, Colorado

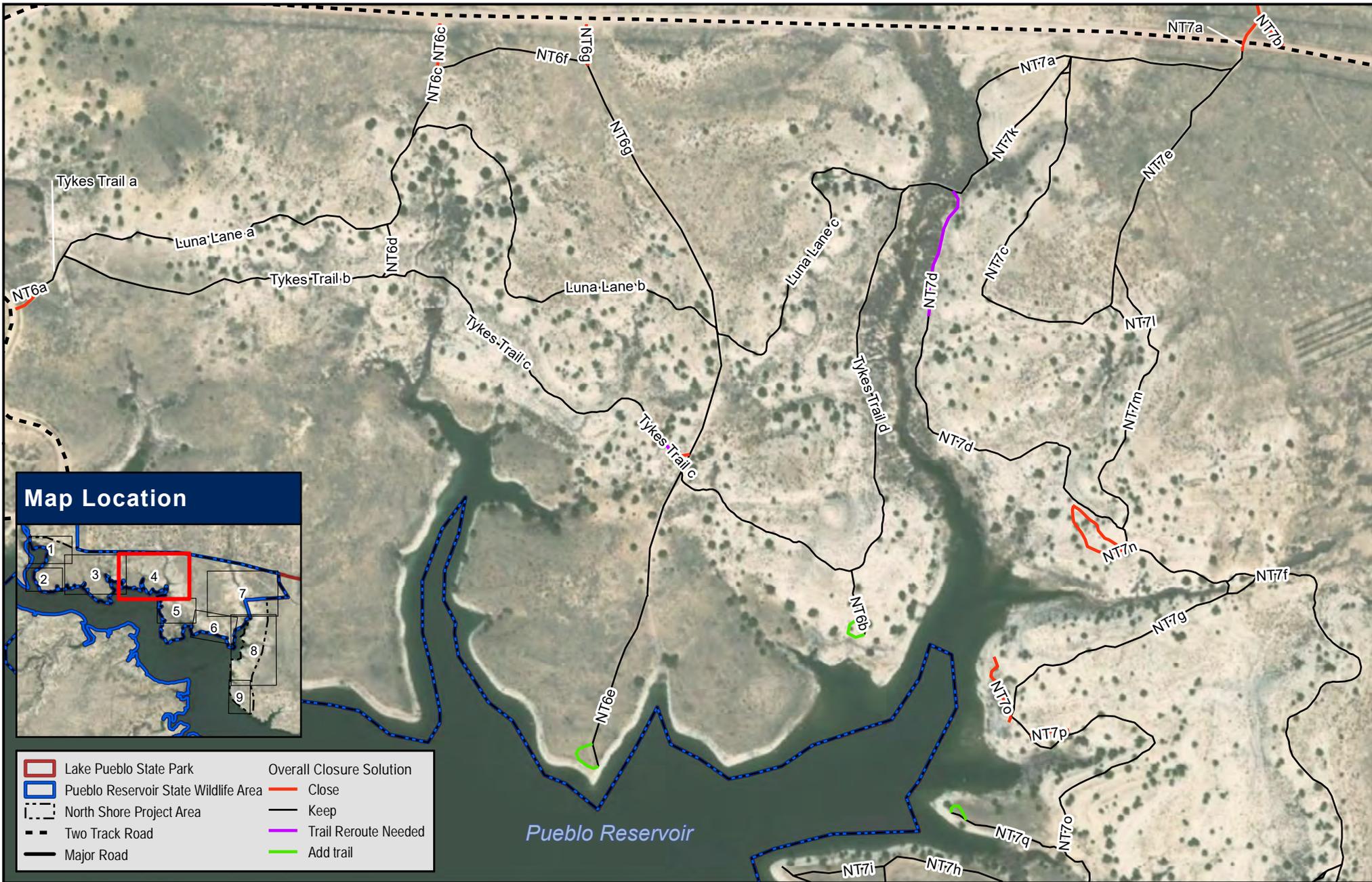


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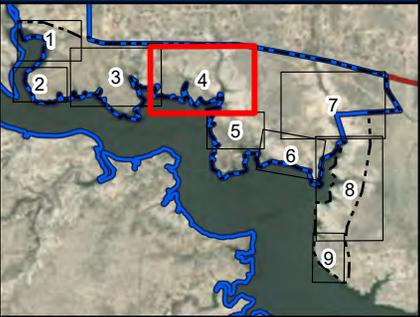
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Map Document-  
Map5\_3\_North\_Shore\_Closures  
Adobe PDF-  
Map5\_3\_North\_Shore\_Closures.jpg  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
5/24/2019 9:34:25 AM  
Data Sources-  
Colorado Parks and Wildlife, CDOT  
USCS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
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Units: Meters  
UTM Zone: 13 North



### Map Location

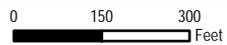


- |                                      |                          |
|--------------------------------------|--------------------------|
| Lake Pueblo State Park               | Overall Closure Solution |
| Pueblo Reservoir State Wildlife Area | Close                    |
| North Shore Project Area             | Keep                     |
| Two Track Road                       | Trail Reroute Needed     |
| Major Road                           | Add trail                |

## North Shore Trail Closures Map (4)



MAP 5.4



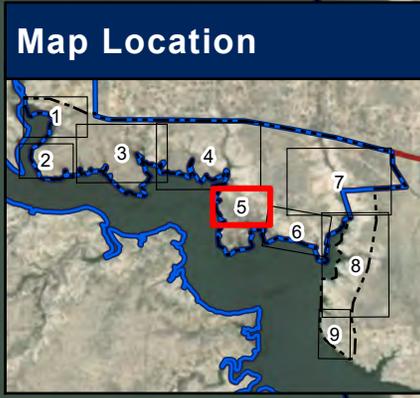
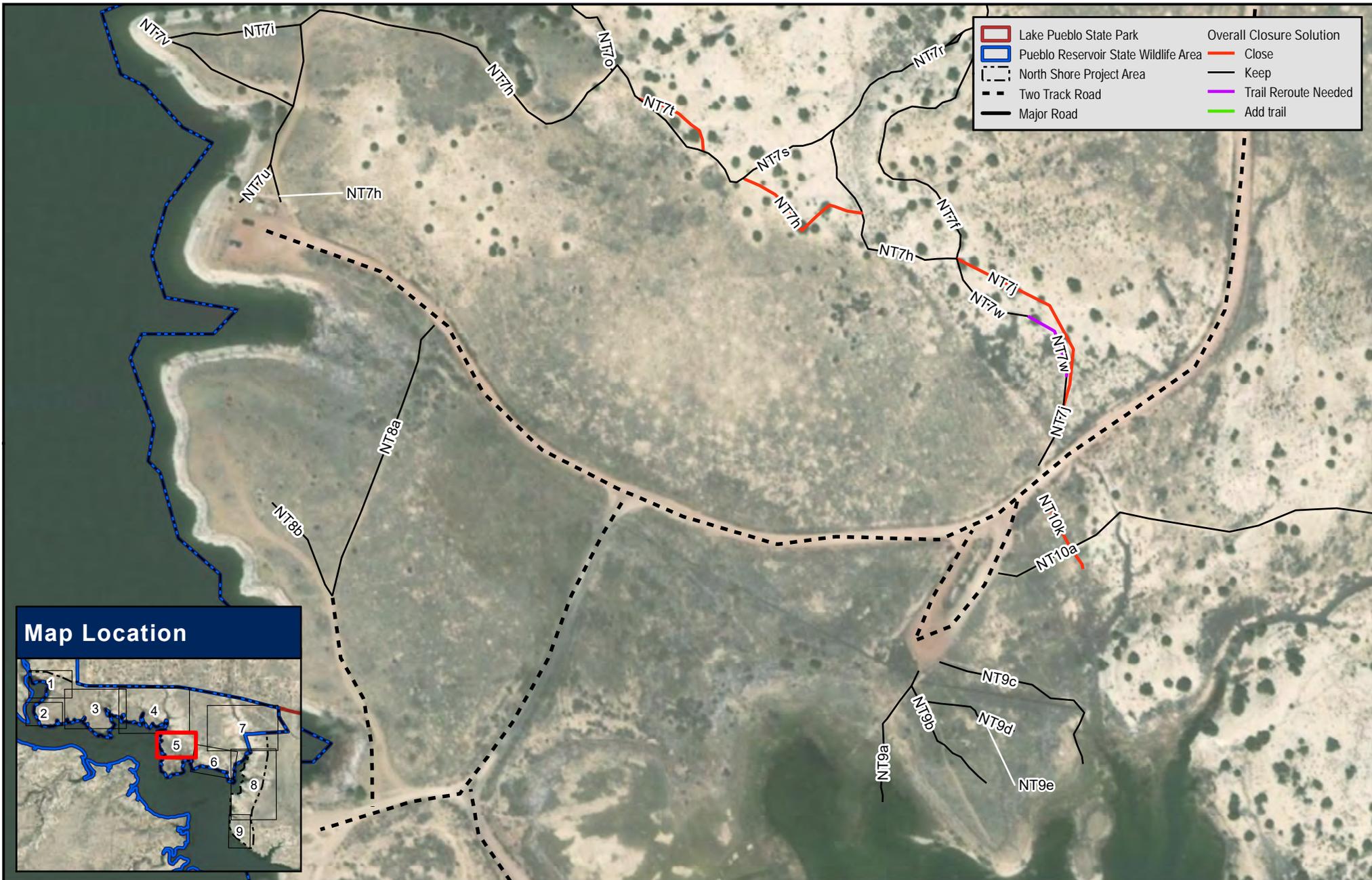
Colorado Parks and Wildlife  
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Pueblo, Colorado

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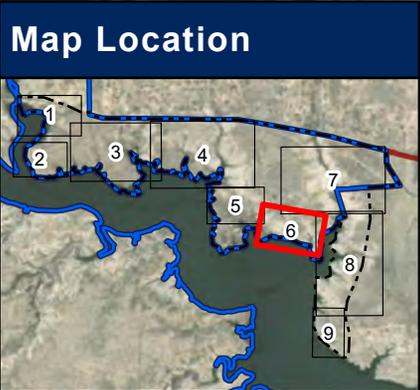
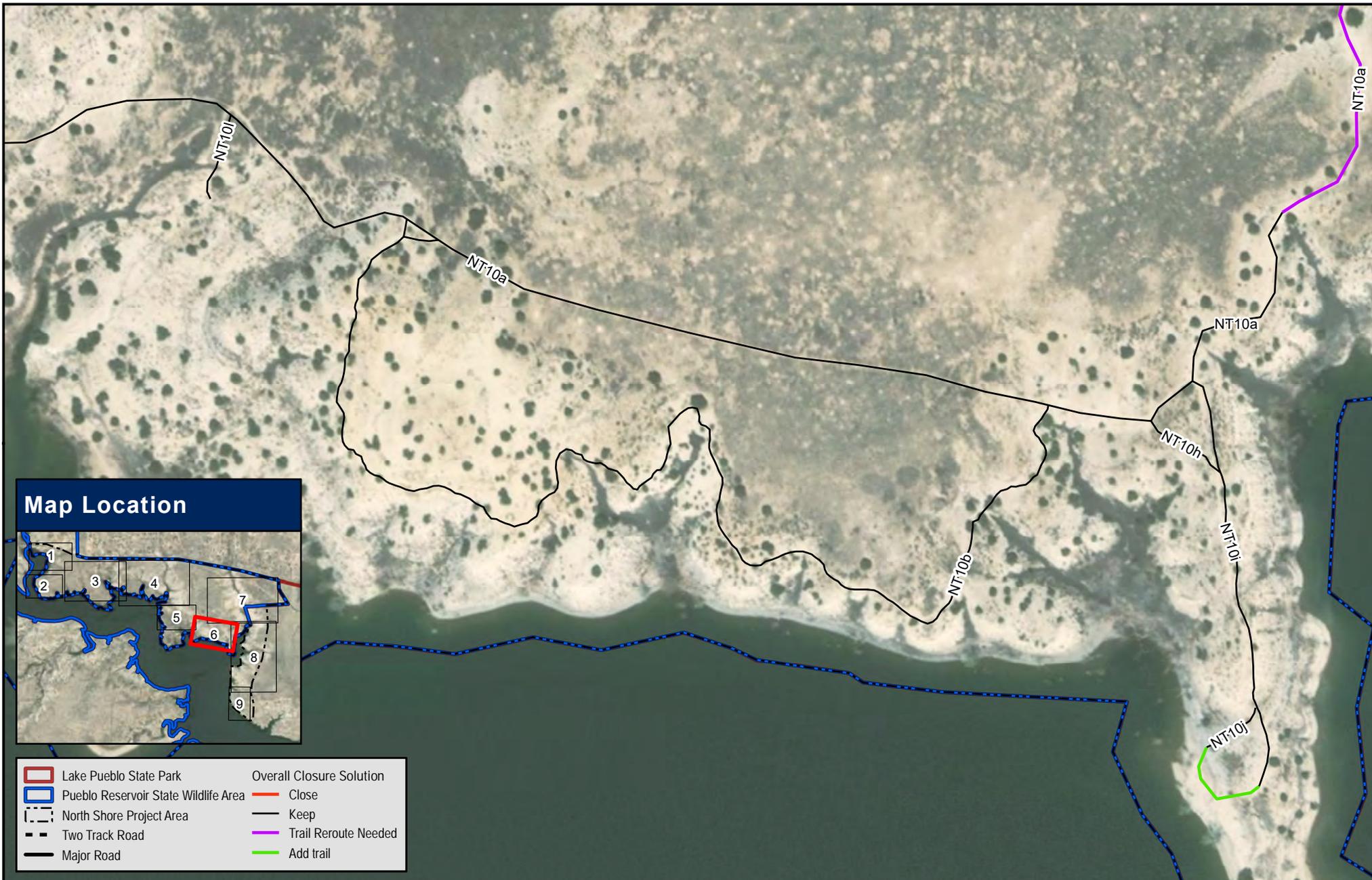
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
5/24/2019 9:39:33 AM  
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Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
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# North Shore Trail Closures Map (5)

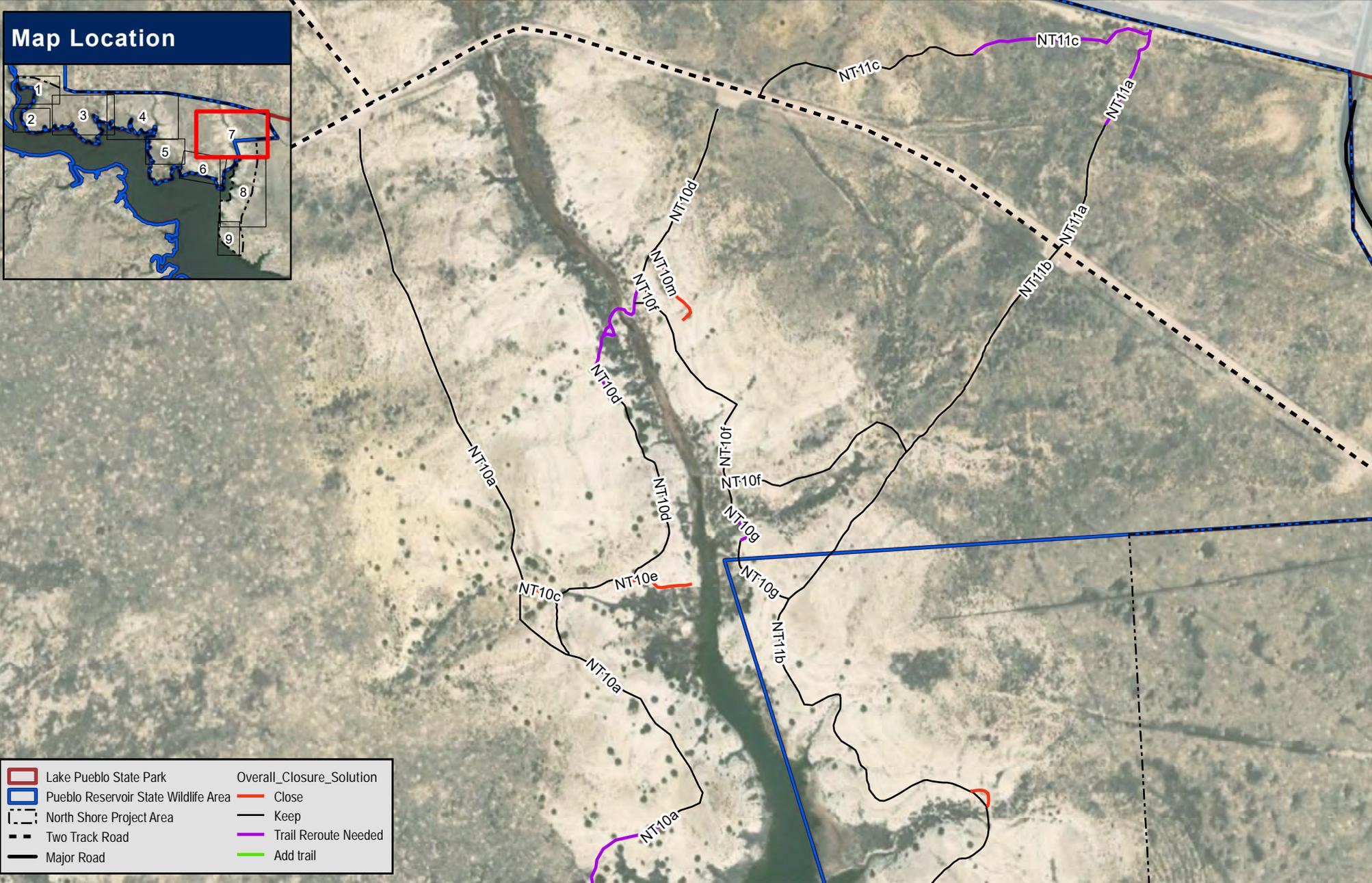
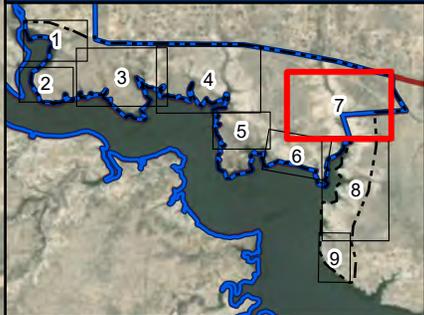
	<p>MAP 5.5</p>	<p>0 200 400 Feet</p> <p>Colorado Parks and Wildlife Lake Pueblo Trail Management Plan Pueblo, Colorado</p>	<p>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p>	<p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document- Map5_5_North_Shore_Closures Adobe PDF- Map5_5_North_Shore_Closures.jpg Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</p>	<p>Date prepared- 5/24/2019 9:44:45 AM Data Sources- Colorado Parks and Wildlife, CDOT USCS, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1866 Units: Meters UTM Zone: 13 North</p>
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# North Shore Trail Closures Map (6)

	<b>MAP 5.6</b>		<p>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p> <p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document- Map5_6_North_Shore_Closures Adobe PDF- Map5_6_North_Shore_Closures.jpg Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</p> <p>Date prepared- 5/24/2019 9:46:09 AM Data Sources- Colorado Parks and Wildlife, CDOT USGS, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1866 Units: Meters UTM Zone: 13 North</p>
		<p>Colorado Parks and Wildlife Lake Pueblo Trail Management Plan Pueblo, Colorado</p>		

### Map Location



	Lake Pueblo State Park		Close
	Pueblo Reservoir State Wildlife Area		Keep
	North Shore Project Area		Trail Reroute Needed
	Two Track Road		Add trail
	Major Road		
			Overall_Closure_Solution

## North Shore Trail Closures Map (7)



MAP 5.7



0 250 500 Feet

Colorado Parks and Wildlife  
Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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Map5\_7\_North\_Shore\_Closures.jpg  
Map prepared by- Melissa Greulich  
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Resource Stewardship

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5/24/2019 9:50:21 AM  
Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North

# Map Location



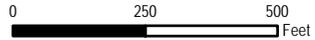
Lake Pueblo State Park	Overall Closure Solution
Pueblo Reservoir State Wildlife Area	Close
North Shore Project Area	Keep
Two Track Road	Trail Reroute Needed
Major Road	Add trail



## North Shore Trail Closures Map (8)



MAP 5.8



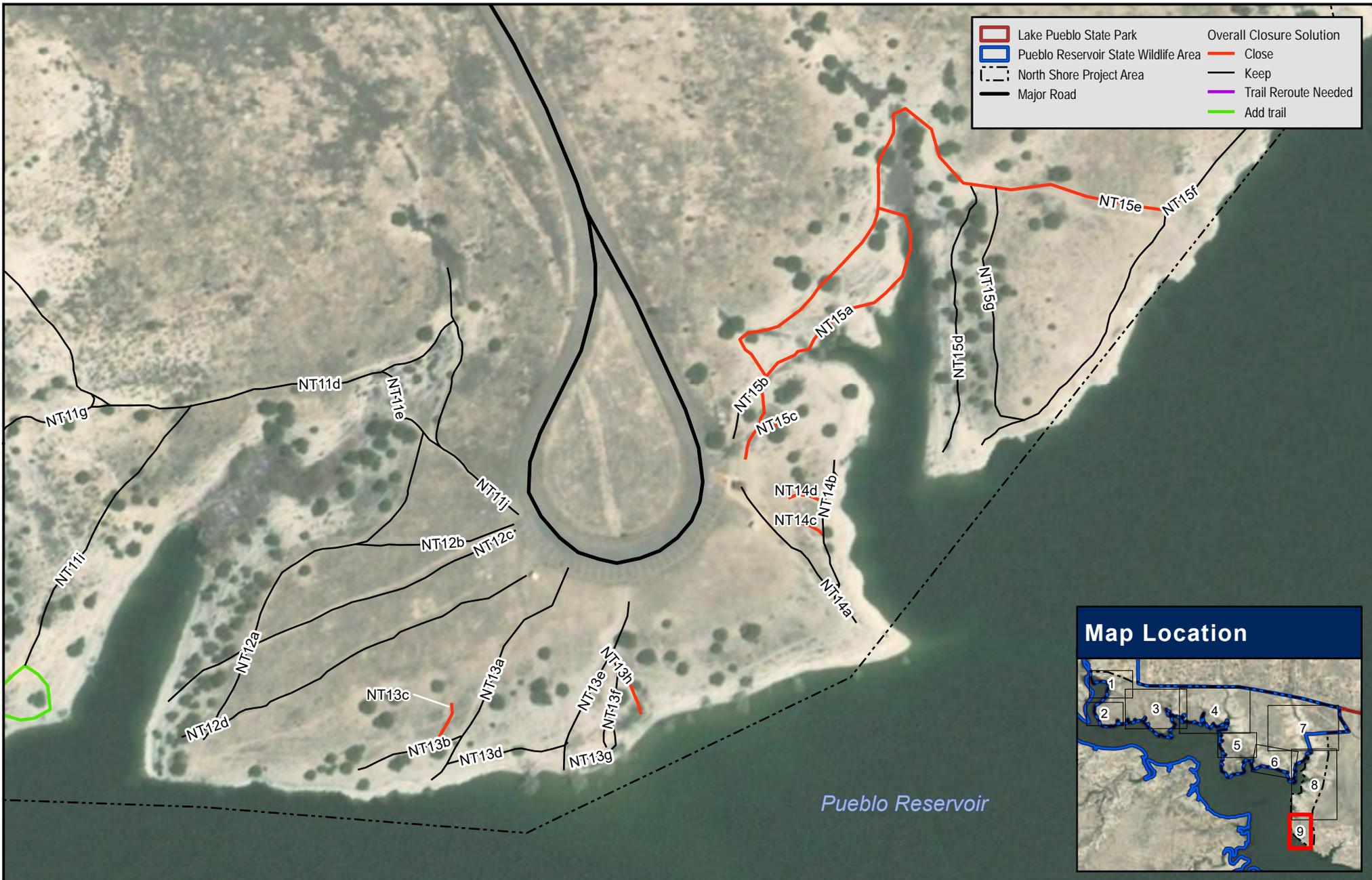
Colorado Parks and Wildlife  
Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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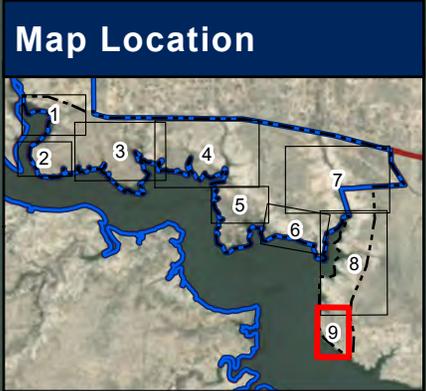
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Map prepared by- Melissa Greulich  
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Resource Stewardship

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Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
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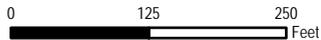
	Lake Pueblo State Park		Overall Closure Solution
	Pueblo Reservoir State Wildlife Area		Close
	North Shore Project Area		Keep
	Major Road		Trail Reroute Needed
			Add trail



# North Shore Trail Closures Map (9)



MAP 5.9



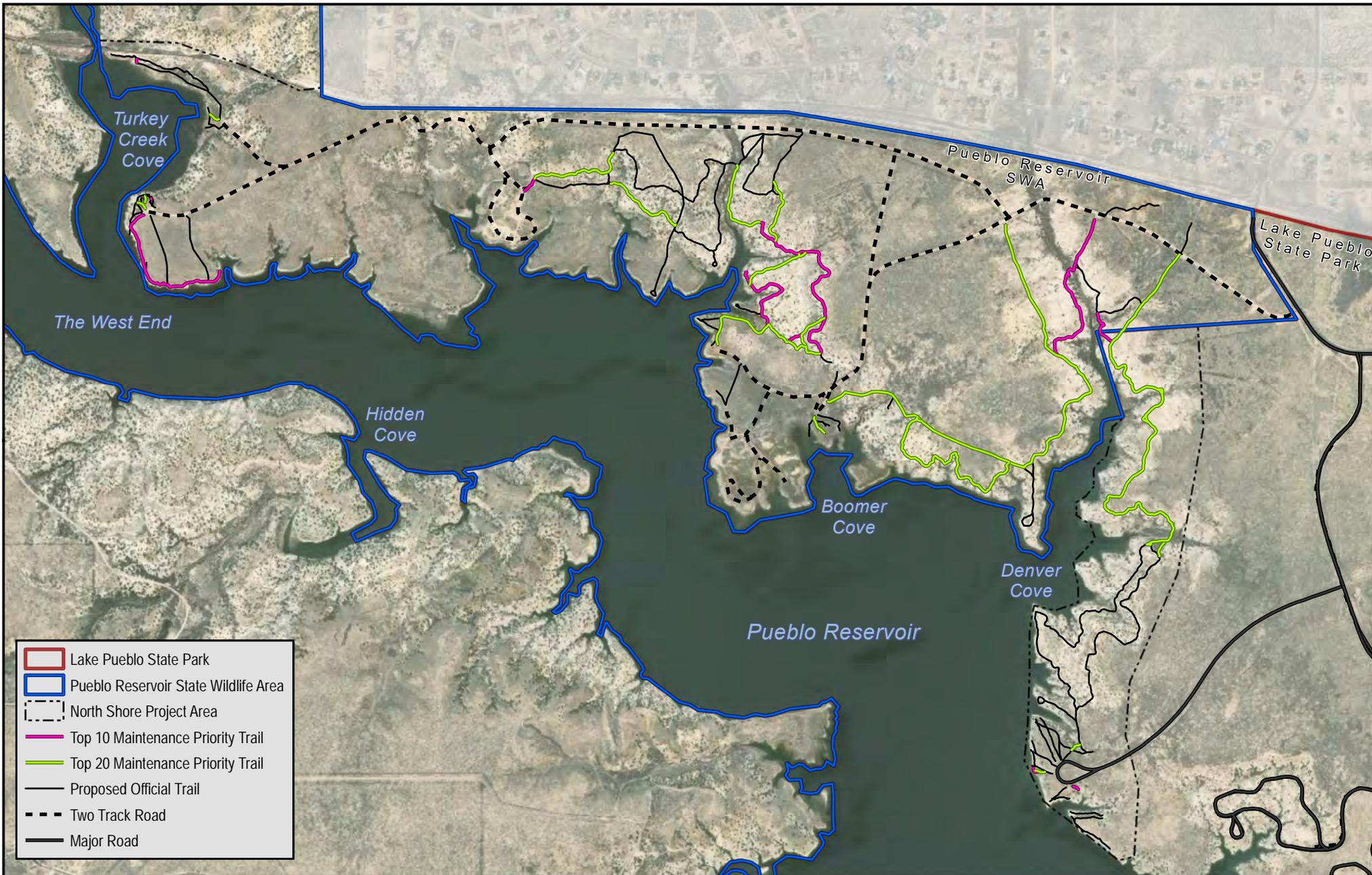
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Map5\_9\_North\_Shore\_Closures.jpg  
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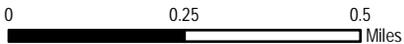
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USGS, Bing  
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Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



# North Shore Top 20 Maintenance Priority Trails Map



MAP 5.10



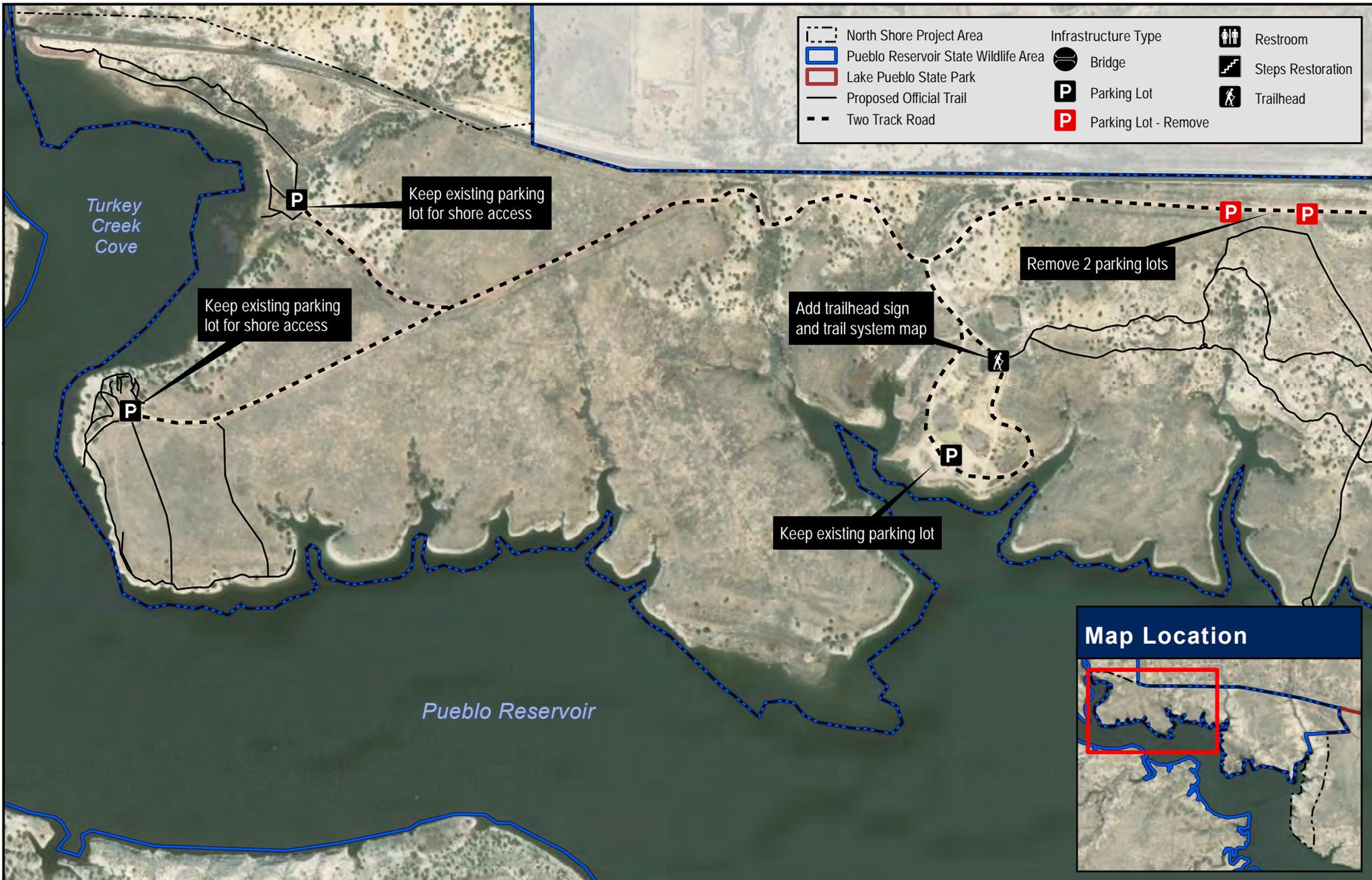
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Adobe PDF- 5/24/2019 10:03:18 AM  
MapS\_10\_North\_Shore\_Maintenance  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



# North Shore Infrastructure Needs Map (1)



MAP 5.11



0 0.1 0.2 Miles

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Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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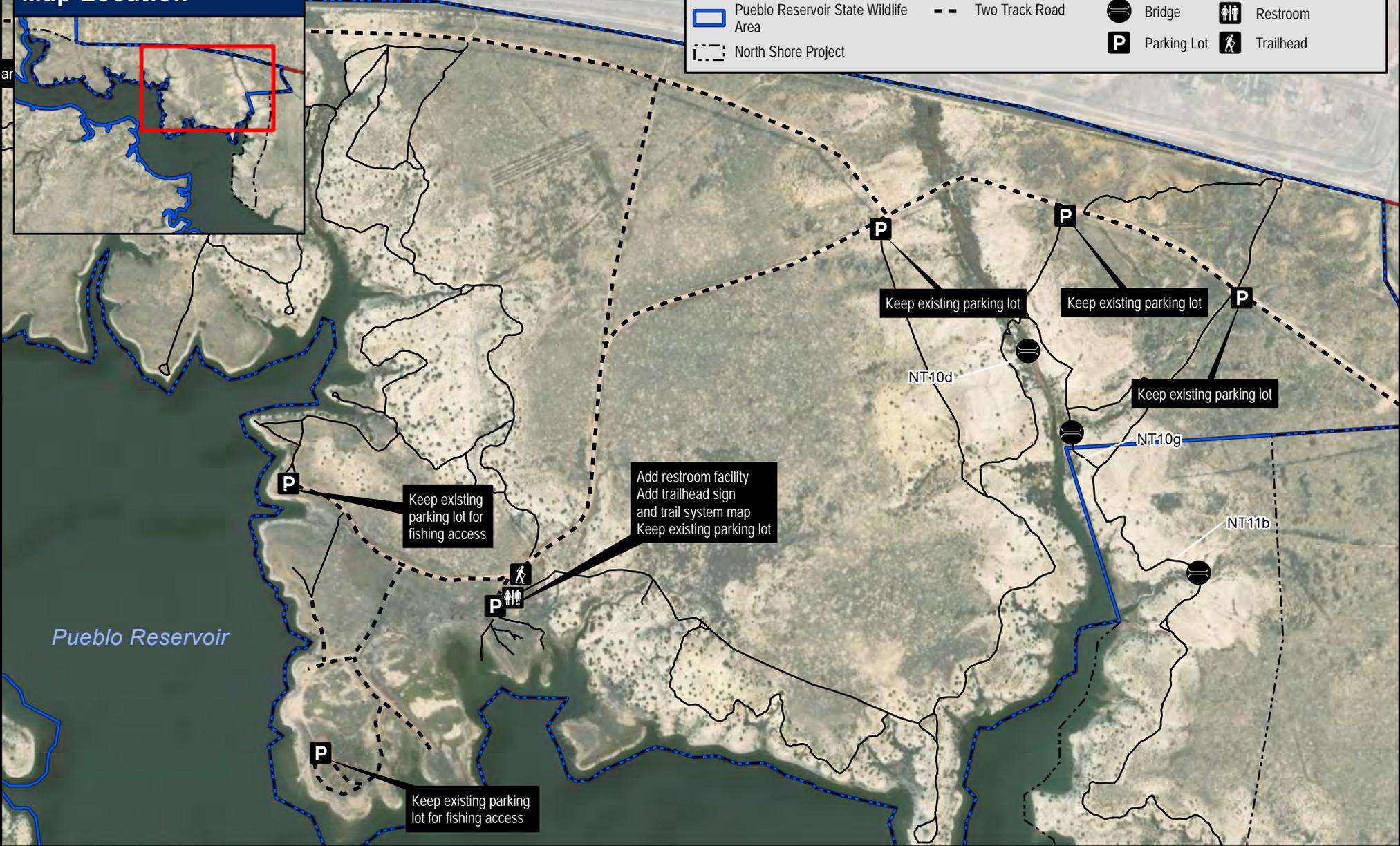
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Map5\_11\_North\_Shore\_Infra\_Needs  
Adobe PDF-  
Map5\_11\_North\_Shore\_Infra\_Needs.jpg  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
5/24/2019 12:01:31 PM  
Data Sources-  
Colorado Parks and Wildlife, CDOT  
USGS, Bing  
Additional Information-  
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Units: Meters  
UTM Zone: 13 North

# Map Location



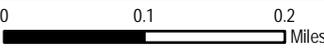
Lake Pueblo State Park	Proposed Official Trail Infrastructure	Parking Lot - Remove
Pueblo Reservoir State Wildlife Area	Two Track Road	Restroom
North Shore Project	Bridge	Parking Lot
	Trailhead	



## North Shore Infrastructure Needs Map (2)



MAP 5.12



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Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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Map5\_12\_North\_Shore\_Infra\_Needs.jpg  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

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5/24/2019 11:50:24 AM  
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Colorado Parks and Wildlife, CDOT  
USGS, Bing  
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Color Aerial Imagery Flown 2015  
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Units: Meters  
UTM Zone: 13 North



Pueblo Reservoir

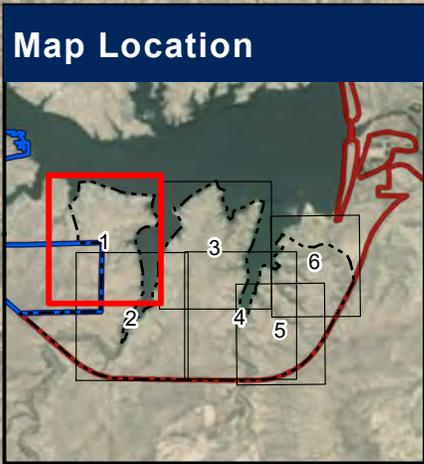
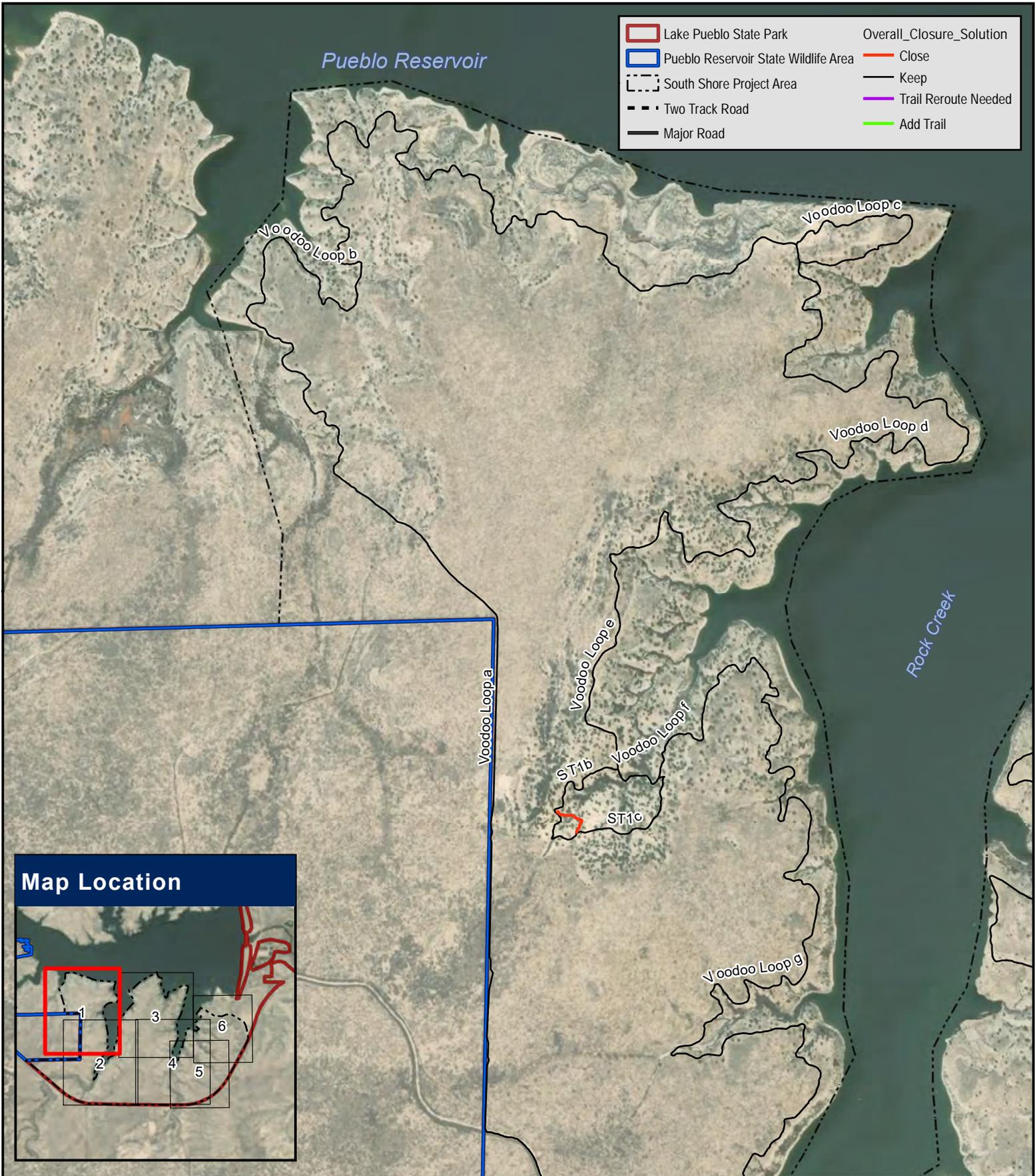
Keep existing parking lot  
Add trailhead sign  
and trail system map

- |  |                                      |  |                   |
|--|--------------------------------------|--|-------------------|
|  | Lake Pueblo State Park               |  | Infrastructure    |
|  | Pueblo Reservoir State Wildlife Area |  | Parking Lot       |
|  | North Shore Project                  |  | Steps Restoration |
|  | Proposed Official Trail              |  | Trailhead         |
|  | Major Road                           |  |                   |



## North Shore Infrastructure Needs Map (3)

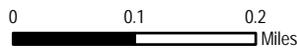
	MAP 5.13		<p>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use.</p> <p>ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</p>	<p>Map Document- Map5_13_North_Shore_Infra_Needs Adobe PDF- Map5_13_North_Shore_Infra_Needs.jpg Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</p> <p>Date prepared- 5/24/2019 12:05:14 PM Data Sources- Colorado Parks and Wildlife, CDOT USGS, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1866 Units: Meters UTM Zone: 13 North</p>
		<p>Colorado Parks and Wildlife Lake Pueblo Trail Management Plan Pueblo, Colorado</p>		



## South Shore Trail Closures Map (1)



MAP 5.14



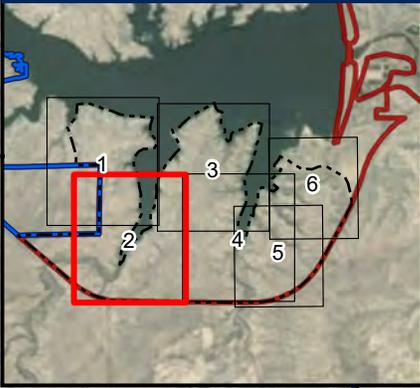
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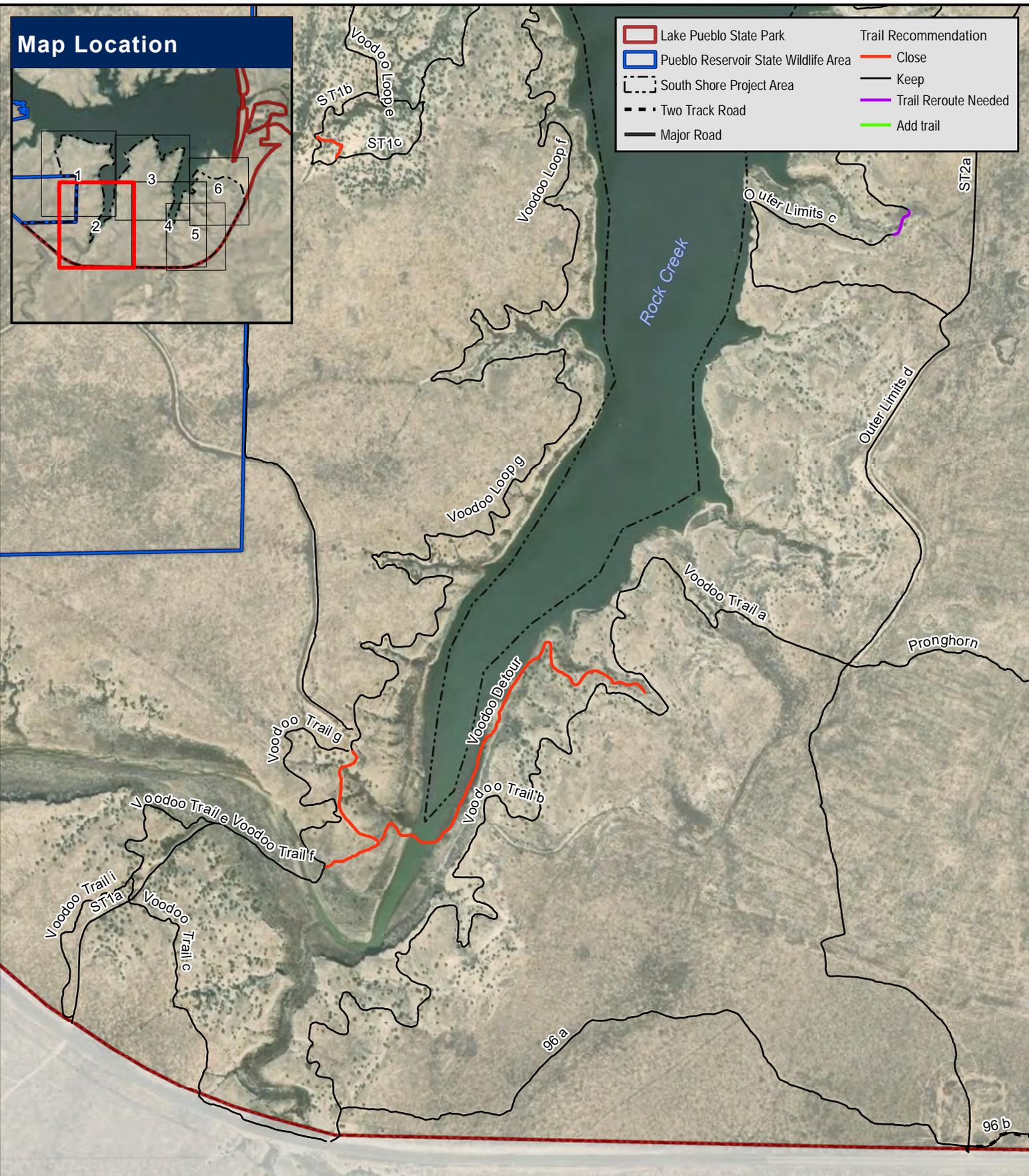
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
5/24/2019 12:08:32 PM  
Data Sources-  
Colorado Parks and Wildlife, CDOT, USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
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# Map Location



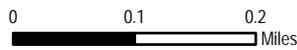
Lake Pueblo State Park	Trail Recommendation: Close
Pueblo Reservoir State Wildlife Area	Trail Recommendation: Keep
South Shore Project Area	Trail Recommendation: Trail Reroute Needed
Two Track Road	Trail Recommendation: Add trail
Major Road	



## South Shore Trail Closures Map (2)



MAP 5.15



Colorado Parks and Wildlife  
Lake Pueblo Trail Management Plan  
Pueblo, Colorado

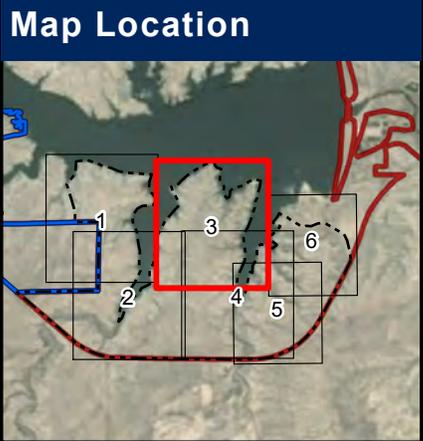
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Map prepared by- Melissa Greulich  
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Colorado Parks and Wildlife, CDOT, USGS, Bing  
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Units: Meters  
UTM Zone: 13 North

Pueblo Reservoir

	Lake Pueblo State Park		Close
	Pueblo Reservoir State Wildlife Area		Keep
	South Shore Project Area		Trail Reroute Needed
	Two Track Road		Add trail
	Major Road		



## South Shore Trail Closures Map (3)



MAP 5.16

0 0.1 0.2 Miles

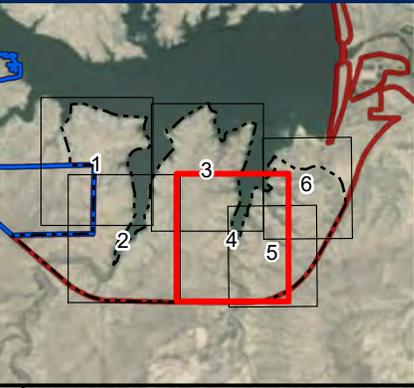
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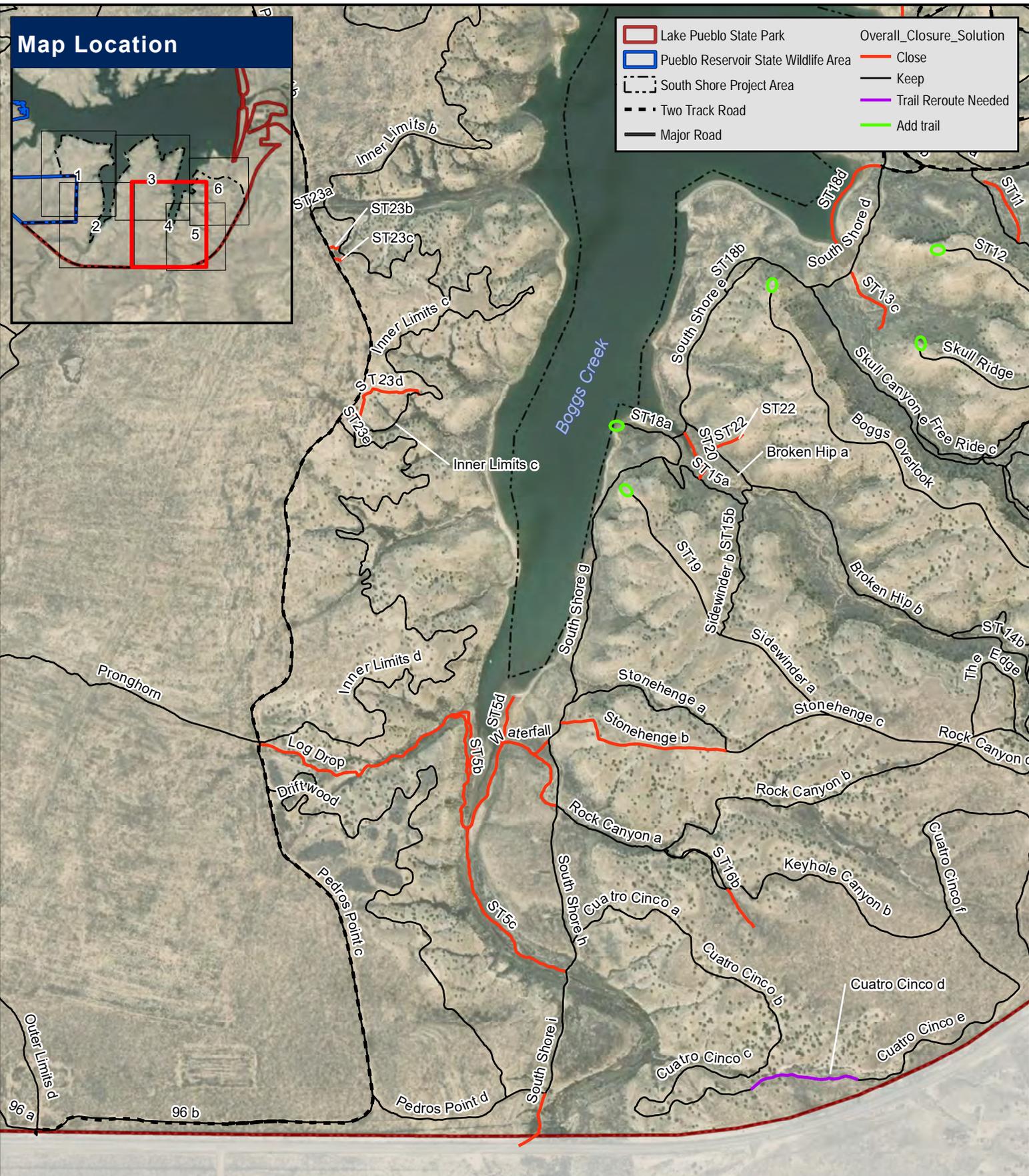
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Color Aerial Imagery Flown 2015  
Cartographic Information-  
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Units: Meters  
UTM Zone: 13 North

# Map Location



	Lake Pueblo State Park		Close
	Pueblo Reservoir State Wildlife Area		Keep
	South Shore Project Area		Trail Reroute Needed
	Two Track Road		Add trail
	Major Road		



## South Shore Trail Closures Map (4)



MAP 5.17

0 0.1 0.2 Miles

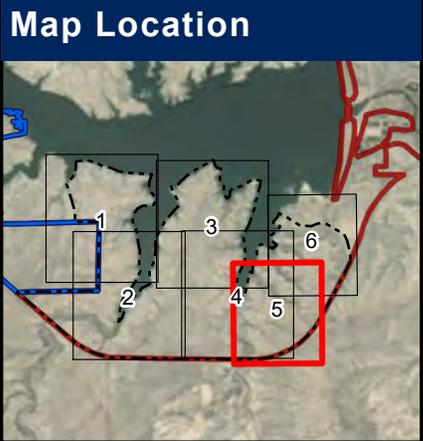
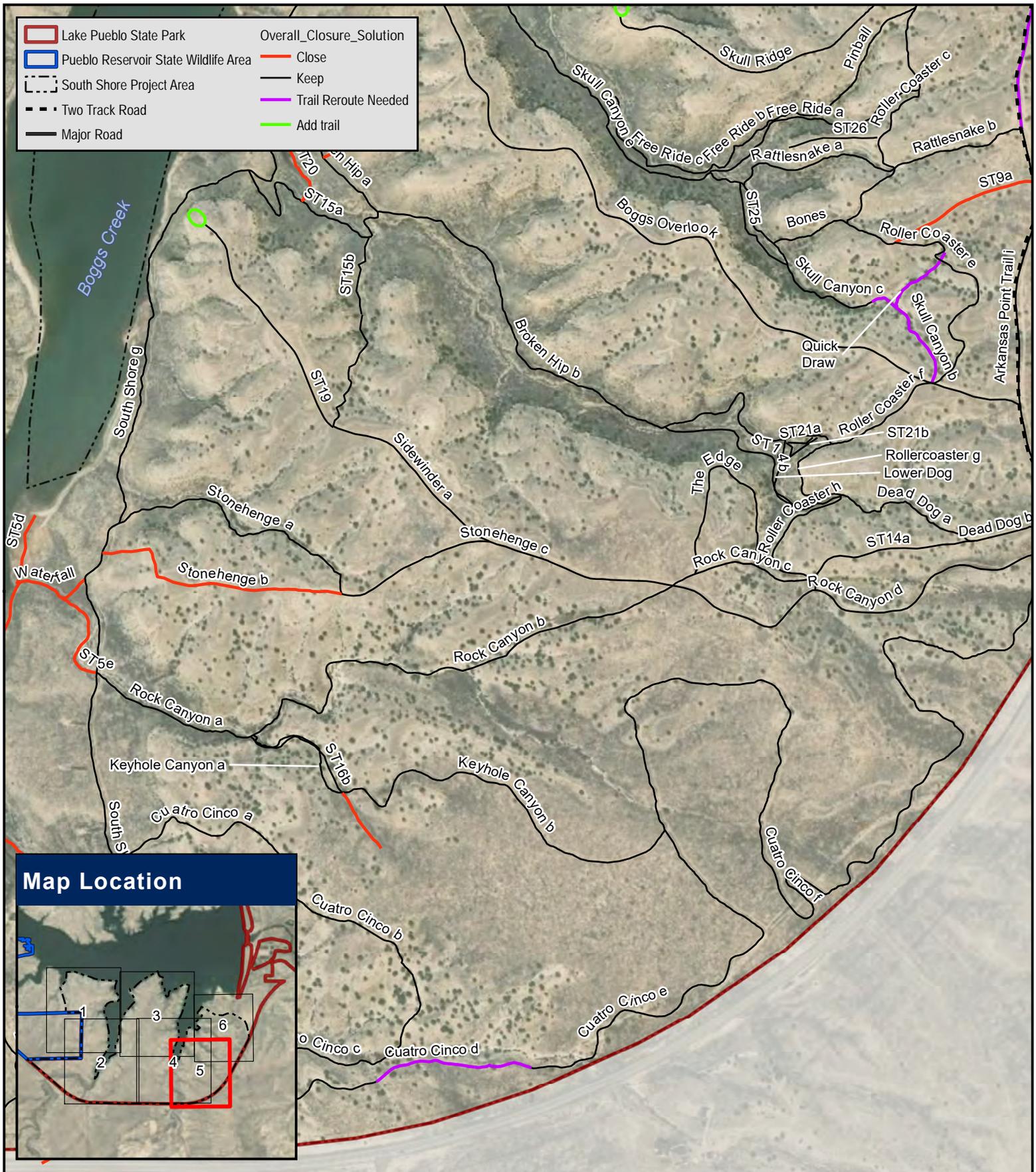
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Colorado Parks and Wildlife, CDOT, USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
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Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North

	Lake Pueblo State Park		Overall_Closure_Solution
	Pueblo Reservoir State Wildlife Area		Close
	South Shore Project Area		Keep
	Two Track Road		Trail Reroute Needed
	Major Road		Add trail



## South Shore Trail Closures Map (5)



MAP 5.18

0 0.1 0.2 Miles

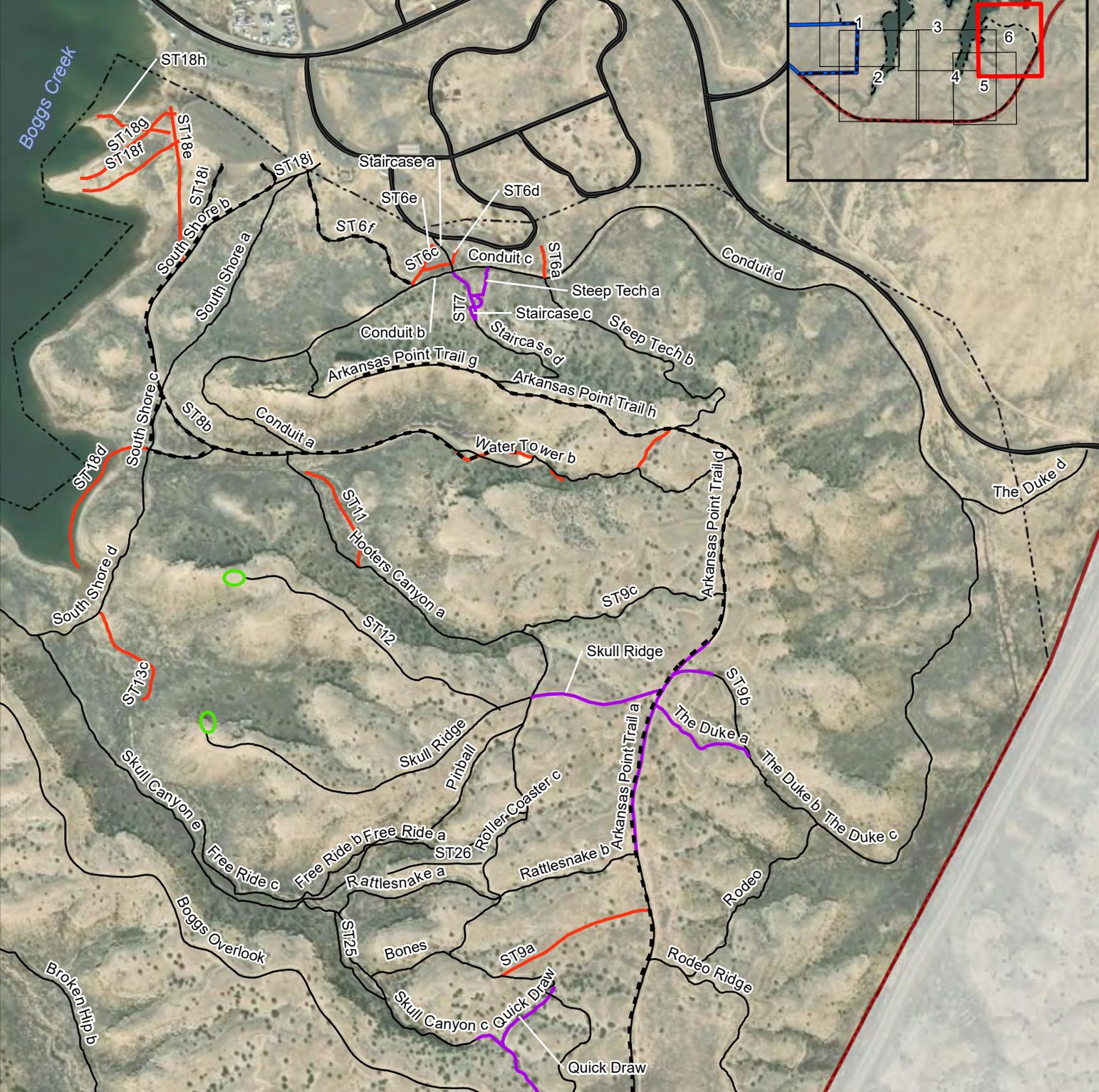
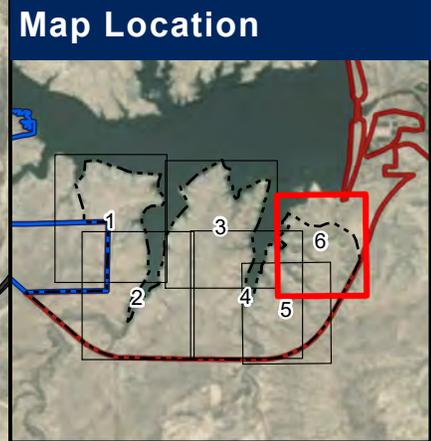
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Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
5/24/2019 12:33:44 PM  
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Colorado Parks and Wildlife, CDOT, USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North

	Lake Pueblo State Park		Close
	Pueblo Reservoir State Wildlife Area		Keep
	South Shore Project Area		Trail Reroute Needed
	Two Track Road		Add trail
	Major Road		



## South Shore Trail Closures Map (6)



MAP 5.19

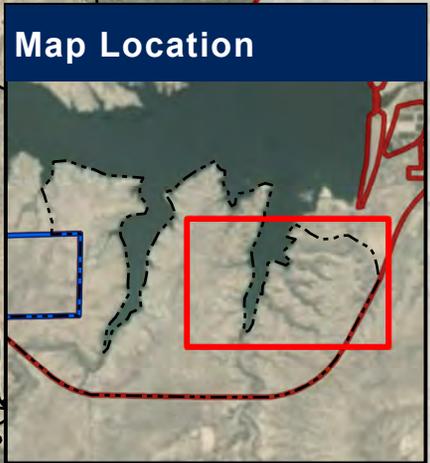
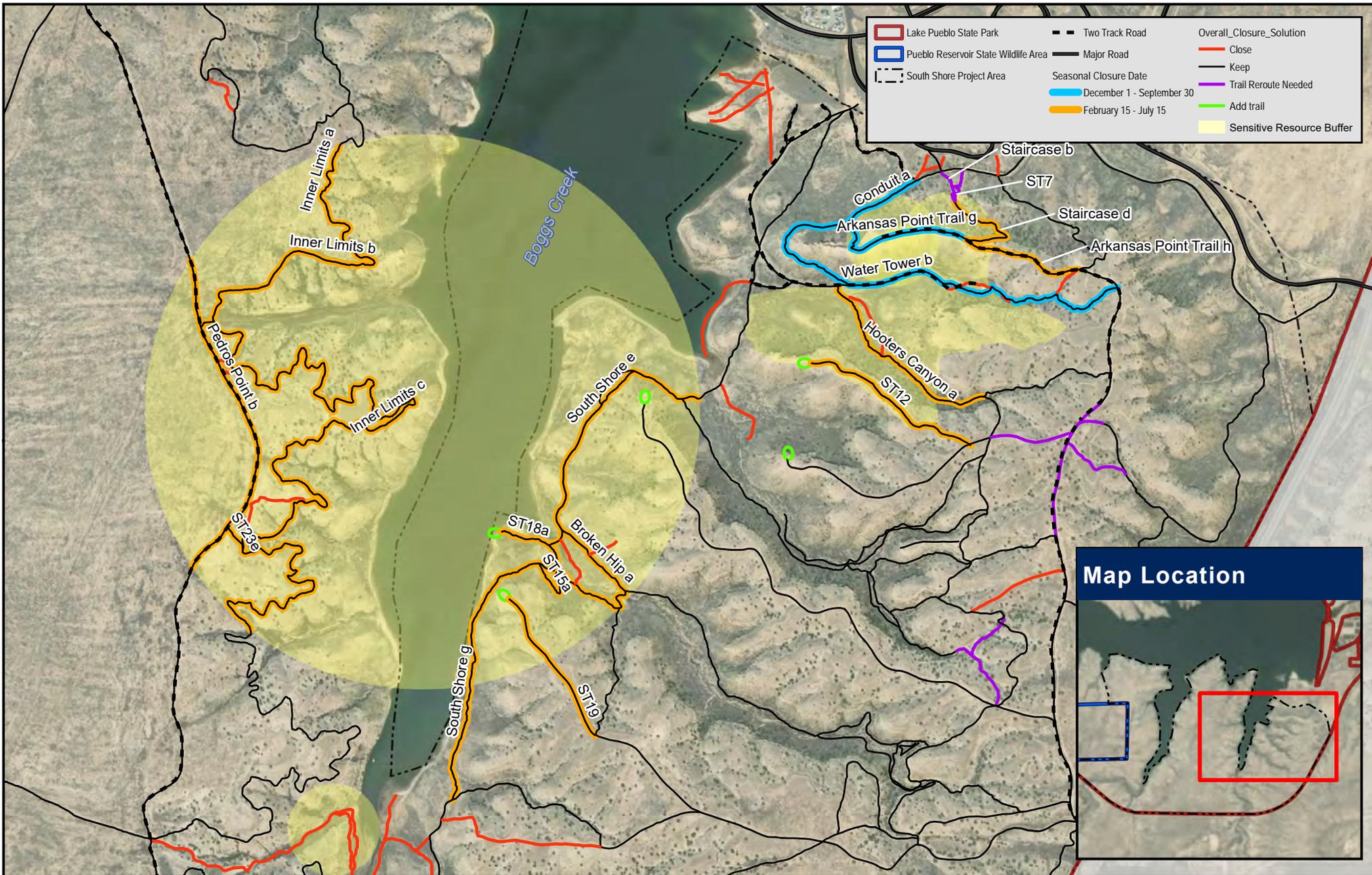
0 0.1 0.2 Miles

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Map5\_19\_South\_Shore\_Closures  
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Map5\_19\_South\_Shore\_Closures.pdf  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
5/24/2019 12:43:42 PM  
Data Sources-  
Colorado Parks and Wildlife, CDOT, USGS, Bing  
Additional Information-  
Color Aerial Imagery Flown 2015  
Cartographic Information-  
Map Datum: NAD83  
Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North



# South Shore Seasonal Trail Closures Map



MAP 5.20

0 0.1 0.2 Miles

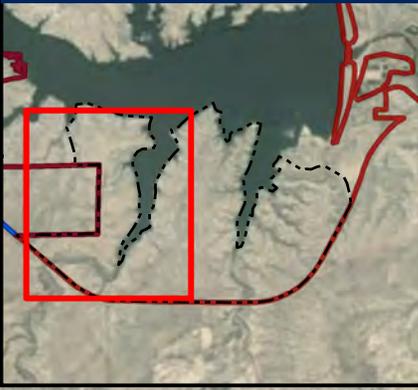
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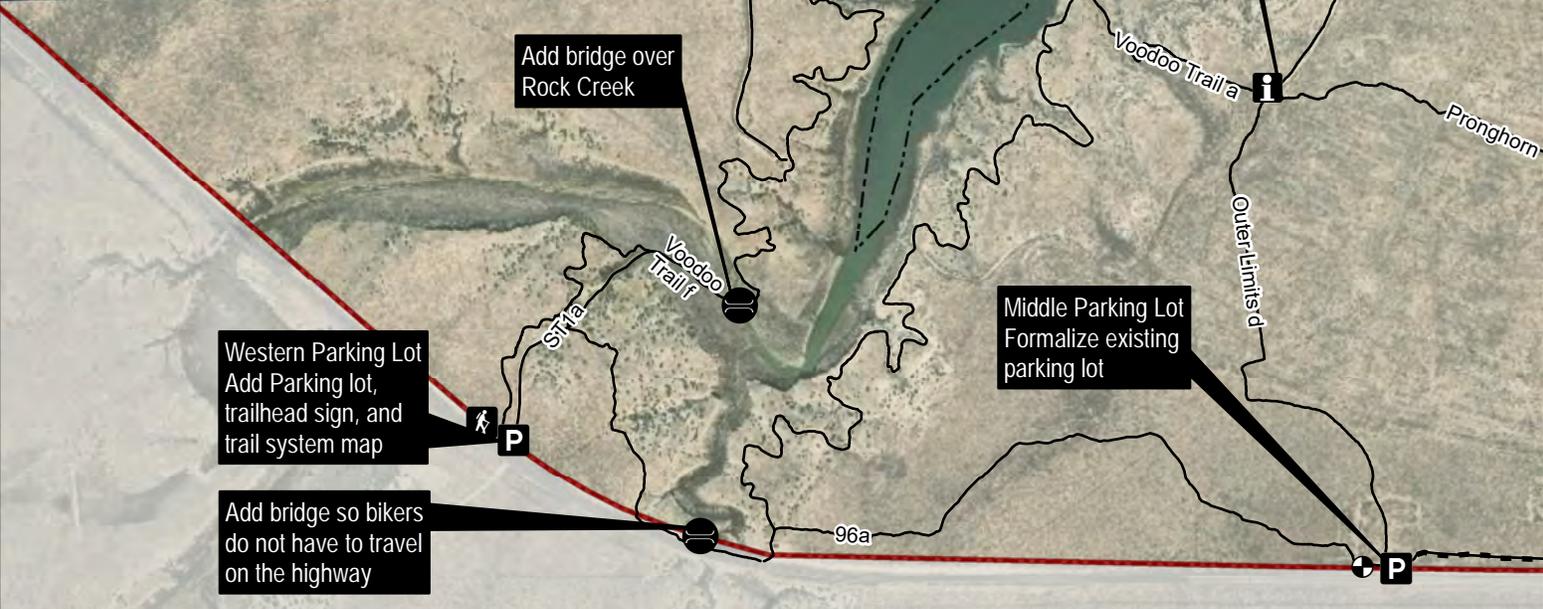
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Colorado Parks and Wildlife, CDOT  
Additional Information-  
Color Aerial Imagery Flown 2015  
Map prepared by- Melissa Greulich  
Cartographic Information-  
Colorado Parks and Wildlife  
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UTM Zone: 13 North

# Map Location



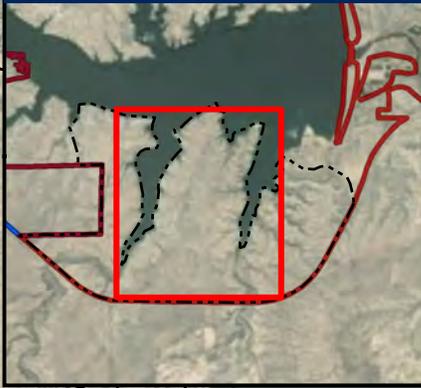
Lake Pueblo State Park	Two Track Road	<b>Infrastructure Type</b>	Interpretation
Pueblo Reservoir State Wildlife Area	Major Road	Bridge	Parking Lot
South Shore Project Area	Proposed Official Trail	Fence	Trailhead
		Gate	



## South Shore Infrastructure Needs Map (1)

	<b>MAP 5.22</b>		<small>Department of Natural Resources Disclaimer: The Colorado Department of Natural Resources ("DNR") is not responsible and shall not be liable to the user for damages of any kind arising out of the use of data or information provided by the DNR, including the installation of the data or information, its use, or the results obtained from its use. ANY DATA OR INFORMATION PROVIDED BY THE DNR IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Data or information provided by the DNR shall be used and relied upon only at the user's sole risk, and the user agrees to indemnify and hold harmless the DNR, its officials, officers and employees from any liability arising out of the use of the data/information provided.</small>	<small>Map Document- Map5_22_South_Shore_Infra_Needs Adobe PDF- Map5_22_South_Shore_Infra_Needs Map prepared by- Melissa Greulich Colorado Parks and Wildlife Resource Stewardship</small>	<small>Date prepared- 8/15/2019 11:29:58 AM Data Sources- Colorado Parks and Wildlife, CDOT, Bing Additional Information- Color Aerial Imagery Flown 2015 Cartographic Information- Map Datum: NAD83 Map Projection: UTM, Clarke 1866 Units: Meters UTM Zone: 13 North</small>
		Colorado Parks and Wildlife Lake Pueblo Trail Management Plan Pueblo, Colorado			

# Map Location



Pueblo Reservoir

	Lake Pueblo State Park		Bridge
	Pueblo Reservoir State Wildlife Area		Gate
	South Shore Project Area		Interpretation
	Two Track Road		Parking Lot
	Major Road		Trailhead
	Proposed Official Trail		

Rock Creek

Boggs Creek

Add Arkansas Valley  
Conduit Cultural  
Interpretation

Voodoo-Trail a

Pronghorn

Add Quarry Cultural  
Interpretation

Outer Limits d

Cuatro Cinco a

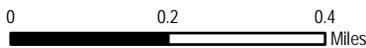
Middle Parking Lot  
Formalize existing  
parking lot

96a

## South Shore Infrastructure Needs Map (2)



MAP 5.23



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Lake Pueblo Trail Management Plan  
Pueblo, Colorado

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Map5\_23\_South\_Shore\_Infra\_Needs  
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Colorado Parks and Wildlife, CDOT,  
Bing  
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Color Aerial Imagery Flown 2015  
Cartographic Information-  
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Map Projection: UTM, Clarke 1866  
Units: Meters  
UTM Zone: 13 North

# Map Location



Pueblo Reservoir

Arkansas Point River Parking Lot  
Keep and expand existing parking lot, add trailhead sign and trail system map

	Lake Pueblo State Park	<b>Infrastructure Type</b>	
	Pueblo Reservoir State Wildlife Area		Fence
	South Shore Project Area		Gate
	Two Track Road		Interpretation
	Major Road		Parking Lot
	Proposed Official Trail		Pay Station
			Restroom
			Trailhead

Add Arkansas Valley Conduit cultural interpretation and create formalized access from campground

Add fencing

Add Quarry cultural interpretation

"Red Gate" / East Parking Lot  
Formalize existing parking lot, add restroom facility, add pay station, add trailhead sign and trail system map

Boggs Creek

ST181

South Shore b

Cuatro Cinco a

Rock Canyon d

Cuatro Cinco f

Arkansas Point trail

Rodeo Ridge

## South Shore Infrastructure Needs Map (3)



MAP 5.24

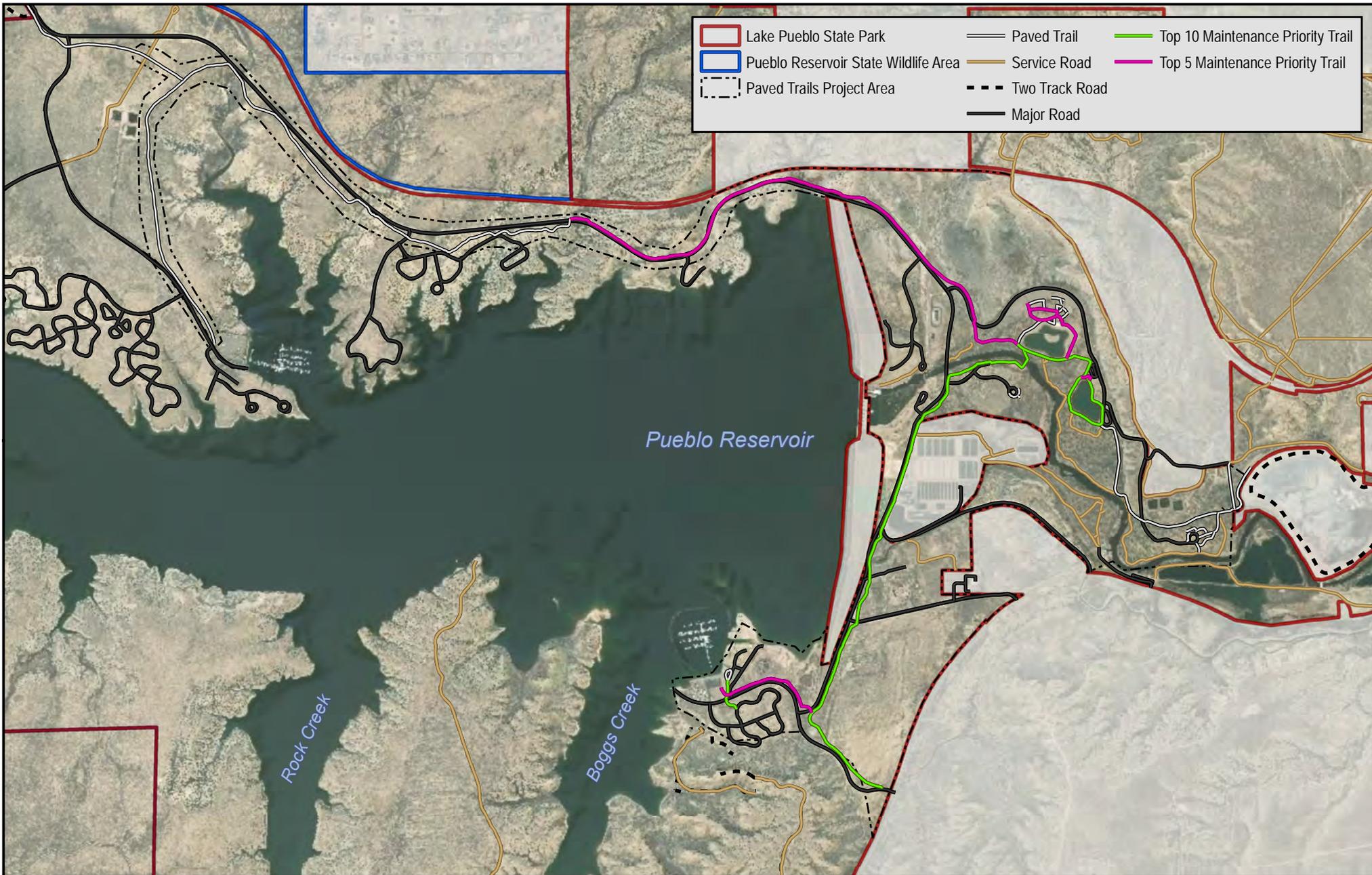
0 0.2 0.4 Miles

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Map Document-  
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Map5\_24\_South\_Shore\_Infra\_Needs  
Map prepared by- Melissa Greulich  
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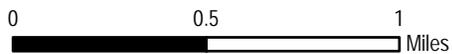
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Units: Meters  
UTM Zone: 13 North



## Paved Trails Top 10 Maintenance Priority Trails Map



MAP 5.25



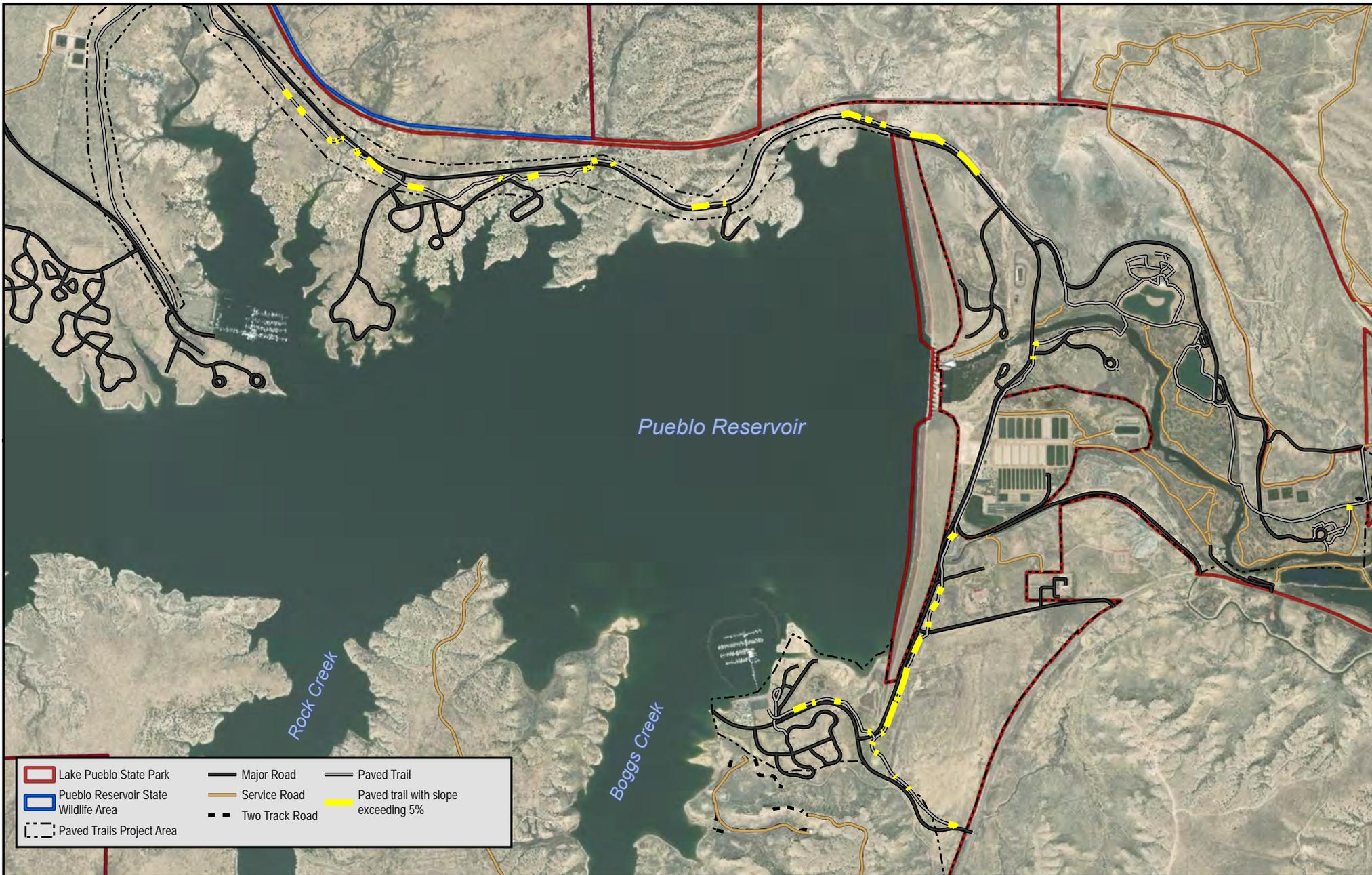
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Map Document- 3/21/2019 11:25:30 AM  
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 Map prepared by- Melissa Greulich  
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Additional Information-  
 Color Aerial Imagery Flown 2015  
 Cartographic Information-  
 Map Datum: NAD83  
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 Units: Meters  
 UTM Zone: 13 North



## Paved Trails with Slopes Exceeding 5 Percent Map



MAP 5.26



0 0.4 0.8 Miles

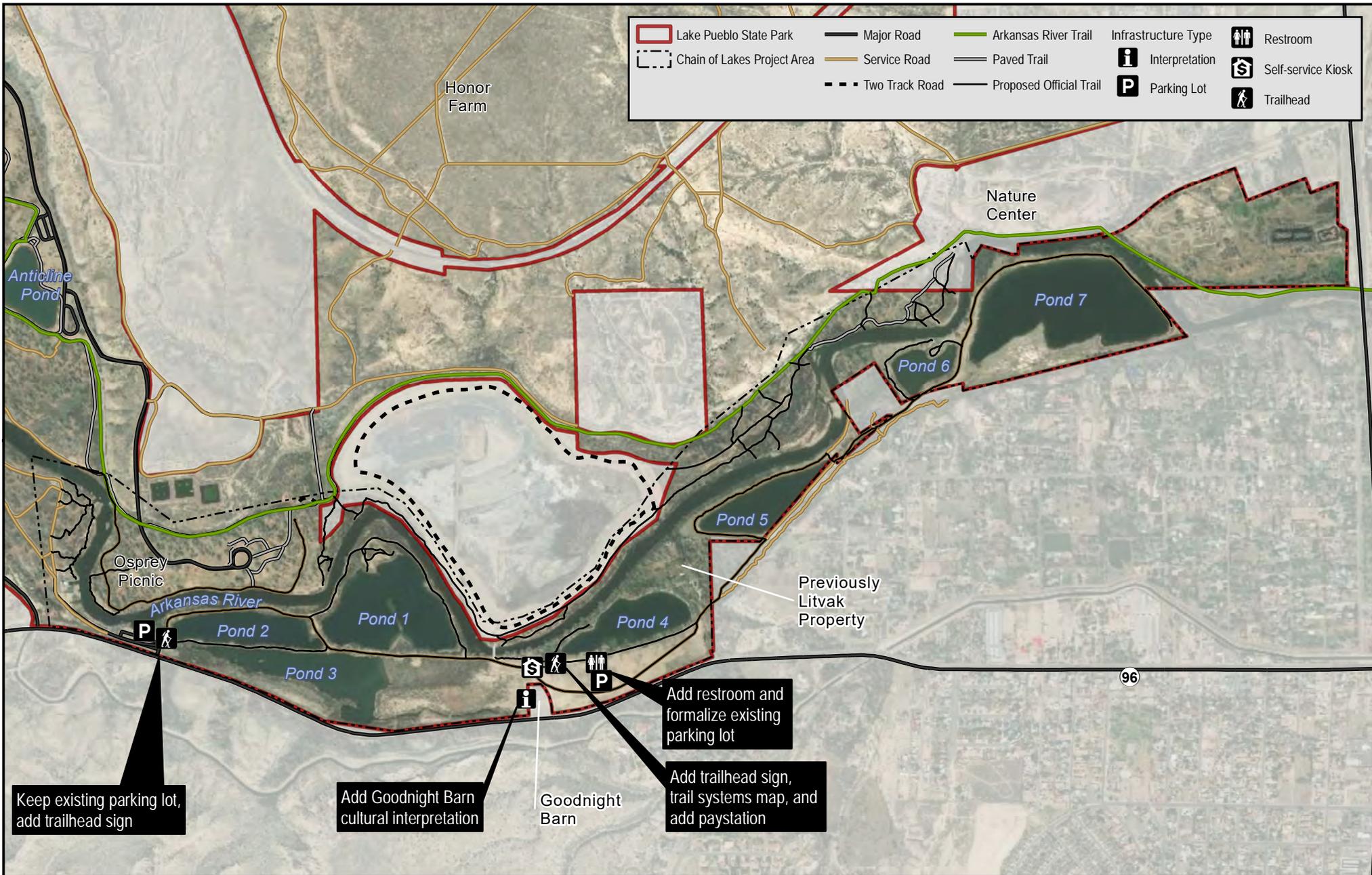
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Map5\_26\_Paved\_ADAslopes  
Adobe PDF-  
Map5\_26\_Paved\_ADAslopes.jpg  
Map prepared by- Melissa Greulich  
Colorado Parks and Wildlife  
Resource Stewardship

Date prepared-  
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USGS, Bing  
Additional Information-  
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Cartographic Information-  
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Units: Meters  
UTM Zone: 13 North



## Chain of Lakes Proposed Trails and Infrastructure Map



MAP 5.27



0 0.25 0.5 Miles

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Lake Pueblo Trail Management Plan  
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Map5\_27\_COL\_Trails  
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Map prepared by- Melissa Greulich  
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Date prepared-  
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USGS, Bing  
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## Appendix B: Tables

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**Table 1.** Rare Plants and Communities of LPSP.

Common Name	Scientific Name	CNHP Rank	Project Areas Present In
Arkansas Valley Evening Primrose	<i>Oenothera harringtonii</i>	Global: Vulnerable, State: Vulnerable	North Shore
Barneby Fever-few	<i>Bolophyta tetraeuris</i>	Global: Vulnerable, State: Vulnerable	South Shore, North Shore
Dwarf Milkweed	<i>Asclepias uncialis ssp. uncialis</i>	Global: Vulnerable/Apparently Secure, Subspecies: Imperiled/Vulnerable, State: Imperiled	North Shore
Foothills Shrubland (James' Sea Heath Dwarf Shrubland)	<i>Frankenia jamesii/Oryzopsis hymenoides</i>	(Proposed) Global: Apparently Secure, State: Critically Imperiled	South Shore, North Shore
Foothills Pinyon-Juniper Woodlands	<i>Juniperus monosperma/Bouteloua gracilis</i>	Global: Secure, State: Vulnerable/Apparently Secure	South Shore
Great Plains Mixed Grass Prairie	<i>Stipa neomexicana</i>	Global: Vulnerable, State: Vulnerable	South Shore
Plains Escarpment Prairies (Limestone Breaks)	<i>Artemisia bigelovii/Achnatherum hymenoides</i>	Global: Vulnerable, State: Vulnerable	South Shore
Pueblo Goldenweed	<i>Oonopsis puebloensis</i>	Global: Imperiled State: Imperiled	North Shore
Rocky Mountain Bladderpod	<i>Lesquerella calcicola</i>	Global: Vulnerable, State: Vulnerable	North Shore
Round-leaf Four-O'clock	<i>Oxybaphus rotundifolius</i>	Global: Imperiled State: Imperiled	North Shore
Shadscale/Indian ricegrass shrubland	<i>Atriplex confertifolia/Achnatherum hymenoides shrubland</i>	Global: Vulnerable, State: Imperiled	None
Shortgrass Prairie	<i>Bouteloua gracilis/Hilaria jamesii</i>	Global: Vulnerable/Apparently Secure, State: Vulnerable	South Shore
Three-leaf Sumac (skunkbush) Riparian Shrubland	<i>Rhus trilobata</i>	Global: Imperiled State: Imperiled	North Shore
Western Slope Grasslands	<i>Hilaria jamesii</i>	Global: Imperiled/Apparently Secure, State: Critically Imperiled	South Shore

Sources:(CNHP 2017; CPW 2017b)

**Table 2.** Sensitive Wildlife Species of LPSP.

Common Name	Scientific Name	Federal ESA Status	CPW Rank	CNHP Rank	Project Areas Present In
<b>Birds</b>					
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	-	Tier 2, SC	Global: Apparently Secure State: Imperiled Breeding Range	Could occur in the park
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA	Tier 2, SC	Global: Secure State: Critically Imperiled Breeding, Imperiled Non-Breeding Range	Could occur in the park
Burrowing Owl	<i>Athene cunicularia</i>	-	Tier 1, ST	Global: Secure State: Secure	North Shore
Cassin's Sparrow	<i>Aimophila cassinii</i>	-	Tier 2	Global: Secure State: Apparently Secure Breeding Range	Could occur in the park
Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	-	-	Global: Secure State: Vulnerable	South Shore
Ferruginous Hawk	<i>Buteo regalis</i>	-	Tier 2, SC	State: Critically Imperiled (breeding range), Vulnerable (non-breeding range)	Could occur in the park
Mountain Plover	<i>Charadrius montanus</i>		Tier 1, SC	Global: Vulnerable State: Imperiled Breeding Range	Could occur in the park
Prairie Falcon	<i>Falco mexicanus</i>	-	Tier 2	Global: Secure State: Apparently Secure	South Shore
Short-eared Owl	<i>Asio flammeus</i>	-	Tier 2	Global: Secure State: Imperiled Breeding Range	South Shore
Snowy Egret	<i>Egretta thula</i>	-	-	Global: Secure State: Imperiled Breeding Range	Could occur in the park
Western Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	FT	Tier 1, SC	Global: Secure State: Critically Imperiled Breeding Range	Previously documented in COL, could occur in other areas
<b>Mammals</b>					
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	-	Tier 2, SC	Global: Apparently Secure State: Vulnerable	North Shore
Botta's Pocket Gopher	<i>Thomomys bottae</i>	-	Tier 2, SC	Global: Secure State: Critically Imperiled	Could occur in the park
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	-	Tier 1, SC	Global: Vulnerable State: Imperiled	Could occur in the park
Swift Fox	<i>Vulpes velox</i>	-	Tier 2, SC	Global: Vulnerable State: Vulnerable	Could occur in the park
<b>Amphibians</b>					
Northern Leopard Frog	<i>Lithobates pipiens</i>	-	Tier 1, SE	Global: Secure State: Vulnerable	Could occur in the park

Plains Leopard Frog	<i>Rana blairi</i>	-	Tier 2, SC	Global: Secure State: Vulnerable	Could occur in the park
<b>Fish</b>					
Southern Redbelly Dace	<i>Phoxinus erythrogaster</i>	-	Tier 1, SE	Global: Secure State: Critically Imperiled	North Shore
<b>Reptiles</b>					
Triploid Checkered Whiptail	<i>Aspidoscelis neotesselata</i>	-	Tier 1, SC	Global: Imperiled, Vulnerable State: Imperiled	South Shore, North Shore

FT – Federally Threatened, BGEPA – Bald and Golden Eagle Protection Act Listed, SE – State Endangered, ST – State Threatened, SC – State Candidate for Listing  
 Sources: (CPW 2015, 2017b; CNHP 2017)

**Table 3. Seasonal Raptor Buffers**

Raptor Species	Buffer Distance (meters)	Nesting Period
Bald Eagle	800	October 15th – July 31st
Golden Eagle	800	December 15th – July 15th
Ferruginous Hawk	800	February 1st – July 15th
Northern Goshawk	800	March 1st – September 15th
Peregrine Falcon	800	March 15th – July 31st
Prairie Falcon	800	March 15th – July 15th
Turkey Vulture <sup>3</sup>	800	April 1st – September 31st
Red-tailed Hawk	600	February 15th - July 15th
Short-eared Owl <sup>2</sup>	500	March 1st – August 1st
Swainson's Hawk	400	April 1st – July 15th
Osprey	400	April 1st - August 31st
Mississippi Kite <sup>3</sup>	400	May 1st – July 31st
Northern Harrier <sup>2</sup>	400	April 1st – August 15th
Cooper's Hawk <sup>2</sup>	200	March 15th – August 31st
Sharp-shinned Hawk <sup>2</sup>	200	March 15th – August 31st
Barn Owl <sup>2</sup>	200	February 1st – September 15th
Western Screech-Owl <sup>4</sup>	200	March 1st – August 15th
Great Horned Owl <sup>2</sup>	100	December 1st - September 30th
American Kestrel <sup>3</sup>	50	March 1st - August 31st
Burrowing Owl	50	March 15th – October 31st

Sources: <sup>1</sup>(CPW 2008); <sup>2</sup>(USFWS 2013); <sup>3</sup>(Cornell Lab of Ornithology 2016); <sup>4</sup>(BLM 2008; USFWS 2008)

**Table 4.** Resource Datasets Used to Create Trail Recommendations

Dataset Name	Description	Buffer Distance	Trail Intersect Action	Data Source
Cultural Resource Points	SHPO listed and eligible sites buffered by 20 meters	20 meters	Trail Closure or Reroute	Compass, CPW Resource Stewardship
Cultural Sensitivity Area Polygons	Terrace edge areas where high density of cultural resources may be found based on previous occurrence records	NA	Trail Redundancy Reduction	Compass, CPW Resource Stewardship
Paleontological Points	Documented sites buffered by 20 meters	20 meters	Trail Closure or Reroute	CPW Resource Stewardship
Riparian Corridor Polygons <sup>1</sup>	Vegetation community riparian areas were buffered by 75 meters, including sensitive riparian communities (three-leaf sumac shrubland). National Hydrography Dataset streams buffered by 10 meters in areas where vegetation community data did not exist and then buffered by 75 meters.	75 meters	Trail Redundancy Reduction, Trail Reroute	Ecotone Corporation, National Hydrography Dataset
Rare Plant Points	Individual or population occurrence points	NA	Trail Closure or Reroute	CNHP, CPW Resource Stewardship
Rare Plant Point Buffer Polygons	Individual of population occurrence points buffered by 10 meters	10 meters	Trail Closure or Reroute	CNHP, CPW Resource Stewardship
Rare Plant and Community Polygons <sup>2</sup>	Occurrence points buffered by various distances, potential habitat, and mapped rare community polygons	Various	Trail Redundancy Reduction	CNHP, CPW Resource Stewardship
Sensitive Wildlife Species Occurrence Polygons	Occurrence polygons delineating potential habitat based on documented occurrences	Various	Trail Redundancy Reduction	CNHP
Sensitive Wildlife Species Occurrence Points	Occurrence points	NA	Trail Redundancy Reduction	CNHP
Raptor Nest Buffer Polygons	Points of active nests within the last five years buffered by the CPW-recommended distance (see Table 3)	Various	Seasonal Trail Closure	CPW Resource Stewardship
Roost/Rookery Polygon	Point where cluster of trees present, and historic rookery documented buffered by 300 meters	300 meters	Seasonal Trail Closure	CPW Resource Stewardship

<sup>1</sup>Vegetation mapping data was only available for a small portion of the North Shore trail assessment area due to it being located outside of the park and in the SWA.

<sup>2</sup>This rare plant and community polygon layer is more generalized than the buffered point layer, and therefore results in a different management/maintenance action. It does not necessarily indicate an exact location of an individual plant.

**Table 5. Trail Problem Measurements**

Attribute	Description	Attribute Options	Problem Types Collected For
Trail Width	Width of current trail treads taken 10 feet from the end of the problem	None	All
Trail Depth	Depth of maximum incision taken 10 feet from the end of the problem	None	All
Trail Slope	Assessment of whether the trail is sloped or flat	Slope Flat NA	All
Problem Type	Description of the problem encountered	Animal Activity Braiding Bedrock Erosion Infrastructure Line of Sight Roots Water Pooling Safety Concern Surface Crack Surface Buckling Surface Depression Trail-Surrounding Height Difference Vegetation Encroachment Debris/Windfall Trees Other Monitoring Point	All
Problem Count	A count of the number of problems of one type present and described by a single point.	None	All
Problem Width	Width of problem measured in inches perpendicular to the direction of travel on the trail.	None	All
Trail Width at Problem	Width of current trail treads at the location of the problem	None	All
Problem Length	Length of trail where problem is encountered measured in inches parallel to the direction of travel, may be recorded as zero if a line feature is also used to record very long sections of problematic trails.	None	All
Problem Height Difference	Any measurable vertical distance related to a problem (i.e. gully depth, lippage height, height of buckle peak, pothole depth, etc.)	None	All
Probable Cause	Description of the likely source of the problem encountered	Hiker Activity Biker Activity	All

**Table 5. Trail Problem Measurements**

Attribute	Description	Attribute Options	Problem Types Collected For
		Horse Activity Animal Activity Elevation Change Vegetation High Incline Location of Trail Other Unknown	
Infrastructure Type	Indicator of the type of man-made structure encountered on the trail	Bike Jump Bridge Structure Other Stairs Wall Safety Concern Culvert/Pipe NA	Infrastructure
Infrastructure Material	Material used to construct some structure encountered on the trail (should be built as new materials are encountered).	Other Unknown NA	Infrastructure
Root Exposure	A description of the amount of root exposure of roots found on the trail.	Root Exposed Soil Beneath Root No Soil Beneath Root Not Applicable	Roots
Root Count	A count of the number of exposed roots on the trail at a given location.	None	Roots
Safety Concern	An assessment of whether the problem poses a safety concern.	Yes No Unknown NA	All

**Table 6. Natural Surface Trail Ranking Weights**

Problem Type	Weight
Erosion	1.25
Trail Braiding	0.75
Infrastructure	1
Water Accumulation	1
Bedrock Exposure	0.5
Root Exposure	0.5

**Table 7. "Other" Problem Maintenance Priority Ranks for Maintenance Score Calculation**

Problem Type	Weight
Safety	10
Line of Sight	8
Animal Activity	6
Vegetation Encroachment	4
Debris/Windfall Trees	2
Other (bridge without crossing)	10

**Table 8. Paved Surface Trail Ranking Weights**

Problem Type	Weight
Erosion	0.75
Surface Buckling	1.5
Surface Crack	1.25
Water Accumulation	1
Surrounding Height Difference	1

**Table 9. North Shore Trails Area Trail Problems Summary**

Problem Type	Number of Problems	Average Ranking <sup>1</sup>
Animal Activity	4	NA
Bedrock Exposure	62	1.4
Debris/Windfall Trees	1	NA
Erosion	139	3.3
Line of Sight	10	NA
Other <sup>2</sup>	1	NA
Recreation Infrastructure	3	2
Root Exposure	47	1.4
Safety Concern	13	NA
Surface Depression	7	1.7
Trail Braiding	35	1.9
Vegetation Encroachment	11	NA

<sup>1</sup>Ranking only available for parameters included in the ranking system.

<sup>2</sup>Other issue documented: Water without a proper crossing.

**Table 10.** North Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems											Total
		Erosion	Bedrock	Braiding	Infrastructure	Roots	Safety	Surface Dep.	Animal Activity	Debris	Line of Sight	Other	
Luna Lane a	1145.83	0	2	0	0	2	0	0	0	0	3	0	7
Luna Lane b	1218.43	1	0	3	0	0	0	1	0	0	0	0	5
Luna Lane c	915.62	1	0	3	0	1	0	0	0	0	0	0	5
NT10a	5983.43	15	3	6	0	3	1	1	1	0	0	0	34
NT10b	2479.26	0	5	3	0	5	1	0	0	0	0	0	14
NT10c	98.34	2	0	0	0	1	0	0	0	0	0	0	3
NT10d	1998.48	10	3	1	0	3	1	1	0	0	1	0	21
NT10e	200.45	1	1	0	0	0	0	0	0	0	0	0	2
NT10f	1329.43	2	1	0	0	0	1	0	0	0	0	0	5
NT10g	455.76	2	1	0	0	0	1	0	0	0	0	1	5
NT10h	150.06	0	0	0	0	0	0	0	0	0	0	0	0
NT10i	715.93	1	1	0	0	0	0	0	0	0	0	0	2
NT10j	110.99	0	0	0	0	1	0	0	0	0	0	0	1
NT10k	131.18	0	0	0	0	0	0	0	0	0	0	0	0
NT10l	150.95	0	0	0	0	0	0	0	0	0	0	0	0
NT10m	239.25	1	0	0	0	1	0	0	0	0	0	0	2
NT11a	668.47	2	0	0	0	0	0	0	1	0	0	0	3
NT11b	5724.67	8	7	3	0	2	0	0	0	0	2	0	32
NT11c	1184.44	1	0	0	0	0	0	0	0	0	0	0	1
NT11d	3524.11	3	3	0	0	2	1	0	0	0	0	0	9
NT11e	140.79	1	0	0	0	0	0	0	0	0	0	0	1
NT11f	203.71	1	0	0	0	1	0	0	0	0	0	0	2
NT11g	3747.28	9	3	2	0	4	0	0	0	0	0	0	18
NT11h	247.56	1	1	0	0	0	0	0	0	0	0	0	2
NT11i	420.18	0	0	0	0	0	0	0	0	0	0	0	0
NT11j	318.95	0	1	0	0	1	0	0	0	0	0	0	2
NT12a	543.46	0	0	0	0	0	0	0	0	0	0	0	0
NT12b	217.65	0	0	0	0	0	0	0	0	0	0	0	0
NT12c	523.78	0	1	0	0	0	0	0	0	0	0	0	1
NT12d	517.63	0	0	0	0	0	0	0	0	0	0	0	0
NT13a	348.55	0	0	0	0	0	0	0	0	0	0	0	0
NT13b	146.69	0	0	0	0	0	0	0	0	0	0	0	0

**Table 10.** North Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems											Total
		Erosion	Bedrock	Braiding	Infrastructure	Roots	Safety	Surface Dep.	Animal Activity	Debris	Line of Sight	Other	
NT13c	60.41	0	0	0	0	0	0	0	0	0	0	0	0
NT13d	167.82	0	0	0	0	0	0	0	0	0	0	0	0
NT13e	245.49	0	2	0	0	0	0	0	0	0	0	0	2
NT13f	126.70	0	1	0	0	0	0	0	0	0	0	0	1
NT13g	99.73	1	0	0	0	0	0	0	0	0	0	0	1
NT13h	87.34	0	1	0	0	0	0	0	0	0	0	0	1
NT14a	241.10	0	0	0	0	0	0	0	0	0	0	0	0
NT14b	244.34	1	0	0	0	0	0	0	0	0	0	0	1
NT14c	36.82	0	1	0	0	0	0	0	0	0	0	0	1
NT14d	51.93	0	0	0	0	0	0	0	0	0	0	0	0
NT15a	476.15	0	0	0	0	0	0	0	0	0	0	0	0
NT15b	89.23	2	0	0	0	0	0	0	0	0	0	0	2
NT15c	52.94	0	0	0	0	0	0	0	0	0	0	0	0
NT15d	373.81	0	0	0	0	0	0	0	0	0	0	0	0
NT15e	885.26	0	2	0	0	0	0	0	0	0	0	0	2
NT15f	576.79	0	0	0	0	0	0	0	0	0	0	0	0
NT15g	345.09	0	0	0	0	0	0	0	0	0	0	0	0
NT1a	755.48	0	0	0	0	0	0	0	0	0	0	0	0
NT1b	793.75	0	1	0	0	0	0	0	0	0	0	0	1
NT1c	790.12	0	0	0	0	0	0	1	0	0	0	0	1
NT1d	1772.55	1	6	0	0	0	4	0	0	0	0	0	11
NT1e	93.27	0	0	0	0	0	0	0	0	0	0	0	0
NT1f	362.21	0	0	0	0	0	0	0	2	0	0	0	2
NT2a	2006.22	0	0	0	0	0	0	0	0	0	0	0	0
NT2b	2178.40	0	0	0	0	0	0	0	0	0	0	0	0
NT3a	1389.36	3	0	0	0	0	0	0	0	0	0	0	3
NT3b	140.62	1	0	0	0	0	0	0	0	0	0	0	1
NT3c	153.37	0	0	0	0	0	0	0	0	0	0	0	0
NT3d	433.52	0	0	0	0	0	0	0	0	0	0	0	0
NT3e	655.73	0	0	0	0	0	0	0	0	0	0	0	0
NT3f	362.58	1	0	0	0	0	0	0	0	0	0	0	1
NT3g	246.30	0	0	0	0	0	0	0	0	0	0	0	0

**Table 10.** North Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems											Total
		Erosion	Bedrock	Braiding	Infrastructure	Roots	Safety	Surface Dep.	Animal Activity	Debris	Line of Sight	Other	
NT3h	1254.39	5	0	0	0	0	0	0	0	0	0	0	6
NT3i	145.67	0	1	0	0	0	0	0	0	0	0	0	1
NT3j	64.05	1	1	0	0	0	0	0	0	0	0	0	2
NT3k	35.17	1	0	0	0	0	0	0	0	0	0	0	1
NT3l	114.44	1	0	0	0	0	0	0	0	0	0	0	1
NT3m	99.60	0	0	0	0	0	0	0	0	0	0	0	0
NT3n	77.80	1	0	0	0	0	0	0	0	0	0	0	1
NT4a	641.87	0	0	0	0	1	0	0	0	0	0	0	1
NT4b	243.92	0	0	0	0	0	0	0	0	0	0	0	0
NT4c	132.41	0	1	0	0	0	0	0	0	0	0	0	1
NT4d	76.75	0	0	0	0	0	0	0	0	0	0	0	0
NT4e	60.05	0	0	0	0	0	0	0	0	0	0	0	0
NT4f	87.85	0	0	0	0	1	0	0	0	0	0	0	1
NT4g	42.38	0	0	0	0	0	0	0	0	0	0	0	0
NT4h	109.63	0	0	0	0	0	0	0	0	0	0	0	0
NT4i	25.92	0	1	0	0	1	0	0	0	0	0	0	2
NT5a	97.70	0	0	0	0	0	0	0	0	0	0	0	0
NT5b	109.85	0	0	0	0	0	0	0	0	0	0	0	0
NT6a	78.26	0	0	0	0	0	0	0	0	0	0	0	0
NT6b	170.33	0	0	0	0	0	0	0	0	0	0	0	0
NT6c	302.21	1	0	0	0	0	0	0	0	0	0	0	1
NT6d	190.35	0	1	0	0	0	0	0	0	0	0	0	1
NT6e	458.03	1	0	0	0	0	0	0	0	0	0	0	1
NT6f	401.14	2	0	0	0	0	0	0	0	0	0	0	2
NT6g	1560.13	2	0	3	0	3	0	0	0	0	0	0	8
NT7a	1194.85	3	1	0	0	0	0	0	0	0	0	0	5
NT7b	94.16	0	0	0	0	0	0	0	0	0	0	0	0
NT7c	1022.07	2	1	0	0	1	0	0	0	0	0	0	4
NT7d	985.31	4	0	0	0	0	1	0	0	0	0	0	5
NT7e	698.00	1	0	1	0	0	0	0	0	0	0	0	2
NT7f	2400.53	9	1	2	0	2	1	2	0	0	2	0	20
NT7g	812.94	2	3	0	0	2	0	0	0	0	0	0	7

**Table 10.** North Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems											Total	
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Surface Dep.	Animal Activity	Debris	Line of Sight	Other		
NT7h	1739.32	6	0	3	0	1	0	0	0	0	0	0	0	11
NT7i	478.90	0	0	0	0	0	0	0	0	0	0	0	0	0
NT7j	465.71	1	1	0	0	0	0	0	0	0	0	0	0	2
NT7k	372.74	0	0	0	0	0	0	0	0	0	0	0	0	1
NT7l	113.44	0	0	0	0	0	0	0	0	0	0	0	0	0
NT7m	793.50	1	1	1	0	1	1	0	0	0	0	0	0	5
NT7n	403.97	0	0	0	0	0	0	0	0	0	0	0	0	0
NT7o	1199.91	3	1	0	0	1	0	1	0	0	2	0	0	8
NT7p	101.56	0	0	0	0	0	0	0	0	0	0	0	0	0
NT7q	310.43	0	0	1	0	0	0	0	0	0	0	0	0	1
NT7r	516.50	2	1	0	1	0	0	0	0	0	0	0	0	4
NT7s	177.44	1	0	0	1	1	0	0	0	0	0	0	0	3
NT7t	152.97	1	0	1	1	0	0	0	0	0	0	0	0	3
NT7u	83.47	0	0	0	0	0	0	0	0	0	0	0	0	0
NT7v	37.08	0	0	0	0	0	0	0	0	0	0	0	0	0
NT7w	350.34	1	0	1	0	0	0	0	0	0	0	0	0	2
NT8a	490.16	0	0	0	0	0	0	0	0	0	0	0	0	2
NT8b	190.16	0	0	0	0	0	0	0	0	0	0	0	0	0
NT9a	213.31	0	0	0	0	0	0	0	0	0	0	0	0	0
NT9b	240.52	2	0	0	0	0	0	0	0	0	0	0	0	2
NT9c	358.79	0	0	0	0	0	0	0	0	1	0	0	0	1
NT9d	176.89	0	0	0	0	0	0	0	0	0	0	0	0	0
NT9e	38.24	0	0	0	0	0	0	0	0	0	0	0	0	0
Tykes Trail a	188.11	2	0	0	0	0	0	0	0	0	0	0	0	2
Tykes Trail b	872.12	1	0	1	0	0	0	0	0	0	0	0	0	2
Tykes Trail c	1022.29	5	0	0	0	4	0	0	0	0	0	0	0	9
Tykes Trail d	1704.07	5	0	0	0	1	0	0	0	0	0	0	0	6

Infra. = Infrastructure, Surface Dep. = Surface Depression

**Table 11. South Shore Trails Area Trail Problems Summary**

Problem Type	Number of Problems	Average Ranking <sup>1</sup>
Animal Activity	1	NA
Bedrock Exposure	16	1.4
Debris/Windfall Trees	2	NA
Erosion	93	4.2
Other <sup>2</sup>	1	NA
Recreation Infrastructure	25	4.2
Root Exposure	75	1.4
Safety Concern	9	NA
Water Pooling	5	2.8
Trail Braiding	40	2.3

<sup>1</sup>Ranking only available for parameters included in the ranking system.

<sup>2</sup>Other issue documented: Unknown, not noted in field work.

**Table 12. South Shore Trails Area Number of Problems by Trail**

Trail Name	Length (ft)	Number of Problems										Total
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Water Pooling	Animal Activity	Debris	Other	
96 a	4872.31	0	0	0	0	0	0	0	0	0	0	0
96 b	2454.40	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail a	677.82	1	0	1	0	0	0	0	0	0	0	2
Arkansas Point Trail b	65.90	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail c	89.82	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail d	620.47	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail e	857.87	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail f	311.16	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail g	1091.56	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail h	876.16	0	0	0	0	0	0	0	0	0	0	0
Arkansas Point Trail i	1334.53	0	0	0	0	1	0	0	0	0	0	1
Arkansas Point Trail j	450.53	0	0	0	0	0	0	0	0	0	0	0
Boggs Overlook	3743.12	0	0	0	0	0	0	0	0	0	0	0
Bones	389.04	0	0	0	0	1	0	0	0	0	0	1
Broken Hip a	635.55	2	0	0	0	0	0	0	0	0	0	2
Broken Hip b	2974.49	1	0	1	0	0	0	0	0	0	0	2
Conduit a	1691.80	0	0	0	0	0	0	0	0	0	0	0
Conduit b	184.75	0	0	0	0	0	0	0	0	0	0	0
Conduit c	414.78	0	0	0	0	0	0	0	0	0	0	0
Conduit d	2712.01	0	0	0	0	0	0	0	0	0	0	0
Cuatro Cinco a	1046.36	0	0	0	0	0	0	0	0	0	0	0
Cuatro Cinco b	896.34	0	0	0	0	1	0	0	0	0	0	1
Cuatro Cinco c	2535.59	1	0	0	0	1	0	0	0	0	0	2
Cuatro Cinco d	418.64	0	0	0	0	2	0	0	0	0	0	2
Cuatro Cinco e	2439.97	2	0	0	0	0	0	0	0	0	0	2
Cuatro Cinco f	6118.09	3	1	0	0	4	0	0	1	0	0	9
Dead Dog a	766.12	2	4	3	0	1	0	0	0	0	0	10

**Table 12.** South Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems										Total
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Water Pooling	Animal Activity	Debris	Other	
Dead Dog b	334.10	0	1	0	0	0	0	0	0	0	0	1
Driftwood	6011.61	1	0	0	3	0	0	0	0	0	0	4
Free Ride a	1185.62	0	0	1	1	0	1	0	0	0	0	3
Free Ride b	719.83	0	0	0	0	0	0	0	0	0	0	0
Free Ride c	708.94	0	0	0	0	0	0	0	0	0	0	0
Hooters Canyon a	1504.06	1	0	0	0	1	0	0	0	0	0	2
Hooters Canyon b	376.79	0	0	0	0	0	0	0	0	0	0	0
Inner Limits a	9088.80	0	0	0	0	4	0	0	0	0	0	4
Inner Limits b	1890.37	0	0	1	0	0	0	0	0	0	0	1
Inner Limits c	6141.27	0	0	0	0	2	1	0	0	0	0	3
Inner Limits d	7541.40	0	2	1	0	2	0	0	0	0	0	5
Keyhole Canyon a	584.81	0	0	1	1	0	1	0	0	0	0	3
Keyhole Canyon b	1996.67	2	0	0	0	1	0	0	0	0	0	3
Log Drop	882.67	0	0	0	2	0	0	1	0	0	0	3
Lower Dog	546.80	0	0	0	0	0	0	0	0	0	0	0
Outer Limits a	6029.69	0	0	1	0	5	0	0	0	0	0	6
Outer Limits b	6701.19	0	0	0	0	0	0	0	0	0	0	0
Outer Limits c	10554.96	2	0	0	0	2	1	0	0	0	0	5
Outer Limits d	6759.17	0	0	0	0	0	0	0	0	0	0	0
Pedro's Point a	2734.53	0	0	0	0	0	0	0	0	0	0	0
Pedro's Point b	6849.31	0	0	0	0	0	0	0	0	0	0	0
Pedro's Point c	2607.93	0	0	0	0	0	0	0	0	0	0	0
Pedro's Point d	1030.45	0	0	0	0	0	0	0	0	0	0	0
Pedro's Point e	282.32	1	1	0	0	0	0	0	0	0	0	2
Pinball	693.45	0	0	0	0	0	0	0	0	0	0	0
Pronghorn	2490.80	0	0	0	0	0	0	0	0	0	0	0
Quick Draw	370.33	0	0	1	1	0	0	0	0	0	0	2
Rattlesnake a	828.81	0	0	0	2	0	0	0	0	0	0	2
Rattlesnake b	657.35	1	2	0	0	3	1	0	0	0	0	7
Rock Canyon a	839.63	0	0	3	0	1	0	0	0	0	0	4
Rock Canyon b	2450.03	0	0	2	0	2	0	0	0	0	0	4
Rock Canyon c	726.52	0	0	0	0	0	0	0	0	0	0	0
Rock Canyon d	2094.20	2	0	2	0	0	0	0	0	0	0	4
Rodeo	1014.89	0	0	0	0	2	1	0	0	0	0	3
Rodeo Ridge	2143.72	0	0	0	0	0	0	0	0	0	0	0

**Table 12.** South Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems										Total
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Water Pooling	Animal Activity	Debris	Other	
Roller Coaster a	118.98	0	0	0	0	0	0	0	0	0	0	0
Roller Coaster b	424.93	0	0	0	0	0	0	0	0	0	0	0
Roller Coaster c	516.39	0	0	0	0	0	0	0	0	0	0	0
Roller Coaster d	379.46	0	0	1	0	0	0	0	0	0	0	1
Roller Coaster e	1475.70	0	0	0	0	2	0	0	0	0	0	2
Roller Coaster f	585.93	0	0	0	0	0	0	0	0	0	0	0
Roller Coaster g	525.72	0	0	0	1	0	0	0	0	0	0	1
Roller Coaster h	782.80	0	0	0	0	0	0	0	0	0	0	0
Sidewinder a	948.50	0	0	0	0	0	0	0	0	0	0	0
Sidewinder b	626.67	0	0	0	0	0	0	0	0	0	0	0
Skull Canyon a	437.50	0	0	0	0	0	0	0	0	0	0	0
Skull Canyon b	429.68	1	0	1	0	0	0	0	0	0	0	2
Skull Canyon c	777.36	0	0	1	0	3	0	0	0	0	0	4
Skull Canyon d	332.92	0	0	0	0	0	0	0	0	0	0	0
Skull Canyon e	2037.32	1	0	0	0	2	0	0	0	0	0	3
Skull Ridge	2280.46	0	0	0	0	0	0	0	0	0	0	0
South Shore a	1185.69	0	0	0	0	0	0	0	0	0	0	0
South Shore b	1307.45	0	0	0	0	0	0	0	0	0	0	0
South Shore c	255.06	2	0	0	0	0	0	0	0	0	0	2
South Shore d	1490.41	3	0	0	1	0	0	0	0	0	0	4
South Shore e	1352.62	2	0	1	0	0	0	0	0	0	0	3
South Shore f	483.88	3	0	0	0	0	0	0	0	0	0	3
South Shore g	2003.03	0	0	0	0	0	0	0	0	0	0	0
South Shore h	1984.88	0	0	0	0	0	0	0	0	0	0	0
South Shore i	1316.33	0	0	0	0	0	0	0	0	0	0	0
ST11	525.86	0	0	0	0	0	0	0	0	0	0	0
ST12	1360.22	0	0	0	0	0	0	0	0	0	0	0
ST13c	526.66	2	0	0	0	0	0	0	0	0	0	2
ST14a	800.98	0	0	0	0	0	0	0	0	0	0	0
ST14b	1123.03	0	0	0	0	0	0	0	0	0	0	0
ST15a	1168.85	2	0	0	0	0	0	0	0	0	0	2
ST15b	398.10	0	0	0	0	0	1	0	0	0	0	1
ST16b	951.13	0	0	0	0	0	0	0	0	0	0	0
ST18a	370.75	0	0	0	0	0	0	0	0	0	0	0
ST18b	404.11	2	0	1	0	0	0	0	0	0	0	3

**Table 12.** South Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems										Total
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Water Pooling	Animal Activity	Debris	Other	
ST18d	743.57	0	0	0	0	0	0	0	0	0	0	0
ST18e	695.57	0	0	0	0	0	0	0	0	0	0	0
ST18f	527.40	0	0	0	0	0	0	0	0	0	0	0
ST18g	539.95	0	0	0	0	0	0	0	0	0	0	0
ST18h	347.02	0	0	0	0	0	0	0	0	0	0	0
ST18i	308.73	0	0	0	0	0	0	0	0	0	0	0
ST18j	226.50	0	0	0	0	0	0	0	0	0	0	0
ST19	1173.47	0	0	0	0	0	0	0	0	0	0	0
ST1a	1752.08	3	0	0	0	0	0	0	0	0	0	3
ST1b	984.78	0	0	0	0	0	0	0	0	0	0	0
ST1c	1329.43	5	0	2	0	3	0	0	0	0	0	10
ST20	382.91	0	0	0	0	0	0	0	0	0	0	0
ST21a	239.53	0	0	0	0	0	0	0	0	0	0	0
ST21b	127.64	0	0	0	1	0	0	0	0	0	0	1
ST22	228.18	0	0	0	0	0	0	0	0	0	0	0
ST23a	110.16	0	0	0	0	0	0	0	0	0	0	0
ST23b	82.47	0	0	0	0	0	0	0	0	0	0	0
ST23c	91.21	0	0	0	0	0	0	0	0	0	0	0
ST23d	694.47	0	0	0	0	0	0	0	0	0	0	0
ST23e	198.96	0	0	0	0	0	0	0	0	0	0	0
ST23f	365.09	0	0	0	0	0	0	0	0	0	0	0
ST23g	909.29	0	0	0	0	0	0	0	0	0	0	0
ST24a	79.13	0	0	0	0	0	0	0	0	0	0	0
ST24b	232.87	0	0	0	0	0	0	0	0	0	0	0
ST25	496.96	0	0	1	0	0	0	0	0	0	0	1
ST26	426.29	0	0	0	0	0	0	0	0	0	0	0
ST2a	3775.07	0	0	0	0	0	0	0	0	0	0	0
ST5b	521.74	0	0	0	0	0	0	0	0	0	0	0
ST5c	1357.77	0	0	0	0	0	0	0	0	0	0	0
ST5d	346.35	0	0	0	0	0	0	0	0	0	0	0
ST5e	506.66	0	0	0	0	0	0	0	0	0	0	0
ST6a	148.06	0	0	0	0	0	0	0	0	0	0	0
ST6c	212.66	0	0	0	0	0	0	0	0	0	0	0
ST6d	83.46	0	0	0	0	0	0	0	0	0	0	0
ST6e	122.21	0	0	0	0	0	0	0	0	0	0	0

**Table 12.** South Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems										Total
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Water Pooling	Animal Activity	Debris	Other	
ST6f	838.32	0	0	0	0	0	0	0	0	0	0	0
ST7	167.02	1	0	0	1	1	0	0	0	0	0	3
ST8a	373.51	0	0	0	0	0	0	0	0	0	0	0
ST8b	305.59	0	0	0	0	0	0	0	0	0	0	0
ST9a	731.79	0	0	0	0	0	0	0	0	0	0	0
ST9b	603.82	0	0	0	0	0	0	0	0	0	0	0
ST9c	1022.61	0	0	0	0	0	0	0	0	0	0	0
Staircase a	190.18	0	0	0	0	0	0	0	0	0	0	0
Staircase b	136.22	0	0	0	2	0	0	0	0	0	0	2
Staircase c	115.80	0	0	0	0	0	0	0	0	0	0	0
Staircase d	769.22	4	1	1	4	2	0	0	0	0	0	12
Steep Tech a	187.47	0	0	0	0	0	0	0	0	0	0	0
Steep Tech b	1473.55	0	0	0	0	0	0	0	0	0	0	0
Stonehenge a	1360.92	0	0	0	0	2	0	0	0	0	0	2
Stonehenge b	1251.69	0	0	0	0	0	0	0	0	0	0	0
Stonehenge c	1670.50	0	0	3	0	0	0	0	0	0	0	3
The Buttes	3358.84	2	0	0	0	1	0	0	0	0	0	3
The Duke a	532.52	0	0	0	0	0	0	0	0	0	0	0
The Duke b	455.08	0	0	0	0	0	0	0	0	0	0	0
The Duke c	2238.33	2	0	0	0	0	0	2	0	0	0	4
The Duke d	684.15	0	0	0	0	0	0	0	0	0	0	0
The Edge	1128.20	0	1	0	0	0	0	0	0	0	0	1
Voodoo Detour	2988.47	1	0	0	0	0	0	0	0	2	0	3
Voodoo Loop a	5665.03	1	0	0	0	0	0	0	0	0	0	1
Voodoo Loop b	11185.52	8	0	0	0	2	0	0	0	0	0	10
Voodoo Loop c	1819.61	2	0	4	0	1	0	1	0	0	0	8
Voodoo Loop d	7803.66	1	0	0	0	5	0	0	0	0	0	6
Voodoo Loop e	1654.61	4	0	0	0	2	0	1	0	0	0	7
Voodoo Loop f	4161.95	9	0	4	2	4	0	0	0	0	0	19
Voodoo Loop g	9165.49	2	3	1	0	7	2	0	0	0	0	15
Voodoo Shortcut	122.11	0	0	0	0	0	0	0	0	0	0	0
Voodoo Trail a	3119.07	1	0	0	1	1	0	0	0	0	0	3
Voodoo Trail b	7580.69	1	0	0	0	1	0	0	0	0	1	3
Voodoo Trail c	2566.30	0	0	0	0	0	0	0	0	0	0	0
Voodoo Trail d	172.27	0	0	0	0	0	0	0	0	0	0	0

**Table 12.** South Shore Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems										Total
		Erosion	Bedrock	Braiding	Infra.	Roots	Safety	Water Pooling	Animal Activity	Debris	Other	
Voodoo Trail e	1226.54	0	0	0	0	0	0	0	0	0	0	0
Voodoo Trail f	925.79	0	0	0	0	0	0	0	0	0	0	0
Voodoo Trail g	2115.35	0	0	0	0	0	0	0	0	0	0	0
Voodoo Trail h	1225.96	3	0	0	0	0	0	0	0	0	0	4
Voodoo Trail i	1320.87	0	0	0	0	0	0	0	0	0	0	0
Water Tower a	719.08	0	0	0	0	0	0	0	0	0	0	0
Water Tower b	2147.68	1	0	1	1	0	0	0	0	0	0	3
Waterfall	2721.73	1	0	0	1	0	0	0	0	0	0	2

Infra. = Infrastructure

**Table 13. Paved Trails Area Trail Problems Summary**

Problem Type	Number of Problems	Average Ranking <sup>1</sup>
Surface Crack	79	2.14
Surface Buckling	4	4.25
Erosion	25	2.6
Surrounding Height Difference	30	1.83
Water Pooling	1	3
Vegetation Encroachment	8	NA

<sup>1</sup>Ranking only available for parameters included in the ranking system.

**Table 14.** Paved Trails Area Number of Problems by Trail

Trail Name	Length (ft)	Number of Problems						Total
		Erosion	Surface Crack	Surface Buckling	Surrounding Height Diff.	Water Pooling	Vegetation Encroachment	
PT1a	713.68	0	0	0	0	0	0	0
PT1b	1117.42	2	8	0	4	0	1	15
PT2a	1486.21	0	14	2	3	0	1	20
PT2b	532.16	0	0	0	0	0	0	0
PT2c	248.76	0	0	0	0	0	0	0
PT2d	274.23	0	0	0	0	0	0	0
PT2e	102.12	0	0	0	0	0	0	0
PT2f	165.32	0	0	0	0	0	0	0
PT2g	131.65	0	0	0	0	0	0	0
PT2h	204.49	0	0	0	0	0	0	0
PT2i	315.90	0	1	0	0	0	0	0
PT3a	2662.29	0	1	0	1	0	0	2
PT3b	278.76	0	0	0	1	0	0	1
PT4a	367.27	0	0	0	0	0	0	0
PT4b	71.57	0	0	0	0	0	0	0
PT5a	5404.88	0	1	0	1	0	0	2
PT5b	949.86	0	0	0	0	0	0	0
PT6a	744.67	0	0	0	0	0	0	0
PT6b	320.23	0	0	0	0	0	0	0
PT6c	243.54	0	0	0	0	0	0	0
PT6d	202.70	0	0	0	0	0	0	0
PT6e	528.28	0	0	0	0	0	0	0
PT6f	185.21	0	0	0	0	0	0	0
PT7a	712.71	0	1	0	0	0	1	2
PT7b	488.26	0	0	0	0	0	0	0
PT8a	4219.27	0	1	0	0	0	0	1
Pueblo Reservoir Trail a	5973.51	0	0	0	0	0	0	0
Pueblo Reservoir Trail b	9956.58	1	8	0	7	0	0	16
Pueblo Reservoir Trail c	6723.05	8	21	0	4	0	0	34

Pueblo Reservoir Trail d	4932.93	3	8	0	3	1	1	16
Pueblo Reservoir Trail e	1714.58	0	1	1	0	0	0	2
Pueblo Reservoir Trail f	3298.71	3	2	0	6	0	0	11
Pueblo Reservoir Trail g	6437.66	7	7	0	0	0	0	14
Pueblo Reservoir Trail h	2344.36	0	1	0	0	0	4	5
Pueblo Reservoir Trail i	2224.44	1	4	1	0	0	0	6

**Table 15.** North Shore Trails Area Permanent Trail Closures

Trail Name	Closure Length (ft)	Percent of Entire Trail Segment Closed	Reason
NT13h	87.34	100%	Sensitive resource
NT15a	476.15	100%	Sensitive resource
NT15c	52.94	100%	Redundant in sensitive area
NT14c	36.82	100%	Redundant in sensitive area
NT14d	51.93	100%	Redundant in sensitive area
NT15e	885.26	100%	Sensitive resource
NT13c	60.41	100%	Redundant in sensitive area
NT5b	109.85	100%	Redundant in sensitive area
NT5a	97.70	100%	Redundant in sensitive area
NT3k	35.17	100%	Illegal Park Access
NT3i	145.67	100%	Illegal Park Access
NT11h	247.56	100%	Redundant in sensitive area
NT3l	114.44	100%	Illegal Park Access
NT10k	131.18	100%	Little use
NT7t	152.97	100%	Redundant in sensitive area
NT10m	239.25	100%	Redundant in sensitive area
NT7p	101.56	100%	Redundant in sensitive area
NT2b	2178.40	100%	Not in use regularly, sensitive area, leave area open potentially for hunting access
NT1a	557.48	74%	Redundant in sensitive area
NT7b	94.16	100%	Illegal Park Access
NT3e	655.73	100%	Redundant in sensitive area
NT3c	153.37	100%	Redundant in sensitive area
NT3d	433.52	100%	Redundant in sensitive area, provides illegal access to park
NT7j	357.35	77%	Sensitive resource
NT10c	98.34	100%	Closing parking lot
NT10e	200.45	100%	Redundant in sensitive area
NT3g	246.30	100%	Redundant in sensitive area, provides illegal access to park
NT1f	362.21	100%	Redundant in sensitive area
NT3n	77.80	100%	Illegal Park Access
Tykes Trail a	95.08	51%	Redundant in sensitive area
NT7n	403.97	100%	Redundant in sensitive area
NT2a	2006.22	100%	Not in use regularly, sensitive, leave area open potentially for hunting access
Tykes Trail c	28.99	3%	Sensitive resource
NT11b	89.36	2%	Redundant in sensitive area
NT6c	117.80	39%	Closing parking lot nearby, Sensitive resources
NT6g	105.28	7%	Closing parking lot nearby
NT3a	157.18	11%	Crosses riparian area, possibly under water in summer
NT7a	162.14	14%	Illegal Park Access
NT7o	174.06	15%	Redundant in sensitive area
NT7g	16.28	2%	Redundant in sensitive area
NT7h	255.00	15%	Hard to see trail, erosion
NT7w*	132.05	38%	Sensitive resource
Tykes Trail c*	127.59	12%	Sensitive resource

**Table 15.** North Shore Trails Area Permanent Trail Closures

Trail Name	Closure Length (ft)	Percent of Entire Trail Segment Closed	Reason
NT10d*	503.52	25%	Sensitive resources, bad condition.
NT7d*	336.05	34%	Adjacent to riparian area, safety concern.
NT1d*	510.02	29%	Redundant in sensitive area, safety concern.
NT11c*	519.24	44%	Illegal Park Access
NT11a*	299.01	45%	Illegal Park Access
NT10a*	701.58	12%	Safety concern and goes through steep drainage.
NT10g*	131.18	29%	Safety concern, travels through and along riparian corridor.

\*Part or all of trail is rerouted. See Table 20.

**Table 16. North Shore Trails Area Trail Reroutes and Additions**

Trail Name	Reroute or Addition Length (ft)	Reason
NT11i	226.82	Add loop for bikers per Reclamation
NT10i	176.97	Add loop for bikers per Reclamation
NT6e	123.76	Add loop for bikers per Reclamation
NT7q	71.81	Add loop for bikers per Reclamation
NT6b	100.54	Add loop for bikers per Reclamation
NT7w	132.05	Provide reroute to avoid sensitive resource.
Tykes Trail c	127.59	Provide reroute to avoid sensitive resource.
NT10d	503.52	Provide reroute across creek with bridge, perpendicular to the creek to discourage the creation of new social trails in sensitive area.
NT7d	336.05	Provide reroute east of current trail location that travels in upland area, rather than along the creek.
NT1d	510.02	Provide a reroute that travels along the upland area rather than along the narrow shoreline.
NT11c	519.24	Provide reroute connecting 11a and 11c within the park.
NT11a	299.01	Provide reroute connecting 11a and 11c within the park.
NT10a	701.58	Provide reroute that avoids dipping into steep drainage and travels along upland areas west of current trail.
NT10g	131.18	Provide reroute perpendicular to the creek and potentially add bridge over creek.

**Table 17.** North Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
1	NT7f	NT4i	NT1c
2	NT10d	NT3j	NT13g NT3b NT3f NT3a
3	NT10g	NT15b	NT15b Tykes Trail a
4	NT1d	NT7s	NT3h
5	NT15b	NT4f	NT7o NT3j NT10g NT9b NT11e NT6f NT11a NT14b Tykes Trail d
6	NT3j	NT10g	NT6c NT7d
7	Tykes Trail a	Tykes Trail a	NT7g
8	NT13g NT7o	NT10d	NT11f NT7f NT7h NT10a NT11g NT7a NT7e Tykes Trail b
9	NT4i	NT13g	NT10d NT10f
10	NT7s	NT11f	NT4i NT7s NT13f NT4c NT7m
11	NT11f	NT10j	Luna Lane c NT7c NT7q NT10i NT11d NT6e NT12c NT4a
12	NT10a NT9b NT7g	Tykes Trail c	NT10b
13	NT3b	NT7g	NT7r
14	Luna Lane a	NT7f	

**Table 17.** North Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
15	NT7m	NT9b	NT11b
16	NT11e NT4f	NT13e	Tykes Trail c
17	Tykes Trail c	NT13f	NT6g
18	NT13f NT11b	NT7r	NT1d
19	NT4c NT7d	NT4c	NT13e NT7w NT7j
20	NT7r NT10b NT7h	NT3b	Luna Lane b
21	NT10j	NT11e	Luna Lane a
22	NT13e	NT7o	NT4f NT10j NT6d NT11c NT1b NT11j NT8a NT9c NT7k NT12d NT12b NT13a NT14a NT15f NT15d NT11i NT15g NT13d NT13b NT4e NT4h NT1e NT4d NT4g NT4b NT9d NT9e NT10l NT7l NT10h NT7v NT7u NT6b NT1a NT7i NT6a NT8b NT3m NT12a
23	NT11a	NT7h	

**Table 17.** North Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
			NT9a
24	NT3h NT6f	NT7m	NA
25	Luna Lane c	NT1d	NA
26	NT11g	Luna Lane a	NA
27	NT7w NT10f	NT7w	NA
28	NT14b	NT10a	NA
29	NT7a	NT10b	NA
30	NT6g	NT11b	NA
31	Tykes Trail d	Luna Lane c	NA
32	NT6c	NT6d	NA
33	NT3f NT6d	NT6g	NA
34	NT7c NT11d	NT7d	NA
35	NT7e NT7j	NT6f	NA
36	NT3a	NT11g	NA
37	NT7q	NT3h	NA
38	Luna Lane b	NT11a	NA
39	NT10i NT1c	NT7j	NA
40	Tykes Trail b	NT7a	NA
41	NT8a	Luna Lane b	NA
42	NT6e	NT14b	NA
43	NT12c	NT8a	NA
44	NT9c NT4a	NT7c	NA
45	NT7k	NT10f	NA
46	NT11c	Tykes Trail d	NA
47	NT1b	NT6c	NA
48	NT11j	NT7q	NA
	NT12d		
	NT12b		
	NT13a		
	NT14a		
	NT15f		
	NT15d		
	NT11i		
	NT15g		
49	NT13d	NT7e	NA
	NT13b		
	NT4e		
	NT4h		
	NT1e		
	NT4d		
	NT4g		
	NT4b		
	NT9d		
	NT9e		

**Table 17.** North Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
	NT10l		
	NT7l		
	NT10h		
	NT7v		
	NT7u		
	NT6b		
	NT1a		
	NT7i		
	NT6a		
	NT8b		
	NT3m		
	NT12a		
	NT9a		
50	NA	NT10i	NA
51	NA	NT9c	NA
52	NA	NT3f	NA
53	NA	NT7k	NA
54	NA	NT11d	NA
55	NA	Tykes Trail b	NA
56	NA	NT6e	NA
57	NA	NT3a	NA
58	NA	NT12c	NA
59	NA	NT11c	NA
60	NA	NT4a	NA
61	NA	NT1c	NA
62	NA	NT1b	NA
63	NA	NT11j	NA
		NT12d	
		NT12b	
		NT13a	
		NT14a	
		NT15f	
		NT15d	
		NT11i	
		NT15g	
		NT13d	
		NT13b	
		NT4e	
		NT4h	
64	NA	NT1e	NA
		NT4d	
		NT4g	
		NT4b	
		NT9d	
		NT9e	
		NT10l	
		NT7l	
		NT10h	
		NT7v	
		NT7u	
		NT6b	
		NT1a	

**Table 17.** North Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
		NT7i	
		NT6a	
		NT8b	
		NT3m	
		NT12a	
		NT9a	

**Table 18.** South Shore Trails Area Permanent Trail Closures

Trail Name	Closure Length (ft)	Percent of Entire Trail Segment Closed	Reason
Arkansas Point Trail a*	677.8	100%	Sensitive resource
Arkansas Point Trail b*	65.9	100%	Sensitive resource
Arkansas Point Trail c*	89.8	100%	Sensitive resource
Arkansas Point Trail j*	218.9	49%	Sensitive resource
Cuatro Cinco c*	82.4	3%	Sensitive resource
Cuatro Cinco d*	418.6	100%	Sensitive resource
Cuatro Cinco e*	276.6	11%	Sensitive resource
Inner Limits a*	259.8	3%	Sensitive resource
Log Drop	882.7	100%	Closing connecting trail, Sensitive resource
Outer Limits c*	220.2	2%	Sensitive resource
Quick Draw*	370.3	100%	Sensitive resource
Skull Canyon b*	429.7	100%	Sensitive resource
Skull Canyon c*	144.7	19%	Sensitive resource
Skull Ridge*	604.8	27%	Sensitive resource
South Shore i	448.8	34%	Sensitive resource, leads to Highway 96, no parking lot present
ST11	525.9	100%	Redundant in sensitive area, sensitive resource
ST13c	526.7	100%	Off-shoot that does not lead to another trail
ST16b	325.5	34%	Redundant in sensitive area
ST18d	743.6	100%	Off-shoot that does not lead to another trail, sensitive riparian area
ST18e	695.6	100%	Redundant in sensitive area
ST18f	527.4	100%	Redundant in sensitive area
ST18g	539.9	100%	Redundant in sensitive area
ST18h	347.0	100%	Redundant in sensitive area
ST1b	287.2	29%	Redundant in sensitive area
ST20	382.9	100%	Redundant in sensitive area
ST22	228.2	100%	Off-shoot that does not lead to another trail, sensitive resource
ST23b	82.5	100%	Redundant in sensitive area
ST23c	91.2	100%	Redundant in sensitive area
ST23d	694.5	100%	Chosen to be closed instead of Inner Limits c route, sensitive resource
ST23f	365.1	100%	Redundant in sensitive area, sensitive resource
ST24a	79.1	100%	Redundant in sensitive area
ST24b	232.9	100%	Redundant in sensitive area
ST5b	521.7	100%	Close with Waterfall closing, sensitive resource
ST5c	1357.8	100%	Close with Waterfall closing, sensitive resource
ST5d	346.3	100%	Close with Waterfall closing, sensitive resource
ST5e	506.7	100%	Close with Waterfall closing, sensitive resource
ST6a	148.1	100%	Off-shoot that does not lead to another trail
ST6c	212.7	100%	Redundant in sensitive area
ST6d	83.5	100%	Off-shoot that does not lead to another trail
ST6e	122.2	100%	Redundant in sensitive area
ST7*	167.0	100%	Redundant in sensitive area
ST8a	373.5	100%	Redundant in sensitive area
ST9a	731.8	100%	Redundant in sensitive area

**Table 18.** South Shore Trails Area Permanent Trail Closures

Trail Name	Closure Length (ft)	Percent of Entire Trail Segment Closed	Reason
ST9b*	184.1	30%	Turn does not work with trail closures from cultural site
Staircase b*	136.2	100%	Reroute to create a single, safe trail in this area.
Staircase c*	115.8	100%	Sensitive resource
Steep Tech a*	187.5	100%	Sensitive resource
Stonehenge b	1251.7	100%	Very steep and dangerous, biking community is not concerned with keeping this trail open
The Buttes	1361.9	41%	Sensitive resource
The Duke a*	532.5	100%	Sensitive resource
Voodoo Detour	2988.5	100%	Sensitive resource
Voodoo Trail h	1226.0	100%	Redundant in sensitive area
Waterfall	2721.7	100%	Sensitive resource

\*Part or all of trail is rerouted. See Table 23.

**Table 19.** South Shore Trails Area Seasonal Trail Closures.

Trail Name	Closure Length (ft)	Closure Date	Reason
Arkansas Point Trail g	1091.6	December 1 - September 30	Sensitive Resource
Arkansas Point Trail h	876.2	February 15 - July 15	Sensitive Resource
Broken Hip a	635.6	February 15 - July 15	Sensitive Resource
Conduit a	1691.8	December 1 - September 30	Sensitive Resource
Hooters Canyon a	1504.1	February 15 - July 15	Sensitive Resource
Inner Limits a	809.8	February 15 - July 15	Sensitive Resource
Inner Limits b	1890.4	February 15 - July 15	Sensitive Resource
Inner Limits c	5432.2	February 15 - July 15	Sensitive Resource
Inner Limits c	709.1	February 15 - July 15	Sensitive Resource
Inner Limits d	2186.9	February 15 - July 15	Sensitive Resource
Pedros Point b	2445.9	February 15 - July 15	Sensitive Resource
South Shore d	524.0	February 15 - July 15	Sensitive Resource
South Shore e	1352.6	February 15 - July 15	Sensitive Resource
South Shore f	483.9	February 15 - July 15	Sensitive Resource
South Shore g	2003.0	February 15 - July 15	Sensitive Resource
ST12	1360.2	February 15 - July 15	Sensitive Resource
ST15a	1168.8	February 15 - July 15	Sensitive Resource
ST18a	370.7	February 15 - July 15	Sensitive Resource
ST19	1173.5	February 15 - July 15	Sensitive Resource
ST23a	110.2	February 15 - July 15	Sensitive Resource
ST23e	199.0	February 15 - July 15	Sensitive Resource
Staircase d	769.2	February 15 - July 15	Sensitive Resource
Water Tower b	2147.7	December 1 - September 30	Sensitive Resource

**Table 20. South Shore Trails Area Trail Reroutes and Additions**

Trail Name	Reroute or Addition Length (ft)	Reason
ST12	242.80	Add loop for bikers per Reclamation
Boggs Overlook	242.80	Add loop for bikers per Reclamation
ST19	242.80	Add loop for bikers per Reclamation
Pedro's Point a	242.80	Add loop for bikers per Reclamation
ST18a	242.80	Add loop for bikers per Reclamation
Skull Ridge	242.80	Add loop for bikers per Reclamation
ST7	Unknown	Reroute to create a single, safe trail in this area.
Arkansas Point Trail a	Unknown	Provide easy-level reroute path to avoid sensitive resource
Arkansas Point Trail b	Unknown	Provide easy-level reroute path to avoid sensitive resource.
Arkansas Point Trail c	Unknown	Provide easy-level reroute path to avoid sensitive resource.
Arkansas Point Trail j	Unknown	Provide easy-level reroute path to avoid sensitive resource.
Cuatro Cinco c	Unknown	Provide reroute to avoid sensitive resource.
Cuatro Cinco d	Unknown	Provide reroute to avoid sensitive resource
Cuatro Cinco e	Unknown	Provide reroute to avoid sensitive resource
Inner Limits a	Unknown	Provide reroute to avoid sensitive resource
Outer Limits c	Unknown	Provide reroute to avoid sensitive resource
Quick Draw	Unknown	Provide reroute to avoid sensitive resource
Skull Canyon b	Unknown	Provide reroute to avoid sensitive resource
Skull Canyon c	Unknown	Provide reroute to avoid sensitive resource
Skull Ridge	Unknown	Provide easy-level reroute path to avoid sensitive resource.
ST7	Unknown	Reroute to create a single, safe trail in this area.
ST9b	Unknown	Provide easy-level reroute path to avoid sensitive resource.
Staircase b	Unknown	Reroute to create a single, safe trail in this area.
Staircase c	Unknown	Reroute to create a single, safe trail in this area.
Steep Tech a	Unknown	Reroute to create a single, safe trail in this area.
The Duke a	Unknown	Provide easy-level reroute path to avoid sensitive resource.

**Table 21. South Shore Trails Maintenance Priorities**

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
1	Staircase d Rattlesnake b South Shore c	Staircase d	South Shore d ST1a
2	South Shore f ST18b	Dead Dog a	Driftwood
3	Keyhole Canyon a	Rattlesnake b	Cuatro Cinco e South Shore c South Shore f
4	Dead Dog a	South Shore c	Keyhole Canyon a South Shore e Voodoo Loop a
5	South Shore d Pedros Point e	ST21b	Voodoo Loop b
6	ST1c	ST1c	Keyhole Canyon b ST18b
7	ST21b	ST18b	Staircase d
8	Broken Hip a Voodoo Loop c Voodoo Loop f	Pedros Point e	Broken Hip a Free Ride a Rattlesnake a Hooters Canyon a Cuatro Cinco c
9	Voodoo Loop e	South Shore f	Voodoo Trail a
10	Rodeo	Skull Canyon c	Voodoo Loop c The Duke c
11	South Shore e	Keyhole Canyon a	Voodoo Loop f
12	Skull Canyon c	Rock Canyon a	Pedros Point e Voodoo Loop e Rock Canyon d ST15a Skull Canyon e
13	Free Ride a	Voodoo Loop f	Cuatro Cinco f Outer Limits c
14	Voodoo Loop g Rock Canyon a	Voodoo Loop c	Dead Dog a Roller Coaster e Broken Hip b Voodoo Trail b
15	ST1a Rattlesnake a	Voodoo Loop e	Rattlesnake b Water Tower b The Buttes ST1c
16	Roller Coaster d	Broken Hip a	ST21b Roller Coaster d ST25 Roller Coaster g Rock Canyon b Stonehenge a Cuatro Cinco b
17	Rock Canyon d	Dead Dog b	Outer Limits a

**Table 21.** South Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
18	The Duke c	Rodeo	Voodoo Loop g
19	Keyhole Canyon b Dead Dog b	South Shore d	Rock Canyon a
20	ST25	Roller Coaster d	Skull Canyon c Rodeo Voodoo Loop d
21	ST15a Cuatro Cinco f Roller Coaster g	Bones	Stonehenge c
22	Bones	Free Ride a	Inner Limits a
23	Skull Canyon e ST15b	ST15b	Inner Limits d
24	Hooters Canyon a	Rattlesnake a	Dead Dog b Bones The Edge Arkansas Point Trail i Inner Limits b Inner Limits c
25	Voodoo Loop b Rock Canyon b Stonehenge c	South Shore e	ST1b ST15b ST12 ST8b ST9b ST19 ST18j ST14a ST6f ST9c ST2a ST26 ST23e ST23a ST14b ST16b ST18i ST18a Rodeo Ridge Lower Dog Voodoo Shortcut Free Ride b ST23g Pinball South Shore g South Shore h South Shore i Voodoo Trail i Roller Coaster c Roller Coaster a Roller Coaster b

**Table 21.** South Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
			Voodoo Trail e Voodoo Trail d Steep Tech b Voodoo Trail g Skull Ridge South Shore a Pronghorn Conduit d 96 a Sidewinder a Boggs Overlook South Shore b Rock Canyon c Pedros Point b Pedros Point c Pedros Point d Arkansas Point Trail d Staircase a 96 b Arkansas Point Trail e Roller Coaster f Hooters Canyon b Arkansas Point Trail f Arkansas Point Trail g Arkansas Point Trail h Water Tower a Conduit a Conduit b Conduit c The Duke d Arkansas Point Trail j Skull Canyon d Cuatro Cinco a The Duke b Voodoo Trail f Skull Canyon a ST21a Sidewinder b Roller Coaster h Free Ride c Outer Limits d Outer Limits b Pedros Point a Voodoo Trail c
26	Cuatro Cinco e	ST25	NA
27	Voodoo Trail a Roller Coaster e	Rock Canyon d	NA
28	Water Tower b Stonehenge a	Roller Coaster g	NA
29	Driftwood	Stonehenge c	NA

**Table 21.** South Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
30	Cuatro Cinco c	The Duke c	NA
31	Cuatro Cinco b	ST1a	NA
32	Driftwood Cuatro Cinco c Cuatro Cinco b	ST15a	NA
33	The Buttes	Voodoo Loop g	NA
34	Voodoo Loop a	Rock Canyon b	NA
35	Broken Hip b	Keyhole Canyon b	NA
36	Voodoo Loop d Inner Limits c	Skull Canyon e	NA
37	The Edge	Cuatro Cinco f	NA
38	Voodoo Trail b	Stonehenge a	NA
39	Arkansas Point Trail i	Water Tower b	NA
40	Inner Limits d	Roller Coaster e	NA
41	Inner Limits b	Hooters Canyon a	NA
42	Inner Limits a	Cuatro Cinco b	NA
43	ST12 ST8b ST9b ST19 ST18j ST14a ST6f ST9c ST2a ST26 ST23e ST23a ST14b ST16b ST1b ST18i ST18a Rodeo Ridge Lower Dog Voodoo Shortcut Free Ride b ST23g Pinball	Outer Limits a	NA

**Table 21.** South Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
	South Shore g		
	South Shore h		
	South Shore i		
	Voodoo Trail i		
	Roller Coaster c		
	Roller Coaster a		
	Roller Coaster b		
	Voodoo Trail e		
	Voodoo Trail d		
	Steep Tech b		
	Voodoo Trail g		
	Skull Ridge		
	South Shore a		
	Pronghorn		
	Conduit d		
	96 a		
	Sidewinder a		
	Boggs Overlook		
	South Shore b		
	Rock Canyon c		
	Pedros Point b		
	Pedros Point c		
	Pedros Point d		
	Arkansas Point Trail		
	d		
	Staircase a		
	96 b		
	Arkansas Point Trail		
	e		
	Roller Coaster f		
	Hooters Canyon b		
	Arkansas Point Trail f		
	Arkansas Point Trail		
	g		
	Arkansas Point Trail		
	h		
	Water Tower a		
	Conduit a		
	Conduit b		
	Conduit c		
	The Duke d		
	Arkansas Point Trail j		
	Skull Canyon d		
	Cuatro Cinco a		
	The Duke b		
	Voodoo Trail f		
	Skull Canyon a		
	ST21a		
	Sidewinder b		
	Roller Coaster h		
	Free Ride c		
	Outer Limits d		

**Table 21.** South Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
	Outer Limits b Pedros Point a Voodoo Trail c		
44	NA	Voodoo Trail a	NA
45	NA	Voodoo Loop b	NA
46	NA	The Buttes	NA
47	NA	The Edge	NA
48	NA	Cuatro Cinco e	NA
49	NA	Cuatro Cinco c	NA
50	NA	Voodoo Loop d	NA
51	NA	Arkansas Point Trail i	NA
52	NA	Broken Hip b	NA
53	NA	Driftwood	NA
54	NA	Inner Limits d	NA
55	NA	Inner Limits b	NA
56	NA	Inner Limits c	NA
57	NA	Outer Limits c	NA
58	NA	Inner Limits a	NA
59	NA	Voodoo Trail b	NA
60	NA	Voodoo Loop a	NA
		ST12 ST8b ST9b ST19 ST18j ST14a ST6f ST9c ST2a ST26 ST23e	
61	NA	ST23a ST14b ST16b ST1b ST18i ST18a Rodeo Ridge Lower Dog Voodoo Shortcut Free Ride b ST23g Pinball	NA

**Table 21.** South Shore Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
		South Shore g	
		South Shore h	
		South Shore i	
		Voodoo Trail i	
		Roller Coaster c	
		Roller Coaster a	
		Roller Coaster b	
		Voodoo Trail e	
		Voodoo Trail d	
		Steep Tech b	
		Voodoo Trail g	
		Skull Ridge	
		South Shore a	
		Pronghorn	
		Conduit d	
		96 a	
		Sidewinder a	
		Boggs Overlook	
		South Shore b	
		Rock Canyon c	
		Pedros Point b	
		Pedros Point c	
		Pedros Point d	
		Arkansas Point Trail d	
		Staircase a	
		96 b	
		Arkansas Point Trail e	
		Roller Coaster f	
		Hooters Canyon b	
		Arkansas Point Trail f	
		Arkansas Point Trail g	
		Arkansas Point Trail h	
		Water Tower a	
		Conduit a	
		Conduit b	
		Conduit c	
		The Duke d	
		Arkansas Point Trail j	
		Skull Canyon d	
		Cuatro Cinco a	
		The Duke b	
		Voodoo Trail f	
		Skull Canyon a	
		ST21a	
		Sidewinder b	
		Roller Coaster h	
		Free Ride c	
		Outer Limits d	
		Outer Limits b	
		Pedros Point a	
		Voodoo Trail c	

**Table 22. Paved Trails Maintenance Priorities**

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
1	Pueblo Reservoir Trail h	PT2a	PT7a
2	PT2a PT1b	PT1b	Pueblo Reservoir Trail e
3	PT3b	Pueblo Reservoir Trail c	PT3b Pueblo Reservoir Trail h
4	Pueblo Reservoir Trail d	PT3b	PT3a
5	Pueblo Reservoir Trail c	Pueblo Reservoir Trail f	PT1b
6	Pueblo Reservoir Trail e	Pueblo Reservoir Trail d	PT2a
7	Pueblo Reservoir Trail i	PT7a	Pueblo Reservoir Trail i
8	PT3a	Pueblo Reservoir Trail i	Pueblo Reservoir Trail d
9	Pueblo Reservoir Trail f	Pueblo Reservoir Trail g	Pueblo Reservoir Trail c
10	Pueblo Reservoir Trail g	Pueblo Reservoir Trail h	Pueblo Reservoir Trail g
11	Pueblo Reservoir Trail b	Pueblo Reservoir Trail b	PT5a PT8a PT2i
12	PT5a	Pueblo Reservoir Trail e	Pueblo Reservoir Trail b
13	PT8a	PT3a	Pueblo Reservoir Trail f
			PT2b PT2c PT2f PT2g PT2h PT2d PT2e PT4a PT4b PT6b PT6a PT6d PT6c PT5b PT6e PT6f PT1a PT7b
14	PT2i	PT5a	Pueblo Reservoir Trail a

**Table 22.** Paved Trails Maintenance Priorities

Priority #	Overall Trail Maintenance Rank	Problem Density Rank	Average Problem Score Rank
15	PT2b	PT8a	NA
	PT2c		
	PT2f		
	PT2g		
	PT2h		
	PT2d		
	PT2e		
	PT4a		
	PT4b		
	PT6b		
	PT6a		
	PT6d		
	PT6c		
	PT5b		
	PT6e		
PT6f			
PT1a			
PT7b			
	Pueblo Reservoir Trail a		
16	NA	PT2i	NA
		PT2b	
		PT2c	
		PT2f	
		PT2g	
		PT2h	
		PT2d	
		PT2e	
		PT4a	
		PT4b	
		PT6b	
		PT6a	
		PT6d	
		PT6c	
		PT5b	
PT6e			
PT6f			
PT1a			
PT7b			
	Pueblo Reservoir Trail a		

## Appendix C: Data Sheet

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## Appendix D: Potential Project Funding Sources

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### **Colorado the Beautiful Grant**

The Colorado the Beautiful Grant Program funds projects through large trail construction grants and regional trails planning grants. It provides a unique opportunity that includes goals, objectives and criteria independent of the normal motorized and non-motorized Colorado Parks and Wildlife grants that run each fall. The program is a partnership between CPW and Great Outdoors Colorado (GOCO).

Website: <https://cpw.state.co.us/aboutus/Pages/TrailsGrants-CtB.aspx>

### **Colorado State Recreation Trails Grant Program**

The Colorado State Recreational Trails Grant Program funds projects for large recreational trail grants, small recreational trail grants, trail planning, and trail support grants. This program is a partnership among:

- ▶ Colorado Parks and Wildlife
- ▶ [Great Outdoors Colorado \(GOCO\)](#)
- ▶ The [Colorado Lottery](#)
- ▶ The federal [Recreational Trails Program \(RTP\)](#)
- ▶ The [Land and Water Conservation Fund \(LWCF\)](#)

Website: <https://cpw.state.co.us/aboutus/Pages/TrailsGrantsNM.aspx>

### **Fishing is Fun Grant**

The Fishing Is Fun program provides up to \$400,000 in matching grants annually to local and county governments, park and recreation departments, water districts, angling organizations and others for projects to improve angling opportunities in Colorado.

Among the types of projects supported through Fishing Is Fun are stream and river habitat improvements, access improvements, perpetual easements for public access, pond and lake habitat improvements, fish retention structures, development of new fishing ponds, and amenity improvements such as shade shelters, benches and restrooms.

Website: <https://cpw.state.co.us/aboutus/Pages/FishingIsFunProgram.aspx>

### **Great Outdoors Colorado – Stewardship Impacts Grants**

GOCO aims to improve the condition of our state's lands by providing grants for outdoor stewardship projects that demonstrate meaningful improvements to the state's ecological and recreational amenities. The GOCO Board has allocated \$1,000,000 for this inaugural grant cycle.

Title 32 special districts eligible to receive distributions from the Conservation Trust Fund, non-profit land conservation organizations, municipalities, counties, Colorado Parks and Wildlife, and political subdivisions of the State of Colorado that include in their mission the identification, acquisition, or management of open space and natural areas are eligible for this grant program.

Website: <http://www.goco.org/grants/apply/stewardship-impact-grants>

### **Land and Water Conservation Fund**

The Land and Water Conservation Fund (LWCF) program was enacted by Congress in 1965 (P.L. 88-578) to create parks and open spaces; protect wilderness, wetlands, and refuges; preserve wildlife habitat; and enhance recreational opportunities.

The LWCF program features two funding components:

1. A federal program that funds the purchase of land and water areas for conservation and recreation purposes through four federal land management agencies – the U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service and Bureau of Land Management.
2. A state managed (state-side) matching grant program provides funds to states for planning, developing and acquiring land and water areas for state and local parks and recreation facilities. Funds appropriated annually by Congress through the National Park Service for this program are divided among the states. These grants require a fifty percent (50%) match of the total project related allowable costs funded with LWCF money.

Website: <https://cpw.state.co.us/aboutus/Pages/TrailsLWCF.aspx>

### **Recreational Trails Program**

The Recreational Trails Program (RTP) provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. The RTP is an assistance program of the Department of Transportation's Federal Highway Administration. Federal transportation funds benefit recreation including hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.

Website: [https://www.fhwa.dot.gov/environment/recreational\\_trails/](https://www.fhwa.dot.gov/environment/recreational_trails/)

## Appendix E: Relevant Laws and Policies

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## Federal Regulations

- ▶ National Environmental Policy Act - (42 U.S.C. §§ 4321-4347). This law requires environmental impact statements for federal projects with the potential to impact important historic, cultural, and natural aspects of our national heritage.
- ▶ Endangered Species Act (16 U.S.C. §§ 1531-1544). This act prevents the taking of endangered and threatened species.
- ▶ Clean Water Act (33 U.S.C. §§ 1251 et seq.) – This Act makes it unlawful for anyone to discharge any pollutant from a point source into navigable waters without a proper permit. This Act also includes Section 404 which mandates permits for the placement of fill material in waters of the United States including wetlands.
- ▶ Land and Water Conservation Fund Act (16 U.S.C. §§ 4601-4-4601-11) - This Act regulates admission and special recreation user fees at certain recreational areas and establishes a fund to subsidize state and federal acquisition.
- ▶ Migratory Bird Treaty Act (16 U.S.C. § 703-712) - This Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful unless otherwise permitted by federal regulations.
- ▶ Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) – This Act protects two species of eagle. It currently prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles. Taking is described to include their parts, nests, or eggs, molesting or disturbing the birds. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof."
- ▶ Federal Noxious Weed Act (7 U.S.C. § 2814(c)) - This Act primarily applies to Federal land management agencies, but also has a section related to state lands. The Act requires the federal land management agencies to enter into cooperative agreements to coordinate the management of undesirable plant species on federal lands where similar programs are being implemented on state and private lands in the same area.
- ▶ Paleontological Resources Preservation Act (16 U.S.C. §§ 470aaa - 470aaa-11) – This Act directs the Department of Agriculture (U.S. Forest Service) and the Department of the Interior (National Park Service, Bureau of Land Management, Bureau of Reclamation, and Fish and Wildlife Service) to implement comprehensive paleontological resource management programs.
- ▶ National Historic Preservation Act (Public Law 89-665 and amendments, 16 U.S.C. 470 et. seq.) - This strong policy statement establishes and defines the national historic preservation program, including the statutes establishing the National Register of Historic Places (§36 CFR Part 60) and Determinations of Eligibility (§36 CFR Part 63), State and Tribal Historic Preservation Officers (§36 CFR Part 61), National Historic Landmarks program (§36 CFR Part 65) and Section 106 (§36 CFR Part 800). It delegates authority to the states and requires the review of federal actions.
- ▶ Antiquities Act (16 USC 431-433) – This Act obligates federal agencies that manage the public lands to preserve for present and future generations the historic, scientific, commemorative, and cultural values of the archaeological and historic sites and structures on these lands. It also authorizes the President to protect landmarks, structures, and objects of historic or scientific interest by designating them as National Monuments.

## State Law, Regulations/Administrative Policies

**Colorado's Constitution** includes two provisions dealing directly with natural resources:

- **Article XVIII, Section 6, Protection of Forests:**

The general assembly shall enact laws in order to prevent the destruction of, and to keep in good preservation, the forests upon the lands of the state, or upon lands of the public domain, the control of which shall be conferred by congress upon the state.

- **Article XXVII – Section 1, Great Outdoors Colorado Program**

The people of the State of Colorado intend that the net proceeds of every state-supervised lottery game operated under the authority of Article XVIII, Section 2 shall be guaranteed and permanently dedicated to the preservation, protection, enhancement and management of the state's wildlife, park, river, trail and open space heritage.

Many **statutes** have been passed by the General Assembly in response to this enabling provision. Those most applicable to the management of Colorado's State Parks are listed here:

- **Legislative Declaration Regarding Division of Parks and Outdoor Recreation § 33-10-101,**

It is the policy of the state of Colorado that the natural, scenic, scientific, and outdoor recreation areas of this state are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and visitors of this state.

C.R.S. This statute states among other things:

- **Colorado Natural Areas Act § 33-33-104, C.R.S.** This statute established the Colorado Natural Areas Program which is focused upon the identification and protection of natural features (including geological features) of statewide significance. Several state parks have been designated as Colorado Natural Areas.
- **Non-game, Endangered, or Threatened Species Conservation Act §§33-2-101-106, C.R.S.** This statute establishes a listing procedure, some protections, and recovery plan requirements for animal species. Stated as:

The general assembly finds and declares that species or subspecies of wildlife indigenous to this state which may be found to be endangered or threatened within the state should be accorded protection in order to maintain and enhance their numbers to the extent possible (from 33-2-102).

- **Conservation of Native Species § 24-33-111, C.R.S.** This statute established the Species Conservation Trust Fund for use in conservation of endangered or threatened species or those likely to be listed as such by the federal or state government. Specifically, it states:

The general assembly hereby recognizes the importance of conserving native species that have been listed as threatened or endangered under state or federal law, or are candidate species or are likely to become candidate species as determined by the United States fish and wildlife service. (from 24-22-111)

- **Colorado Noxious Weed Act, §§ 35-5.5-, 101-119 C.R.S.** The official summary is:

The Colorado general assembly clearly recognizes the profound negative impacts of noxious weeds on the economic and environmental values of Colorado's private and public lands. Consequently, the assembly has placed all Colorado lands under the jurisdiction of local governments that have been delegated the responsibility and power to assure the management of state and locally designated noxious weeds.

- **Colorado Aquatic Nuisance Species Act, §33-10.5-, 101-108 C.R.S.:**

This Act defines Aquatic Nuisance Species as exotic or nonnative aquatic wildlife or any plant species that have been determined to pose a significant threat to water infrastructure or aquatic resources of the state. This act makes it illegal to possess, import, export, ship, transport, release, plant, place or cause an Aquatic Nuisance Species to be released.

- **Section 110 of the statute refers specifically to state agencies:**

It is the duty of each state board, department, or agency that administers or supervises state lands to manage noxious weeds on any lands under its jurisdiction using the methods prescribed by the local governing body in whose jurisdiction such state lands are located.

- **Release of Destructive Rodent Pests § 35-7-203 C.R.S.** This legislation requires the approval of the Wildlife Commission and the Board of County Commissions prior to the relocation of prairie dogs and other rodents described in the statute.

**Executive orders** issued by the Governor direct state employees to take specific actions. Only one executive order has been identified that is directly relevant to the development of Stewardship Plans:

- **Development and Implementation of Noxious Weed Management Programs (Executive Order D 006 99)** This order calls upon several state agencies, including Colorado State Parks, to develop strategies to reduce the establishment and spread of weeds on the properties they manage.
- **The State Parks Board sets policies and regulations** for the division. These policies and regulations were not reviewed for the preparation of this plan.
- The Department of Natural Resources has a **Long-Range Plan**, several elements of which are directly relevant to Stewardship Plan development. No directives or administrative orders from the Executive Director's office were identified in the development of this plan.
- **Stewardship:** We are committed to sound stewardship practices that recognize the importance of sustaining natural resources for our quality of life.
- **Science and Information:** We will strive to obtain and use complete and credible information to guide policy development and decision making.
- **Communications:** We will communicate effectively with the public and provide leadership in natural resources education.

Colorado State Parks also has a long-range plan (referred to as **Horizons**) through which the division has articulated a **mission statement** and several **goals and objectives**.

The mission of Colorado State Parks is to provide a spectrum of safe, quality outdoor recreation experiences for visitors, while effectively managing the natural resources of the parks.

The introductory chapter contains references to the goals and objectives that call for the development of stewardship plans.

Occasionally, **Colorado State Parks** issues **administrative directives** that provide staff with specific guidance on responding to park management issues. Two of these are directly relevant to this Trails Management Plan:

- Use of Native Vegetation in State Parks and Recreation Areas. Administrative Directive No. B-302. This directive expresses the Division's preference for the use of native plants in landscaping, reclamation and restoration projects.
- Forest Management Administrative Directive No. B-301. This directive calls for the development of forest management plans for parks with significant forest resources.

Park management plans are the lowest level of policy and elaborate on the implementation of management strategies:

- General Management Plans. Park managers are responsible for creating a management plan that describes priorities for all park operations over a ten-year time span. The emphasis of management plans varies greatly from park to park.

### **Cultural Resource Laws and Regulations**

- ▶ Cultural resources on state lands are protected by federal (**National Historic Preservation Act** (NHPA); Public Law 89-665; 16 U.S.C. 470 et seq.) and state (**CRS 24-80-401 et. seq**) laws giving the State of Colorado title to all historical, prehistorical, and archaeological resources. "To knowingly disturb a historical, prehistorical, and archaeological resource on public land" is illegal under the National Historic Preservation Act, and the Colorado Historical, Prehistorical, and Archaeological Resources Act.

The Colorado Parks and Wildlife environmental/cultural review directive should be referenced prior to the commencement of any ground disturbing park projects in or near areas of high resource sensitivity. This directive is in place to assist park management and park development projects and to ensure legal compliance with statutes and to aid in the protection of these valuable nonrenewable resources.

In order to ensure compliance with federal law, state law, and CPW policies, it is recommended that prior to conducting any ground disturbing projects that appropriate consultation takes place. Resource Stewardship can assist in determining what level, if any, consultation needs to happen. If it is determined that there will be potential adverse effects, Resource Stewardship, along with the SHPO or a qualified archaeologist, can develop mitigation solutions to minimize or eliminate potential impacts.

A resource's eligibility for inclusion to the National and State Registers of Historic Places should not be considered overly restrictive, in many cases in order to prevent damage to a significant cultural resource OAH/SHPO, if contacted, can offer comment on how to minimize this impact. A simple

file search to review the type and location of any previously recorded resources and to gather information concerning past surveys in the project area, can greatly reduce the potential impact on significant resources. This process is easier and clearer if all the park's cultural resources are appropriately surveyed and inventoried.

- ▶ **Native American Graves Protection and Repatriation Act** (Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statute as cultural items, with which they can show a relationship of lineal descent or cultural affiliation.
- ▶ **Archaeological Resources Protection Act (ARPA)** was enacted "...to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals (Sec. 2(4)(b))."
- ▶ **Colorado Historical, Prehistorical, and Archaeological Resources Act** (CRS 24-80-401 to 410), a permit is required to conduct archaeological or paleontological investigations on state lands, which includes city and county as well as any political subdivision of the state. Permits can be issued at any time throughout the calendar year, but most permits expire the last day of February of the following year.

## Appendix F: Recommended Best Management Practices

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Best management practices in this section are provided based on recommendations by City of Boulder Open Space and Mountain Parks Department (BOSMP & Land Stewardship Consulting 2013).

**Ecological BMPs for Trail Planning and Design**

<b>General considerations</b>	
BMP 1	Specify the minimum width of trail tread that is needed to accommodate the designed uses of the trail.
BMP 2	Specify the minimum necessary construction access adjacent to the trail or within the tread of the trail under construction.
BMP 3	Identify and avoid existing research and monitoring sites when designing new trails and rerouted sections of existing trails.
<b>Soil erosion</b>	
BMP 4	Specify trail design features to minimize the time water flows on the trail.
BMP 5	Avoid planning trails in wet areas and/or flat areas.
BMP 6	Identify areas of highly erosive soils and areas of soil with high clay content and avoid routing trails across such soils. If not possible, specify appropriate measures to minimize the effects of these conditions.
BMP 7	Prepare a plan for erosion control during construction.
<b>Invasive species</b>	
BMP 8	Survey the proposed trail alignment, identify significant invasive plant occurrences, and suggest alternate alignment(s) to avoid these occurrences or control invasive plant species prior to construction. In cases where infestations are likely to be disturbed by trail construction, plan for post-construction, follow-up weed treatments.
BMP 9	Specify imported trail tread fill material (e.g., soil, aggregates, and crusher fines) only from known sources confirmed to be free of weed seeds.
<b>Native wildlife and plants</b>	
BMP 10	Identify conservation targets and nested conservation targets, that may occur near the proposed trail alignment, survey the proposed trail alignment, and consider alternate trail alignment(s) that avoid occurrences of the conservation targets.
BMP 11	Minimize trails in areas of significant vegetation or significant wildlife habitat.
BMP 12	Specify that only native plant species are to be used for revegetation of areas disturbed by trail construction. Work with plant ecologists to determine suitable native plant species to use in post-construction revegetation.
BMP 13	Specify that construction should avoid critical times in the life cycles (e.g., bird nesting) of key wildlife species.
BMP 14	Incorporate state and federal requirements for wildlife protection that are relevant to trail construction into trail planning. Provide trail construction staff and contractors with relevant wildlife protection information.
BMP 15	Consult with Stewardship staff prior to specifying the use of local native rock for building retaining walls and other structures.
<b>Aquatic areas</b>	
BMP 16	Minimize the length of trail and the number of trail crossings in aquatic areas.
BMP 17	Specify construction techniques and trail design to minimize impacts to hydrology, water quality or aquatic biota where trails cross aquatic areas

BMP 18	Consult with the Stewardship Team to determine if a proposed trail falls within a wetland or a wetland buffer area.
BMP 19	Specify equipment and timing of its use to minimize environmental damage while accomplishing trail construction in wetlands and riparian areas.

**Ecological BMPs for Trail Construction**

<b>General considerations</b>	
BMP 20	Install barriers and/or signs during and after construction to keep visitors on designated trails and to discourage off-trail use.
BMP 21	Stage materials and equipment in sites which are not sensitive to disturbance. Demarcate the boundaries of staging areas.
BMP 22	Specify construction access on or along the trail alignment in which construction equipment must stay. Minimize the number of vehicles and frequency of vehicle travel along the access corridor.
BMP 23	Avoid research and monitoring sites during construction, in accessing construction sites, and when gathering native rock or other surface materials for use in trail building.
<b>Soil erosion</b>	
BMP 24	Avoid construction activities when soils are wet or muddy.
BMP 25	Install erosion control materials to prevent soil disturbed by construction from moving off the construction site.
BMP 26	Dispersed spoils should be spread along the trail corridor within 50 feet of the location of the cut to allow continued growth of the underlying vegetation. No trail construction spoils may be placed in streams, wetlands, or waterbodies or their adjacent buffer areas. Scattered soil should be no more than 2 inches in depth and added cobbles and larger rocks should cover 20% or less of the ground surface. At least 50% vegetation cover should remain after dispersion of spoils. In forested settings where there is limited space for disposing of spoils, soil and small rock may be piled in an unvegetated upland area. The locations for spoils piles should be selected in collaboration with an ecologist.
BMP 27	Complete timely post-construction revegetation by seeding at the appropriate time of year with a mixture of hand-collected native plant species or commercially purchased seed, and/or native plantings suitable for the site.
<b>Invasive species</b>	
BMP 28	Include in trail construction specifications the requirement for construction equipment to be washed before coming to the construction site and inspected for plant seeds, propagules, and soil prior to entry onto state land. Recommend the washing and cleaning of equipment after finishing state projects to prevent the spread of weed species and aquatic nuisance species (ANS) to other work sites.
BMP 29	Encourage contractors to leave all pieces of heavy construction equipment at the job site for the duration of the project, or if equipment leaves the site and returns, require that equipment be washed and then inspected by state staff before returning.

BMP 30	Inspect off-road transportation corridors leading to staging and work sites for noxious weeds. Pretreat noxious weeds before access routes and staging areas are used.
BMP 31	If native plants are salvaged from the trail construction, install them adjacent to or as close as possible to locations where they were obtained to reduce the risk of spreading invasive plant seeds and plant fragments present in the soil.
BMP 32	Where seeding is used in revegetation, evaluate whether it is necessary to cover the soil surface with an appropriate mulch or jute netting to prevent erosion, facilitate seedling establishment, and prevent the introduction of invasive, non-native plant species. Hay, straw, and plastic netting are not used for post-construction revegetation.
BMP 34	BMP 35 If slash from trees and shrubs is used in revegetation or to encourage visitors to stay on-trail, use only material from native species.
<b>Native plants and animals</b>	
BMP 35	Identify the locations of rare plant occurrences and minimize impacts during trail construction
BMP 36	Schedule construction to avoid critical times in life cycles (e.g., nesting) of key wildlife species.
BMP 37	Comply with state and federal requirements for wildlife protection that are relevant to trail construction. Provide construction staff and contractors with relevant wildlife protection information.
<b>Aquatic areas</b>	
BMP 38	As specified by wetland permitting, use appropriate erosion control materials during trail construction within 50 feet of a body of open water (stream, lake or pond) or wetland as needed to prevent soil disturbed by trail construction from entering a water body.

**Ecological BMPs for Trail Maintenance**

<b>General considerations</b>	
BMP 39	Monitor trail condition regularly throughout the system such that priority maintenance needs are addressed in a timely manner, and natural resource protection and management issues are considered in advance.
BMP 40	When it is necessary to prune or remove encroaching vegetation from trails, dispose of pruned material in a responsible manner.
<b>Soil erosion</b>	
BMP 41	Minimize soil disturbance by walking into sites and performing maintenance activities on foot when feasible; otherwise use motorized equipment that will cause the least amount of impact.
BMP 42	Install or renovate water bars, as needed, to minimize erosion of the trail surface.
BMP 43	Ensure proper trail out slope drainage by removing trail edge berms.
<b>Invasive species</b>	
BMP 44	Avoid spreading invasive non-native plant species through planning and collaboration between trail maintenance staff and IPM coordinators.
BMP 45	Spread soil cleaned from water bars and drains thinly on the trail tread no more than 15 feet from the cleaned feature.

BMP 46	Wash mowing and other maintenance equipment or use other cleaning methods before moving from one project area to another. Equipment cleaning should be done off-site.
<b>Native plants and animals</b>	
BMP 47	Identify the locations of rare plant occurrences and avoid impacting them insofar as possible during trail maintenance.
BMP 48	Identify any potential conflicts of maintenance activities with sensitive animal species or habitat or with key times of the year (e.g., nesting). Schedule maintenance activities to avoid sensitive wildlife and sensitive periods for wildlife.
BMP 49	If emergency trail maintenance is needed due to hazardous conditions, wildlife and vegetation protection should be addressed and trail closures should be considered.
BMP 50	Leave trail sides unmowed unless there is a human safety concern or trail sustainability is compromised by vegetation encroachment. If mowing is warranted, blade height should be 6 to 8 inches or higher.
<b>Aquatic areas</b>	
BMP 51	Do not cast soil and rocks removed from trails outside of wetland and riparian areas into wetlands, riparian areas, streams, and ponds.

**Ecological BMPs for Trail Closure and Restoration**

<b>General considerations</b>	
BMP 52	Identify priority undesignated trails for closure.
<b>Soil erosion and revegetation</b>	
BMP 53	Prepare a plan for trail closure.
BMP 54	Grade areas along the trail as needed to create surfaces that will likely revegetate.
BMP 55	Scarify the trail tread to loosen compacted soil and create a rough surface capable of absorbing and holding precipitation and providing suitable conditions for seeds to germinate.
BMP 56	Amend the graded / scarified soil with organic matter and/or other amendments if top soil is absent.
BMP 57	If seeding is part of the closure plan, seed the prepared soil at the appropriate time of year with a mixture of hand-collected native plant species or commercially purchased seed, and/or plantings of native species that are suitable for the site.
BMP 58	After seeding, evaluate whether it is necessary to cover the soil surface with an appropriate mulch to prevent erosion and facilitate seedling establishment. Hay, straw, and plastic netting are not used for post-construction revegetation.
BMP 60	Discourage use of the closed trail by placing rocks, branches, shrub plantings, jute netting, and/or temporary fencing at the edges of the re-seeded areas to create a visual barrier. Post signs, as needed.
BMP 61	Inspect annually for the first 3 years to gauge planting success. Re-seed and/or re-plant as needed. Water tree and shrub plantings during the first 2 growing seasons on a regular basis.
<b>Invasive species</b>	

BMP 62	Survey the length of the trail to be closed for significant invasive plant species prior to starting closure activities; control invasive species as needed to prevent spread to new locations.
BMP 63	Survey the closed trail during the first growing season following closure to locate new occurrences of significant invasive plant species.
BMP 64	Clean tools and equipment before and after maintenance work (mowers, graders, hand tools, etc.) to remove plant materials.
<b>Native plants and animals</b>	
BMP 65	Identify the locations of any rare plant occurrences adjacent to the trail closure and avoid impacting them.
BMP 66	Identify any potential conflicts in the timing of restoration activities with sensitive animal species. Schedule trail closure activities to avoid critical periods for wildlife (e.g., bird nesting).
<b>Aquatic areas</b>	
BMP 67	If the trail to be closed crosses a wetland or wetland buffer, and restoration involves ground disturbing activities, consult with a Wetland and Riparian Ecologist to determine whether a permit is needed.
BMP 68	Remove the buildup of accumulated sediments in the trail, as needed, to reestablish an effective hydrologic connection across the closed trail.

## Appendix G: Existing LPSP Plans and Documents

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**Lake Pueblo State Park Supplemental Park Management Plan (2016)**

This plan serves as the guiding documented for the Honor Farm, Chain of Lakes, and State Land Board Property. It provides a conceptual framework for the future enhancement opportunities and management strategies for park resources and amenities. It also serves as a guide and policy documented for current and future park staff, agencies, stakeholders, and the public. Lastly it provides potential improvements to facilities and recreational infrastructure on state-owned lands.

**Lake Pueblo State Park Stewardship Plan (Draft, 2017)**

A comprehensive document of findings, along with a body of useful appendices, which is provided to park management as a resource to help identify appropriate goals, guidelines, and potential threats to the park resources, as well as recommended measures to help protect precious park resources.

## Appendix H: ADA Accessibility Guidelines Document

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**UNITED STATES ACCESS BOARD**

**trails camping & picnic facilities viewing areas beach access**

# **outdoor developed areas**

**a summary of  
accessibility standards  
for Federal outdoor developed areas**

**MAY 2014**

**ADVANCING FULL ACCESS AND INCLUSION FOR ALL**

**Cover photo: J. Strom Thurmond Lake, courtesy of U.S. Army Corps of Engineers.**

**Reproduction and dissemination of this publication is encouraged.**

## Contents

<b>Acknowledgments</b> .....	<b>vi</b>
<b>Introduction</b> .....	<b>1</b>
<b>Conditions for Exceptions [1019]</b> .....	<b>4</b>
Condition for Exception 1 .....	5
Condition for Exception 2 .....	5
Condition for Exception 3 .....	6
Condition for Exception 4 .....	7
Documenting Use of the Conditions for Exceptions on a Portion of a Trail or Beach Access Route [F204.4.1] .....	9
<b>Exemptions for an Entire Trail or Beach Access Route [1017.1, Exception 2 and 1018.1, Exception 2]</b> .....	<b>10</b>
Notifying the Access Board When an Entire Trail or Beach Access Route is Exempted [F204.4.1] .....	10
<b>Trails</b> .....	<b>11</b>
Definition [F106.5] .....	11
New Trails [F247.1] .....	11
Existing Trails [F247.2] .....	12
Technical Requirements [1017] .....	14
Using the Trail Exceptions [1017.1, Exceptions 1 and 2] .....	14
Surface [1017.2] .....	15
Measuring Surface Firmness and Stability .....	17
Clear Tread Width [1017.3] .....	18
Passing Spaces [1017.4] .....	20
Tread Obstacles [1017.5] .....	23
Openings [1017.6] .....	24
Running Slope [1017.7.1] .....	24
Cross Slope [1017.7.2] .....	26
Resting Intervals [1017.8] .....	27
Protruding Objects [1017.9] .....	28

<b>Trailheads</b> .....	<b>29</b>
Definition [F106.5]. . . . .	29
Trailhead Information Signs [F216.13 and 1017.10] . . . . .	29
Outdoor Constructed Features at Trailheads [F247.3.1 and 1011]. . . . .	31
Outdoor Recreation Access Routes at Trailheads [F247.3.2] . . . . .	32
Existing Trailheads [F202.3] . . . . .	32
<b>Trail Facilities</b> .....	<b>33</b>
Camping and Picnic Facilities and Viewing Areas on Trails [F247.4] . . . . .	33
Outdoor Constructed Features Along Trails [F247.5] . . . . .	34
<b>Outdoor Recreation Access Routes (ORARs)</b> .....	<b>35</b>
Scoping Requirements [F244.5, F245.4, F246.4, and F247.3.2] . . . . .	35
Technical Requirements [1016] . . . . .	36
Using the ORAR Exceptions [F202.3, Exception 4 and 1016, Exceptions 1, 2, and 3] . . . . .	36
Surface [1016.2] . . . . .	37
Clear Width [1016.3] . . . . .	38
Passing Spaces [1016.4]. . . . .	38
Obstacles [1016.5] . . . . .	40
Openings [1016.6]. . . . .	41
Running Slope [1016.7.1] . . . . .	42
Cross Slope [1016.7.2] . . . . .	42
Resting Intervals [1016.8] . . . . .	43
Protruding Objects [1016.9] . . . . .	44
<b>Outdoor Constructed Features.</b> .....	<b>45</b>
Definition [F106.5]. . . . .	45
Scoping Requirements . . . . .	45
Camping and Picnic Facilities [F244.2.3.1, F244.3, F245.2.5.1, and F244.5.3] . . . . .	46
Viewing Areas [F246.3] . . . . .	47
Trails and Trailheads [F247.3.1 and F247.5] . . . . .	47

Common Technical Requirements . . . . .	47
Clear Ground Space [1011.2] . . . . .	47
Surface, Slope, and Openings [1011.2.2, 1011.2.3, and 1011.2.4] . . . . .	50
Operable Parts [1011.3] . . . . .	50
Technical Requirements Applicable to Specific Features . . . . .	51
Picnic Tables [1011.2 and 1011.4] . . . . .	51
Fire Rings, Grills, Fireplaces, and Woodstoves [1011.2, 1011.3, and 1011.5] . . . . .	53
Trash and Recycling Receptacles [1011.2 and 1011.3] . . . . .	57
Benches [1011.2] . . . . .	57
Water Hydrants and Water Spouts [1011.2, 1011.3, and 1011.6] . . . . .	58
Utility and Sewage Hookups [1011.2, 1011.3, and 1011.6] . . . . .	60
Outdoor Rinsing Showers [1011.2, 1011.3, and 1011.7] . . . . .	60
Viewing Scopes [1011.2, 1011.3, and 1011.8] . . . . .	62
<b>Other Features . . . . .</b>	<b>63</b>
Sinks [F212.3, Exception 2] . . . . .	63
Toilet and Bathing Facilities [F213 and 603 through 610] . . . . .	63
Pit Toilets [F213.1, Exception] . . . . .	64
<b>Camping Facilities . . . . .</b>	<b>65</b>
Definition [F106.5] . . . . .	65
Camping Units With Mobility Features [F244.2] . . . . .	65
Alterations and Additions [F244.2.1] . . . . .	66
Dispersion [F244.2.2] . . . . .	67
Elements Within Camping Units With Mobility Features [F244.2.3] . . . . .	68
Outdoor Constructed Features in Common Use and Public Use Areas [F244.3] . . . . .	68
Outdoor Recreation Access Routes in Camping Facilities [F244.5] . . . . .	68
RV Parking Spaces Within Camping Units With Mobility Features and RV Pull-Up Spaces at Dump Stations [F244.2.3.2.1 and F244.4] . . . . .	69
Width of Spaces [1012.3] . . . . .	69
Surface and Slope [1012.4 and 1012.5] . . . . .	70
Parking Spaces for Vehicles Other Than RVs [F244.2.3.2.2] . . . . .	70
Width of Spaces [1012.3] . . . . .	70
Surface and Slope [1012.4 and 1012.5] . . . . .	70

Tent Pads and Tent Platforms [1013]	71
Exception [1013.1, Exception]	71
Clear Ground Space [1013.2]	71
Slope [1013.3]	72
Floor Height [1013.4]	72
<b>Camp Shelters [1014]</b>	<b>73</b>
Definition [F106.5]	73
Exceptions [1014.1, Exceptions 1 and 2]	73
Entrance [1014.2]	74
Transfer Access [1014.2.1]	74
Roll-in Access [1014.2.2]	75
Floor [1014.3]	75
<b>Picnic Facilities</b>	<b>76</b>
Definition [F106.5]	76
Picnic Units With Mobility Features [F245.2.1 and F245.2.2]	76
Alterations and Additions [F245.2.3]	76
Dispersion [F245.2.4]	77
Elements Within Picnic Units With Mobility Features [F245.2.5]	78
Outdoor Constructed Features in Common Use and Public Use Areas [F245.4]	78
Outdoor Recreation Access Routes in Picnic Facilities	78
<b>Viewing Areas</b>	<b>79</b>
Definition [F106.5]	79
Distinct Viewing Locations [F246.2, 1015.2, and 1015.3]	79
Turning Space [1015.4]	80
Surface and Slope [1015.5 and 1015.6]	81
Outdoor Constructed Features Within Viewing Areas [F246.3]	81
Outdoor Recreation Access Routes in Viewing Areas [F246.4]	81

<b>Beach Access Routes</b> .....	<b>82</b>
Scoping Requirements .....	83
Facilities Serving Beaches [F248.1.1] .....	83
Beach Nourishment [F248.1.2] .....	83
Minimum Number of Beach Access Routes [F248.2] .....	83
Location [F248.3] .....	84
Technical Requirements [1018 and 1018.1, Exception 3] .....	84
Using the Beach Access Route Exceptions [1018.1, Exceptions 1 and 2] .....	84
Connections [1018.2] .....	85
Surface [1018.3] .....	85
Clear Width [1018.4] .....	86
Obstacles [1018.5] .....	86
Openings [1018.6] .....	87
Running Slope [1018.7.1] .....	87
Cross Slope [1018.7.2] .....	88
Resting Intervals [1018.8] .....	88
Protruding Objects [1018.9] .....	89
Dune Crossings [1018.10] .....	90
<b>Appendixes</b> .....	<b>91</b>
Key Differences Between Routes .....	92
Notification Forms .....	96
Entire Trail Exemption Form [1017.2 Exception 2] .....	97
Entire Beach Access Route Exemption Form [1018.2 Exception 2] .....	99

## Acknowledgments

The Architectural and Transportation Barriers Compliance Board (Access Board) developed the accessibility guidelines for trails, camping and picnic facilities, viewing areas, and beach access routes through extensive public input from the disability community, Federal land management agencies, and other interested individuals and organizations.

This information has been developed and reviewed in accordance with the Access Board's information quality guidelines [www.access-board.gov/the-board/policies/information-quality](http://www.access-board.gov/the-board/policies/information-quality).

## Introduction

The Access Board is responsible for developing accessibility guidelines for the construction and alteration of facilities covered by the Americans with Disabilities Act (ADA) of 1990 and the Architectural Barriers Act (ABA) of 1968. The guidelines ensure that the facilities are readily accessible to and usable by people with disabilities. The Access Board issued the current guidelines in 2004. The 2004 guidelines contain provisions for several types of recreation facilities, including boating facilities, fishing piers and platforms, golf facilities, play areas, sports facilities, and swimming pools. The Access Board amended the 2004 guidelines in 2013 by adding new provisions for trails, picnic and camping facilities, viewing areas, and beach access routes constructed or altered by Federal agencies or by non-federal entities on Federal land on behalf of a Federal agency pursuant to a concession contract, partnership agreement, or similar arrangement.



The U.S. Department of Defense, the U.S. General Services Administration, and the U.S. Postal Service have adopted the Access Board's 2004 guidelines, including the 2013 amendments, as the enforceable standards for the ABA. The ABA standards adopted by these agencies are available on the Access Board's Web site at [www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-aba-standards/aba-standards](http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-aba-standards/aba-standards). The ABA Standards are comprised of two types of provisions: scoping requirements and technical requirements. The scoping requirements specify when and where elements must be accessible. The scoping requirements also specify the number of a particular type of element that must be accessible when more than one is provided. The scoping requirements are in chapter 2 of the ABA Standards and the section numbers are preceded by the capital letter "F." The technical requirements specify the design criteria for individual elements. The technical requirements for trails, picnic and camping facilities, viewing areas, and beach access routes are in chapter 10 of the ABA Standards. The scoping and technical requirements are minimum requirements. Designers, owners, and operators are encouraged, but are not required, to exceed the minimum requirements where possible to provide increased accessibility and opportunities for people with disabilities to enjoy trails and other outdoor developed areas.

This guide is intended to help designers, owners, and operators understand and use the ABA Standards for trails, picnic and camping facilities, viewing areas, and beach access routes. Guides for other recreation facilities, including boating facilities, fishing piers and platforms, golf facilities, play areas,

sports facilities, and swimming pools, are available on the Access Board's Web site at [www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards](http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards). The Access Board is also developing guides for toilet and bathing facilities, parking facilities, and other elements and spaces that are required to be accessible by the ABA Standards. These guides will be available on the Access Board's Web site at [www.access-board.gov/guidelines-and-standards/recreation-facilities](http://www.access-board.gov/guidelines-and-standards/recreation-facilities) as they are completed.

Incorporating accessibility into the design of outdoor developed areas must begin early in the planning process, with careful consideration given to the location of accessible elements and the routes that connect them. Emphasis must be placed on ensuring that people with disabilities are able to access these unique facilities and use a variety of elements that serve these facilities.

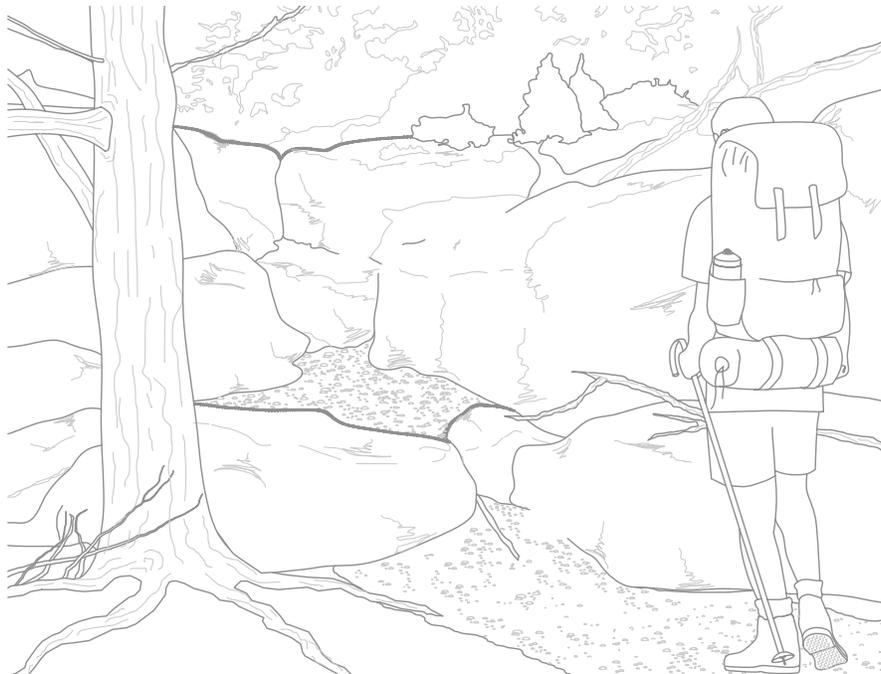
The new provisions for trails, picnic and camping facilities, viewing areas, and beach access routes are not included in the Department of Justice's (DOJ) 2010 ADA Standards and have no legal effect on State and local governments and private entities subject to DOJ's ADA regulations. State and local governments and private entities may, however, use the provisions for guidance when designing trails, picnic and camping facilities, viewing areas, and beach access routes. State and local governments and private entities are cautioned to check with DOJ about using the technical requirements for outdoor recreation access routes, instead of accessible routes, to connect elements at picnic and camping facilities, viewing areas, and trailheads.

## Conditions for Exceptions [1019]

The ABA Standards recognize the existence of constraints and limitations in the outdoor environment and allow for exceptions from specific provisions in the technical requirements where certain circumstances, referred to as “conditions for exceptions,” apply. When an entity determines that any of the conditions for exceptions do not permit full compliance with a specific provision in the technical requirements, compliance with that provision is required to the extent practicable. The phrase “to the extent practicable” means reasonably doable under the circumstances.

The conditions for exceptions should be used only after all other design options are thoroughly explored. Where a condition for exception applies to only part of a trail, a beach access route, or an outdoor recreation access route, the rest of the trail or route must comply with all the technical requirements for the trail or route.

The following sections describe the four conditions for exceptions and provide examples of situations where they might apply.



### **Condition for Exception 1**

Compliance is not practicable due to terrain. The phrase “not practicable” means not reasonably doable.

For example, where a trail is constructed in a steeply sloped area, compliance with the running slope provision may not be practicable on parts of the trail where it would require extensive cuts or fills that are difficult to construct and maintain, cause drainage and erosion problems, significantly lengthen the trail, and create other adverse environmental impacts.

### **Condition for Exception 2**

Compliance cannot be accomplished with the prevailing construction practices.

This condition does not require the use of construction equipment or methods other than those typically used in a particular type of setting.

For example, where handtools would normally be used to construct a trail in order to minimize the impact on a sensitive adjacent stream and the prevailing construction practices for this type of setting do not include blasting, blasting does not have to be used to remove a rock outcrop in order to comply with the clear tread width provision. Compliance with the clear tread width provision is required to the extent that it can be accomplished using handtools.

Prevailing construction practices are those used by most contractors or designers faced with the same or similar projects in the area. Preferences or practices used by a single contractor or designer are not necessarily prevailing construction practices.

### **Condition for Exception 3**

Compliance would fundamentally alter the function or purpose of the facility or the setting.

This condition recognizes that public lands provide a wide variety of recreational experiences, from highly developed areas to wilderness areas that appear unchanged from primeval times and provide opportunities for people to experience primitive and challenging conditions. The condition applies where compliance with specific provisions in the technical requirements would fundamentally alter the function or purpose of the facility or the setting.

For example, people using primitive trails experience the outdoor environment in a nearly natural state, with limited or no development. Use of manufactured building materials or engineered construction techniques to comply with specific provisions in the technical requirements for trails could fundamentally alter the natural or undeveloped nature of the setting and change the recreational experience. Trails that are intended to provide a rugged experience, such as a cross-country training trail with a steep grade, a fitness challenge course with abrupt and severe changes in elevation, and a trail that traverses boulders and rock outcroppings to provide users with the opportunity to climb the rocks, are other examples. To remove the obstacles on these trails or to reroute the trails around the obstacles would fundamentally alter the function or purpose of the trails.

## Condition for Exception 4

Compliance is limited or precluded by any of the following laws, or by decisions or opinions issued or agreements executed pursuant to any of the following laws:

- Endangered Species Act (16 U.S.C. §§ 1531 et seq.)
- National Environmental Policy Act (42 U.S.C. §§ 4321 et seq.)
- National Historic Preservation Act (16 U.S.C. §§ 470 et seq.)
- Wilderness Act (16 U.S.C. §§ 1131 et seq.)
- Other Federal, State, or local law, the purpose of which is to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or other significant natural features

The laws specified in this condition prescribe certain activities or require certain analyses to be prepared or procedures to be followed when planning projects that may impact features protected under the laws. The condition does not require full compliance with a specific provision in the technical requirements where compliance is limited or precluded by the laws, or by decisions or opinions issued or agreements executed pursuant to the laws.

### Example

Situations where the condition may apply include:

- Congressionally designated wilderness areas. The condition applies if work that is necessary to comply with a specific provision in the technical requirements can't be accomplished using handtools, because motorized equipment is prohibited by law in Congressionally designated wilderness areas.
- Designated wetlands or coastal areas where construction methods and materials are limited.
- Tribal sacred sites where the physically undisturbed condition of the land is an important part of the sacred observance.
- Areas where water crossings are restricted to safeguard aquatic features protected under Federal or State laws.

Archaeological and cultural features include burial grounds and cemeteries, protected tribal sites, and other properties considered sacred by an organized religion. Historical features are properties listed or eligible for listing on the National Register of Historic Places or other places of recognized historic value. Significant natural features include objects, such as large boulders, rocky outcrops, and bodies of water; or unique trees or vegetation, such as giant sequoia groves, that are regarded as distinctive or important locally, regionally, or nationally and are therefore placed under legal protection.

Table 1 summarizes the conditions for exceptions and when and where they may apply.

<b>Table 1— Permissible Uses of Conditions for Exceptions</b>		
<b>Technical Requirements</b>	<b>Specific Provisions</b>	<b>Applies To</b>
Outdoor constructed features	Clear ground space	Alterations only
Tent pads and tent platforms	Any specific provision	New construction or alterations
Camp shelters	Any specific provision	New construction or alterations
Outdoor recreation access routes at camping facilities, picnic facilities, and trailheads	Any specific provision	Alterations only
Viewing areas	Any specific provision	Alterations only
Outdoor recreation access routes to viewing areas	Any specific provision	New construction or alterations
Trails	Any specific provision	New construction or alterations
Beach access routes	Any specific provision	New construction or alterations

### **Documenting Use of the Conditions for Exceptions on a Portion of a Trail or Beach Access Route [F204.4.1]**

When using the conditions for exceptions on a portion of trail or a beach access route, Federal agencies should document in writing why they could not fully comply with a specific provision in the technical requirements for trails or beach access routes. The documentation should be retained with the project records. The documentation should include the date the decision is made and the names and positions of the people making the decision. The Access Board is responsible for investigating complaints alleging violations of the ABA Standards and will request documentation when a complaint involves a trail or beach access route.



## **Exemptions for an Entire Trail or Beach Access Route [1017.1, Exception 2 and 1018.1, Exception 2]**

When extreme or numerous conditions for exceptions make it impractical to construct a trail or beach access route that complies with the technical requirements, the ABA Standards provide an exemption for the entire trail or beach access route. The exemption for an entire trail or beach access route can only be used after applying the conditions for exceptions to portions of the trail or beach access route. When determining whether to exempt an entire trail or beach access route, consider the portions of the trail or beach access route that can and cannot comply with the specific provisions in the technical requirements and the extent of compliance where full compliance cannot be achieved.

## **Notifying the Access Board When an Entire Trail or Beach Access Route is Exempted [F204.4.1]**

In the rare cases where an entire trail or beach access route is exempted, Federal agencies must notify the Access Board about the exemption. Sample notification forms are in the appendix of this guide and are also available on the Access Board's Web site at [www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/final-guidelines-for-outdoor-developed-areas/notification-forms](http://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/final-guidelines-for-outdoor-developed-areas/notification-forms). Federal agencies do not have to obtain approval from the Access Board to exempt an entire trail or beach access route. The Access Board will monitor the use of exemptions for an entire trail or beach access route and may provide additional guidance on the use of such exemptions. Federal agencies are encouraged to seek technical assistance from the Access Board when considering exempting an entire trail or beach access route.

## Trails

### Definition [F106.5]

A trail is defined as a pedestrian route developed primarily for outdoor recreational purposes. Pedestrian routes that are developed primarily to connect accessible elements, spaces, and buildings within a site are not a trail.

The Access Board is developing accessibility guidelines for sidewalks and shared-use paths. The key differences between accessible routes, sidewalks, shared-use paths, and trails are outlined in the appendix of this guide.

### New Trails [F247.1]

When a trail is designed for use by hikers or pedestrians and directly connects to a trailhead or another trail that substantially meets the technical requirements for trails, the trail must comply with the technical requirements.

#### Do the Standards Apply?

- Is the trail designed for hiker or pedestrian use?
- Is the trail connected to a trailhead or an existing trail that substantially meets the technical requirements for trails?

The ABA Standards for trails apply when the answer to both questions above is “yes.”

The Federal Trail Data Standards (FTDS) classify trails by their **designed use** and **managed use**. Under the FTDS, a trail has only **one designed use** that determines the design, construction, and maintenance parameters for the trail. A trail can have more than **one managed use** based on a management decision to allow other uses on the trail. Trails that have a **designed use** for hikers or pedestrians are required to comply with the technical requirements for trails. Trails that have a **designed use** for other than hikers or pedestrians, such as mountain bike or equestrian trails, are not required to comply with the technical requirements for trails.

A trail system may include a series of connecting trails. Only trails that directly connect to a trailhead or another trail that substantially meets the technical requirement for trails are required to comply with the technical requirements for trails. A trail that complies with most of the technical requirements for trails is considered to substantially meet the technical requirements.

### **Existing Trails [F247.2]**

When the original design, function, or purpose of an existing trail is changed, regardless of the reason, and the altered portion of the trail directly connects to a trailhead or another trail that substantially meets the technical requirements for trails, the altered portion of the existing trail must comply with the technical requirements for trails.

The term “**reconstruction**” is not used in the ABA Standards, though the term is used frequently by the trails community. For the purposes of the ABA

Standards, actions are categorized as either new construction or an alteration. Routine or periodic maintenance activities are not considered an alteration that would trigger the application of the ABA standards. The difference between an alteration and maintenance is as follows:

- An **alteration** is work done to change the original design, purpose, intent, or function of an existing trail.
- **Maintenance** is the routine or periodic repair of existing trails or trail segments to restore them to their originally designed and built condition. Maintenance does not change the original design, purpose, intent, or function for which a trail is designed. Maintenance may include:
  - ◆ Removing debris and vegetation, such as fallen trees or broken branches on the trail; clearing the trail of encroaching brush or grasses; and removing rock slides
  - ◆ Maintaining trail tread, such as filling ruts, reshaping a trail bed, repairing a trail surface or washout, installing riprap to retain cut and fill slopes, and constructing retaining walls or cribbing to support trail tread
  - ◆ Performing erosion control and drainage work, such as replacing or installing drainage dips or culverts
  - ◆ Repairing or replacing deteriorated, damaged, or vandalized trail or trailhead structures or parts of structures, including sections of bridges, boardwalks, information kiosks, fencing and railings; painting; and removing graffiti



## **Technical Requirements [1017]**

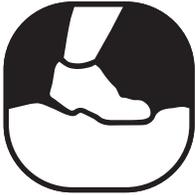
The technical requirements for trails include specific provisions for the surface, clear tread width, passing spaces, tread obstacles, openings, running slope, cross slope, resting intervals, protruding objects, and trailhead signs.

### **Using the Trail Exceptions [1017.1, Exceptions 1 and 2]**

When a condition for exceptions does not permit full compliance with a specific provision in the technical requirements on a portion of a trail, that portion of the trail must comply with the specific provision to the extent practicable.

When extreme or numerous conditions for exceptions make it impracticable to construct a trail that complies with the technical requirements, the entire trail can be exempted from complying with the technical requirements. An entire trail can be exempted from the technical requirements only after applying the conditions for exceptions to portions of the trail. When determining whether to exempt an entire trail from the technical requirements, consider the portions of the trail or beach access route that can and cannot comply with the specific provisions in the technical requirements and the extent of compliance where full compliance cannot be achieved.

Additional information on the conditions for exceptions, including documenting use of the exceptions on portions of a trail and notifying the Access Board when an entire trail is exempted from the technical requirements, is provided in the section of this guide on the conditions for exceptions.

**Surface [1017.2]**

The surfaces of trails, passing spaces, and resting intervals must be firm and stable. A firm trail surface resists deformation by indentations. A stable trail surface is not permanently affected by expected weather conditions and can sustain normal wear and tear from the expected uses between planned maintenances.

Paving with concrete or asphalt may be appropriate for highly developed areas. For less developed areas, crushed stone, fine crusher rejects, packed soil, soil stabilizers, and other natural materials may provide a firm and stable surface. Natural materials also can be combined with synthetic bonding materials to provide greater stability and firmness. These materials may not be suitable for every trail.

**DESIGN TIP—Building a firm and stable surface**

A firm and stable surface does not always mean concrete and asphalt. Some natural soils can be compacted so that they are firm and stable. Other soils can be treated with stabilizers without drastically changing their appearance. Designers are encouraged to investigate the options and use surfacing materials that are consistent with the site's level of development and that require as little maintenance as possible.

**CONSTRUCTION TIP—Stable materials**

Generally, the following materials provide firmer surfaces that are more stable than the alternative:

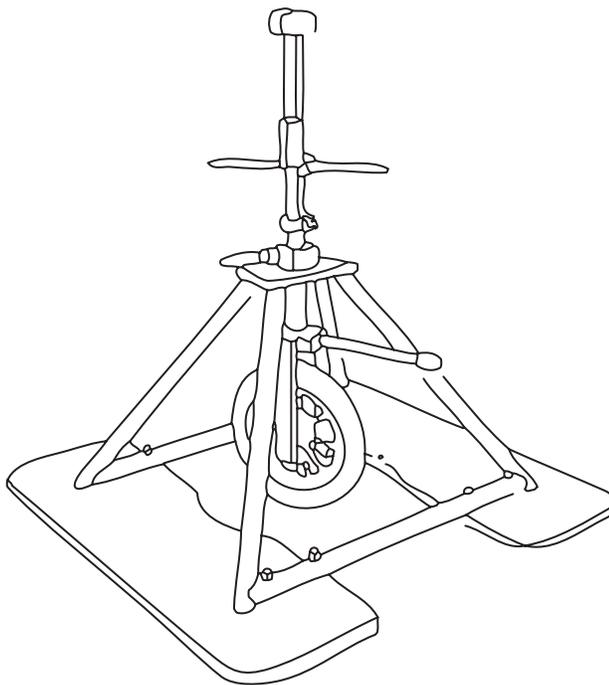
- Crushed rock (rather than uncrushed gravel)
- Rocks with broken faces (rather than rounded rocks)
- A rock mixture containing a full spectrum of sieve sizes, including fine material (rather than a single size)
- Hard rock (rather than soft rock that breaks down easily)
- Rock that passes through a ½-inch screen (rather than larger rocks)
- Rock material that is compacted in 3- to 4-inch layers (rather than thicker layers)
- Material that is moist (but not too wet) before it is compacted (rather than material that is compacted when it is dry)
- Material that is compacted with a vibrating plate compactor, roller, or by hand tamping (rather than material that is laid loose and compacted by use)

## Measuring Surface Firmness and Stability

The rotational penetrometer (RP) is a precision surface-indenter measuring tool for evaluating the firmness and stability of ground and floor surfaces (figure 1).

To measure firmness, the precision spring applies force to the penetrator and the caliper measures the vertical displacement of the penetrator into the surface. The penetrator is then rotated and the total displacement

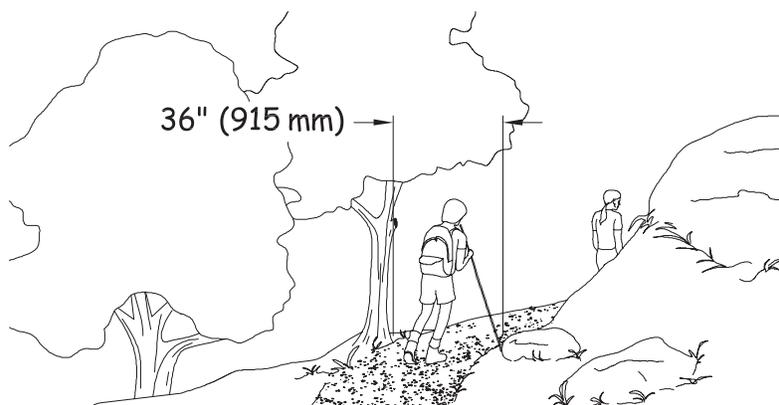
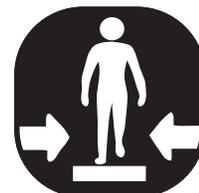
into the surface is measured, indicating surface stability. The Access Board has conducted several research projects using the RP to evaluate the firmness and stability of trail and play area surfaces. Additional information about these projects is available at [www.access-board.gov/research/completed-research/accessible-exterior-surfaces](http://www.access-board.gov/research/completed-research/accessible-exterior-surfaces). Slip resistance is not required for the surface of trails because leaves, dirt, ice, snow, and other surface debris and weather conditions are part of the natural environment that would be difficult, if not impossible, to avoid.



**Figure 1—The rotational penetrometer is a portable precision surface indenter that is used for measuring the firmness and stability of surfaces.**

### Clear Tread Width [1017.3]

The clear tread width of trails must be a minimum of 36 inches (figure 2). The 36-inch-minimum clear tread width must be maintained for the entire distance of the trail and may not be reduced by gates, barriers, or other obstacles unless a condition for exception does not permit full compliance with the provision.



**Figure 2—Minimum clear trail tread width.**

Where gates and barriers require users to make 90-degree or 180-degree turns, sufficient space should be provided for people using mobility devices to make the turns (figure 3). Mobility devices that are used in the outdoors typically have a longer wheel base and are wider than mobility devices that are used indoors. The Access Board and National Institute on Disability and Rehabilitation Research sponsored research to collect anthropometric

data from a sample of about 500 people who use manual wheelchairs, power wheelchairs, and scooters. The Center for Inclusive Design and Environmental Access in the School of Architecture and Planning, University at Buffalo, The State University of New York conducted the “Anthropometry of Wheeled Mobility Project.” The final report for this project is available at [www.udeworld.com/documents/anthropometry/pdfs/AnthropometryofWheeledMobilityProject\\_FinalReport.pdf](http://www.udeworld.com/documents/anthropometry/pdfs/AnthropometryofWheeledMobilityProject_FinalReport.pdf). The report recommends that, in order to accommodate 95 percent of the users of manual wheelchairs, power wheelchairs, and scooters in the project sample, a minimum clear width of 43 inches is needed to make a 180-degree turn around a barrier similar to a chicane-style gate.

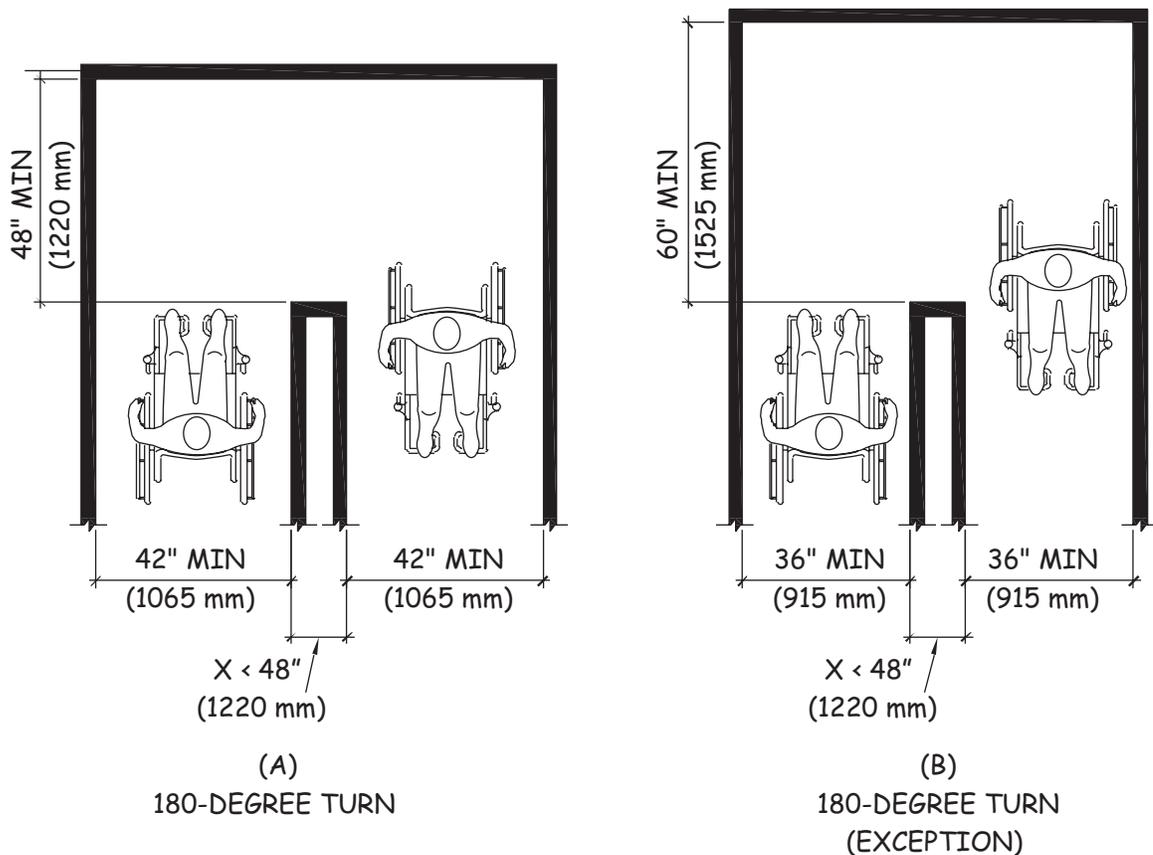


Figure 3—Clearance needed to negotiate a 180-degree turn.

## Passing Spaces [1017.4]

A trail tread width less than 60 inches does not permit two people using mobility devices to pass each other. Consequently, where the tread width is less than 60 inches, passing spaces must be provided at intervals of at least 1000 feet. Where the trail is heavily used or the trail is not at the same level as the adjoining ground surface, such as a bridge crossing a ravine, increasing the frequency of passing spaces or widening the tread width to a minimum of 60 inches provides greater access. People using mobility devices also use passing spaces to turn around.

Where the full length of a trail does not fully comply with the trail technical requirements, a passing space must be located at the end of the trail segment that complies fully with the technical requirements. This enables people who use mobility devices to turn around and proceed back to where they started. Consider ways to alert people using mobility devices when a passing space provides the last opportunity on a trail to turn around, because this may not always be apparent. Printed materials, trail Web sites, trailhead information signs, and signage at the end of the trail segment that fully complies with the technical requirements could be used to indicate the location of the last place on the trail to turn around.

Passing spaces must be:

- A minimum of 60 by 60 inches (figure 4) or

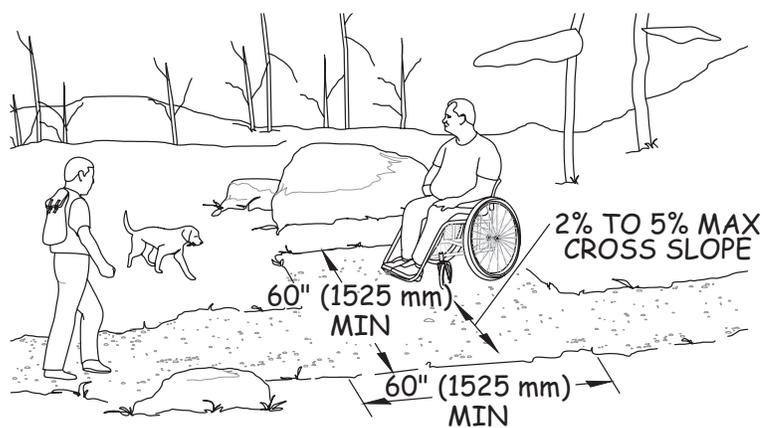


Figure 4—Minimum dimensions for a passing space.

- The intersection of two trails that provide a T-shaped space that complies with section 304.3.2 of the ABA Standards (figure 5), and the base and the arms of the T-shaped space extend a minimum of 48 inches beyond the intersection (figure 6)

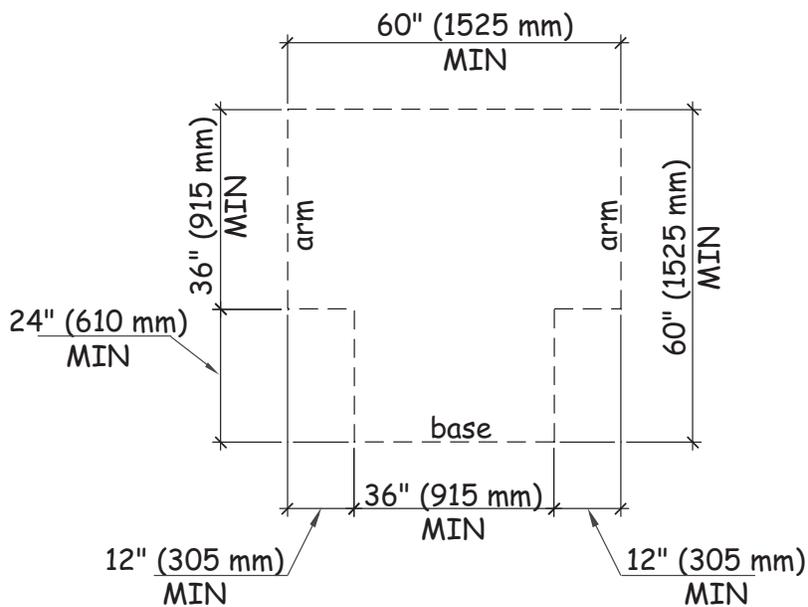


Figure 5—A T-shaped turning space (304.3.2).

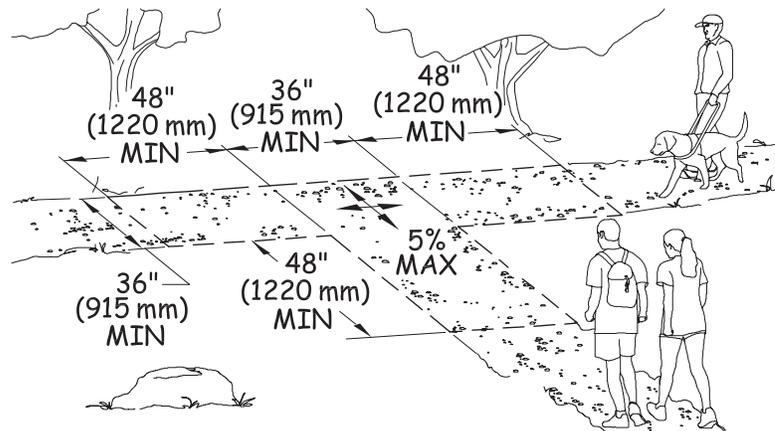


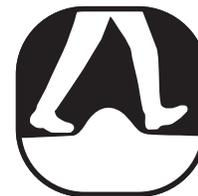
Figure 6—Minimum dimensions for a T-shaped passing space.

Where the intersection of two trails serves as a passing space, the vertical alignment of the trails at the intersection that form the T-shaped space must be nominally planar so that all the wheels of a mobility device remain on the ground when turning into and out of the space. Nominally planar means on the same nominal table surface (same nominal geometric surface plane) and the slopes of the table surface correspond to the running slope and cross slope of the trail tread. For example, if the trail tread has a 2 percent cross slope and 5 percent running slope, the nominal surface plane of the trail tread and passing space must both have a 2 percent cross slope and a 5 percent running slope. This allows people using mobility devices with three or four wheels to better maintain contact with the surface when moving from the main trail into a passing space. This makes it less likely that the mobility device will tip or overbalance to one side.

**Passing spaces and resting intervals can overlap.** When passing spaces and resting intervals overlap, the technical requirements for resting intervals apply and the slope of the ground surface must be no steeper than 1:48 (2 percent) in any direction. When the surface is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

**Tread Obstacles [1017.5]**

A tread obstacle is anything that interrupts the evenness of the tread surface. The vertical alignment of joints in concrete, asphalt, or board surfaces, as well as natural features, such as tree roots and rocks, within the trail tread can be tread obstacles.

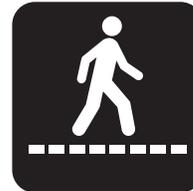


The limit on the height of tread obstacles on trails, passing spaces, and resting intervals is based on the surface material used. When the trail surface is constructed of concrete, asphalt, or boards, tread obstacles cannot exceed one-half inch in height at their highest point. When the trail surface is constructed of materials other than concrete, asphalt, or boards, tread obstacles are permitted to be a maximum of 2 inches high.

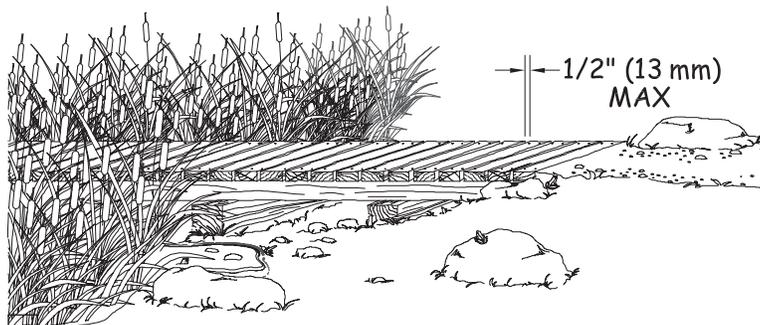
Frequent tread obstacles and tread obstacles that cross the full width of a trail tread can make travel very difficult for people using mobility devices. Where possible, separate tread obstacles by at least 48 inches, particularly when the obstacles cross the entire tread width. This separation allows people using mobility devices to fully cross one obstacle before confronting another.

### Openings [1017.6]

Openings are gaps in the surface of a trail. Gaps, including slots in a drainage grate and spaces between the planks on a bridge or boardwalk (figure 7), that are big enough for wheels, canes, or crutch tips to drop through or become trapped in are potential hazards.



Openings in the surfaces of trails, passing spaces, and resting intervals must be small enough so that a sphere more than one-half inch in diameter cannot pass through. Where possible, elongated openings should be placed perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.



**Figure 7—Where possible, openings in boardwalk decking should be placed perpendicular to the direction of travel.**

### Running Slope [1017.7.1]

Running slope, also referred to as grade, is the length-wise slope of a trail, parallel to the direction of travel. Trails or trail segments of any length may be constructed with running slopes up to 1:20 (5 percent). To accommodate steep terrain, trails may be designed with shorter segments that have a running slope and length, as shown in table 2, with resting intervals at the top and bottom of each segment.



Table 2—Maximum Running Slope and Segment Length		
Running Slope of Trail Segment		Maximum Length of Segment
Steeper Than	But Not Steeper Than	
1:20 (5%)	1:12 (8.33%)	200 feet
1:12 (8.33%)	1:10 (10%)	30 feet
1:10 (10%)	1:8 (12%)	10 feet

To ensure that a trail is not designed as a series of steep segments, no more than 30 percent of the total length of the trail may have a running slope exceeding 1:12 (8.33 percent). The running slope must never exceed 1:8 (12 percent). Resting intervals must be provided more frequently as the running slope increases (figure 8).

**Trail Running Slope**

Whenever possible, trails should be constructed with lesser slopes to provide greater independent access and usability.



Figure 8—The running slope is measured along a trail’s length; the cross slope is measured across its width.

**CONSTRUCTION TIP—How is running slope measured?**

Running slope is often described as a ratio of vertical distance to horizontal distance, or rise to run (figure 9). For example, a running slope of 1:20 (5 percent) means that for every foot of vertical rise, there are 20 feet of horizontal distance. The technical requirements specify running slope as both a ratio and percentage.

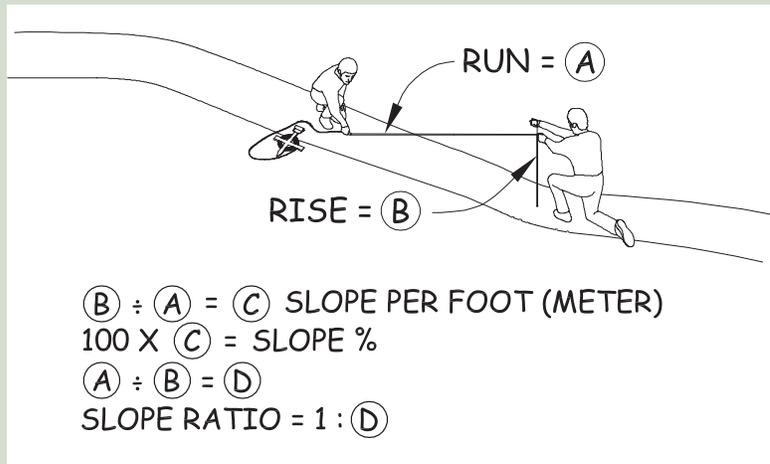


Figure 9—Determining the slope ratio.

**Cross Slope [1017.7.2]**

Cross slope is the side-to-side slope of a trail tread. Some cross slope is necessary to provide drainage and to keep water from ponding and damaging the trail surface, especially on unpaved or natural surfaces.



When the trail surface is constructed of concrete, asphalt, or boards, the cross slope must be no steeper than 1:48 (2 percent). When the trail surface is constructed of materials other than asphalt, concrete, or boards, cross slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

### **Resting Intervals [1017.8]**

Resting intervals are level areas that provide an opportunity for people to stop after a steep segment and recover before continuing on. Resting intervals are required between trail segments any time the running slope exceeds 1:20 (5 percent).

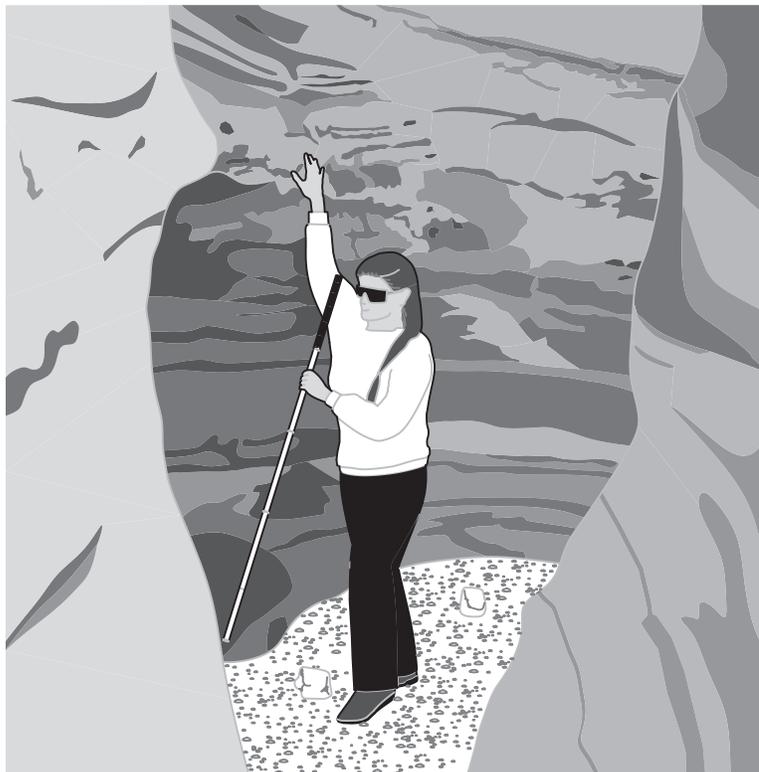
Resting intervals may be provided within the trail tread or adjacent to the trail tread. When the resting interval is within the trail tread, it must be at least 60 inches long and at least as wide as the widest segment of the adjacent trail tread.

When the resting interval is adjacent to the trail, it must be at least 60 inches long and 36 inches wide. A turning space that complies with section 304.2.3 of the ABA Standards must be provided. The vertical alignment of the trail tread, turning space, and resting interval must be nominally planar so that all the wheels of a mobility device touch the ground when turning into and out of the resting interval.

When the surface of the resting interval is constructed of concrete, asphalt, or boards, the slope of the resting interval must be no steeper than 1:48 (2 percent) in any direction. When the surface of the resting interval is constructed of materials other than concrete, asphalt, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

### Protruding Objects [1017.9]

Objects that protrude into the trail clear tread width, passing spaces, and resting intervals can pose hazards to people who are blind or have low vision. Constructed elements on trails, resting intervals, and passing spaces must comply with the technical requirements for protruding objects in section 307 of the ABA Standards. Signs and other post-mounted objects are examples of constructed elements that, if located incorrectly, can be protruding objects.



**Figure 10—Protruding object requirements do not apply to natural features such as caves in undeveloped areas.**

The technical requirements for protruding objects do not apply to natural features, such as tree branches, rock formations, and trails that pass beneath rock ledges or through caves because these are not constructed elements (figure 10). Clearing limits for trail construction and maintenance usually require that brush, limbs, trees, and logs be cut back a foot or more from the edge of the trail. However, trail maintenance cycles may be several years for some trails, and vegetation may encroach on the trail in the interim between cycles. While it may not always be possible to control vegetation, it is always possible to place constructed features where they won't pose a hazard to hikers who are blind or have low vision.

## Trailheads

### Definition [F106.5]

A trailhead is defined as an outdoor space that is designated by an entity responsible for administering or maintaining a trail to serve as an access point to the trail. The junction of two or more trails or the undeveloped junction of a trail and a road is not a trailhead. For example, if a trail crosses the road, the crossing does not automatically become a trailhead.



### Trailhead Information Signs [F216.13 and 1017.10]



All hikers need trail information to make informed decisions. For example, hikers want to know which trail is most appropriate for the amount of time they have available, the people in their group, and the type of hike that best suits their needs or desires. Information about the accessibility of a trail enables people with disabilities to decide whether the characteristics of the trail are suited to their abilities. When this information is available on Web sites and in printed materials, it allows all hikers, including people with disabilities, the opportunity to understand the possible challenges of the trail before arriving at the trailhead.

When a new trail information sign is provided at the trailhead on a newly constructed or altered trail designed for use by hikers or pedestrians, the sign must provide information about the accessible characteristics of the trail. This requirement applies to new trailhead information signs regardless of whether the newly constructed or altered trail complies with the technical requirements for trails.

The new trail information signs must include the following information:

- Length of the trail or trail segment
- Type of trail surface
- Typical and minimum trail tread width
- Typical and maximum trail grade
- Typical and maximum trail cross slope

Signs can provide additional information to help people with disabilities decide whether or not to attempt a trail. For example, information about the height of any major obstacles, such as boulders in the trail tread, can help people determine if they can overcome these barriers. It is helpful to have a caution notice indicating that the posted information reflects the condition of the trail when it was constructed or assessed and on what date the information was current. Because conditions in the outdoors are subject to change, knowing when an assessment was made is very helpful.

### International Symbol of Accessibility (ISA)

The ISA is not required or encouraged on trail information signs.



Section F216.2 of the ABA Standards requires exterior signs that identify spaces by name to comply with the technical requirements for visual characters in section 703.5 of the ABA Standards, including the provisions for contrast of the characters and their background, and character size and style. Consequently, if a trail information sign identifies the name of the trail, the name of the trail must comply with the technical requirements for visual characters in section 703.5 of the ABA Standards. Tactile characters, Braille, and the International Symbol of Accessibility are not required on trail information signs.

Section F205 of the ABA Standards requires operable parts in accessible spaces to comply with the technical requirements for operable parts in section 309 of the ABA Standards, including the provisions for clear ground space, reach ranges, and operation. Consequently, if bins or holders for materials, such as maps, brochures, or fee envelopes, are provided at trailheads, a clear ground space at least 30 by 48 inches must be provided at the bins or holders. The bins or holders must be located a minimum of 15 inches and a maximum of 48 inches above the ground surface. If a latch or lid is provided, it must be operable using one hand without tightly grasping, pinching, or twisting the wrist.

### **Outdoor Constructed Features at Trailheads [F247.3.1 and 1011]**

When outdoor constructed features, such as benches, picnic tables, or trash and recycling receptacles, are provided at trailheads, at least 20 percent, but no less than one, of each type of element provided must comply with the applicable technical requirements for the element. The technical requirements for outdoor constructed features are discussed in the section of this guide on outdoor constructed features.

Toilet and bathing facilities, parking facilities, and drinking fountains must comply with the applicable sections of the ABA Standards.

## Outdoor Recreation Access Routes at Trailheads [F247.3.2]

Trailheads are usually accessed by vehicle rather than by hiking. At least one outdoor recreation access route (ORAR) must connect the following at trailheads:

- Accessible parking spaces or other arrival points
- The starting point of the trail
- Accessible elements, spaces, and facilities within the trailhead

The technical requirements for ORARs are discussed in the section of this guide on ORARs. ORARs provide greater accessibility than a trail because areas served by ORARs are typically more developed than trails.

## Existing Trailheads [F202.3]

At existing trailheads, if elements or spaces are altered but the circulation path to the altered space or element is not changed, the circulation path does not have to be altered to comply with the technical requirements of ORARs. If the circulation path at a trailhead is altered and a condition for exception does not permit full compliance with a specific provision in the technical requirements for ORARs, the circulation path must comply with the specific provision to the extent practicable. Additional information on the conditions for exceptions is provided in the section of this guide on the conditions for exceptions.

## Trail Facilities

### Camping and Picnic Facilities and Viewing Areas on Trails [F247.4]

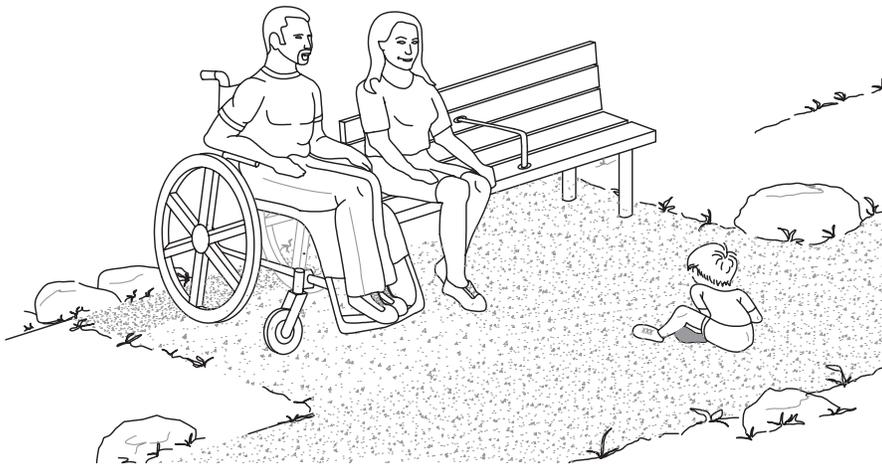
When camping and picnic facilities or viewing areas are constructed or altered along a trail, they must comply with the applicable scoping and technical requirements for the facility, regardless of whether the trail complies with the technical requirements for trails. The scoping and technical requirements for camping and picnic facilities and viewing areas are discussed in the sections of this guide on camping and picnic facilities and viewing areas.

ORARs are not required to connect trails to camping and picnic facilities, viewing areas, and pit toilets along the trails. On trails that comply with the technical requirements for trails, the routes that connect the trails to camping and picnic facilities, viewing areas, and pit toilets along the trails, including accessible elements within the facilities, must comply with the technical requirements for trails. On trails that do not comply with the technical requirements for trails, there are no technical requirements for the routes that connect the trails to camping and picnic facilities, viewing areas, and pit toilets along the trails.

Where bridges are provided along trails that substantially comply with the technical requirements for trails, the bridges must also be constructed to meet the trail technical requirements.

## Outdoor Constructed Features Along Trails [F247.5]

When outdoor constructed features, such as benches (figure 11), picnic tables, or trash and recycling receptacles, are provided along a trail, at least 20 percent, but no less than one, of each type of element provided at each location on the trail (other than within camping and picnic facilities and viewing areas, which have their own scoping requirements for outdoor constructed features) must comply with the applicable technical requirements for the element, regardless of whether the trail complies with the technical requirements for trails. The technical requirements for outdoor constructed features are discussed in the section of this guide on outdoor constructed features.



**Figure 11—A bench is an example of an outdoor constructed feature along a trail.**

## Outdoor Recreation Access Routes (ORARs)

### Scoping Requirements [F244.5, F245.4, F246.4, and F247.3.2]

An ORAR is a continuous, unobstructed path that is intended for pedestrian use and that connects accessible elements, spaces, and facilities within camping and picnic facilities and at viewing areas and trailheads. ORARs cannot be used at other types of facilities, such as educational campuses, office parks, or theme parks.

ORARs must coincide with or be located in the same area as general circulation paths provided for other users.

Within camping and picnic facilities, ORARs must connect accessible elements, spaces, and facilities provided within camping and picnic units with mobility features. ORARs must also connect public and common use areas that serve camping and picnic units with mobility features and accessible elements, spaces, and facilities provided within the public or common use areas. When a circulation path connects camping and picnic facilities and adjacent recreation facilities, such as play areas or boating facilities, at least one ORAR must connect camping and picnic units with mobility features to an accessible route serving the adjacent recreation facilities.

#### Permitted Uses of ORARs

ORARs can only be used within camping and picnic facilities, and at viewing areas and trailheads.

At viewing areas, at least one ORAR must connect accessible parking spaces or other arrival points that serve the viewing area with accessible elements, spaces, and facilities provided within the viewing area.

At trailheads, at least one ORAR must connect:

- Accessible parking spaces or other arrival points serving the trailhead
- The starting point of the trail
- Accessible elements, spaces, and facilities provided within the trailhead

Elements, spaces, or facilities that are not required to be accessible do not have to be connected by an ORAR.

ORARs are not required when accessible camping and picnic facilities, viewing areas, or outdoor constructed features are provided along a trail.

**These routes must meet the technical requirements for trails.**

## Technical Requirements [1016]

### Using the ORAR Exceptions [F202.3, Exception 4 and 1016, Exceptions 1, 2, and 3]

Where elements or spaces in camping and picnic facilities, viewing areas, or trailheads are altered but the circulation path to the altered element or space is not changed, the circulation path is not required to comply with the technical requirements for ORARs.

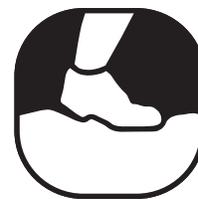
In alteration projects, if a condition for exception does not permit full compliance with a specific provision in the technical requirements for ORARs on a portion of an ORAR, then that portion of the ORAR must comply with the specific provision to the extent practicable. The conditions for exceptions can be

used for newly constructed ORARs at viewing areas. Additional information on the conditions for exceptions is provided in the section of this guide on the conditions for exceptions. Although not required, documenting use of the conditions for exceptions on a portion of an ORAR and retaining the documentation with the project records can be helpful if a complaint is filed with the Access Board alleging that the ORAR does not comply with the technical requirements.

If a roadway is the common circulation path for pedestrians within camping and picnic facilities or at viewing areas and trailheads, an ORAR may be provided within the roadway. When an ORAR is provided within the roadway, it is exempted from the technical requirements for cross slope, running grade, resting intervals, and passing spaces. The other technical requirements apply to ORARs provided within the roadway. For instance, where traffic calming devices, gates, or other barriers are provided on a paved roadway, the ORAR must have a clear width of 36 inches and obstacles cannot exceed one-half inch in height at their highest point within the clear width of the ORAR.

### **Surface [1016.2]**

The surfaces of ORARs, passing spaces, and resting intervals must be firm and stable. Additional information on firm and stable surfaces is provided in the trails section of this guide.



Slip resistance is not required because leaves and needles, dirt, ice, snow, and other surface debris and weather conditions are components of the natural environment that would be difficult, if not impossible, to avoid.

During the design process, evaluating the planned surface material for noticeable distortion or compression during the seasons for which the surface is managed, and for stability under normally occurring weather conditions and expected uses, can be helpful. If the planned surface material does not remain firm and stable during this evaluation, another surfacing product may be a more appropriate choice.

### Clear Width [1016.3]

The clear width of ORARs must be a minimum of 36 inches. The 36-inch-minimum clear width must be maintained for the entire ORAR and may not be reduced by gates, barriers, or other obstacles unless a condition for exception does not permit full compliance with the provision.



ORARs don't all necessarily have to be the same width. ORARs may be different widths, depending on their location. Consider the number of people who are likely to use the ORAR at the same time and how they will want to use it—single file or walking side-by-side. Two people using mobility devices need a clear width of at least 60 inches to pass each other on an ORAR. Consider providing a minimum clear width of 60 inches on ORARs that connect camping units with mobility features to important features, such as toilet and bathing facilities or water hydrants.

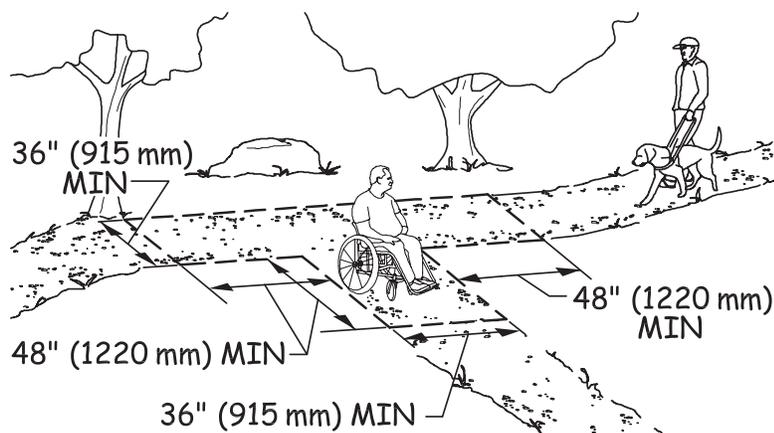
### Passing Spaces [1016.4]

Where the clear width of an ORAR is less than 60 inches, passing spaces must be provided at intervals of at least 200 feet.

Passing spaces must be:

- A minimum space of 60 by 60 inches or
- The intersection of two ORARs that provide a T-shaped space that complies with section 304.3.2 of the ABA Standards, where the base and the arms of the T-shaped space extend a minimum of 48 inches beyond the intersection (figure 12)

Either of these configurations provides enough space for people using mobility devices to move to the side and let other people pass along the ORAR.



**Figure 12—A T-intersection may be used as a passing space on an outdoor recreation access route or a beach access route if it has the dimensions shown (or larger).**

Consider providing either a minimum clear width of 60 inches or passing spaces at shorter intervals where an ORAR is heavily used or adjoins elements, spaces, or facilities that are heavily used. Also, consider providing a minimum clear width of 60 inches if the ORAR is a boardwalk or otherwise not at the same level as the adjoining ground surface or if the edge is bordered by timbers or edge protection.

When the intersection of two ORARs serves as a passing space, the vertical alignment of the routes at the intersection that form the T-shaped space must be nominally planar (i.e., as flat as possible) so that all the wheels of a mobility device touch the ground when turning into and out of the passing space.

Passing spaces and resting intervals can overlap. When passing spaces and resting intervals overlap, the technical requirements for resting intervals apply and the slope of the surface must be no steeper than 1:48 (2 percent) in any direction when the ORAR is constructed of concrete, asphalt, or boards. When the surface is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage. Otherwise, passing-space surfaces must have the same slopes as the adjoining ORAR.

### **Obstacles [1016.5]**

Obstacles are anything that interrupts the evenness of the surface of an ORAR. Obstacles may occur where a tree root or rock protrudes above the surface or where two different surfaces abut, such as when a concrete path joins a natural surface. When an ORAR is provided within a vehicular route, traffic-calming devices or speed bumps can be obstacles. If obstacles are pronounced, they can pose a serious tripping hazard and make it difficult to travel using a mobility device.

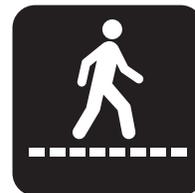


The limit on the height of obstacles on ORARs, passing spaces, and resting intervals is based on the surface material used. When the surface is constructed of concrete, asphalt, or boards, obstacles cannot exceed one-half inch in height at their highest point. When the surface is constructed of materials other than concrete, asphalt, or boards, obstacles cannot exceed 1 inch in height at their highest point.

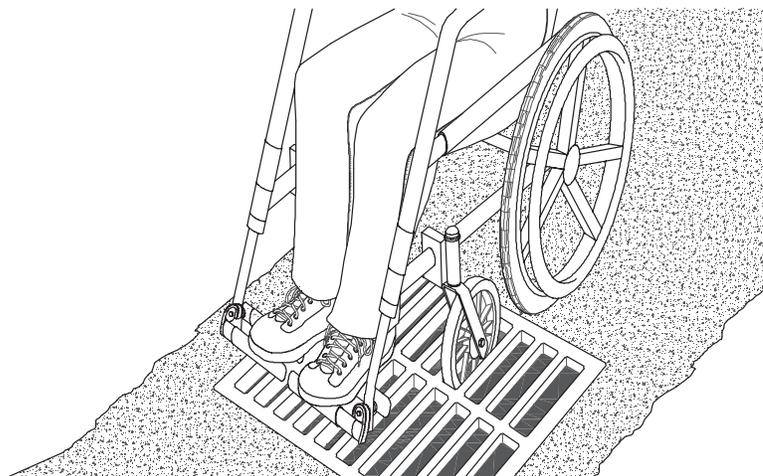
Frequent obstacles and obstacles that cross the full width of an ORAR can make travel difficult for people using mobility devices. Where possible, separate obstacles that cross the full width of an ORAR by at least 48 inches so people using mobility devices can fully cross one obstacle before confronting another.

### Openings [1016.6]

Openings are gaps in the surface of an ORAR. Gaps, including spaces between the planks on a boardwalk or slots in a drainage grate, that are big enough for wheels, cane, or crutch tips to drop through or become trapped in are potential hazards (figure 13). Where possible, drainage grates should be located outside the minimum clear width of the ORAR.



Openings in the surface of ORARs, passing spaces, and resting intervals must be small enough so that a sphere more than one-half inch in diameter cannot pass through. Where possible, elongated openings should be placed perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.



**Figure 13—Whenever possible, elongated openings in outdoor recreation access routes should be placed perpendicular to the dominant direction of travel to avoid creating potential problems.**

### Running Slope [1016.7.1]



Running slope, also referred to as grade, is the lengthwise slope of an ORAR, parallel to the direction of travel. ORAR sections of any length may be constructed with a running slope up to 1:20 (5 percent). To accommodate steep terrain, ORARs may be designed with shorter sections that have a steeper running slope and length, as shown in table 3, with resting intervals at the top and bottom of each section. The running slope of any section of an ORAR must never exceed 1:10 (10 percent).

Table 3—Maximum Running Slope and Segment Length		
Running Slope of Segment of Outdoor Recreation Access Route		Maximum Length of Segment
Steeper Than	But Not Steeper Than	
1:20 (5%)	1:12 (8.33%)	50 feet
1:12 (8.33%)	1:10 (10%)	30 feet

### Cross Slope [1016.7.2]

Cross slope is the side-to-side slope of the surface of an ORAR. When the surface is constructed of concrete, asphalt, or boards, the cross slope must be no steeper than 1:48 (2 percent). When the surface is constructed of materials other than concrete, asphalt, or boards, cross slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.



### Resting Intervals [1016.8]

Resting intervals are level areas that provide an opportunity for people to rest before continuing along an ORAR. Resting intervals are required at the top and bottom of an ORAR section any time the running slope exceeds 1:20 (5 percent).

Resting intervals may be provided within an ORAR or adjacent to an ORAR. When a resting interval is within an ORAR, it must be at least 60 inches long and at least as wide as the widest section of the ORAR leading into it (figure 14).

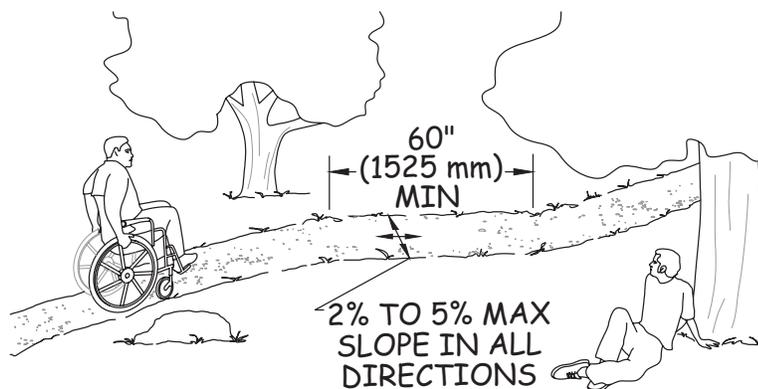


Figure 14—Length and slope requirements for resting intervals.

When a resting interval is adjacent to an ORAR, it must be at least 60 inches long and at least 36 inches wide. A turning space that complies with section 304.2.3 of the ABA Standards must be provided. The vertical alignment of the ORAR, turning space, and resting interval must be nominally planar (i.e., as flat as possible) so that all the wheels of a mobility device touch the ground surface when turning into and out of the resting interval.

When the surface of the resting interval is constructed of concrete, asphalt, or boards, the slope of the resting interval must be no steeper than 1:48 (2 percent) in any direction. When the surface of the resting interval is constructed of materials other than concrete, asphalt, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

### Protruding Objects [1016.9]

Objects that protrude into ORARs, passing spaces, and resting intervals can pose hazards to people who are blind or have low vision. Constructed elements, such as signs on ORARs, resting intervals, and passing spaces, must comply with the technical requirements for protruding objects in section 307.2 of the ABA Standards (figure 15).

The technical requirements for protruding objects do not apply to natural features, such as tree branches and rock formations. To prevent injuries to people who are blind or have low vision, whenever possible, maintain the vertical clearance free of tree branches a minimum of 80 inches above the ground surface along ORARs, resting intervals, and passing spaces.

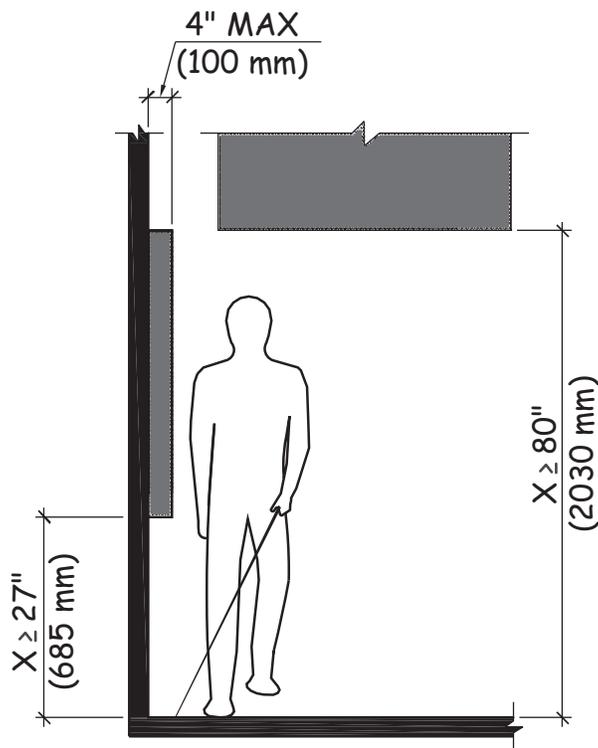


Figure 15—Constructed elements must comply with the technical requirements for protruding objects in section 307.2.

## Outdoor Constructed Features

### Definition [F106.5]

Outdoor constructed features are picnic tables, fire rings, grills, fireplaces, wood stoves, trash and recycling receptacles, water hydrants, utility and sewage hookups, outdoor rinsing showers, benches, and viewing scopes provided at outdoor recreation facilities.

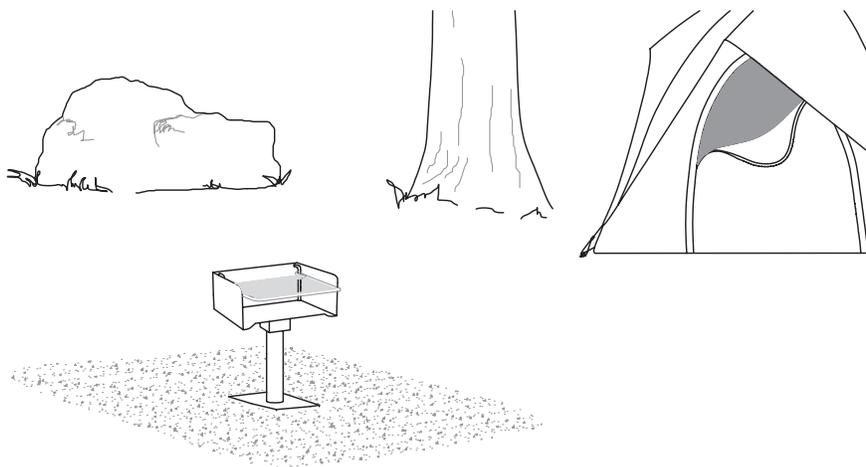
### Scoping Requirements

The scoping requirements for outdoor constructed features are explained in the sections of the standards that contain the scoping requirements for camping and picnic facilities, viewing areas, and trails and trailheads. The scoping requirements apply only where outdoor constructed features are provided. For instance, if a bench is provided at a viewing area, the scoping requirements apply to the bench. The scoping requirements do not require a viewing scope to be provided at the viewing area if none is planned. There are no scoping requirements for outdoor constructed features at beaches.

### **Camping and Picnic Facilities [F244.2.3.1, F244.3, F245.2.5.1, and F244.5.3]**

Within camping and picnic units with mobility features (figure 16), at least one of each type of outdoor constructed feature must comply with the applicable technical requirements for the feature. Where more than two of the same type of outdoor constructed feature are provided within camping and picnic units required to provide mobility features, at least two of the same type of outdoor constructed feature must comply with the applicable technical requirements for the feature.

Where outdoor constructed features are provided in common use and public use areas that serve camping and picnic units with mobility features, at least 20 percent, but no less than one, of each type of outdoor constructed feature must comply with the applicable technical requirements for the feature.



**Figure 16—This grill is an example of a common outdoor constructed feature within picnic and camping units.**

### **Viewing Areas [F246.3]**

Within viewing areas, at least 20 percent, but no less than one, of each type of outdoor constructed feature must comply with the applicable technical requirements for the feature.

### **Trails and Trailheads [F247.3.1 and F247.5]**

Within trailheads and along trails, at least 20 percent, but no less than one, of each type of outdoor constructed feature must comply with the applicable technical requirements for the feature. Where camping and picnic facilities are provided on trails, the scoping requirements for outdoor constructed features within camping and picnic facilities applies.

## **Common Technical Requirements**

The technical requirements for outdoor constructed features apply only to those outdoor constructed features that are required to comply with the technical requirements by the scoping requirements. For instance, if five benches are provided at a viewing area, at least 20 percent (or one) of the benches must comply with the technical requirements for benches.

### **Clear Ground Space [1011.2]**

A clear ground space must be provided at each outdoor constructed feature. The technical requirements include specific provisions for the size, location, surface, slope, and openings in the clear ground space.

**Exceptions [1011.2, Exceptions 1 and 2]**—When individual outdoor constructed features are altered and the ground surface is not changed, the clear ground space is not required to comply with the specific provisions for surface and slope.

In alterations, when a condition for exception does not permit full compliance with a specific provision in the technical requirements for the clear ground space, the clear ground space must comply with the specific provision to the extent practicable. Additional information on the conditions for exceptions is provided in the section of this guide on the conditions for exceptions.

**Size [1011.2.1]**—The size of the clear ground space is based on the dimensions for maneuvering clearance in section 305.7 of the ABA Standards for clear ground spaces that are confined on all or part of three sides. Providing clear ground spaces that are larger than the minimum required sizes can make the outdoor constructed feature more independently usable by people with varied abilities.

Table 4 shows the minimum requirements for clear ground space sizes for each outdoor constructed feature. The location and orientation of the clear ground space is discussed under the applicable outdoor constructed feature.

**Table 4—Clear Ground Space Requirements**

<b>Outdoor Constructed Feature</b>	<b>Minimum Size and Location</b>
Picnic tables	36 inches on all usable sides of the picnic table measured from the back edge of the seats or benches.
Fire rings, grills, fireplaces, and woodstoves	48 by 48 inches on all usable sides of a fire ring, grill, fireplace, and woodstove.  Center the space on each usable side of the grill, fireplace, and woodstove.
Trash and recycling receptacles	36 by 48 inches positioned for a forward approach to the receptacle opening or 30 by 60 inches positioned for a parallel approach to the receptacle opening.
Water hydrants	72 by 48 inches with the long side of the space adjoining or overlapping an ORAR or trail, as applicable, or another clear ground space.  Locate the clear space so that the water spout is a minimum of 11 inches and a maximum of 12 inches from the rear center of the long side of the space.
Utility and sewage hookups	30 by 60 inches with the long side of the space adjoining or overlapping an accessible parking space or pull-up space for recreational vehicles.  Locate the space so that the hookups are at the rear center of the space.  Bollards or other barriers may not obstruct the clear ground space in front of the hookups or restrict their use.
Outdoor rinsing showers	60 by 60 inches centered on the shower heads.  Locate the space so that the shower pedestal or wall supporting the shower head is at the rear of the space.
Benches	36 by 48 inches positioned near the bench with one side of the space adjoining an ORAR or trail, as applicable.  The clear ground space may not overlap the ORAR or trail or another clear ground space.
Viewing scopes	36 by 48 inches positioned for a forward approach to the viewing scope.  Provide knee and toe clearance under the viewing scope that complies with section 306.  Locate the space so that the eyepiece is centered on the space.

### **Surface, Slope, and Openings [1011.2.2, 1011.2.3, and 1011.2.4]**

The surface of the clear ground space must be firm and stable. Additional information on firm and stable surfaces is provided in the trails section of this guide.

When the surface of the clear ground space is constructed of concrete, asphalt, or boards, the slope of the clear ground space must be no steeper than 1:48 (2 percent) in any direction. When the surface of the clear ground space is constructed of materials other than concrete, asphalt, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

Openings in the surface of the clear ground space must be small enough so that a sphere more than one-half inch in diameter cannot pass through. Where possible, drainage grates should be located outside the clear ground space and elongated openings should be placed perpendicular, or as close to perpendicular as possible, to the dominant direction of travel.

### **Operable Parts [1011.3]**

The operable parts of outdoor constructed features, such as handles, levers, and latches, must comply with the technical requirements of sections 309.3 and 309.4 of the ABA Standards, unless an exception applies. The technical requirements for operable parts and exceptions to the technical requirements are discussed under the applicable outdoor constructed feature.



## Technical Requirements Applicable to Specific Features

### Picnic Tables [1011.2 and 1011.4]

The number of wheelchair spaces that must be provided at each table is based on the usable table surface perimeter. At least one wheelchair seating space a minimum of 30 by 48 inches must be provided for each 24 linear feet of usable space around the perimeter of a tabletop. Practically speaking, this means that one space is usually required for tables up to 9 feet long. Tables between 10 and 20 feet long usually require two wheelchair spaces (figure 17). More spaces are required for longer tables.

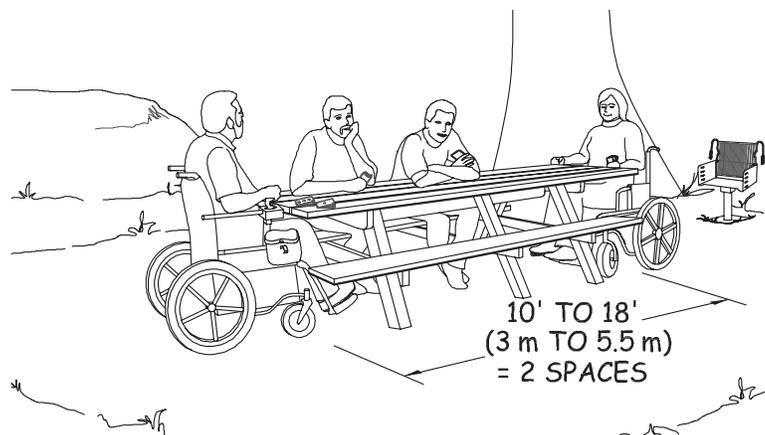


Figure 17—At least two spaces must be accessible at a 10- to 18-foot long picnic table.

The wheelchair space must be positioned for a forward approach and provide knee and toe clearance under the table that complies with section 306 of the ABA Standards. Knee clearance must be at least 30 inches wide and 8 inches deep at 27 inches above the ground surface. Toe clearance must be at least 30 inches wide and 17 inches deep and extend at least 9 inches above the ground surface (figure 18). Knee and toe clearance are required to ensure that a person using a mobility device can sit close to a tabletop, regardless of the table's design. If a table is constructed with one solid leg on each end, as opposed to an A-shaped frame or two individual legs on each end of the table that would allow the wheelchair to fit between, the toes of a person using a mobility device could hit the table leg.

Section 902.3 of the ABA Standards requires that the tops of dining surfaces be between 28 inches and 34 inches above the floor or ground surface. Tabletops

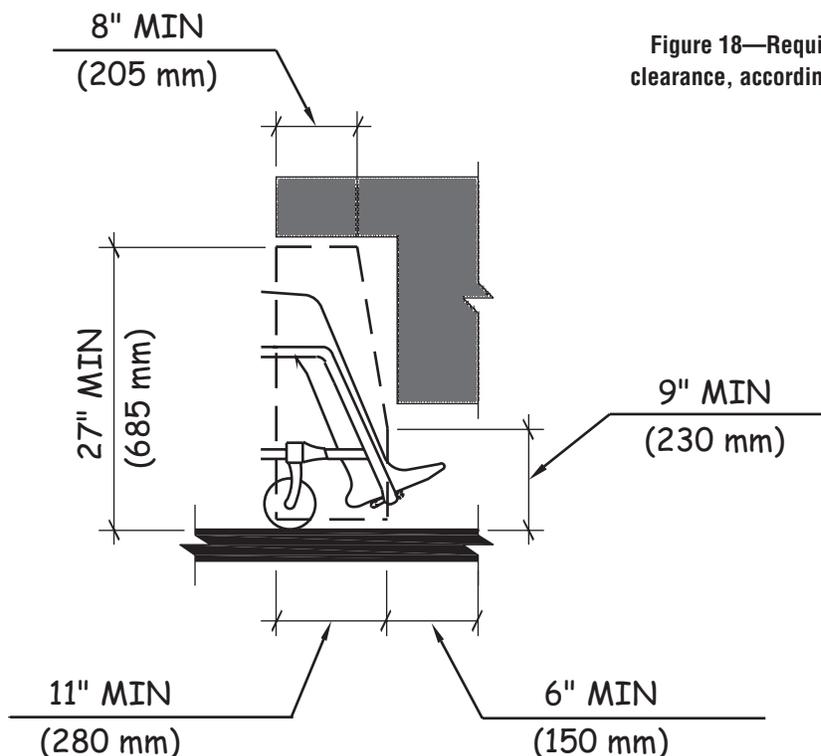


Figure 18—Required knee and toe clearance, according to section 306.3.

may be constructed of a number of different types of materials. Some of these materials, such as heavy timbers, may be quite thick and must allow for knee and toe clearance under the table at the wheelchair spaces.

In addition to the clear ground space for each wheelchair space, a clear ground space 36 inches wide must be provided on all usable sides of a table. This allows a person using a mobility device to maneuver around all usable sides of the table. The clear ground space is measured from the back edge of the benches.

### Fire Rings, Grills, Fireplaces, and Woodstoves [1011.2, 1011.3, and 1011.5]

A minimum of 48 by 48 inches of clear ground space must be provided on all usable sides of fire rings, grills, fireplaces, and woodstoves. The usable sides of these elements are the sides that can be used for building a fire or for cooking. All sides of fire rings and grills are generally usable, unless a wall or other structure on a side renders that side unusable. At least 48 inches of clear ground space must be provided around the entire fire ring or grill (figure 19). The front sides of fireplaces and woodstoves are generally the usable sides.

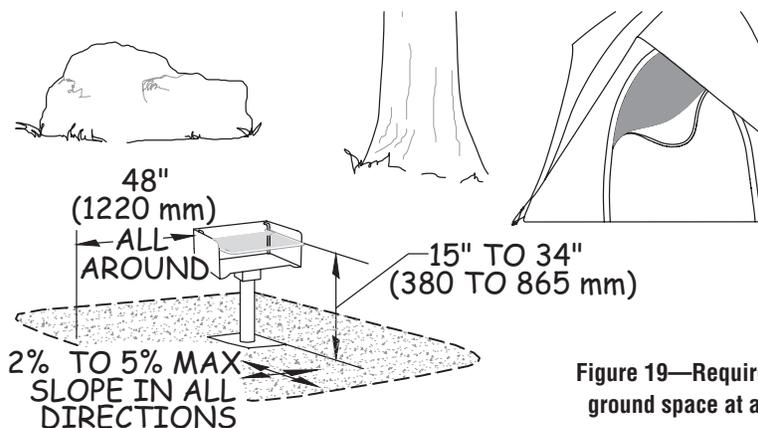
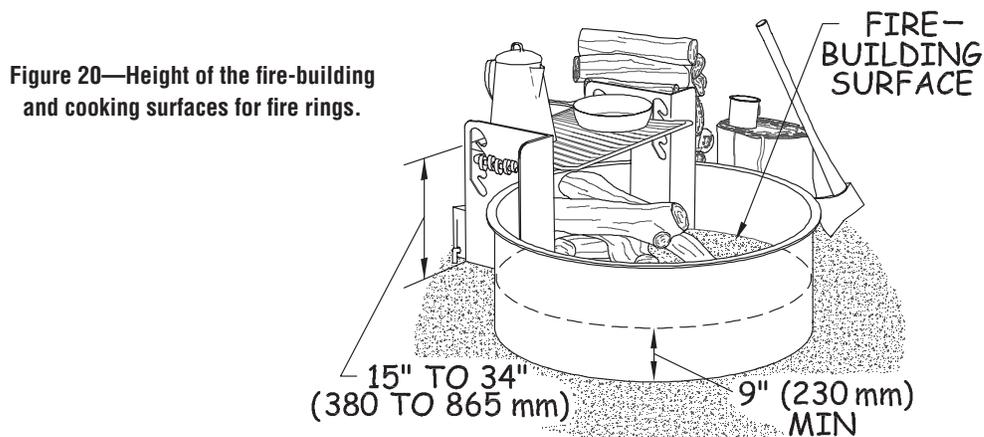


Figure 19—Requirements for clear ground space at a pedestal grill.

The fire-building surface within a fire ring must be at least 9 inches above the ground (figure 20). Fire rings that are constructed with two concentric walls reduce the chances that people using mobility devices and children will receive burns when the outside wall is touched.

The cooking surface must be between 15 and 34 inches above the ground. The cooking surface of pedestal grills may be adjustable beyond the required range, but must include adjustments within the specified range.



Some custom-built fire rings and fireplaces may have a raised edge or wall around the fire-building area, perhaps built out of bricks or mortared stone. The depth or thickness of the raised edge or wall must not exceed 10 inches (figure 21).

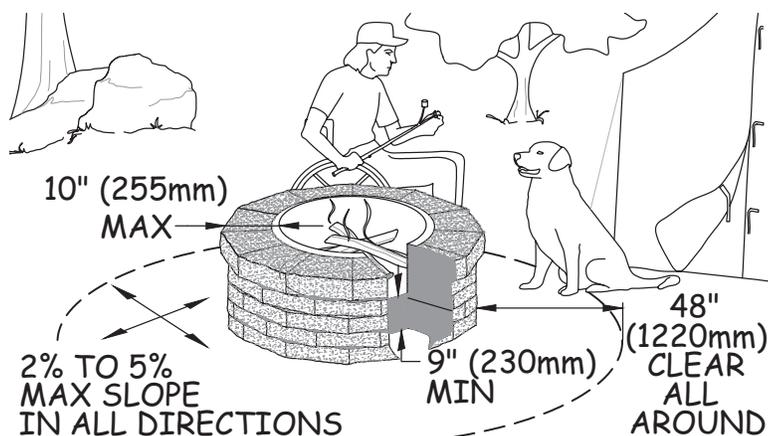


Figure 21—Requirements for custom-built fire rings.

The operable parts of fire rings, grills, fireplaces, and wood stoves must be between 15 and 48 inches above the ground (figure 22). If an operable part, such as a handle or lever, falls outside this range during operation, it is not compliant. Operable parts must also be operable using one hand without tightly grasping, pinching, or twisting the wrist, and with no more than 5 pounds of force.

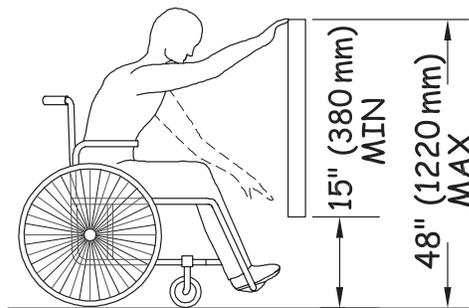


Figure 22—Reach requirements for operable parts.

Fire rings, grills, fireplaces, and woodstoves with compliant operable parts may not yet be commercially available. Until products with compliant operable parts become commercially available, compliance is required to the extent practicable.

### Trash and Recycling Receptacles [1011.2 and 1011.3]

At trash and recycling containers, a minimum of 36 by 48 inches of clear ground space positioned for a forward approach to the receptacle opening, or a minimum of 30 by 60 inches of clear ground space positioned for a parallel approach to the receptacle opening must be provided.



The operable parts of trash and recycling containers, such as handles or latches, must be between 15 and 48 inches above the ground. The operable parts must also be operable using one hand without tightly grasping, pinching, or twisting the wrist, and with no more than 5 pounds of force.



Currently, trash and recycling receptacles with hinged lids and latches to keep out large animals require a person to operate the latch or handle by tightly grasping, pinching, or twisting the wrist, and by applying more than 5 pounds of force. Until products with compliant operable parts become commercially available, compliance is required to the extent practicable.

Dumpster-type trash and recycling receptacles are not required to comply with the technical requirements for operable parts because the receptacle openings are typically more than 48 inches above the ground.

### Benches [1011.2]

A minimum of 36 by 48 inches of clear ground space must be provided near a bench, with one side of the clear space adjoining an ORAR or trail as applicable. This clear ground space must not overlap the ORAR, trail tread, or another clear ground space.

Although there are no technical requirements for the bench itself, providing a bench with at least one armrest and back support that runs the full length of the bench is helpful to people who need the support or have difficulty standing up



from a seated position. However, armrests on both ends of a bench could prevent a person using a mobility device from being able to transfer from the device onto the bench. One option is to provide a bench with a backrest and one armrest placed in the middle of the bench. Another option is to place a single armrest on the end of the bench farthest from the clear ground space.

The technical requirements in section 903 of the ABA Standards apply only to benches used for dressing and undressing in fitting and locker rooms, and not to benches used for sitting in an outdoor developed area.

### **Water Hydrants and Water Spouts [1011.2, 1011.3, and 1011.6]**

Water hydrants are outdoor devices for dispensing water, including water faucets on posts and hand pumps. The opening for dispensing the water is called a water spout.



At water hydrants, a minimum of 72 by 48 inches of clear ground space must be provided with the long side of the space adjoining or overlapping an ORAR or trail as applicable, or another clear ground space (figure 23). The clear ground space must be located so that the water spout is between 11 and 12 inches from the rear center of the long side of the space. This allows people using mobility devices to approach and operate the water spout from either the right or left side.

There are different technical requirements for the clear ground space at water utility hookups in camping units required to provide mobility features, which are discussed in the next section. There are also different technical requirements for drinking fountains in section 602 of the ABA Standards.

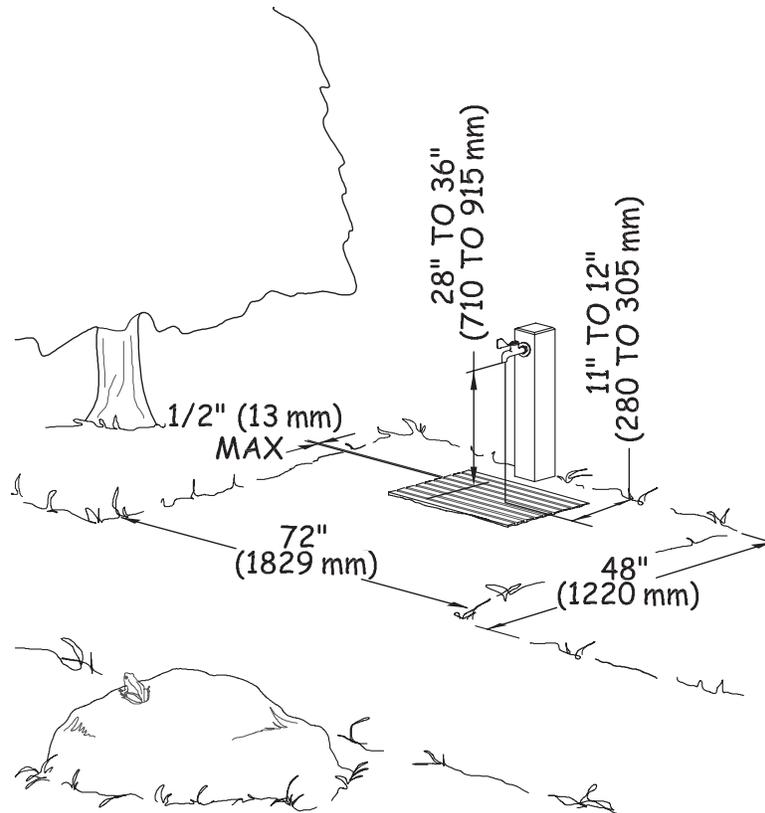


Figure 23—Technical requirements for water hydrants.

Water spouts must be between 28 and 36 inches above the ground. The operable parts of water hydrants, such as handles or levers, must be between 15 and 48 inches above the ground. Operable parts must also be operable using one hand without tightly grasping, pinching, or twisting the wrist, and with no more than 5 pounds of force. Water hydrants with compliant operable parts may not yet be commercially available. Until products with compliant operable parts become commercially available, compliance is required to the extent practicable.

### Utility and Sewage Hookups [1011.2, 1011.3, and 1011.6]

At utility hookups, such as electrical service, water, cable or Internet connections, in camping units with mobility features and at sewage hookups in dump stations, a minimum of 30 by 60 inches of clear ground space must be provided with the long side of the space adjoining or overlapping an accessible parking space or pull-up space for recreational vehicles (RVs). The clear ground space must be designed so that the hookups are located at the rear center of the space. Bollards or other barriers must not obstruct the clear ground space in front of the hookups.



The operable parts of utility hookups must be between 15 and 48 inches above the ground. Water spouts must be between 28 and 34 inches above the ground. Operable parts must also be operable using one hand without tightly grasping, pinching, or twisting the wrist, and with no more than 5 pounds of force. Sewage hatches do not have to comply with the technical requirements for operable parts.

Because RV dump stations are usually accessed by vehicle, an ORAR is not required to connect to RV dump stations when an accessible vehicle pull-up space is provided at RV dump stations. An accessible vehicle pull-up space must be a minimum of 20 feet wide.

### Outdoor Rinsing Showers [1011.2, 1011.3, and 1011.7]

Outdoor rinsing showers allow people to rinse off sand, dirt, and debris. They are not intended for bathing. Outdoor rinsing showers generally don't offer privacy and people usually are not allowed to disrobe when using them.



At outdoor rinsing showers, a minimum of 60 by 60 inches of clear ground space must be provided. The clear ground space must be centered on the shower head to enable people using mobility devices to turn in the space while rinsing. The shower pedestal or wall with the shower heads must be at the rear end of the clear ground space.

At least one hand-held shower spray unit must be provided. The hand-held shower spray unit must have a hose at least 59 inches long and at least one fixed position between 15 and 48 inches above the ground (figure 24). When vandalism is a consideration, a fixed shower head mounted at 48 inches above the ground is allowed in place of a hand-held shower spray unit. Outdoor rinsing showers can have more than one hand-held spray unit or fixed shower head.

The other operable parts of outdoor rinsing showers, such as handles or levers, must be between 15 and 48 inches above the ground and be operable using one hand without tightly grasping, pinching, or twisting the wrist, and with no more than 5 pounds of force. If self-closing devices are used, they should remain open and allow water to flow for at least 10 seconds.

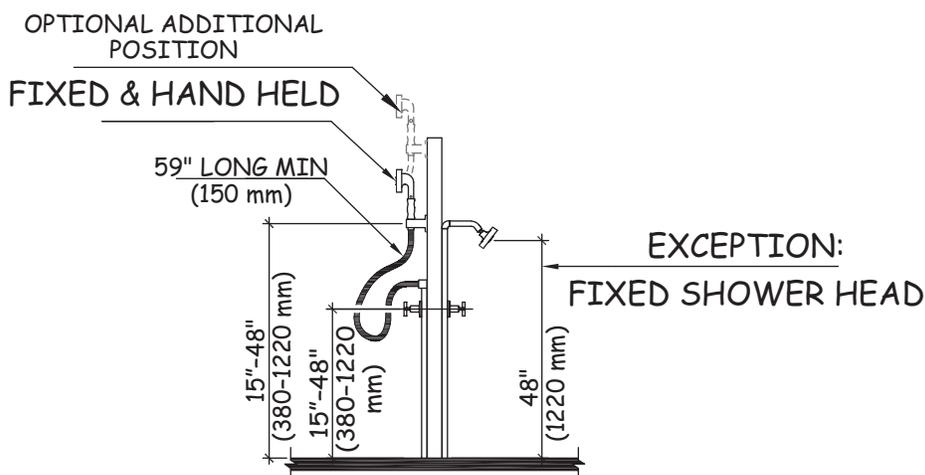


Figure 24— Technical requirements for outdoor rinsing showers.



### Viewing Scopes [1011.2, 1011.3, and 1011.8]

Viewing areas or overlooks are sometimes equipped with viewing scopes to provide visitors with a closer view of a point of interest. When viewing scopes are provided, separate viewing scopes must be provided for use from a standing position and from a seated position. This allows everybody the opportunity to experience similar views. Viewing scopes that can be used from a seated position provide viewing opportunities not only for seated individuals, but also for children and people of short stature. The viewing scopes can be mounted on separate pedestals or on the same pedestal.

At viewing scopes used from a seated position, a minimum of 36 by 48 inches of clear ground space positioned for a forward approach to the viewing scope must be provided. The clear ground space must be centered on the eyepiece of the viewing scope. Knee and toe clearance that complies with section 306 of the ABA Standards must be provided under the viewing scope (figure 25).

The eyepieces of viewing scopes used from a seated position must be between 43 and 51 inches above the ground surface. The other operable parts of viewing scopes, such as handles or levers, must be located between 15 and 48 inches above the ground and be operable using one hand without tightly grasping, pinching, or twisting the wrist, and with no more than 5 pounds of force.

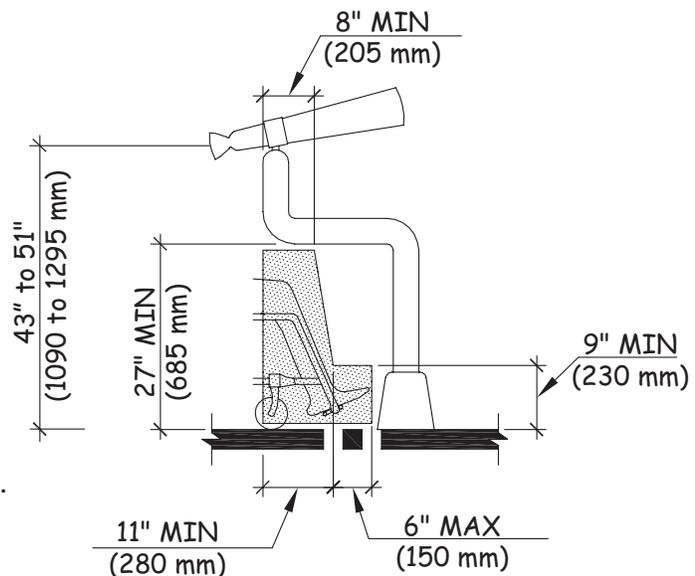


Figure 25—Technical requirements for viewing scopes.

## Other Features

### Sinks [F212.3, Exception 2]

Sinks in camping and picnic facilities are not required to comply with the technical requirements for sinks in Section 606 of the ABA Standards, unless a cooktop or conventional range is provided. Lavatories must comply with the technical requirements for lavatories in section 606 of the ABA Standards.

When hot water is provided, the drainpipes at sinks and lavatories must be wrapped, insulated, or shielded to help prevent a person using a mobility device from accidentally touching the hot drainpipes. This is especially important if a forward approach is provided.

### Toilet and Bathing Facilities [F213 and 603 through 610]

When toilet and bathing facilities are provided, they must comply with the scoping and technical requirements in sections F213 and 603 through 610 of the ABA Standards. When bathing facilities are provided, at least one transfer shower, roll-in shower, or accessible bathtub must be provided.



When multiple single user portable toilet or bathing units are clustered at the same location, no more than 5 percent of the units at each cluster must comply with the technical requirements in section 603 of the ABA Standards.

## Pit Toilets [F213.1, Exception]

Pit toilets are primitive outhouses that may consist simply of a hole in the ground covered by a toilet riser (figure 26). Pit toilets are only provided in low development sites where they are determined to be necessary for resource or environmental protection. Pit toilets on trails and in camping facilities are not required to comply with the scoping and technical requirements for toilet facilities. F247.4.4 requires routes connecting pit toilets located along a trail to comply with the technical requirements in 1017 only if the trail complies with 1017. ORARs are not required to connect facilities on trails.

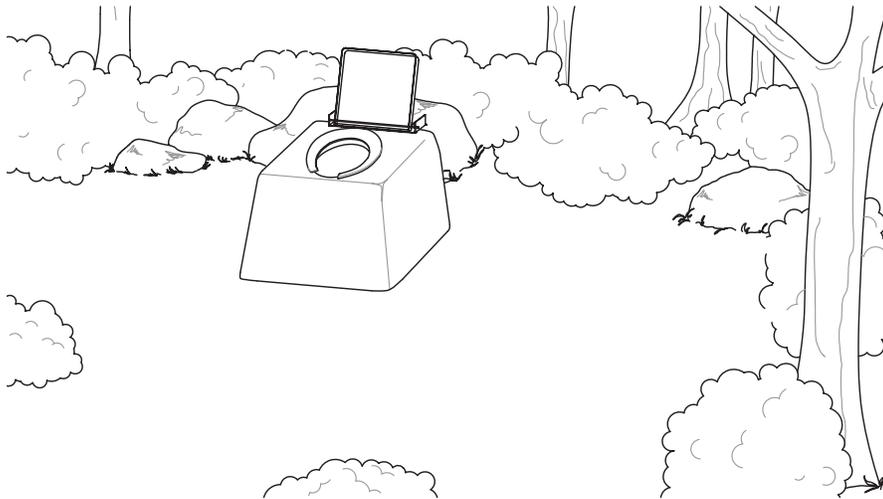


Figure 26—A pit toilet.

## Camping Facilities



### Definition [F106.5]

A camping facility is a site, or a portion of a site, that is developed for outdoor recreational purposes and contains camping units.

A camping unit is an outdoor space in a camping facility that is used for camping and contains outdoor constructed features, parking spaces for RVs or other vehicles, tent pads or tent platforms, or camp shelters.

### Camping Units With Mobility Features [F244.2]

Camping facilities must provide a minimum number of camping units with mobility features based on the total number of camping units provided in the camping facility, in accordance with table 5. When different types of camping units are provided (e.g., camping units for RVs only or tent camping only, or camping units with camp shelters), table 5 applies to each type of camping unit provided. If a camping facility has 15 units for tent camping only and 30 units for RVs only, then at least two of the tent camping units and at least three of the RV units must provide mobility features.

**Table 5—Camping Units with Mobility Features**

Total Number of Camping Units Provided in Camping Facility	Minimum Required Number of Camping Units with Mobility Features
1	1
2 to 25	2
26 to 50	3
51 to 75	4
76 to 100	5
101 to 150	7
151 to 200	8
201 and over	8, plus 2 percent of the number over 200

Camping units with mobility features don't have to be identified by signs. Entities should provide information on the location of camping units with mobility features on Web sites, in brochures, and at bulletin boards or information kiosks at the camping facility. When an entity operates a reservation system for camping units or assigns camping units upon arrival, the entity should establish policies and procedures to ensure that camping units with mobility features are available for people with disabilities until all other camping units are occupied.

**Alterations and Additions [F244.2.1]**

When altering or adding camping units at an existing camping facility, only consider the number of altered or added camping units when using table 5 to determine the required number of camping units with mobility features. Continue this practice whenever camping units are altered or added until the total number of camping units with mobility features in the camping facility complies with the minimum number required in table 5.



### Example

A camping facility has 50 RV camping units. The facility currently does not have an RV camping unit with mobility features. Twenty-five additional RV units are being added to the facility. With the addition of 25 new units, 2 of the newly added units are required to have mobility features even though, in new construction, 75 new units would require 4 units with mobility features to be provided. The scoping requirements apply to any subsequent alteration or addition until the full number of units with mobility features required on a site is satisfied.

When an entity is implementing a transition plan for program accessibility developed pursuant to regulations issued under section 504 of the Rehabilitation Act, which designates specific camping units to provide mobility features, the entity is not required to provide accessible elements when altering individual elements within camping units that are not designated to provide mobility features. When all the elements within a camping unit are altered, the altered camping unit must provide mobility features unless the minimum number of camping units with mobility features required in table 5 is already provided at the camping facility.

### Dispersion [F244.2.2]

Camping units with mobility features must provide choices of units comparable to and integrated with those available to all other campers. For instance, if camping units are provided near a body of water or on the foothills, then some units with mobility features must also be located in the same settings.

## **Elements Within Camping Units With Mobility Features [F244.2.3]**

At least one of each type of element provided within camping units with mobility features, including outdoor constructed features, parking spaces for RVs, parking spaces for vehicles other than RVs, tent pads and tent platforms, and camp shelters, must comply with the applicable technical requirements for the element. When more than one of the same type of element (e.g., picnic tables, tent pads) is provided within a camping unit with mobility features, at least two of the same type of element must comply with the applicable technical requirements for the element.

## **Outdoor Constructed Features in Common Use and Public Use Areas [F244.3]**

Where outdoor constructed features are provided in common use and public use areas that serve camping units with mobility features, at least 20 percent, but no less than one, of each type of outdoor constructed feature provided at each location must comply with the applicable technical requirements for the feature.

## **Outdoor Recreation Access Routes in Camping Facilities [F244.5]**

The scoping and technical requirements for ORARs in camping facilities are discussed in the section of this guide on ORARs.

### RV Parking Spaces Within Camping Units With Mobility Features and RV Pull-Up Spaces at Dump Stations [F244.2.3.2.1 and F244.4]



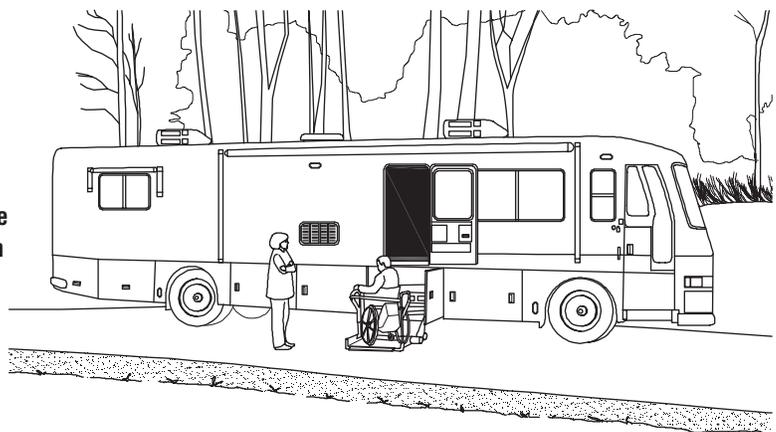
RV parking spaces within camping units with mobility features and RV pull-up spaces at dump stations must comply with the technical requirements for width, surface, and slope of RV spaces.

#### Width of Spaces [1012.2]

Parking spaces and pull-up spaces for RVs must be at least 20 feet wide to accommodate RVs equipped with a lift (figure 27). RVs are typically 8 feet wide and require a 9-foot-wide space. RVs equipped with a lift need an additional 8 feet of space on the passenger's side to deploy the lift and to allow people using mobility devices to maneuver onto and off of the lift. Utility hookups for RVs are typically located on the driver's side of the vehicle. An additional 3 feet of space is needed on the driver's side so that people using mobility devices can access the utility hookups.

Where two adjacent parking spaces are provided for RVs, one of the parking spaces is permitted to be narrower, but must be at least 16 feet wide.

**Figure 27—An accessible recreational vehicle with a wheelchair lift.**



### **Surface and Slope [1012.4 and 1012.5]**

The surface of parking spaces and pull-up spaces for RVs must be firm and stable.

When the surface of parking spaces and pull-up spaces for RVs is constructed of asphalt, concrete, or boards, the slope of the parking spaces and pull-up spaces must be no steeper than 1:48 (2 percent) in any direction. When the surface of parking spaces and pull-up spaces for RVs is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

### **Parking Spaces for Vehicles Other Than RVs [F244.2.3.2.2]**

Parking spaces for vehicles other than RVs within camping units with mobility features must comply with the following technical requirements for width, surface, and slope.



#### **Width of Spaces [1012.3]**

Parking spaces for vehicles other than RVs must be at least 16 feet wide. Parking spaces at least 16 feet wide can accommodate vans equipped with a lift or ramp.

When two adjacent parking spaces are provided for vehicles other than RVs, one of the parking spaces is permitted to be at least 8 feet wide.

Parking spaces within camping units with mobility features do not have to be striped or identified by the International Symbol of Accessibility.

### **Surface and Slope [1012.4 and 1012.5]**

The technical requirements for the surface and slope of parking spaces for vehicles other than RVs are the same as for RV parking spaces.

## Tent Pads and Tent Platforms [1013]



Tent pads and tent platforms are defined spaces with prepared surfaces for setting up and securing tents. No minimum tent pad size is specified because the types of tents commonly used in camping facilities can vary depending on the setting. For example, small tents may be used at a camping facility near a wilderness access point, while large family tents may be used at a more developed camping facility with numerous constructed features. Tent pads and tent platforms must comply with the technical requirements for clear ground space and slope. Tent platforms must also comply with the technical requirements for height.

### Exception [1013.1, Exception]

When a condition for exception does not permit full compliance with a specific provision in the technical requirements for tent pads and tent platforms, the tent pads and tent platforms must comply with the specific provision to the extent practicable. Additional information on the conditions for exceptions is provided in the section of this guide on the conditions for exceptions.

### Clear Ground Space [1013.2]

A clear ground space at least 48 inches wide must be provided on all usable sides of tent pads and tent platforms. This clear ground space enables people using mobility devices to set up and take down a tent (figure 28). The usable sides of tent pads and tent platforms are the sides that can be used for setting up and taking down a tent. All sides of tent pads and tent platforms are generally usable, unless the tent pad or tent platform is located next to a natural feature, such as a rock or tree, that renders a side unusable. The

surface of the clear ground space must be firm and stable, but must also accommodate the use of tent stakes or other devices to secure the tent.



Figure 28—Clear space requirements for tent pads and platforms.

### Slope [1013.3]

When the surface of tent pads, tent platforms, and clear ground spaces is constructed of materials other than asphalt, concrete, or boards, the surface must be no steeper than 1:48 (2 percent) in any direction. When the surface is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

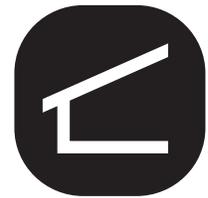
### Floor Height [1013.4]

If the tent platform floor is raised above grade, the floor height must be no more than 19 inches when measured from the clear ground space to the tent platform surface. This height allows people using mobility devices to transfer from the device to the platform surface.

## Camp Shelters [1014]

### Definition [F106.5]

A camp shelter is a partially enclosed structure that provides campers and hikers cover from weather and that does not contain plumbing fixtures or kitchen appliances. Camp shelters are often located on long-distance trails. Camp shelters are not cabins, which are typically larger and must comply with the ABA Standards for transient lodging.



### Exceptions [1014.1, Exceptions 1 and 2]

When a condition for exception does not permit full compliance with a specific provision in the technical requirements for camp shelters, the camp shelter must comply with the specific provision to the extent practicable. Additional information on the conditions for exceptions is provided in the section of this guide on the conditions for exceptions.

The technical requirements for protruding objects in section 309 of the ABA Standards do not apply to camp shelters. Many times, the roof of a camp shelter is sloped or does not permit someone to stand fully erect while in the shelter.

## **Entrance [1014.2]**

Camp shelters must provide either transfer access or roll-in access at the entrance. Providing shelters with roll-in access enables people using mobility devices to also shelter the device.

### **Transfer Access [1014.2.1]**

To provide transfer access at the entrance to a camp shelter, a clear ground space at least 36 by 48 inches positioned for a parallel approach must be provided along the open side of the camp shelter. One full, unobstructed side of the clear ground space must adjoin or overlap an ORAR or trail, as applicable, or another clear ground space. The surface of the clear ground space must be firm and stable. When the surface of the clear ground space is constructed of asphalt, concrete, or boards, the slope of the clear ground space must be no steeper than 1:48 (2 percent) in any direction. When the surface of the clear ground space is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

The camp shelter floor at the entrance or opening must be no higher than 19 inches when measured from the clear ground space. This enables people using mobility devices to pull alongside of the shelter and transfer from the mobility device to the shelter floor. For people using power mobility devices, raised floor shelters that provide transfer access may make it difficult to bring the mobility device into the shelter to protect it from the weather.

### **Roll-in Access [1014.2.2]**

To provide roll-in access into a camp shelter, a level or sloped entry route that complies with the technical requirements for an ORAR or trail, as applicable, must be provided along the open side of the camp shelter. Handrails and edge protection are not required on a sloped entry into a camp shelter but may be useful to people with and without disabilities.

When roll-in access is provided, a turning space at least 60 inches in diameter or a T-shaped space with an arm at least 60 by 36 inches and a base at least 36 inches wide and 24 inches long must be provided inside the camp shelter.

### **Floor [1014.3]**

The floor surface within a camp shelter must be firm and stable. When the floor surface is constructed of asphalt, concrete, or boards, the slope of the floor surface must be no steeper than 1:48 (2 percent) in any direction, regardless of the type of access provided (e.g., sloped entry or transfer access). When the floor surface is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

## Picnic Facilities



### Definition [F106.5]

A picnic facility is a site, or a portion of a site, that is developed for outdoor recreational purposes and contains picnic units.

A picnic unit is an outdoor space in a picnic facility that is used for picnicking and contains at least one outdoor constructed feature.

### Picnic Units With Mobility Features [F245.2.1 and F245.2.2]

When only one or two picnic units are provided in a picnic facility, each picnic unit must provide mobility features. When more than two picnic units are provided in a picnic facility, at least 20 percent, but no less than two, of the picnic units must provide mobility features.

Picnic units with mobility features don't have to be identified by signs. Entities should provide information on the location of picnic units with mobility features on Web sites, in brochures, and at bulletin boards or information kiosks at the picnic facility.

### Alterations and Additions [F245.2.3]

When altering or adding picnic units to an existing picnic facility, the scoping requirements apply only to the picnic units that are altered or added until the required minimum number of picnic units with mobility features is provided at the picnic facility.

### **Example**

A picnic facility has 10 picnic units. None of the picnic units provide mobility features. Ten picnic units are being added to the facility, for a total of 20 units. In order for the facility to comply with the minimum requirement of 20 percent of picnic units providing mobility features, a minimum of two new units, not four, must be constructed to include mobility features. When any of the existing picnic units are altered in the future, at least two of the existing units must include mobility features. The requirements only apply to the picnic units that are altered or added until the required minimum number of picnic units with mobility features is provided at the picnic facility.

When an entity is implementing a transition plan for program accessibility developed pursuant to regulations issued under section 504 of the Rehabilitation Act, which designates specific picnic units to provide mobility features, the entity is not required to provide accessible elements when altering individual elements within picnic units that are not designated to provide mobility features. When all the elements within a picnic unit are altered, the altered picnic unit must provide mobility features until the required minimum number of picnic units with mobility features is provided at the picnic facility.

### **Dispersion [F245.2.4]**

Picnic units with mobility features must provide choices of picnic units comparable to, and integrated with, those available to others.

## **Elements Within Picnic Units With Mobility Features [F245.2.5]**

At least one of each type of element provided within picnic units with mobility features, including outdoor constructed features and parking spaces, must comply with the applicable technical requirements for that element. When more than one of the same type of element (e.g., picnic tables, grills) is provided within a picnic unit with mobility features, at least two of the same type of element must comply with the applicable technical requirements for that element.

## **Outdoor Constructed Features in Common Use and Public Use Areas [F245.4]**

Where outdoor constructed features are provided in common use and public use areas that serve picnic units with mobility features, at least 20 percent, but no less than one, of each type of outdoor constructed feature provided at each location must comply with the applicable technical requirements for the feature.

## **Outdoor Recreation Access Routes in Picnic Facilities**

The scoping and technical requirements for ORARs in picnic facilities are discussed in the section of this guide on ORARs.

## Viewing Areas

### Definition [F106.5]

A viewing area is an outdoor space developed for viewing a landscape, wildlife, or other points of interest.



### Distinct Viewing Locations [F246.2, 1015.2, and 1015.3]

Viewing areas often provide more than one distinct viewing location. For example, a viewing area can provide a distinct viewing location for observing a mountain range and another distinct viewing location for observing a river. Distinct viewing locations within a viewing area don't have to be identified, but may be designated by signs or other markers.

A clear ground space at least 36 by 48 inches that is positioned for either a forward or parallel approach must be provided at each distinct viewing location. One full, unobstructed side of the clear ground space must adjoin or overlap an ORAR or trail, as applicable, or another clear ground space.



Each distinct viewing location must provide a viewing space that is adjacent to the clear ground space through which the point of interest may be viewed. The viewing space must be free and clear of obstructions between 32 and 51 inches above the ground and must extend the full width of the clear ground space.

Guards or similar safety barriers can obstruct the viewing space only to the extent that the obstruction is necessary for the guard or other safety barrier to serve its intended purpose. See-through panels may be used to provide safety while still allowing a person using a mobility device or a person of short stature to view the point of interest.

### Turning Space [1015.4]

A turning space at least 60 inches in diameter or a T-shaped space with an arm at least 60 by 36 inches and a base at least 36 inches wide by 24 inches long (figure 29) must be provided within the viewing area to allow people using mobility devices to turn around.

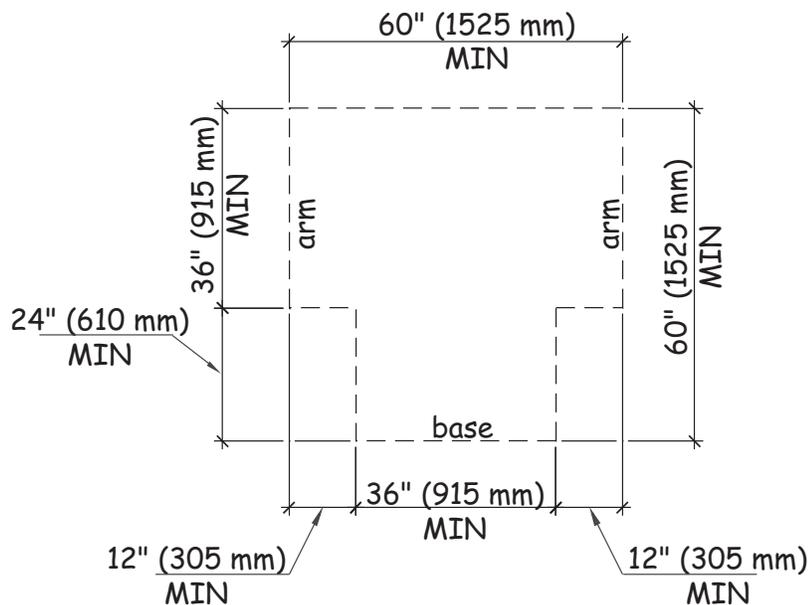


Figure 29—A T-shaped turning space that complies with section 304.3.2.

## Surface and Slope [1015.5 and 1015.6]

The surface of clear ground spaces and turning spaces must be firm and stable. Additional information on firm and stable surfaces is provided in the trails section of this guide.



When the surface of clear ground spaces and turning spaces is constructed of asphalt, concrete, or boards, the slope of the surface must be no steeper than 1:48 (2 percent) in any direction. When the surface is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

## Outdoor Constructed Features Within Viewing Areas [F246.3]

At least 20 percent, but no less than one, of each type of outdoor constructed feature provided within each viewing area must comply with the applicable technical requirements for the feature. The technical requirements for outdoor constructed features, including viewing scopes, are located in the section of this guide on outdoor constructed features.

## Outdoor Recreation Access Routes in Viewing Areas [F246.4]

At viewing areas not located along trails, at least one ORAR must connect accessible parking spaces or other arrival points that serve the viewing area with accessible elements, spaces, and facilities provided within the viewing area. Additional information on the scoping and technical requirements for ORARs at viewing areas are discussed in the section of this guide on ORARs.

## Beach Access Routes



Beach access routes allow pedestrians to cross a beach so that they can play, swim, or participate in other beach- or water-related activities. A beach access route is a continuous, unobstructed path that crosses the surface of the beach and provides pedestrians access to the water. Beach access routes are not required where pedestrian access to the beach is not allowed.

Beach access routes can be permanent or removable. Removable beach access routes may be an option where restrictive permits are issued in coastal and shoreline areas, where seasonal tides or high flows may remove or damage a permanent structure, or in areas where the beach erodes or builds up quickly each season and causes a permanent beach access route to become inaccessible. Removable beach access routes can be moved to a protected storage area during storms and other periods when the routes are subject to damage or loss.

There are no scoping requirements for outdoor constructed features provided on beaches. Outdoor constructed features provided on beaches don't have to be connected by beach access routes, ORARs, trails, or accessible routes. Whenever possible, providing access to outdoor constructed features on a beach gives people with disabilities more independence and opportunities to participate in beach- or water-related activities.

## Scoping Requirements

### Facilities Serving Beaches [F248.1.1]

Beach access routes are required when an entity that administers or manages a beach constructs or alters any circulation paths, parking facilities, toilet facilities, or bathing facilities that serve the beach. The entity is not required to spend more than 20 percent of the costs of constructing or altering these facilities to provide beach access routes.



### Beach Nourishment [F248.1.2]

Beach access routes are required when the entity that administers or manages the beach undertakes a beach nourishment project. The entity is not required to spend more than 20 percent of the costs of a beach nourishment project to provide beach access routes.

### Minimum Number of Beach Access Routes [F248.2]

At least one beach access route must be provided for each one-half mile of beach shoreline administered or managed by the same entity. The number of beach access routes is not required to exceed the number of pedestrian access points provided to the beach by the entity. Pedestrian access points to a beach include parking facilities, dune crossings, and stairways or ramps leading from boardwalks to the beach. In high-density population areas, entities should consider providing beach access routes more frequently than the minimum of every one-half mile to prevent people with disabilities from traveling extensive distances to access the beach.

## **Location [F248.3]**

Beach access routes must coincide with or be located in the same general area as pedestrian access points that serve the beach.

## **Technical Requirements [1018 and 1018.1, Exception 3]**

The technical requirements for beach access routes include specific provisions for connections, the surface, clear width, obstacles, openings, running slope, cross slope, resting intervals, protruding objects, and dune crossings. Removable beach access routes are not required to comply with the specific provisions for running slope, cross slope, resting intervals, and dune crossings.

## **Using the Beach Access Route Exceptions [1018.1, Exceptions 1 and 2]**

When a condition for exception does not permit full compliance with a specific provision in the technical requirements on a portion of a beach access route, that portion of the route must comply with the specific provision to the extent practicable. After applying all the applicable conditions for exceptions to a beach access route, if an entity determines that it is impracticable to provide a beach access route that meets the technical requirements, then a compliant beach access route is not required. Additional information on the conditions for exceptions, including documenting use of the exceptions on portions of a beach access route and notifying the Access Board when it is impracticable to provide an entire beach access route, is provided in the section of this guide on the conditions for exceptions.

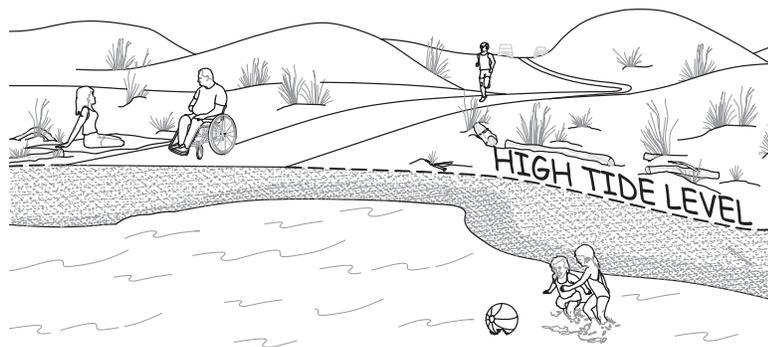
### Removable Beach Access Route Requirements

Removable beach access routes are not required to comply with the specific requirements for running slope, cross slope, resting intervals, and dune crossings.

### Connections [1018.2]

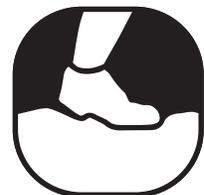
Beach access routes must connect an entry point to the beach to the high tide level at tidal beaches (figure 30); the mean high water level at river beaches; and the normal recreation water level at lake, pond, and reservoir beaches. Whenever possible, providing a beach access route that extends into the water will allow people to remain in their mobility devices and to transfer directly into the water.

Figure 30—The high tide level at a coastal beach.



### Surface [1018.3]

The surface of beach access routes and resting intervals must be firm and stable. Sand is not a firm and stable surface. Additional information on firm and stable surfaces is provided in the trails section of this guide.



### Clear Width [1018.4]



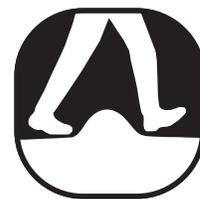
The clear width of beach access routes must be a minimum of 60 inches to enable people using mobility devices to pass people traveling in the opposite direction without veering off the firm and stable surface into the sand. The clear width of beach access routes that are not removable can be reduced to a minimum of 48 inches at dune crossings.

Beach wheelchairs are not a substitute for providing beach access routes. Beach wheelchairs have large, wide wheels that can roll across sand without sinking but do not provide independent access.

When gates or barriers are installed to control beach access, the gates or barriers must allow the passage of mobility devices, including beach wheelchairs. Gates or barriers should provide clear openings at least 48 inches wide for beach wheelchairs.

### Obstacles [1018.5]

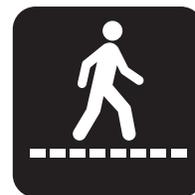
Changes in the vertical alignment of boards or the connection points for removable sections of beach access routes can be obstacles to beach access. When beach access routes are constructed of concrete, asphalt, or boards, obstacles cannot exceed one-half inch in height at their highest point.



When beach access routes are constructed of materials other than concrete, asphalt, or boards, obstacles cannot exceed 1 inch in height at their highest point. Where possible, separate obstacles that cross the entire beach access route by at least 48 inches so that people using mobility devices can fully cross one obstacle before confronting another.

### Openings [1018.6]

Openings are gaps in the surface of a beach access route. Gaps, including spaces between the planks on a boardwalk and drainage holes in temporary or permanent surfaces, that are big enough for wheels, canes, or crutch tips to drop through or become trapped in are potential hazards.



Openings in the surface of beach access routes and resting intervals must be small enough so that a sphere more than one-half inch in diameter cannot pass through. Where possible, elongated openings should be placed perpendicular, or as close to perpendicular as possible, to the dominant direction of travel or outside of the clear width of the beach access route.

### Running Slope [1018.7.1]

The running slope of any segment of a beach access route must be no steeper than 1:10 (10 percent). When the running slope of a segment of beach access route is steeper than 1:20 (5 percent), the maximum length of the segment is specified in table 6, and a resting interval must be provided at the top and bottom of each segment.



Gradual running slopes provide more independent use for people with disabilities. Resting intervals must be provided more frequently when running slopes are more severe.

Table 6—Maximum Running Slope and Segment Length		
Running Slope of Beach Access Route Segment		Maximum Length of Segment
Steeper Than	But Not Steeper Than	
1:20 (5%)	1:12 (8.33%)	50 feet
1:12 (8.33%)	1:10 (10%)	30 feet

### **Cross Slope [1018.7.2]**

When beach access routes are constructed of asphalt, concrete, or boards, the cross slope must be no steeper than 1:48 (2 percent). When beach access routes are constructed of materials other than asphalt, concrete, or boards, cross slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.



### **Resting Intervals [1018.8]**

Resting intervals are level areas that provide an opportunity for people to stop after a steep segment and recover before continuing on. Resting intervals are required between beach access route segments any time the running slope exceeds 1:20 (5 percent).

Resting intervals must be at least 60 by 60 inches. When the surface of the resting interval is constructed of asphalt, concrete, or boards, the slope of the resting interval must be no steeper than 1:48 (2 percent) in any direction. When the surface of the resting interval is constructed of materials other than asphalt, concrete, or boards, slopes no steeper than 1:20 (5 percent) are allowed when necessary for drainage.

### Protruding Objects [1018.9]

Objects that protrude into the clear width of beach access routes and resting intervals can pose hazards to people who are blind or have low vision. Constructed elements on beach access routes and resting intervals must comply with the technical requirements for protruding objects in section 307 of the ABA Standards (figure 31). Signs and other post-mounted objects are examples of constructed elements that, if not located correctly, can be protruding objects.

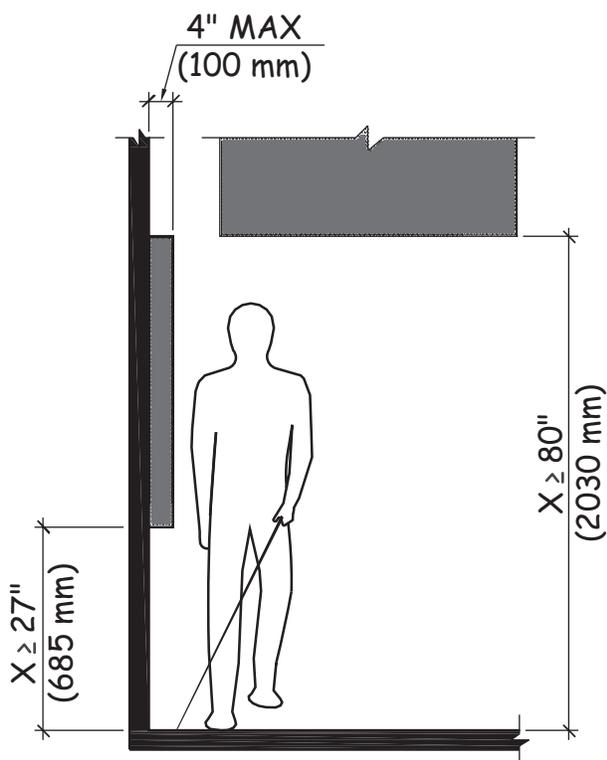


Figure 31—Constructed elements must comply with the technical requirements for protruding objects in section 307.2.

### Dune Crossings [1018.10]

A dune crossing that is part of a beach access route and has a slope that exceeds 1:20 (5 percent) must also provide handrails that comply with section 505 of the ABA Standards and must also provide edge protection. The handrails must be continuous at a height of 34 to 38 inches above the walking surface along both sides of the dune crossing (figure 32). Edge protection in the form of a curb or barrier must prevent the passage of a 2-inch sphere where any portion of the sphere is within 2 inches of the dune crossing surface. The technical requirements for dune crossings do not address the vertical pickets provided in some handrail designs.

When a dune crossing is part of a beach access route, the clear width of the beach access route may be reduced from a minimum of 60 inches to a minimum of 48 inches. Where a removable beach access route is provided as a dune crossing, the beach access route technical provisions for running slope, cross slope, and resting intervals do not apply. When the running slope of a non-removable segment of a dune crossing is steeper than 1:20 (5 percent), the maximum length of the segment is specified in table 6, and a resting interval must be provided at the top and bottom of each segment.

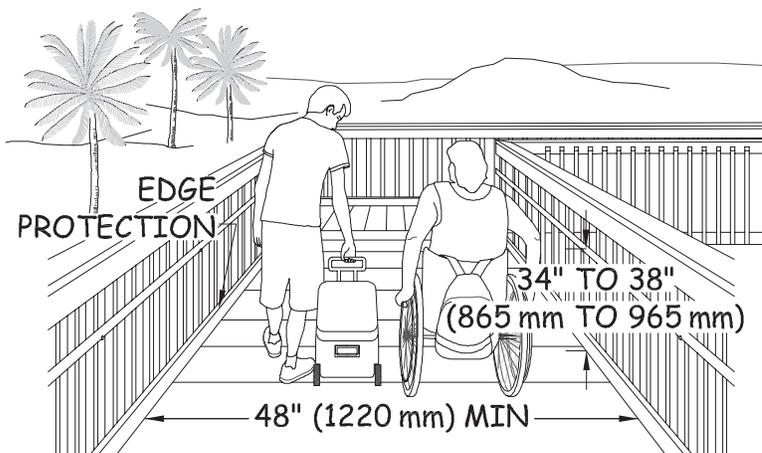


Figure 32—Minimum width and handrail height requirements for dune crossings.

## Appendixes

- **Key Differences Between Routes**
- **Notification Forms**
  - ♦ **Entire Trail Exemption Form [1017.2, Exception 2]**
  - ♦ **Entire Beach Access Route Exemption Form [1018.2, Exception 2]**

## Key Differences Between Routes

Determining the type of route required is often a challenging exercise. The following descriptions and review of the technical requirements for each type of route provides a quick reference to aid with this process.

**Accessible Routes**—An accessible route is a continuous, unobstructed path that connects all accessible elements and spaces of a building or facility. Interior accessible routes may include corridors, floors, ramps, elevators, lifts, and clear floor space at fixtures. Exterior accessible routes may include accessible parking space access aisles, curb ramps, crosswalks at vehicular ways, walks, ramps, and platform lifts.

**Pedestrian Access Routes**—A pedestrian access route, often called a sidewalk, is located in a public right-of-way and typically is parallel to a roadway. Consequently, sidewalk grades (running slopes) must generally be consistent with roadway grades so that they fit into the right-of-way. Sidewalks are designed for pedestrian transportation and are not designed for bicycles or other recreational purposes.

**Pedestrian Trails**—A trail typically is not parallel to a roadway and is designed primarily for recreational purposes. Trails are not necessarily part of an infrastructure connecting elements or facilities, but typically are designed to provide a recreational experience. Trails may also be used by multiple types of users, but most are not designed for bicycles, nor do they have a transportation purpose.

**Outdoor Recreation Access Routes**—An outdoor recreation access route (ORAR) is a continuous, unobstructed path that is intended for pedestrian use and that connects accessible elements, spaces, and facilities within camping and picnic facilities and at viewing areas and trailheads only. ORARs cannot be used at other types of facilities, such as educational campuses, office parks, or theme parks.

**Beach Access Routes**—A beach access route is a continuous, unobstructed path that crosses the surface of the beach to allow pedestrians to play, swim, or participate in other beach-, shoreline-, or water-related activities. A beach access route may be a permanent or removable route. Beach access routes typically coincide with or are located in the same general area as pedestrian access points to the beach. Beach access routes are not required where pedestrian access to the beach is not permitted.

**Shared-Use Paths**—A shared-use path is part of a transportation system in a public right-of-way that provides off-road routes for a variety of users. Even where the primary users may be bicyclists, skaters, or equestrians, shared-use paths typically are designed to serve pedestrians, including people using mobility devices such as manual or motorized wheelchairs. In addition to transportation uses, shared-use paths often provide recreational experiences. They may extend or complement a roadway network. For example, they may supplement on-road bike lanes, shared roadways, bike boulevards, and paved shoulders. Shared-use path design is similar to roadway design but on a smaller scale and for lower speeds. Whether located within a highway right-of-way, provided along a riverbank, or established over natural terrain within an independent right-of-way, shared-use paths differ from sidewalks and trails in that they are designed for a variety of users and serve both recreational and transportation purposes.

The following table highlights the key elements of design for different route types.

Route Characteristics	
Pedestrian Route Type	Key Elements of Design Intent
Accessible route (AR)	Connects accessible elements and spaces of a building or facility on a site
Sidewalk—pedestrian access route (PAR)	Parallel to roadway Designed for pedestrians (not bicycles) Sometimes part of the roadway
Trail	Designed for the “recreation experience” Does not connect elements and spaces on a site Generally includes a trailhead Has limited to no transportation function
Outdoor recreation access route (ORAR)	Connects outdoor constructed features and spaces within picnic and camping facilities, viewing areas, and trailheads <b>only</b>
Beach access route (BAR)	Crosses the surface of the beach to the shoreline Coincides with or is located in the same general area as pedestrian access points to the beach
Shared-use path (SUP)	Intended for multi-use Bicycle/transportation focus Machined, layered surface (improved) Located in either an “independent corridor” or public right-of-way

The following tables highlight the technical requirements for slope, width, and surface for different route types.

Technical Requirements for Slope			
If Running Slope of Segment is Steeper Than	But Running Slope of Segment is Not Steeper Than	Maximum Length of Segment	Cross Slope
<b>Trail</b>			
0:00 (0%)	1:20 (5%)	any length	Concrete, asphalt, boards—1:48 (2%)
1:20 (5%)	1:12 (8.33%)	200 feet	All other surfaces when necessary for drainage —1:20 (5%)
1:12 (8.33%)	1:10 (10%)	30 feet	
1:10 (10%)	1:8 (12%)	10 feet	
<b>ORAR</b>			
0:00 (0%)	1:20 (5%)	any length	Concrete, asphalt, boards—1:48 (2%)
1:20 (5%)	1:12 (8.33%)	50 feet	All other surfaces when necessary for drainage —1:20 (5%)
1:12 (8.33%)	1:10 (10%)	30 feet	
<b>BAR</b>			
0:00 (0%)	1:20 (5%)	any length	Concrete, asphalt, boards—1:48 (2%)
1:20 (5%)	1:12 (8.33%)	50 feet	All other surfaces when necessary for drainage —1:20 (5%)
1:12 (8.33%)	1:10 (10%)	30 feet	

Technical Requirements for Width and Surface		
	Minimum Width	Surface
AR	36 inches	Firm, Stable, Slip Resistant
PAR	48 inches	Firm, Stable, Slip Resistant
Trail	36 inches	Firm and Stable
ORAR	36 inches	Firm and Stable
BAR	60 inches	Firm and Stable
SUP	No requirement	Firm, Stable, Slip Resistant

## Notification Forms

Documentation is required where a condition for exception prohibits full compliance with a specific technical requirement. The documentation must include the reason that full compliance could not be achieved and should be retained with the project records. In addition to the reason for the exception, documentation should include the date the decision was made and the names and positions of the individuals making the decision.

Where extreme or numerous exceptions make it impracticable to provide a newly constructed or altered trail or beach access route that meets the technical requirements, the standards provide an exemption for the entire trail or beach access route (see 1017.1, exception 2 and 1018.1, exception 2). In these rare cases, an explanation of the conditions that resulted in the determination that it was impracticable for the entire trail or beach access route to comply must be recorded and the documentation must be retained with the records for that project. A copy must also be sent to the Access Board (see F201.4.1).

The Access Board has developed sample notification forms with assistance from the accessibility program managers for the Federal land management agencies. These forms can be used to notify the Access Board when an entire trail or beach access route is exempted. The Access Board plans to monitor situations where the exceptions for trails and beach access routes result in exempting an entire trail or beach access route. The notification forms do not require approval or any other action on the part of the Access Board or the Federal agency. The Access Board will use the information provided by the Federal agencies to develop additional guidance on exempting entire trails and beach access routes. Federal agencies are encouraged to seek technical assistance from the Access Board at [outdoor@access-board.gov](mailto:outdoor@access-board.gov) when considering exempting an entire trail or beach access route.

The trail exemption form can be downloaded at [https://www.access-board.gov/images/guidelines\\_standards/Recreation\\_Facilities/Outdoor\\_Developed\\_Areas/trail\\_exemption\\_notice.pdf](https://www.access-board.gov/images/guidelines_standards/Recreation_Facilities/Outdoor_Developed_Areas/trail_exemption_notice.pdf). The beach access route form can be downloaded at [https://www.access-board.gov/images/guidelines\\_standards/Recreation\\_Facilities/Outdoor\\_Developed\\_Areas/beach\\_route\\_exemption\\_notice.pdf](https://www.access-board.gov/images/guidelines_standards/Recreation_Facilities/Outdoor_Developed_Areas/beach_route_exemption_notice.pdf). The forms must be downloaded before they can be filled out.

## ENTIRE TRAIL EXEMPTION FORM (1017.1 EXCEPTION 2)

This form can be used to notify the U.S. Access Board when a Federal agency determines in accordance with 1017.1, Exception 2 that it is impracticable for an entire trail to comply with the technical requirements in 1017.1. Federal agencies are encouraged to seek technical assistance from the Access Board when considering exempting an entire trail.

**Name of Trail:** \_\_\_\_\_

**Check all boxes that apply.**

FTDS Designed Use of Pedestrian/hiker

**Location:** (FLMA unit, nearest town, city, county, state) \_\_\_\_\_

Connects directly to trailhead or accessible trail that complies with all of the technical requirements in 1017 without any exceptions.

New Construction

Alteration

**Length of Trail:** \_\_\_\_\_  
(miles, km, feet) (loop, round-trip, one way)

The U.S. Access Board will consider these conditions as a basis for determining in accordance with 1017.1 Exception 2 that it is impracticable for an entire trail to comply with the technical requirements in 1017.

**Check the box beside conditions that apply to the trail.**

Combination of running slope and cross slope exceeds 40 percent for over 20 feet

Trail obstacle 30 inches high or more runs across the full tread width of the trail

Trail surface is neither firm nor stable for a distance of 45 feet or more

Tread width is less than 12 inches wide for a distance of 20 feet or more

15 percent or more of the trail does not fully comply with the technical requirements in 1017

Any additional conditions that render it impracticable for a trail to comply with the technical requirements in 1017 should be described below under Additional Information.

**Additional Information:**

**Alternatives Considered:**

Name: \_\_\_\_\_ Agency: \_\_\_\_\_

Position: \_\_\_\_\_ Contact Information  
(email, phone): \_\_\_\_\_

Site Name: \_\_\_\_\_ Date: \_\_\_\_\_



**U.S. Access Board, 1331 F. Street, NW, Suite 1000, Washington, DC 20004-1111**  
**800-872-2253 (v) 202-272-0082 (TTY)**  
[www.access-board.gov](http://www.access-board.gov)

## ENTIRE BEACH ACCESS ROUTE EXEMPTION FORM (1018.1 EXCEPTION 2)

This form can be used to notify the U.S. Access Board when a Federal agency determines in accordance with 1018.1 Exception 2 that it is impracticable to provide a beach access route complying with the technical requirements in 1018.1. Federal agencies are encouraged to seek technical assistance from the Access Board when considering exempting an entire beach access route.)

Name or Location of Beach Access Route: \_\_\_\_\_

Check boxes that apply.

New Construction

Alteration

Length of Beach Access Route: \_\_\_\_\_  
(miles, km, feet)

Any conditions that render it impracticable to provide a beach access route complying with the technical requirements in 1018 should be described below under Additional Information.

Additional Information:

Alternatives Considered:

Name: \_\_\_\_\_ Agency: \_\_\_\_\_

Position: \_\_\_\_\_

Site Name: \_\_\_\_\_

Contact Information  
(email, phone): \_\_\_\_\_

Date: \_\_\_\_\_



**U.S. Access Board, 1331 F. Street, NW, Suite 1000, Washington, DC 20004-1111**  
**800-872-2253(v) 202-272-0082 (TTY)**  
[www.access-board.gov](http://www.access-board.gov)

**Notes**

## Notes

## More Information

Copies of the final rule for federal outdoor developed areas and technical assistance is available from the US Access Board at **[www.access-board.gov](http://www.access-board.gov)** or **by calling 1-800-872-2253 (voice) 1-800-993-2822 (TTY).**



**UNITED STATES ACCESS BOARD**

**1331 F Street, NW, Suite 1000  
Washington, DC 20004-1111**

**voice 800-872-2253  
tty 800-993-2822**

**[www.access-board.gov](http://www.access-board.gov)**

## Appendix I: Public Comments

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# April 29, 2019 Open House Comment Card

## Lake Pueblo State Park Draft Trail Management Plan

Please leave your comment card with park staff. Only written comments will become part of the public record as an appendix of the trail plan. The plan with all comments will be forwarded to the Bureau of Reclamation (the landowner) for their required planning processes that include an Environmental Assessment (EA) and Resource Management Plan (RMP). The EA and the RMP will determine the final outcome and status of the trail recommendations in this plan.

NAME: Michael Hays  
ADDRESS: 44 S. Calle Del sud Pueblo west 81007  
PHONE #: 719 5474359  
EMAIL: mikebhays1@gmail.com

### Comment:

- Comments on Proposed Trail Closures  
Desire to keep open - listed as redundant & unnecessary
- Lower Dog  
ST 25 ✓                      ST 14B
  - The Buttes  
ST 21B
  - Rock Canyon                      • Log Drop  
ST 16B                      ST 21A
  - Sidewinder ST 15B
  - Freeride a & B & C  
ST 25
  - I am a hunter as well as a biker so I understand wildlife <sup>conservation</sup>  
It seems some most of these canyons above  
present a technical biking opportunity that  
allows riders to build bike handling skills. This  
type of trail system is making Lake Pueblo Trails  
famous among mountain biking and is good for  
the State Park economically.



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NAME: Jacob Fair  
ADDRESS: 1584 Camino de las Ranchas  
PHONE #: (719) 248-2881  
EMAIL: cyclofdj@yahoo.com

**Comment:**

Along with most of the stuff I have seen tonight, I have heard about the seasonal closures and still I am not quite clear on the situation giving that the times they are closed it is our most popular time to ride. I am also concerned about the entire popularity of the park. The reservoir gets about 1.8 million visitors a year and cycling is the second biggest source of these visitors, could this have an affect on our park or maybe even our town? There are certain parts of the trail that are only being closed for reasons of redundancy and too many routes yet that is what a trail consists of anywhere you go. The easier it's made for our community, through answers to all questions, the better off we will all be during this process.

Thank you.





Park Visitor Center Auditorium  
Monday, April 29, 2019  
5:00 pm to 7:00 pm

Response to the Lake Pueblo State Park Management Plans.  
Main points in response to the 2019 Draft Trail Management Plan.

Solar Roast Cares, a new nonprofit in the Pueblo area has the mission to use outdoor recreation to support environmental education, conservation, and advocacy in the Greater Pueblo Region. We are excited by the prospect that once the trails are established, we can support this area attracting people to start seeing Pueblo for the positive qualities that are here. The fact that the process is moving forward to legitimizing the trails is exciting. Once they are legitimized Running and Mountain Biking Races on the Pueblo State Park Trails will be possible! This would bring people from all over the state as well as out of state individuals to Pueblo.

I find the 2019 Draft Trail Management Plan fascinating. I am interested in learning more about the history of the area as well as the wildlife in the area. Lake Pueblo Trails have been a free for all for the last 20 years, I am glad that there will be some attention paid to the interesting history and features of the area.

Let's move forward to establish some awesome trails that makes sense while protecting the area features. One concern I have in reading the Management Plan is how the trails will be closed in such a way that disjoins the flow of the park. I am a trail runner and love the multiple loop options available. I understand needing to protect the ecosystem and all but we also need to make sure that are closed have a reroute option. Especially when it comes to the main arteries like South Shore, Arkansas Point Trail. I hope that trail flow will be considered as the park is planned. The current plans ruin the flow.

The main trails I currently use:

Arkansas Point Trail, Water Tower, Steep Tech, Conduit C & D, South Shore, Skull Canyon, Stonehenge, Keyhole Canyon, Water fall, Inner limits, The Duke, Rodeo.

Thank you for giving the People area some attention!

Jessica Hartkop  
Solar Roast Coffee, Office Manager  
Solar Roast Cares (501c3 Nonprofit), President  
Beulah Challenge, Race Director  
719-924-4012  
Jessica@SolarRoast.com



**From:** Maureen Garelick beandog9@mac.com  
**Subject:** 2019 Draft Trail Management Plan - Feedback Needed  
**Date:** April 28, 2019 at 1:31 PM  
**To:** Lake.Pueblo.Park@state.co.us

I appreciate all the hard work undertaken by CPW and BOR to find a way to "legitimize" most of the social trails available in Lake Pueblo State Park. I also understand that these are indeed currently "social trails" that were never authorized or developed by the park.

However as a hiker and novice mountain biker, I do have some significant concerns, especially with regard to changes that will make some of the more elementary trails noncontinuous and inaccessible to users.

The Rock Canyon Trail provides good access and would limit my ability to get to trails that work for my level of experience. The same goes for Arkansas Point Trail. If any part of it is closed, it would make access to significant parts of the system. In addition, as noted by others, the proposed alternative would leave me with an alternative that is beyond my capabilities. I strongly urge you to reconsider these changes.

Best regards,  
Maureen Garelick

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NAME: Muck Kilpatrick

ADDRESS: 423 Jackson St, Pueblo

PHONE #: 719.480.5711

EMAIL: muck.kilpatrick@gmail.com

#### Comment:

- I agree with the Southern Colorado Trail Builders Position Statement — and support the idea of a management plan that takes into account the variety of stakeholders who utilize this area.
- While trail closures in some cases are certainly warranted, doing so on trails outlined in SCTB's statement would be difficult to enforce at best.
- I would encourage BOR, as the land owner, to invest time into bringing recreationists (hikers, bikers, etc) to the table to discuss the realities on the ground of what areas are being most used.
- As a member of SCTB, I'm hoping we are seen as a useful partner in maintaining trails that are made legal, to encourage safe recreation for years to come, which will no doubt continue to bring consumers to our region and be a boon to our local economy.



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NAME: Tom Tabeling  
ADDRESS: 1933 Acomita Pl  
PHONE #: 719.547.1264  
EMAIL: ttabeling@yahoo.com

**Comment:**

Closing trails off south shore  
trail would be challenging and  
rob bikers & hikers of a diverse  
challenge of different technicalities.  
Rock Canyon is one of the most  
popular trails in the park. I  
meet numerous riders from outside  
Pueblo on this trail and it gets  
a lot of complements



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NAME: Scott Cummings  
ADDRESS: 4304 Muirfield Pueblo, CO 81001  
PHONE #: 719-250-2937  
EMAIL: s-m-c-74@hotmail.com

**Comment:**

Log Drop/Waterfall - these trails provide excellent  
uphill and downhill mountain biking. Tires roll on rock,  
not dirt, so erosion is minimal.

Rock Canyon A - this is one of the main  
east-west connector trails and provides excellent  
mountain biking in both directions.



Michael Delahunt

4619 Goodnight Ave

- above Valco Pond #5

480-254-0483

delahuntartlex@gmail.com

I am eager to be informed  
about development of Valco Ponds  
1-10, especially of ponds 4 & 5.

Please send me this info via  
any of the above locations.

Michael Delahunt

~~RFP~~  
~~Monroe~~

~~NOTICE~~  
~~DEF~~

Michael Delahunt

any of the above locations.

Please send me this info via

1-10, especially of ponds #2.

about development of Valco ponds

I am eager to be informed

delahuntmatt@comcast.com

480-334-0483

- above Valco Pond #2

4619 Goodnight Ave

Michael Delahunt

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NAME: David Bemis

ADDRESS: 4615 Cedarwood Blvd Pueblo, CO 81001

PHONE #: (719) 369 6384

EMAIL: dw.bemis@gmail.com

#### Comment:

I am for keeping the Arkansas point trail open as well as the technical canyon trails. Strava heat maps show that these are very actively used trails and would be difficult at best to truly shut down. The Arkansas point trail provides a great connector to other trails, an easy path to hike and allows access to the Arkansas point with its beautiful views.

I would like to emphasize the points made by the southern Colorado trail builders and whole heartedly agree with the statement.



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NAME: TIM & PRICILLA HILL  
ADDRESS: 20 MENDECINO DRIVE PUEBLO 81005  
PHONE #: 719-821-4455  
EMAIL: timhill247@hotmail.com

#### Comment:

1. THE TRAILS AT LAKE PUEBLO ARE AN ASSET TO PUEBLO OUTDOOR RECREATION. WE ENJOY HIKING AND BIKING ALL THE TRAILS. I HAVE BEEN A VOLUNTEER FOR OVER 23 YEARS MAINTAINING AND KEEPING THE TRAILS AND CROSSINGS SAFE. THIS TRAIL SYSTEM IS ONE OF THE MAIN REASONS WE LIVE IN THIS AREA.
- ROCK CANYON - GREAT TRAIL FOR UP AND DOWN TRAVEL. BASICALLY A NATURAL <sup>WATER</sup> WAY WITH LITTLE TO NO DIRT OR VEGATATION, PROVIDE GREAT ACCESS FROM THE RED GATE.
- SEASONAL - CLOSURES - I HOPE A STUDY IS PERFORMED TO CONFIRM IF THESE CLOSURES ARE NECESSARY.
- I AM WILLING TO HELP WITH THE IMPACT STUDY OF THIS AREA, OR WHATEVER IT TAKES TO KEEP THESE TRAILS OPEN.
- I'M SURE THE PARK HAS NOTICES THE CROWDS OF CARS IN THE FALL - WINTER, SPRING MONTHS FULL OF BIKES.



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NAME: Alex Willmon  
ADDRESS: 702 Arden Ave 81005  
PHONE #: 713 775 8005  
EMAIL: misterniceguy311@icloud.com

#### Comment:

Please do not close Rock Canyon or Keyhole Canyon. They are favorites of everyone I ride with. Any of the ~~closed~~<sup>canyon</sup> downhill technical runs are essential to keep this trail system popular. If anything, more <sup>technical canyon</sup> downhill runs should be added not subtracted. Adding more trails will help Pueblo's ~~economy~~ economy & popularity. Taking away favorite technical downhill runs will force people to spring & canyon. I love these trails so I do want nothing but the best for them but I think we should be adding cool New runs if anything.

Thanks for listening!!

PS: I would be sad to see The Busses go to



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NAME: TERRY L Quintanilla  
ADDRESS: 144 Agency Blvd, Pueblo CO 81005  
PHONE #: 719 250 5531  
EMAIL: t.quintanilla3265@gmail.com

#### Comment:

The trail system at Lake Pueblo is some of the most, cleanest and challenging in the state. I completely understand protecting our resources but closing some of the best trails in the state is not the answer unless they are replaced with equally challenging new trails. This city doesn't have much going for it, these trails are what for the community and city of Pueblo. It is a huge positive for a community that needs positive in it?!

Thank you for your time  
Terry Quintanilla



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NAME: Jake McDowell

ADDRESS: 1085 Limestone dr pueblo west, CO 81007

PHONE #: 719-429-6045

EMAIL: JAKE McDowell@outlook.com

**Comment:**

On the APP Strava which is a running and  
cycling app. At the lake pueblo trails rock  
canyon is the most used trail out of all  
the trails. Closing rock canyon would be  
very hard and I dont think should be done.  
All the other planned closures would be hard  
to do as well.



## April 29, 2019 Open House Comment Card

### Lake Pueblo State Park Draft Trail Management Plan

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NAME: Ken Berkley  
ADDRESS: Po Box 19991 Colorado City, CO 81019  
PHONE #: 719-369-5440  
EMAIL: Kberkle@yahoo.com

**Comment:**

Ⓢ  
when it comes to specific trails up for closure  
I would like to get involved as a trail user  
perspective in finding solutions. There are specific  
trails that I enjoy for my own reasons.  
Lower Dog, Friends, Rattlesnake, Rock Canyon,  
Skull canyon and Voodoo two are worth coming  
to a solution to keeping these trails.



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NAME: Shady Needs  
ADDRESS: 111 Newman Ave Pueblo CO 81005  
PHONE #: 719-553-8468  
EMAIL: needs.shady@gmail.com

**Comment:**

◦ Rock Canyon must stay. This is a great <sup>beginner</sup> technical trail to begin <sup>to</sup> learn downhill skills.  
◦ Stonehenge must stay. This is another great trail to ride up and down. Another one to learn great skills and have a great workout.  
These are great trails, most of the trail closures are the trails the attract locals & out of towners to come ride here.  
I do understand the importance of protecting wildlife & vegetation. Most of these trail closures will force me to go to another place to ride. It would be like going to a ski resort to find out all the trails closed except for the greens.  
Thanks for all you do. We want to see this successful & a great place to ride.  
Thanks for listening!

◦ PS. Keyhole Canyon is another great downhill tech trail.



Good evening BLM and CPW representatives - thank you for your time and a chance to address the issue at hand. I would like to begin by expressing the effort put into this report and the goal of improving Lake Pueblo State Park. After reviewing the document, I have to say I agree with a majority of the trail re-routes, repairs and assessments. I, however, in reviewing the specific aspects of the report related to the South Shore Trail System have found numerous contradictions and misrepresentations, which I believe will lead to a detrimental outcome to Lake Pueblo State Park and Pueblo as a whole. Out of respect for your time and the time of those present, I would like to scrutinize a few aspects that stand out the most. From an outward point of view, I believe these contradictions and vagaries within the document are what led to the outraged response of trail users, more specifically, the mountain biking community, to which I am a part. As such, I apologize if my tone is accusatory. This is a point of great passion for me, and I believe that your intent is good.

The first and greatest discrepancy I would like to address is your reference to Title 33 of the Colorado Revised Statutes. Title 33, according to the lead page, requires land managers to "offer the greatest possible variety of wildlife-related recreational opportunity to the people of this state and its visitors and that, to carry out such program and policy, there shall be a continuous operation of planning, acquisition, and development of wildlife habitats and facilities for wildlife-related opportunities." I feel the recommendations to close at least 20% of the trail system is a failure to support the given mandate and its focus to improve the quality and quantity of recreation while respecting natural resources. Calling a 10 month closure "seasonal" is nonsensical. That is simply a trail closure. The reason for closing that is to protect raptors who actually follow me while I ride, hoping I scare up some lunch. These majestic birds have chosen to live here during the 20 years of this trail system's existence before the writing of this report. Beyond the discussion of wildlife and cultural protections, the collateral damage to Pueblo County's economy will be considerable. The immediate effects would be felt by bringing down the mean dollar amount spent on bikes at the three local bike stores and tourism-related spending such as food, gas, lodging, and park entrance fees. The long term effects would mean sending money to neighboring trail systems.

Language and maps used in the plan discriminates against certain trail users and builders; by deeming terrain "dangerous", brings me to my second point. The document claims that these features and trails were not professionally constructed; that is simply not true. I put my life on the line trusting these constructs every time I ride. The men who built these were expert mountain bikers when the sport was in its infancy. You mention the need for engineers to build features. This is also untrue. Any carpenter can build a deck, which is a far more complex process than building mountain bike terrain. Employing an engineer would be an incredible waste of resources and education; they would still lack understanding unless they themselves enjoyed the sport.

In section 1.1.1, paragraph 5, the final sentence references a collaboration between "land managers, land owners, and trail user groups." If all trail user groups had been consulted, these areas would not have been labelled "dangerous." The choice of trail closures seems biased and an effort to eliminate specific user-groups from the trail system. Evidence of this is abundant. However, one primary example is the plan claims the desire to eliminate "line of sight" issues, yet the most dangerous blind corner is unchanged.

The final point to address is the "addition" of new trails. Drawing a circle on the end of a green out and back trail is an insult to the intelligence of the Pueblo community. If executed, this plan would be a profound waste of resources and manpower. This attempt to disguise a mass trail system disruption with a shiny wrapper makes it hard to accept the legitimacy of the document as a whole. If trail users had been consulted they would have simply said, "Add a bench" and save the money and manpower for real trail improvements and maintenance. These are points not only expressed by myself, but also expressed by the core volunteer force that you would need, as stated in the document, to implement the proposed plan.

I am a father, a naturalist, a historian and an avid trail user. I realize nature's needs must be balanced with the people's interests and economy as well. Including mountain bikers in the plan's development is essential, as alienating an entire stakeholder group is counter-productive. These trails were built for mountain bikers, by mountain bikers. The congenial attitude of this user-group is sure - "Let's all use these trails." And with that congenial attitude I will close. I find it frustrating when someone brings complaints to me without a solution in mind. As such, I volunteer personally to explain in detail, on the ground, with any parties, who are willing to pave the way between trail users and land managers. Together we can make this park better and still respect science, nature and history.

Sincerely, Greg Gehlhoff

April 29, 2019

April 29, 2019

To whom it may concern,

I wish to agree with the position statement of the Southern Colorado Trail Builders. I specifically appreciate the tone of their position with respect to appreciation for the motivation and work that CPW has put into the TMP. Thank you.

I also heartily agree with their position on Rock Canyon. I personally consider Rock Canyon connecting through Waterfall and Log Drop to be a vital connection between the eastern and western portions of the trail system. I understand that the reasons for closure of Waterfall and Log Drop are too numerous in significant to overcome and I will have to make peace with the loss of that route. However, Rock Canyon can still provide access to South Shore trail, and should, in my opinion. If the paleo concern for Keyhole Canyon could be overcome, that would be a most welcome change to the plan. Keyhole is popular and for good reason, providing a technical connection between Cuatro Cinco and Rock Canyon that I incorporate into nearly half my rides.

As one of the reasons to close Keyhole is “too many trails”, allow me to agree with the SCTB position on technical canyons and comment on closures due to “unnecessary, redundant”. In the eyes of many users, the existing trails are not utilitarian, one being as good as another so long as it arrives at “point B”. Each has its own challenges, character, and opportunities for enjoyment and development of skill. An amusement park would not do away with popular rides simply because another ride “also goes around in circles,” and the loss of Free Ride or Sidewinder (Nooooooo!!) on the grounds that it is not needed in order to arrive at a particular destination would feel tragic to many trail users.

I have highlighted several closures that seem “unnecessary” or ill-advised for various reasons: Free Ride A is its own unique fun. If it’s not hurting anything, we’d really like to keep it. Free Ride c and ST13c do go somewhere, they connect to each other; they are the same trail and provide access from Roller Coaster to South Shore. Sidewinder is a fabulous trail that, if seasonal closures remain as planned, would help provide a more rideable route (Sidewinder a / ST19 could be connected to Broken Hip b, intruding on the Raptor Nest Buffer only very slightly — letting us intrude similarly at the juncture of South Shore and Skull Canyon would also help with that seasonal closure). If I’m reading the map correctly, ST21a and ST21b represent what I consider to be the only climbable route up Broken Hip. They are therefore not “unnecessary”. The Buttes add fun and interest to the monotony of Inner Limits, and could provide a “lollipop” route if the seasonal closure of Inner Limits remains in place. The Duke d connects to the paved trail directly across the road. The Edge is a much gentler (easier) climb than is the short section of Rock Canyon that runs between its two ends (though I personally don’t care about The Edge, I always climb that way when my son is with me).

Sincerely yours,



Matt Eide

Sent via e-mail  
to lake.pueblo...  
on Mon. April 29 11:19pm

Marjorie Joy  
1083 S. Quantico Drive  
Pueblo West, CO 81007  
[mar1joy@juno.com](mailto:mar1joy@juno.com)

29 April 2019

## Comments on Lake Pueblo State Park Trail Management Plan (Draft)

Thank you for giving the public the opportunity to comment on this comprehensive plan for managing official and unofficial trails in Lake Pueblo State Park. From 2010 to the present, I have been involved in monitoring raptors at LPSP and in the adjacent State Wildlife Area. I am also a member of the local birding community and a resident of Pueblo West. I have reviewed the draft plan with these interests in mind.

### North and South Shore trails:

My main concern is with the ever-expanding network of social trails on both the North Shore and South Shore areas. The popularity of these trails raise issues of safety, sustainability, and consideration for the natural and cultural resources they impact.

It's important that these trails be constructed and maintained in a safe and sustainable manner. I believe the proposed plan addresses these issues by planning for closure and/or rerouting of unsafe and unsustainable trails, providing safe access with new parking areas and other infrastructure, promoting multiple use by eliminating some of the more extreme trails, avoiding damage to sensitive areas, and by placing the trails under the management of CPW.

It's even more important that these trails be managed with sensitivity to the amazing natural and cultural resources within the boundaries of LPSP and the adjacent SWA. Most of these are not obvious to the average trail user who walks or rides past them. I'm pleased that the draft plan includes both protection of these resources by closing and/or rerouting some of the trails and the education of trail users about these resources through the use of interpretive signs and other materials. These resources cannot be relocated or reproduced. They are fast disappearing in adjacent areas of Pueblo County and the State of Colorado; it's important to preserve what remains.

I am especially pleased to see the plans for trail closures, both permanent and seasonal, to protect nesting areas for raptors and other birds. In my 9 years of raptor monitoring in LPSP and the SWA, I have seen failure of nests of Great Horned Owls and Red-tailed Hawks due to disturbance on trails above and below cliff nests in the side canyons of the South Shore, and failure of Osprey nests on North Shore platforms due to increased disturbance from shoreline fishermen, boaters on the lake, and the expansion of residential areas of Pueblo West. I am pleased to see that these specific issues are addressed in the draft plan. Raptors are indicators of the health of ecosystems, and failure of their nests indicates that something is out of balance. Minimizing human disturbance may help to restore that balance.

I am also pleased to see the plans for trail closures in the riparian and wetland areas in the South Shore canyons. These are the areas that sustain life. They host important plant communities, nesting areas for birds, and breeding areas for other animals. They are rare in this climate and it's important that they be protected.

I don't see mention of protections for birds and other species that depend on the short-grass prairie for survival. These habitats need protection, too. Trails through grassland areas lead to habitat fragmentation, introduction of weedy plants that compete with native species, and disturbance of nesting areas. As trail use increases, trails become wider and the impact on these areas increases. Although I see that the trails shown on the South Shore maps skirt large areas of prairie, I think that protection of grassland habitat needs to be addressed in the body of the plan.

### **Chain of Lakes**

I am concerned also with the plans for the Chain of Lakes area and the trails in the riparian areas on both sides of the Arkansas River below the dam. These areas are used for nesting and migration stopovers by many species of songbirds, and contain nesting areas for raptors such as Great Horned Owls, Red-tailed Hawks, Cooper's Hawks, and Osprey. They are also very popular with park visitors, especially fishermen. The trail maps in the draft plan show nearly continuous trails along the edge of the river on both sides, and I realize that fishermen will also make their own side trails to the water's edge from any developed trail.

I am especially concerned about the active Osprey platform east of the Valco Bridge near the Goodnight Barn. Osprey are increasing their nesting territories in the park, and I expect to see more pairs attempting to nest near the river. According to the draft plan, this area is slated for further development and increased use.

These issues should be addressed in the plan, showing that CPW and park management are aware that they exist and are willing to address them.

Thank you again for allowing me to comment on the draft plan. I look forward to seeing the final version and to seeing the plan in action.

Respectfully,  
Marjorie Joy  
Volunteer Raptor Monitor  
Lake Pueblo State Park

## April 29, 2019 Open House Comment Card

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NAME: LARRY VOLK  
ADDRESS: 308 GRACE AVE  
PHONE #: 719.251.9683  
EMAIL: LRVOLK@YAHOO.COM

#### Comment:

ST1a - Voodoo access single Track, excellent Technical up/down  
ST1b - close  
ST1c - Close  
Voodoo Detour - Close  
Voodoo Trail a keep - established Trail - easy technical Transition  
Inner Limits C keep; original Trail; Technical Fun Trail  
ST23d - Close; Created when Inner Limits C Filled w/ Tumble weeds  
ST23g / The Buttes, nice Technical area and drops to <sup>water</sup> as a bypass,  
Logdrop keep → nice Technical decent ~~that~~  
ST5c - Close  
StoneHenge B - Close  
NT10 a - open Access to North Area  
ST16b - keep open; keyhole Ramp; nice technical;  
keyhole through Rocks - close  
Rock Canyon A - open to South Shore  
ST15b open sidwinder - nice Technical, Flowing Trail to Broken Hip  
ST9b - Close  
The Duke - open

ST 18a - Close

ST 22 - Close

ST-20 - Close

ST 14b - Close

{ ST 21a } open; Excellent Technical up/down  
Lower Dog

Free Ride a,b,c - open

ST 7 - open - excellent Technical up/down

ST 6 - open - excellent Technical up/down

ST 18e, f, g - Close

Staircase b, c, c - Excellent Technical up/down

Skull Ridge - Close

ST 25 - open → nice Technical up/down

ST 9a - Close

Arkansas Trail open to access Arkansas point - good for  
easy ride

I AM a runner and cyclist; I use the  
trails up to 6 times a week; mostly running  
Biggest complaints; use of trails when  
muddy causes damage; Horses punching holes in  
trails; hunter and shooters leaving Brass, shells,  
trash on trails.

This is a gem for Southern Colorado and a Big  
Attraction and Revenue generator for Southern Colorado

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NAME: Emilie Pomerleau  
ADDRESS: 539 Stanton Ave 81003  
PHONE #: 719 660 0433  
EMAIL: pomtraine@gmail.com

#### Comment:

- I don't believe you have the resources to police the amount of closures that are proposed
- Rock Canyon is a natural place for a trail & makes so much sense as an access. I have ridden it for years & it doesn't seasonally erode like other routes. These types of challenging trails are necessary!
- I would love to see an effort to make the canyons more sustainable instead of closing trails.
- Seasonal closures of South Shore, Redro's, etc will cut out a lot of earnings for the park as these would take place during the most visited months.
- Mountain Bikers will look for difficult trails to ride & if we do not keep these challenging trails, I fear that more illegal trails will be built - causing more impact.



• These trails have, without maintenance, have withstood the test of time - just imagine how they would be if we (Southern Co. Trail Builders) could go in + create a plan to make the trails more sustainable = healthier trail system = Stronger community!

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NAME: Kelsea MacTroy

ADDRESS: 423 Jackson St, Pueblo

PHONE #: 7026169960

EMAIL: Kelseamac@gmail.com

#### Comment:

- I am grateful for the work of the SCTR, CPW & BOR and their willingness to work together to make the trails legal
- I fully support the additional fee structures, especially at the Red Gate and infrastructure for parking
- Seasonal closures: I have serious concerns about your proposed seasonal closures. For example, any closure to South Shore, conduit or Pedro's cutoff arterial access to a majority of the park during the busiest season for the trails. This doesn't mean ppl won't still try to use them - they'll make new trails or increase the burden on surrounding trails.

- Though I am not a mtn biker, I enjoy the trails as a runner, hiker and dog walker (leashed!) and the loss of these vital arteries is highly problematic for access.
- In conjunction w/ the SCTB, ~~the~~ the possibility of developing long-term, sustainable trail management plans for each trail is real. So some of the maintenance issues could be addressed thru this partnership.
- In terms of trail closures, the technical trails are highly valued by mtn bikers and are one of the things that makes our (soon to be legit) trail system unique - again w/ proper management, some of these issues could be ameliorated.

Finally, I just want to reiterate that I am ~~so~~ pumped that this assessment has happened and the process for making the trails legal and legit, sustainable and maintained is happening. While I hope the seasonal closures can be changed, ~~at least~~ overall I'm excited for the chance to support the Park, Reservoir, environment, community and trails that I love.

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NAME: Scott Cooper  
ADDRESS: 1315 E. Kiwa Pueblo West, CO  
PHONE #: (719) 250-4601  
EMAIL: scooper1397@gmail.com

#### Comment:

- ① Singletrack trails require off trail disruption for safe multi-use passing, therefore, an increased number of open trails will reduce the overall environmental impact by distributing the overall user load over a larger area.
- ② Trail redundancy allows multiple users to utilize alternate trails in order to reduce contact, therefore increasing overall safety and reducing the need to pull off trail.
- ③ Water access from proposed parking area at redgate in multiple canyon drainages (rock canyon, stonehenge canyon, broken hip canyon, lower dog, skull canyon) are vital in maintaining a

## Safe multi-use infrastructure

- ④ Keyhole canyon acts as an alternate diversion from Cuatro cinco reducing congestion.
- ⑤ Rock Canyon provide direct downhill and uphill route connecting water access to redgate. Also wider trail for multi-use
- ⑥ Lower Dog provides direct water access from redgate. Shortest access for fisherman. Alternate congestion for Brokenhip.
- ⑦ Skull Canyon b provides direct access point to water from redgate. Uphill and downhill route moderate grade. Only direct water access from redgate during drought conditions.
- ⑧ Freeride a, b, c provides trail options with varying difficulty thus increasing group activity, relieves congestion in skull canyon.
- ⑨ Trail system needs to be formalized and some trails need to be closed to reduce impact to archeological sites.
- ⑩ As population along front range continues to increase the number of recreational visitors will also increase. We need to maintain and improve as many trails as possible to reduce the overall impact.

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NAME: Klint Skelly  
ADDRESS: 901 Berkley Ave Pueblo, CO, 81004  
PHONE #: (507) 273-3498  
EMAIL: Klint+Skelly@gmail.com

#### Comment:

Lake Pueblo and the trail system associated with Lake Pueblo is a shining gem for Pueblo and Southern Colorado, bringing ~~the~~ recreational tourism, and the dollars associated with that, to Pueblo. The proposed trail closures of Rock Canyon Trail, Arkansas Point Trail, and any of the Technical Trails, seasonal or not, will cut off quick access, ~~limit skilled bikers~~ to scenic overlooks and regions, limit the skilled bikers variety, and ~~it~~ may cause a decline in the previously mentioned recreational tourism dollars. I, personally, used the trails every day, either it be by mountain biking or by hiking around. These easier access trails, such as Rock Canyon and Arkansas Point trails, provide an opportunity for physically limited individuals to take advantage of seeing the scenic beauty of Lake Pueblo.

Instead of closures, perhaps take advantage of the Southern Colorado Trail Builders to help provide ~~a~~ sustainable maintenance for proposed ~~etc~~ trails to be closed, as well as the rest of them. SCTB has ~~just~~ built a trail, under the guidance of Adam Davidson, in Beulah, CO, so experience is not lacking in the group.

Overall, the proposal from the state is a good one, but ~~it~~ still needs revisions to keep to most politically accessed trails open. Let's use ALL of the trails that were built for us in the past and use them to continue to help Pueblo and Pueblo's ~~recreational~~ recreational tourism grow.

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NAME: RAY Trujillo

ADDRESS: 1100 E. PAINTED HILLS LANE. Pueblo CO. 81007

PHONE #: 719-671-9074

EMAIL: oneballnostrikes@hotmail.com

#### Comment:

I am a life long Pueblo resident, I have ridden these trails for 12 years also hiked with my dog. I have helped taking care of these trails throughout the 12 years. The trails are a very wonderful piece of Southern CO. I have ridden in UTAH, New Mexico, and in both cases I have riders ask me about the Pueblo Res. trails they are known nationally. Recently here at the park I talked to two riders that came down from Illinois to ride, they have buddies in CO. Springs and they fly in to ride. To shut down on blocks off the proposed trails will not only hurt the Economy of Pueblo but also a beautiful and scenic area for everybody. Granted not everybody who rides here is world class but the majority of the riders can ride 90% of these trails. that is the appeal to local and national riders. Most if all canyon trails have 2 trails one for most direct and easy way up or down, the trail next to it is for

More Experienced riders. ITS like A ski slope only allowing  
people on green trails NO riding on black trails.  
Junco, Outer, and Joo doo loop trails should stay open  
because of their EASE in riding for ALL abilities plus  
most riders like to ride miles!

## April 29, 2019 Open House Comment Card

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NAME: BRIANNA TRIPLETT  
ADDRESS: 111 Newman Ave. Pueblo, CO 81005  
PHONE #: 402-853-2210  
EMAIL: btriplett33@icloud.com

#### Comment:

Lake Pueblo bike/hike trails are tourism. These trails have people <sup>of all</sup> from ~~not~~ not only all over the state, but from surrounding states. These people are providing to the economy of Pueblo and the state park. The reason's people choose pueblo for their hiking/biking activities is not only due to the fantastic weather, but due to the fact of a wide variety of unique, different skill level, ~~ex~~centric trail systems.

I live right off of city park and work in Pueblo West. During the warmer weather months all you see are bikes on the backs of vehicles. You even see large tourism vans with \$5,000 to \$10,000

bikes on the back of them. These people are HERE FOR PUEBLO.

These people, buy food from local restaurants, stop at gas stations to fuel up and grab a sports drink. After they're done, they purchase a hotel room and do the same thing the next day.

Taking away popular trails will hurt the tourism factor. Do we have to pay to use the trails in order to maintain upkeep? GREAT! Lets do it! Can we find sponsorships in order to maintain the upkeep? What can we do?

I understand that this must be done in a legal matter due to it being federal land. I am also all for maintaining the ecosystems and protecting wildlife. Us as humans ~~are~~ have an obligation to do so.

All in all, how can we make this work? What do we, as a community, in ~~an~~ a town that struggles economically, have to do to keep this trail system? We should be expanding, not decreasing.

Sincerely,

An avid biker/hiker

(Rock Canyon & Stonehenge MUST stay)

**Shawn Jennings**  
to lake.pueblo.park

Tue, Apr 23, 11:13 AM

Hi,

Just writing a few comments about the proposed trail closures- there several fun technical trails on the closure list, such as rock canyon, keyhole and skull. Those were some of my favorite trails when I lived in Pueblo for 5 years, and will certainly decrease my frequency of visits from Denver if those and others are closed.

I support sustainable trail building and protecting historical/cultural artifacts but am also pragmatic. However, we shouldn't close main trails just because they are redundant. The south shore trails are what they are because of some redundancy- options. If you remove options, I believe you'll decrease visits because it will turn into an XC loop that only locals will want to partake in/drive to for biking purposes.

Closures due to true habitat destruction are justified and valid, but please keep in mind that I believe that can be somewhat subjective. In the end, to avoid all habitat impact, we should not have any trails at all. I just want to ensure that other trail users aren't lobbying against existing bike trails using that reason if it isn't truly an issue, as I'm aware there are certain vocal trail users who would choose to remove bikes from the trails completely if possible.

I admit to not reviewing all 300+ pages of the document, so please forgive any shortsightedness. I am ignorant on the care and protection of cultural artifacts but in my mind you can have trails in the vicinity but still protect artifacts with a sign. Disrespectful people will damage artifacts whether there is a trail running past it or not, because they won't stay on the trails to begin with. Respectful people will stay the trail or admire from the appropriate defined location.

Thank you for the time and effort of putting this plan together. There is no doubt that proper planning and maintenance will benefit all, I just hope you'll reconsider a few of these classic trail options.

Thanks

---

Shawn

**Lacie Davilman** <laciep@gmail.com>  
to Lake.Pueblo.Park

Tue, Apr 23, 5:43 PM

My primary comment on the plan is a general comment to provide horse back riding trails in the park and designate them for that use. It does appear that in the plan there will be signs for these designations. Also please provide maps that show where horses are allowed to go.

Please look for opportunities to include horse use on trails.

I have a general concern that horse use will become more limited and restricted and i would be opposed to those such changes.

Thanks

---

Lacie Davilman  
Resident of Pueblo County, avid LPSP user

**Nicole Cummings** <cummings\_nicole\_@msn.com>  
to Lake.Pueblo.Park@state.co.us

Tue, Apr 23, 9:23 PM

To all concerned,

I have been riding my mountain bike on the trails at Lake Pueblo for more than 15 years. I began as a novice rider who became quickly winded on South Shore Trial, wondered how anyone could possibly ride up or down Rock Canyon, and I wondered if there was an end to Outer Limits. Now, in my mid 40's, I can happily state that South Shore is still difficult but I can do that climb, I ride up and down Rock Canyon, and I know that Outer Limits has an end, it's just the beginning of either Pedro's Point, Inner Limits, or Voodoo Trail, and the list goes on.

I began riding these trails prior to having a family, and now we ride at the park as a family. We have taken family mountain biking trips to Canon City, Salida, Crested Butte, Fruita, Grand Junction, Moab, and Steamboat Springs. Each of these mountain biking destinations offered new terrain, challenge, and often an opportunity to learn about stewardship, conservation, and history. We learned to leave trails and parking areas better than we found them, we know to not "bust the crust" in Moab and stay on the trail, and we have seen dinosaur footprints and petroglyphs during our adventures on foot and bike.

The draft plan for the trails at Lake Pueblo offers understandable suggestions for closure of trails, but I would caution against closures based on exposure and danger, cultural sites, and in some cases, duplicity. Trails should be rated for difficulty and riders/hikers should proceed or not as he/she deems fit for the trail. I think that sections of outer limits and voodoo trail come too close to the edge and should be moved a few feet, but not for an entire trail to be closed. As for cultural and paleontology sites, access only enhances our experience, knowledge, and respect for the area. With the correct signage and access, trails can stay open and we can all be enriched by the experience. Much of what I enjoy about the riding in the area is the variety and connectivity from a common starting point. Riders can lengthen and shorten rides based on the canyons and connector routes like The Duke, Cuatro Sinko, and Inner/Outer Limits.

I hope that as many trails as possible remain open and that the users of the park are trusted by CPW to continue to be the good stewards we are to the trail system. In addition, I suggest that the management plan does not set the sites too microscopic about closures and views this system as one of the great and growing mountain biking destinations in this state and seriously considers adding or adjusting some trails for family and novice riding.

---

*Nicole Cummings*

**Art Baca <laxtz3@gmail.com>**  
to Lake.Pueblo.Park

Tue, Apr 23, 10:05 PM

I am opposed to both permanent and seasonal closures of trails as proposed by the subject "Trail Management Plan". I have been riding these trails for many years, several times per week and seen both wildlife and vegetation thrive. The only negative impact that has occurred in this area is due to water erosion during heavy rain periods.

---

Art Baca

**ALBERT & SHERI**  
**TRUJILLO <astrujillo@comcast.net>**

Wed, Apr 24, 10:11 AM

to lake.pueblo.park, brad.henley, brett.ackerman

**Monique Mullis, State Park Manager**

**Jeff Thompson, Resource Stewardship Program Coordinator**

**Robert Seel, SE Region Trails Coordinator**

**Melissa Belmar, Consultant and Primary Author**

Thank you for the opportunity to comment on the proposed plan. The statements provided in italics are taken from the plan and my comments follow as non-italicized bullet points:

***1.1.1 Plan Purpose and Need***

*The system developed over the past few decades from social use by mountain bikers, equestrian riders and hikers and was not formally designated by CPW or Reclamation. In the past ten years, the trails were maintained by the Southern Colorado Trail Builders Club as a result of informal arrangements with CPW.*

- In the early 2000's a system of illegal trails were built on the north side SWA without the knowledge or approval of (then) DOW.
- A subsequent meeting with the trail builders group determined the trails were built with the implied approval of the DPOR manager at Lake Pueblo (personal communication between staff and bicycle group from a meeting at DOW A-11 Office).
- Since use by bicyclists and new trails were never formally approved in the BOR approved wildlife mitigation planning process DOW was obligated to undo the problems created and literally hundreds of hours of DOW staff time were expended in removing trails and signs.

*The overarching purpose of the completed trail studies is to improve and maintain the extensive trail system present at LPSP.*

- My review of this draft plan determined that illegal trail development on neighboring lands has been acknowledged (the SWA) but it did not offer meaningful suggestions to mitigate impacts beyond the immediate boundaries of LPSP.

### **1.1.2 Project Goals**

*The following project goals were developed through the completion of the trail studies and through collaboration between CPW and the Bureau.*

- The plan needs to include a goal recommendation about informational signing to reduce trespass, or to make it explicit where bike trails end.

### **1.2.1 North Shore Trails**

*A total of 15 miles of undesignated trails were identified during the project analysis, 11.1 miles of which was in the SWA and 3.9 miles located in LPSP.*

- The plan should address the 11.1 miles of illegal bicycle trails on the SWA, how their impacts affect wildlife, whether they will be closed, and what reclamation efforts will be implemented to mitigate damage created by these trails.

- The plan needs to address whether these illegal trails on the SWA violate federal rules (NEPA, NHPA, ESA, CRS Title 33) and CPW Commission approved uses of SWA's.

### **1.2.2 South Shore Trails**

*The South Shore area encompasses 2,964 acres of land in the southern half of LPSP (Map 1.3 and 1.6). A total 53 miles of undesignated trails and 4.9 miles of two track roads were mapped for the project analysis.*

- Does the scope of this plan identify illegal trails and offer mitigation to close those trails that were developed on the South SWA?

### **1.3 Recreation and Visitor Use**

*LPSP is a premier year-round recreation destination, as well as one of the most visited state parks in Colorado with approximately 2,400,000 people visiting the park annually. Park activities include camping, fishing, hiking, biking, boating, swimming, and picnicking.*

- If recreational hunting is no longer permitted on LPSP how does this plan mitigate the loss of opportunity in the offset between bicyclists and hunters?

### **1.4 Public Process**

*Coordination with and input from the public was an important part of the creation of this plan. Informal meetings and conversations with stakeholders and interested individuals occurred continuously before and during this planning process.*

*In January 2014, CPW and the Bureau started a separate planning process to update the LPSP's Resource Management Plan (RMP). This RMP, following federal guidelines and managed by the Bureau, encompasses all aspects of the Bureau owned properties including the trails. Dozens of formal, written comments about the trails were received at that time and were reviewed again by planners at the start of this current trail planning process. The comments centered mainly around keeping the trails accessible, sustainable and open to multiple types of recreation.*

- Was there a similar process for agency scoping and did the wildlife branch of CPW provide comments.

- Did you receive any comments regarding hunting recreation (under multiple types of recreation).

## **2.3 Wildlife**

### **2.3.1 Sensitive Wildlife Species**

*LPSP and the adjacent Pueblo Reservoir SWA together provide a habitat base 19 sensitive wildlife species, including seven Tier 1 and ten Tier 2 sensitive wildlife species of greatest conservation need (SGCN) as ranked by the Colorado State Wildlife Action Plan (SWAP) (CPW 2015). Table 2 lists the sensitive wildlife species that have previously been documented within the project areas and other sensitive species that could occur within these areas.*

- Table 2 does not include bighorn sheep which are a disturbance sensitive species and are known to seasonally frequent LPSP.
- Will trails be modified (seasonally) or closed (permanently) to minimize impacts to BHS in the Park?

## **6.3 North Shore Trails Area**

### **6.3.1 Conclusions**

*The North Shore Trails area consists of 15 miles of previously unmapped social trails. Of these trails, 2.7 miles of trail are recommended for closure and 0.6 miles of trails are recommended for addition or rerouting. This results in a total of 12.9 miles of trail being available, essentially keeping 86 percent of trail mileage on the North Shore.*

- In 1.2.1 North Shore Trails a total of 15 miles of undesignated trails were identified, including 11.1 miles on the SWA, during analysis.
- However, the LPSP recommends that only 2.7 miles of trail are recommended for closure.
- Does the LPSP imply that these once illegal trails on the SWA will be formalized and adopted into the trails system?
- How does the formalization of 11.1 miles of trail on the SWA affect the wildlife mitigation plan which the wildlife branch of CPW is obligated to manage the SWA under by an agreement with the Bureau of Reclamation?
- Does adoption of these trails on the SWA create a financial penalty on the wildlife branch?
- How are recreation conflict impacts going to be managed by adoption of trails on the SWA?

*Multiple social trails appear to be created by residents of the adjacent neighborhood accessing the SWA by crossing the railroad tracks between the SWA and the neighborhood.*

- Since bicyclists often use these trails does the LPSP identify methods to reduce, eliminate, rehabilitate, and/or mitigate these trails?

*These routes should be closed in the interest of public safety, trespass, and liability.*

- These trails have been a problem and CPW can no longer kick the can down the road.
- Since the trails cross private property (the railroad) any plan that does not offer proper closure mitigation implies acceptance of this use and potentially increases liability on CPW.
- Identifying this problem assures a huge payday for attorneys if someone is hurt or killed if CPW has acknowledged but not properly mitigated this issue.

*There is a significant amount of trash scattered around the north shore area, and there is considerable damage from erosion and unregulated recreation. Substantial effort needs to be invested into remediation and restoration of the SWA.*

- Now that this has been identified, what is CPW doing about it?

*We are confident that the local community, including the adjacent neighborhood, can be successfully engaged in cleanup efforts.*

- Unless an outreach effort is specifically identified and implemented this comment should be stricken from this draft plan.

Once again, thank you for the opportunity to provide comment on this draft plan.

Sincerely,

Al Trujillo

Pueblo, CO

[astrujillo@comcast.net](mailto:astrujillo@comcast.net)

**Anthony fonzi** <[anthonyfonzi@gmail.com](mailto:anthonyfonzi@gmail.com)>  
to Lake.Pueblo.Park

Wed, Apr 24, 12:30 PM

To whom it may concern,

I dont like the thought of any of the canyon trails going away..If that is what is being considered to be "redundant" than I completely disagree.

I think it would be huge mistake to get rid of these trails. I would even like to see more of a focus on mountain biking and directional trails in the area.

Thank you  
Tony

**Craig O'Boyle** <[craig.oboyle@oboylegroups.net](mailto:craig.oboyle@oboylegroups.net)>  
to Lake.Pueblo.Park@state.co.us

Wed, Apr 24, 8:38 PM

My email is in response to the trail closure and restrictions proposed. Here are my two cents:

1. Pueblo is too hot most of the summer to ride or hike. Restrictions on the cooler months is like taking 75% of the realistic season the trails in use away. This is land set aside for public use and should remain open.
2. Removing many trails, especially harder rocky Canyon trails would vastly reduce the attractiveness of the park. Many of us visit from outside the area specifically for the combination of warmer winters, vast mileage, and technical Canyon trails. Why make the trip if all three are reduced?
3. Restricted months and reduced trails hurts funds to the park and funds to local Pueblo businesses. I personally visit Pueblo from November to April to mountain bike from Colorado Springs. I pay the park fees each time, ride, then visit downtown restaurants. Cut riding days, difficult trails, and mileage available and I will simply take my business to Canyon city more. So will thousands of others.

Thanks  
Craig O'Boyle  
O'Boyle Real Estate Group  
[719-576-7373](tel:719-576-7373)

**Art Baca** <[laxtz3@gmail.com](mailto:laxtz3@gmail.com)>  
to Lake.Pueblo.Park

Wed, Apr 24, 9:14 PM

I am opposed to the closure of the Lake Pueblo South Shore mountain bike trails as proposed by the Colorado Parks and Wildlife proposed Trail Management Plan. Mountain biking at Lake Pueblo has been one of the few recreation activities that attracts many working professionals and younger outdoor enthusiasts to residing in Pueblo. The "Trail Management Plan" indicates that 83% of the trails will remain open but it is the remaining 17% that is the most desirable mountain

biking terrain that is slated for closure. I've been riding these trails for 20 years and have seen first-hand, wildlife and vegetation of all types thriving. Mountain bikers riding on narrow 12 – 18" single track path have little effect on surrounding vegetation. In contrast roaring motors from the boaters are far more likely to negatively affect the nesting birds in cliffs directly above where boats speed past them. The mountain bikers don't even ride near the cliffs where these birds nest. I realize the boaters bring far more revenue to the Park but, mountain biking is a growing sport and an attraction to live in Pueblo for outdoor physical sport enthusiasts. I talk to many riders who love living in Pueblo because of the access to Lake Pueblo's South Shore MB trails.

**palomar4130@gmail.com**

Thu, Apr 25, 9:13 AM

to Lake.Pueblo.Park

Hello all, I am writing to say that closing the mountain bike trails deemed "redundant" will be the death of mountain biking at Lake Pueblo. The trails slated for closure are the reason mountain bikers recreate at the park. My friends and I have done multiple biking/camping/fishing trips there and have always enjoyed our time there. I can tell you without a doubt we will not be back if those trails close. It was already a discussion between Pueblo and going to Curt Gowdy in Wyoming which we also enjoy. Taking out the canyon trails leaves no discussion. You're also competing with Canon City, who has fully embraced mountain bikers, and are expanding trails in the area. Your local merchants stand to lose a significant amount of tourism dollars if these trails are closed. Thank you for your time,

Joshua Cox

**Robert Blackwell <robert@colofire.com>**

Thu, Apr 25, 4:19 PM

to Lake.Pueblo.Park, Adam

Planning team,

Seeing the list of trails that are to be closed both permanently and seasonally saddens me. (though some seasonal closures for habitat are understandable) I live 5 minutes from "Red Gate" and ride here year round, in the heat and the cold. In the past 10 years I have logged thousands of miles on Lake Pueblo trails alone. I also travel all over the state to ride trails on a good old fashioned mountain bike, no motor, just human power. The current trail system is unique, challenging and loved

by many. I encounter visitors from all over that just rave about the diversity of the trails. From the countless miles of cross country trails to the technically challenging “Canyon” climbs and descents. To say that trails are redundant and there for should be closed, is a contradiction to the nature of exploring or wandering, which is what recreational trail use is all about. The trails at Lake Pueblo are not used to travel to a destination as implied by the closures of trail that are redundant or **lead to nowhere**. Instead of closing dead end trails, why not finish them, improve redundant trails? Currently the trail system challenges even the most seasoned rider or hiker while at the same time, has an offering for all skill levels. I often imagine new trails being built out there, built sustainably by professional trail builders who know how to make use of the natural trail features that are abundant. Most communities that have an outdoor resource such as LPSP trails invest in improvements. Why not do that? I would hope that at least one member of your planning team utilizes these trails and understands their current value.

Please correct me if I am wrong but there seems to be no desire in the Trail Management plan to improve the trail system. Only to close trails, limit use and add trail head parking/bathrooms. Why utilize large amounts of tax dollars on parking areas, bathrooms and signage as part of a Trail Management Plan that will reduce the number of trail users?

The proposed trail closures will remove the guts from our trail system. Please reconsider, like other communities have done.

I will make myself available at your request, to answer questions, comments, whatever you need.

Robert Blackwell  
General Foreman  
Colorado Fire Sprinkler, Inc  
Ph 719-546-8250 ext 103  
Fax 719-546-2652  
Cell 719-252-3263  
[robert@colofire.com](mailto:robert@colofire.com)

**Max**

Thu, Apr 25, 4:29 PM

**Gerson <maxwellgerson@gmail.com>**

to lake.pueblo.park

To whom it may concern,

The planned reduction in mountain biking trails is something that I overwhelmingly oppose.

I am a 38 year old father of two, and I make a living by helping businesses and non profit organizations more successful. I am an avid mountain bike enthusiast and I live in Boulder County.

On the weekend of April 12th, my self and 5 of our friends camped at the reservoir for the explicit purpose of mountain biking. We booked 3 campsites, each for 3 nights at \$36/night. In addition to this we also purchased all of our groceries, and supplies in Pueblo. Once at the campground we purchased 6 bundles of wood, and one night we even had Dominos deliver pizza to us for dinner. Furthermore on the way out of town, we stopped for brunch on the river, and to refill our diesel fuel tanks at local gas stations. Long story short, the existence of these trails, has an immediate and obviously positive benefit to your local community and tax base. Furthermore we believe that the mountain biking community in Colorado and for other markets, is largely unaware of the opportunity that the park affords to this retail audience.

We loved the uniquely technical aspects of these trails based on the shale and clay environment, we also loved the fact that the park is only a 2 hour drive from Denver. This was our first visit to the park, and we plan to return this fall, and make this a trip that that we can repeat at least twice every year.

If the proposed mountain bike trail restrictions go into effect as outlined, it will likely prove to be a measure that prohibits us from ever visiting again.

As a serial entrepreneur, the financial opportunity to me is obvious. These trails should be supported, developed and marketed appropriately, doing so will only serve to support the financial needs of your tax base and the park itself.

Sincerely,

---

Max Gerson

**Kurt**

Thu, Apr 25, 9:44 PM

**Peterson <co.kurtpeterson@gmail.com>**

to Lake.Pueblo.Park

Park officials,

<https://cpw.state.co.us/placestogo/parks/LakePueblo/Documents/LakePuebloStateParkTrailManagementPlan-Draft.pdf>

This report is so biased towards the those who want to shut out recreational mountain bikers, with no input from those who use the "public" land! The trial riding area is just a small, drop in the bucket, portion of land in all of Colorado. It's like the Park is to save one blade of grass in a million acres of grass land! Just like when the government tried to shut down PMI from motorcycle riders a few years ago and what has happened since then? Nothing, they didn't save the land from anything, didn't improve anything for anyone. All the government did is restrict those who love the outdoors, from enjoying it.

Local mountain bikers have spent a great deal of time, energy, and money to develop and maintain the trails. Riders come from all over Colorado to ride these fabulous trails. Riders enjoy the ruggedness of the natural trails and don't need the Park taking control of what is attracting riders from all over. How can the park ruin all the hard work and effort by shutting down any of the trails.

There are a great variety of trails and wide variety of technical levels available for riding. The public doesn't need a communist thinking Park telling them what they can ride and what they can't ride. If Colorado can allow people to ski the dangerous trails that are available to the public, then why would anyone restrict the riding of trails around the park based on technical difficulty?

Just let be what is enjoyed by tax paying, park pass paying citizens. Just leave alone what citizens are taking care of and enjoying on their own. Just stay out of what doesn't need micro managing by the Park.

Sincerely,

Kurt Peterson  
719-214-0155  
2 Portmarnock Pl  
Pueblo, CO 81001  
Local Business Owner  
Experimac

**Thomas Lindenmeyer** <deluxxx247@gmail.com>  
to lake.pueblo.park

Thu, Apr 25, 10:41 PM

To whom it may concern,

I writing to you to oppose any sort of trail reduction to the wonderful trail system Lake

Pueblo State Park has to offer. Any sort of reduction is going backwards in my opinion. There are so many great towns in Colorado that offer camping, biking, boating, and hiking. The money these day or weekend tourists bring in has got to be huge. If anything Pueblo should build more trails to attract the growing mountain bike community. Long gone are the days of dirtbag mountain bikers. We are now a group of enthusiasts that like to spend our recreational time and money on the trails, spending money on campsites, firewood, food and beverage not only from the local grocery stores but also from the local restaurants, gas from the local gas stations. Being within a 2hr drive of Denver, Pueblo is a hidden gem. Don't take trails away, build more. If the trails go away there isn't a reason for the mountain bikers and families to come to Pueblo to spend our hard earned money in your town.

Please reconsider the reduction plan for the wonderful trails at Lake Pueblo State Park.

Sincerely,

Thomas P Lindenmeyer

**Brian**  
**Bratton <brattonb@gmail.com>**

Fri, Apr 26, 6:57 AM

to lake.pueblo.park

To whom it may concern,

I'm writing today to vehemently oppose a reduction to any downhill portion of the single track trail system in the park.

I come to your park at least once a year; usually trying for 2-3 times per year. As someone who lives in Denver and an avid mountain biker and camper, I try to keep my camping within the 2 hour driving range. Lake Pueblo state park fits that perfectly. We love the proximity of camping to the trails with a giant lake to boot.

My wife and I and usually some friends camp for a few days and ride and then spend time downtown on our last day before we head back. By the time the long weekend is over, we spend quite a few hundred dollars locally between park fees, gas, f&b, entertainment, etc.

I hate to say it, as we love Pueblo as a city, but if the down hill portion of the trail system was reduced or removed, we simply wouldn't have the motivation or reason to go camp there anymore and therefore our ability to go to Pueblo would be greatly diminished.

I hope that you guys are able to see the value in your trail system, maintain and market it in a manner that utilizes the funds to maintain and enhance the park and keep the economy in Pueblo strong.

Thank you for your consideration,  
Brian Bratton

**Peg**

Fri, Apr 26, 8:24 PM

**Rooney drpeg@bresnan.net via outlook.com**  
to Lake.Pueblo.Park@state.co.us

It appears that the plan will legitimize the current trail system, while still maintaining access for hikers, bikers, and equestrians. The development of the Red Gate area with a parking lot and restroom will be especially welcome.

We need to make sure that the plan actually protects sensitive riparian areas, as well as, raptor nesting sites.

Sustainable trails is a valuable goal. Making sure birds and other wildlife are protected is equally important.

It appears that only 7 days have been allotted for public comment. That really doesn't seem like enough time.

Thank you.  
Peg Rooney  
Penrose, CO

**Ted**

Sat, Apr 27, 10:35 AM

**Gutshall <tedgutshall@gmail.com>**  
to Lake.Pueblo.Park

Hi.

Please don't close Log Drop or any trails that BRING citizens to the park. I'd hope with your lobbying of the Assembly and Congress, you'd expand trails all around this beautiful, useful reservoir. Tons of trail advocacy groups will help you.

This system is a gem, and we riders are proud of it and glad of your stewardship.

Sincerely,

Ted Gutshall  
2 ACOMA St #5  
Denver, CO 80223  
[tedgutshall@gmail.com](mailto:tedgutshall@gmail.com)

**Shannan <shannan1969@yahoo.com>** Sat, Apr 27, 10:58 AM  
to Lake.Pueblo.Park

Please do not close the trails listed in your plan! These trails are the only reason we go down to Lake Pueblo to ride mountain bikes. Thank you.

**Greg** Sat, Apr 27, 11:10 AM  
**Corey <thenevinrule@gmail.com>**  
to Lake.Pueblo.Park

Dear Lake Pueblo,

I am deeply disappointed by the recently released Trail Management Plan. This plan fails to recognize the community value of recreational trails at Lake Pueblo. The plan aims to eliminate many of the park's best trails. These trails are the reason many front range mountain bikers choose to visit the park during the colder off-peak seasons. The loss of these trails will eliminate a unique recreational experience and deter mountain bikers from visiting.

I support temporary closures for nesting season but I strongly disagree with the permanent closure of trails due to environmental concerns. These trails have been used for the last ten years. Whatever impact has occurred has been done. These trails follow durable drainage features of dry shale beds. The impact is being greatly overstated.

The labeling of trails as "redundant" displays a complete misunderstanding of how recreational bike trails are used. Trails are not simply connectors between Point A and Point B. They are experiences in their own right. Each trail at Lake Pueblo offers mountain bikers a unique ride. Specific trails slated for closure represent features or challenges you can't find anywhere else on the front range.

In recent years Lake Pueblo has become a significant destination for front range mountain bikers due to the aforementioned trail offerings. Mountain bikers have bought state park passes because of these trails. I've personally visited Lake Pueblo five times so far this year. Each visit includes several visits to local restaurants and businesses.

I understand the creation of these trails was not officially approved to begin with. This has happened at other recreational areas across the US. Despite these unofficial beginnings many trails falling into a grey area have been officially adopted by land managers. Why can't we do the same for Lake Pueblo? Why must we lose trails that have been used for ten years without issue?

Regards,

---

Greg Corey

**Aaron**  
**Dix** <aaron.dix@gmail.com>  
to Lake.Pueblo.Park

Sat, Apr 27, 12:15 PM

Sending my plea not to close trails like log drop and Waterfall. They are part of the reason my friends, family, and I take trips to and spend money in Pueblo, Co each year.

Please reconsider closing those trails and let the community know what we can do to keep them open.

Sincerely,

---

Aaron Dix

**Paul**  
**Gerrard** <pfgerrard@gmail.com>  
to Lake.Pueblo.Park

Sat, Apr 27, 12:34 PM

To whom it may concern, please don't close this trail, it is not redundant, it is unique and fun and a big part of why I like to ride the area. Please don't alter the character of the area by changing let alone eliminating signature trails!

May Thanks,  
Paul

**Isaac**  
**Tafoya** <isaactafoya@yahoo.com>  
to Lake.Pueblo.Park

Sat, Apr 27, 12:58 PM

Hello,

I am writing to share my opinion about the proposed closing of some of the reservoir

trails. This is one of my favorite places to ride. Me and a group of friends from Denver make regular trips down there specially to ride those trails. If you take them away I know many similarly-minded riders will stop traveling down south. Ask yourselves why you have the state parks in the first place? It's for people to go and enjoy. Please reconsider this proposal.

Isaac T.

**Cole Stelly** <cjstelly89@icloud.com>  
to Lake.Pueblo.Park

Sat, Apr 27, 3:41 PM

Please do not close any of the trails in the park, they are all different and not redundant in any way. These trails bring tourism to the area, thank you very much.  
Sent from my iPhone

**Rita Peterson** <rpeterson000@yahoo.com>  
to lake.pueblo.park@state.co.us

Sat, Apr 27, 5:49 PM

Hello,

I would like to voice my concern for some of the trails that you are proposing to close on the South Shore Trails. As a mountain biker who lives in the Denver metro area, I regularly visit Lake Pueblo State Park during the winter and spring. As I am not a cross country rider, I pretty much only ride the canyon trails when I visit. I saw you are proposing to close at least 6 of these canyon trails. I want to let you know why I think you should keep each of these trails open.

1) Waterfall/Log Drop - These trails are the only reason for me to ride anywhere near the loop trails (which I find insanely boring). Waterfall provides a fun return to the canyons and Log Drop is another fun challenge. You said the cliff drop on Waterfall is unsafe. Well, welcome to the sport of mountain biking. Riders love to be challenged and this drop is there to challenge the more advanced riders. Less experienced riders can walk around.

2) Rock Canyon - This trail was the first canyon trail I rode cleanly and I think it is needed for progression to the more difficult canyon trails. I still ride it every time I visit because it's a fun ride and a good warm-up for the other canyons.

3) Skull Canyon - This trail is currently one of my favorite trails in the canyons. It flows really well and has a fantastic drop-in at the top. I know a lot of people who would be heartbroken to see this trail close.

4) The Edge - While not necessarily a canyon trail, it's a more scenic way to reach Lower Rock Canyon and you don't have to climb up that horribly steep hill. Plus, it's a great place to take photos of people riding Dead Dog.

5) Lower Dog - So much chunky goodness. Much better than riding Rollercoaster.

18 Public Comments for Draft Lake Pueblo State Park Trail Plan: April 2019

6) Free Ride - Please NO! I only just heard of this trail and have yet to ride it. The features look like a blast to ride. We need more, not less, of this kind of riding!

7) Keyhole Canyon - This is the only canyon closure I agree with as being redundant. It's a pain to get to. If you could get there quicker, I'd say keep it.

Overall, I believe if you close the proposed canyon trails, you are losing what makes Lake Pueblo State Park fun for mountain biking. Half the number of trails to ride means more crowded trails and word will get out that there are fewer fun trails to ride and you'll start to lose those who only visit for the canyons.

Ultimately, this is your choice, but I would hate to lose a fun place to ride because you didn't truly think these changes through.

Thanks for you time,  
Rita Peterson  
Golden, CO

**Rachel**  
**Pierce** <rap150@hotmail.com>  
to lake.pueblo.park@state.co.us

Sat, Apr 27, 5:50 PM

Hello,

Please reconsider the trail closures at Lake Pueblo State Park. Those trails are enjoyed by a variety of trail users and bring a lot of revenue to the area by visitors.

Thank you,  
Rachel

**Chad**  
**McCray** <chademccray@gmail.com>  
to Lake.Pueblo.Park

Sun, Apr 28, 6:09 AM

Lake Pueblo trails are a hidden gem. They attract thousands of visitors. Closing these trails would drastically reduce visitation to the park. These trails are highly sustainable and require minimal manpower maintenance. They don't interfere with wildlife or the landscape. I have been using them for the last ten years and soil has hardly eroded anywhere in that time. This in itself shows the minimal maintenance and high sustainability of these trails.

**Maureen**

Sun, Apr 28, 1:31 PM

**Garelick <beandog9@mac.com>**

to Lake.Pueblo.Park

I appreciate all the hard work undertaken by CPW and BOR to find a way to "legitimize" most of the social trails available in Lake Pueblo State Park. I also understand that these are indeed currently "social trails" that were never authorized or developed by the park.

However as a hiker and novice mountain biker, I do have some significant concerns, especially with regard to changes that will make some of the more elementary trails noncontinuous and inaccessible to users.

The Rock Canyon Trail provides good access and would limit my ability to get to trails that work for my level of experience. The same goes for Arkansas Point Trail. If any part of it is closed, it would make access to significant parts of the system. In addition, as noted by others, the proposed alternative would leave me with an alternative that is beyond my capabilities. I strongly urge you to reconsider these changes.

Best regards,  
Maureen Garelick

**Southern Colorado Trail  
Builders <southerncoloradotrailbuilders@gmail.com>**

Sun, Apr 28, 11:16  
AM

to Lake.Pueblo.Park, Monique, Adam, Emilie, laura, sarat, Nicole

Please see below (also attached as PDF) the public comment from the Southern Colorado Trail Builders (SCTB). SCTB is a non-profit organization dedicated to building and maintaining sustainable trails and educating trail users. We represent and advocate for the trail community in Southern Colorado. SCTB has been closely working with CPW and BOR throughout the TMP and RMP process. We look forward to continued partnership and an opportunity to discuss our comments at a meeting soon.

**POSITION STATEMENT  
Lake Pueblo State Park Trail Management Plan Draft**

In support of our mission, Southern Colorado Trail Builders (SCTB) has been actively engaged with Colorado Parks and Wildlife (CPW) and the Bureau of Reclamation (BOR) on the future of the trails at Lake Pueblo State Park. SCTB agrees with the assessment that the trails at Lake Pueblo are currently social trails that need to be recognized through the Resource Management Plan (RMP) and Trail Management Plan (TMP) process. With official recognition by CPW and the land owner, BOR, the trails at Lake Pueblo will be more sustainable thanks to interagency support and resources.

SCTB is thankful for its hard-working partners - Colorado Parks and Wildlife and the Bureau of Reclamation. In the Lake Pueblo State Park Trail Management Plan draft, CPW has undertaken a comprehensive review of the trails within the park including their location, condition, maintenance needs, and conflicts with natural or cultural resources. The TMP is testament to innumerable hours of research, a vision for a thriving recreation culture, and healthy natural habitats in Pueblo County. SCTB will be providing comment from the perspective of the partner on the ground working most closely with trail users.

SCTB wants to acknowledge the value of the 40+ miles of existing trail that are not impacted assuming no changes with the draft Trail Management Plan. Interagency support of these trails will be excellent for the system. Being able to publicly promote official, recognized trails will be a boon for the region. Recognized trails will also allow for community and sanctioned events in the future.

The trail system on the south shore of Lake Pueblo State Park does contain problem sections that need to be addressed, including trails that impact riparian or otherwise sensitive areas. This is a system that experiences heavy use from varied user groups who are both local and visiting from outside the region. Having a system that is monitored and managed by its partner agencies is a healthier system than a system that has trails closed "on paper" with unmonitored proliferation occurring in and around blockaded areas. SCTB believes that the best way to discourage use of unsustainable or dangerous trails is to build, maintain, and sign sustainable trails that engage and challenge the wide variety of trail users at Lake Pueblo State Park.

In reviewing the trail management plan draft, we recognize that some trails have been recommended for closure. Trail closure inherently requires revegetation, disguising of existing tread, monitoring, public education, and enforcement. In short, it is a very resource heavy process that leans as much on management agencies as it does on users. SCTB will take this into account in its official position on certain aspects of the Trail Management Plan. Below is a summary of SCTB's concerns and comments regarding the draft TMP:

**Trail Closure Recommendations:**

- **Rock Canyon Trail:** Closing any of Rock Canyon trail's contiguous length from the Red Gate to South Shore Trail would be challenging at best, and disastrous at worst. Rock Canyon is an exceptionally popular trail for every user group of the trail system. This trail often serves as the backbone of a trail experience on the south shore. It is the most widely accessible canyon based on difficulty, and an important connector trail in the overall system. Closing Rock Canyon Trail would introduce a major user communication challenge because of its popularity, exacerbated by how hard it would likely be to reclaim the area given its composition and the park's resources.
- **Arkansas Point Trail:** Closing any contiguous portion of the Arkansas Point trail between the Red Gate and Arkansas Point will eliminate access to a main portion of the trail system. The proposed alternate route includes a technical descent/climb only

suitable for advanced users. Furthermore, this trail offers a profound opportunity for users with limited mobility to experience the park and the powerful vista at its terminus. We feel this cannot be understated. Lastly, if the trail is closed, the flat contour and open nature of the area will inevitably lead to further trail proliferation causing unnecessary destruction to virgin resources.

• **Technical Canyons:** Short canyon trails such as Skull Canyon, Freeride, Hooters, and Water Tower diversify the user experience with technical features. Mountain bike users take a particular affinity to these types of features and historically will construct them when system trails do not offer options. Closing these types of trails would prove extremely challenging, would rob the trail system of part of its rugged and diverse character, and would inevitably lead to trail proliferation and thus, additional destruction of virgin resources. Due to the difficulty in revegetating and closing these types of trails, we believe the best way to prevent undue damage is to maintain and improve the existing canyon trails.

### **Seasonal Closures:**

Seasonal closures of major arteries of the trail system during high volume times will be unmanageable with current resources. Due to Pueblo's mild climate, the trail system attracts its largest number of visitors from November - March. Closing South Shore, Conduit, Pedro's Point Trail, Inner Limits and Arkansas Point Trail make the trail system noncontinuous and inaccessible to users. This is analogous to closing portions of major highway arteries in a city – the effects will be detrimental to other areas of the system. It is highly unlikely that users will adhere to these closures and that existing resources will be insufficient for monitoring and enforcement.

### **Infrastructure:**

We fully support the proposed infrastructure construction including: added parking and access points, fee stations, trail signage, and interpretive signage across the trail network. Such a large network of trails requires more and improved access points than the current recognized trail heads. SCTB looks forward to participating in these infrastructure improvements with volunteer support and funding.

In summary, SCTB is excited for the future of recognized official trails at Lake Pueblo State Park. The improvements being proposed to the trail system will undoubtedly improve the experiences of all users. We firmly believe that any attempt to close a trail needs to take into consideration its function within the overall trail network, the variety of user types and experience levels that are drawn to Lake Pueblo State Park, and the potential negative impacts of those closures on virgin resources due to further trail proliferation. As it exists now, Lake Pueblo State Park is a destination for trail recreation in the Western US supporting CPW and the local economy. Our position seeks to see this trail system continue to flourish in the future.

Regards,  
Southern Colorado Trail Builders

**Jeff Twiss** <jptwiss@msn.com>  
to lake.pueblo.park@state.co.us

Sun, Apr 28, 1:43 PM

I'm an avid Mtb biker who has lived in CO for nearly 20yrs now. Every winter I inevitably head south to find trails to ride, and until now Pueblo res has been totally worth the 3 hr drive to get there. If this proposal goes through the town of Pueblo is going to see a lot of its tourist dollars go to Canon city instead.

The canyon trails are the only thing that makes it worth driving down there, the perimeter trails are essentially glorified bike paths. Please reconsider your plans, or at least consider the lost revenue.

I truly hope you don't move forward with this plan as it stands

---

Jeff Twiss  
303-880-6953

**Brittany Jones** <brit.boaski@gmail.com>  
to Lake.Pueblo.Park

Sun, Apr 28, 1:59 PM

I am writing to express my disappointment in CPW's plan to close miles of singletrack in Lake Pueblo State Park. Those trails have done a tremendous job of bringing people and revenue to the area and the local riders in Pueblo have done a fantastic job of maintaining the trails. Many of the trail users drive 2hrs to get to these trails, and it's the fact that there are so many miles and there is so much variety between the canyons and the flow trails that makes that drive worthwhile.

The trails that are on your closure list are some of the most popular and well loved trails. This trail system is a regional gem, and it's upsetting and incredibly disappointing that CPW would close them after so many years of use and community maintenance. Please reconsider this poorly thought out decision.

---

Brittany Jones | Sent while on the go | (720) 468-2826

**Charles C** <cdcrail@gmail.com>

Sun, Apr 28, 2:23 PM

to lake.pueblo.park@state.co.us

I am disappointed to hear LPP is planning to close some of the most unique trails in this part of the state. I regularly make trips in the winter months bringing not only my parking fee dollars, but also my food and drink dollars to local businesses.

Closure of these trails is a short sighted move that will alienate a large portion of out of town visitors.

Please reconsider.

v/r

Charles Crail

**jared  
crockett** <jaredmente@hotmail.com>  
to Lake.Pueblo.Park@state.co.us

Sun, Apr 28, 2:31 PM

I don't think you should close the mountain bike trails at lake Pueblo state park. If closed, I will have lost any and all incentive to ever visit your park again. Thank you for your consideration,

Jared Crockett  
**Stephanie  
Fonger** <stefmarie01@gmail.com>  
to lake.pueblo.park

Sun, Apr 28, 2:57 PM

Good afternoon.

I'm writing in regard to a post I just read about the closure of many mountain bike trails in your park. My family is very sad to hear this, as it was one of our favorite places to ride in the winter months. Please consider marking the trails instead so that no other trails are created and adding them to the map. If the trails are closed, we will have to find another location to bike and we loved your trails.

Thank you,

Stephanie Fonger  
330-936-9755

**Russhole72** <[rbardsley72@gmail.com](mailto:rbardsley72@gmail.com)> Sun, Apr 28, 3:13 PM  
to Lake.Pueblo.Park

I have read through most of the trail management plan and I am concerned about some of the proposed closures. I couldn't agree more that we don't need redundant trails and trails that lead to nowhere. These types of things appear when the trails aren't properly maintained. Most of them occur during Winter when a majority of riders come down from the North. I am very concerned that if main trails such as Rock Canyon and South Shore are closed, people will ignore the closure and possibly cause further damage by going around barriers, signs, etc. The trails are already there. If we are allowed to maintain them properly and fix erosion prone areas, widening of trails and bypasses would be mitigated.

**cathy** <[iamkeeke1@gmail.com](mailto:iamkeeke1@gmail.com)> Sun, Apr 28, 4:25 PM  
to Lake.Pueblo.Park@state.co.us

Please open trails on north side of lake pueblo for equestrian use. I ride horses and also drive miniature horses. The south shore is very limited space and crowded and definitely not cart friendly. The paved areas on north side are horse friendly both riding and driving a horse. Years ago all trails were accessible to equestrian with the exception of wild life sanctuaries. Thank you. Cathy Howard

**Allen Tanner** Sun, Apr 28, 4:50 PM  
**ll** <[ahtannerii@gmail.com](mailto:ahtannerii@gmail.com)>  
to lake.pueblo.park

To whom it may concern,

Hi. My name is Allen Tanner. I am a Colorado Springs local, a trauma surgeon, an outdoor enthusiast, a mountain biker and an administrator to the local Colorado Springs Mountain Biking Facebook Group with over 2800 members.

We have been following the plans to make changes to the Late Pueblo Reservoir Trail system. We strongly agree with modern trail principles, ecology and conservancy. Collaboration with local trail building groups such as the Southern Colorado Trail Builders and the local IMBA Medicine Wheel Trail Advocates has benefitted the local open spaces and trail systems, providing not only well built and sustainable trails, but also world class experiences.

The Lake Pueblo State Park Trail system is a local gem, and considered a destination site among the Front Range biking community, especially in fall and winter seasons.

The slot canyons are not repetitive. Each has its own character and challenges, providing an exceptional riding experience for all levels. The larger loops are also excellent, for cross country style riding.

We strongly urge you to reconsider changes to eliminate so many aspects of this system. While we understand some changes to existing trails may be needed for sustainability purposes and for wild life protection purposes, closure because of 'redundancy' is not needed. This will drastically change the system and discourage usage among the active mountain biking community.

Thank you for your time and consideration.

Respectfully,

Allen Tanner

Picture Attached:



**Paul**  
**cavender** <[paul.cavender94@gmail.com](mailto:paul.cavender94@gmail.com)>  
to lake.pueblo.park

Sun, Apr 28, 6:56 PM

Good evening,

As I sit here contemplating the effects of massive closures of trails at Lake Pueblo State Park, I am disheartened. I, along with countless other trail users, feel that broad extent of closures in the canyons are not warranted. Attached you will find a statement from the Southern Colorado Trail Builders that summarizes and encapsulates my thoughts on the proposed changes to this Southern Colorado trail system.

Sincerely,

Paul Cavender

Pivot Cycles Ambassador  
Zoic Ambassador  
Skratch Labs "Skratchlete"

Southern Colorado Trailbuilders position statement was attached. MLM

**misc@hulsey.org**  
to Lake.Pueblo.Park

Sun, Apr 28, 7:48 PM

Colorado Parks and Wildlife,

Although I live in Colorado Springs, I am one of many trail users of the Lake Pueblo State Park (LPSP) trail system. I am a mountain biker than enjoys the technical diversity of trails within the system; especially the steep, rocky trails in the southern canyons. From October to April, I bike these trails almost every weekend.

As one of the stakeholders in the LPSP trail system, I would like to express my concerns regarding the LPSP Trail Management Plan. There are many aspects of this plan that concern me, but the first is the manner in which it was generated and publicized. The planning team, as listed on the second page, appears to have been led by CP&W personnel and a single consultant. This group, and the “analysis team” appears to have had a very narrow, myopic focus devoid of representation from the actual trail users. In addition, this plan was not well publicized in areas outside of Pueblo that contain significant user groups (for example Colorado Springs). Both of these factors lead me to believe that the trail management planning inadequately represented the trail users.

I am very concerned that the planning team seems to be satisfied with a “less than 100%” solution for the future. All areas will retain less than 100% of the current trail system, with no thought of replacement trails or trail system expansion. This is potentially due to the aforementioned myopic view of the planning team, which is primarily made up of land managers with a desire to “restrict and close” rather than thinking outside the box into the realm of “expand and improve”. This single item alone should disqualify this team as “land managers”, which should be comprised of forward-thinkers that are able to successfully navigate the tricky waters of both protecting the natural resources while improving the experience of the actual landowners (aka the public taxpayers). This plan falls far short of that mark.

I do not believe that the plan adequately justifies the closure of any of the trails I enjoy the most, Keyhole Canyon, Rock Canyon, Skull Canyon, Waterfall, etc. These trails have been in existence for many years now, and appear to be very sustainable. As someone who has ridden down and hiked back up them many times, the damage to natural resources appears to be significantly overstated. Any damage to minor natural resources has more than likely already occurred and would not be mitigated by closures at this late date. Natural erosion, freeze/thaw cycles, and invasive species will do far more damage than all the bikers, hikers, and horseback riders combined.

The seasonal impact due to nesting raptors also appear to be significantly overstated, since these raptor nest and viewshed sites have been used for many years; coexisting with the current trail system. The impact of the trail users is not an impediment to nesting success. I live within a community of multi-acre properties and within 500 yards of my house, and within less than 100 yards of another house, is a very successful Great Horned Owl nest site that has been used for over 10 years. Within two miles of my house are other Great Horned Owl and Red-tailed Hawk nests that are within 100 yards of houses and paved roads that are also successful. The overstatement of the raptor impact and resulting significant closures support my observation of the “restrict and close” approach to land management evidenced by this plan. The vast amount

of property at LPSP with limited/no access provides more than adequate protection for all the raptor species listed, without the draconian impacts to the LPSP trail users.

I also noted references to unsafe features on many of the trails (for instance Waterfall). If a technical mountain biker had been part of the planning team, they would have educated the team on two significant facts:

1. Mountain biking is not safe. No one becomes a mountain biker because they believe that there is no danger. This fact is true of most sports; at least the sports that require infinite levels of physical mastery.
2. Progression of features are inherent in building skill. Not all mountain bikers are created equal. What seems unsafe and hazardous to one person is an easily conquered challenge to others. For many of us, Waterfall and Log Drop barely increase our adrenaline levels.

Relegating safety from an individual decision to one born of committee will result in an entire network of paved flat trails with almost no users. Maybe this is the ultimate strategy for the planning team, but as a stakeholder of the trail system and as a taxpayer of the state, I say “no thanks”.

Speaking of being a taxpayer; each day my friends, family, and I spend at the trail system results in tax revenue for both Pueblo and Pueblo county. We typically eat breakfast and lunch in Pueblo each day we ride the trails, and occasionally spend the night in Pueblo for multi-day rides. In addition, we often end up stopping for gas and snacks in Pueblo. I also see quite a few other vehicles that appear to be coming from points north, headed for the trails at LPSP. This contribution to the Pueblo area tax base should not be overlooked. If this plan is implemented, it will certainly negatively impact this tax base. If the plan, in its current form and without significant overhaul, is implemented I will no longer utilize the LPSP trail system for my winter/spring riding.

In addition, given the myopic nature of this plan I believe it was a significant waste of taxpayer resources (probably in excess of \$1M total, possibly a future FOIA request to determine). I will be rethinking my contributions to the Colorado CP&W in the future, both in access fees and tax refund contributions, if this is an indication of how MY money is being spent.

Randall J. Hulsey  
8285 Towner Ave.  
Peyton, CO 80831

**Tim Magee** <[timmagee1985@gmail.com](mailto:timmagee1985@gmail.com)>  
to Lake.Pueblo.Park

Sun, Apr 28, 7:58 PM

Hello,

I am writing out of concern that many of the trails my wife and I have come to enjoy are slated to be closed with the Trail Management Plan. We travel from Castle Rock down the the state park to ride mountain bikes on the trails about every other weekend over the winter as they are a great option to get out and ride when the majority of trails are

snow covered or muddy elsewhere. With as much as appears to be getting closed, we will likely visit the park less often. Hooters, Freeride, Log Drop, Waterfall, and the Buttes are some favorites.

Thank you for your time and consideration.

---

Tim

**Jamey  
Bridges** <jamey.daniel.bridges@gmail.com>  
to lake.pueblo.park

Sun, Apr 28, 8:02 PM

To whom it may concern,

I appreciate you taking the time to read this email. I don't know all that is planned, but from what I've seen on social media, it appears that there are some trail closures planned, specifically the more technical canyon trails. I'm writing this email as someone who frequently drives from Denver, during the winter, specifically to ride these trails. While I'm in town, I always buy riding snacks before the ride, and then after the ride, I always stop at a local restaurant for post ride food and beverages. I want to point out that I never do this alone, I am always with a group of friends, and we all put money into the local economy every time we come down.

I know that my friends are not unique and that a lot of Denver/Front Range people do this same thing, and a large part of the draw is specifically due to the technical canyon trails. If you remove these trails, I strongly believe that you will see a sharp decrease in people coming to Pueblo to ride, as these trails are what makes it so unique. You would be doing your local economy a disservice by removing these trails, and I really hope that you reconsider.

Thank you,

**Gabe  
Alvarado** <galvarado719@gmail.com>  
to Lake.Pueblo.Park

Sun, Apr 28, 8:15 PM

Hello,

Hopefully you've heard some feedback about the closing of such unique trails at Lake Pueblo. Please know that many riders of a wide range of skill levels LOVE these trails,

and make up to a two hour drive to ride them. Their day passes help to fund state parks! By removing these trails, I would imagine that ridership (and revenue) will decrease. Please reconsider not closing such valuable assets!

Thanks,

Gabe Alvarado

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**Alan & Diane  
Eickelman <eickelman@comcast.net>**  
to Lake.Pueblo.Park

Sun, Apr 28, 8:28 PM

Your draft trail management plan essentially shuts down all mountain biking at Lake Pueblo. After responsibly using the trails on the south side for over 30 plus years, I am deeply saddened by being shut out of this wonderful area. Does this apply to all users including foot, and horse traffic? Where do we go now? Have you really considered the implications of this action? This is a sad day for Pueblo and Southern Colorado.

**Kristopher  
Black <kris.black@live.com>**  
to Lake.Pueblo.Park@state.co.us

Sun, Apr 28, 8:38 PM

After looking at proposed trail closures, I am left questioning why one of Pueblo's great assets is being limited. The reasoning in the study doesn't justify limiting money brought into Pueblo's businesses: the 3 bike shops, gas stations, restaurants, hotels, etc.

1. Who is determining a trail to be "dangerous?" Hard core mountain bikers come as far as Boulder to ride these challenging extreme trails; one persons danger is a skilled riders pleasure.
2. I fail to see how these trails negatively impact certain animal species, the trails have been there a long time and these species are still thriving
3. Erosion does occur, but for the amount of time the trails have been there erosion has been handled well w trail maintenance.
4. Although desert plants can be fragile, the vast land area between trails is more than enough space for desert botany to thrive.

Closing trails is similar to one shooting themself in the foot. These trails are a great

asset to the well being and fitness of Pueblo region's citizens, Colorado State Parks, and Pueblo's economy. Keep our trails open!

**Scott Cummings** <s\_m\_c\_74@hotmail.com>  
to Lake.Pueblo.Park@state.co.us

Sun, Apr 28, 8:54 PM

To whom it may concern,

First, thank you for spending the time and effort to study the trail systems surrounding Lake Pueblo. In particular, I would like to address the trail system on the South Shore. These are great trails and we look forward to improved recognition and maintenance that accompanies the changes that are underway.

I would like to raise 2 points in particular:

1) Lower Dog is proposed for closure due to it being "unnecessary, redundant, riparian." It is short a fabulous Mountain biking trail. It's redundancy is only in the sense that there are other routes to get from the same point A to point B. But this is part of what makes this trail system so valuable - riders of different skill levels can enjoy the day together while selecting different "redundant" trails that will reconnect them shortly after they part ways. To remove one of the few technically challenging trails in this area reduces the draw for many skilled mountain bikers.

2) The trail labeled ST23g is also proposed for closure due to "closing connecting trail, riparian." The south end of this short trail is an extremely challenging climb on a mountain bike. This is another instance of a short "redundant" trail that allows mountain bikers of various skill levels to enjoy the day together. The north end of the trail may need some rerouting/rethinking, but it is well worth saving this trail.

I'm no expert in Riparian habitats, so I will leave that issue alone. Also, The Edge trail does have some sketchy exposure, and I would not argue with labeling it as dangerous. The Southern Colorado Trail Builders raise some excellent points about permanent and seasonal closures to connecting trails that will effectively orphan many of the canyon trails on the east side of the trail system.

Thank you for your time and consideration,  
Scott Cummings  
Pueblo, CO

**KIMBERLY**

Sun, Apr 28, 8:57 PM

**ARLINE <kimarline@comcast.net>**  
to Lake.Pueblo.Park

Trail Closures: I understand the desire or need to reroute a couple short sections of trail to avoid high water areas and sensitive erosive soil areas and make the detours more user friendly. But there needs to be balance with how people use trails. A good flowing trail will prevent cut offs and adjacent land damage. I just got back from a week of mountain biking in NW Arkansas and the recent development of world class mountain bike trails shows the concerns of line of sight is not as dangerous as indicated in your document might suggest. What novice or beginner mountain bikers consider dangerous or difficult, is what attracts people to ride certain trails. Lake Pueblo IS a winter destination for mountain bikers across the state when the rest of the state is under snow. Please do not sacrifice an important draw for tourism spending in our area for “safety” concerns that are actually the thrill people seek. Redundant trails are often built into world class mountain biking areas to offer different options for different types of riders and minimize adjacent terrain damage. Offering a more beginner and a more technical option is an intelligent design to a trail system, not a problem to be eliminated. But confusing and useless cut offs are worth eliminating.

South Shore trails:

Rock Canyon Trail – this is one of the tamer, more beginner to intermediate routes in the south shore area beside Quatro Cinco which would get even more heavily used and abused with cut off trails if Rock Canyon is closed. You would be pushing too many users onto this other route causing more trail conflict and social trail lines. I am interested in learning more about the new reroute trail proposed.

Arkansas Point double track road closure makes no sense from a beginner and more direct route option for those with less skills and mobility.

The Buttes trail is a good trail to close. That is not a sustainable trail.

Inner and Outer limits are epic winter riding loops far above the water line. The proposed trail segment closures close to Pedro’s point road-please keep one option in there for a connection to Pedro’s Point as a legal bail out point or you will have illegal cutting through there. The other more southern route is a fun loop, would like to know why it is slated for closure. The most concerning part is the seasonal closure of Feb 15- July 15 as I’ve seen maybe one deer and no other wildlife along the trail. If they are nesting here, they are happily away from the trail. The South Shore trail for the same closure is really an amazing route to take that time of year to see the lake. No other trails give you such views and I have never come across wildlife there either anytime of the year. I really question how a single track trail could disrupt wildlife that has acres of surrounding vegetation.

The Conduit A and Water Tower trail closures for 10 months of the year is excessive. Again, I've not seen wildlife along the trail but lots of people have enjoyed these routes for well over 30 years. I understand the Staircase trails are steep and should be closed to mountain biking but the infrastructure there hints at a time gone by, it seems like a pretty cool historical feature and our own little mini Incline. It's a hidden secret really, few people are aware of what is hidden in those switchbacks.

North Shore trails:

There are redundant sections that are confusing along the N17 trail that could and should be eliminated. But there is one section of N17K that is a good connector to the trails on the other side of the road. Otherwise you get dumped out to a road and no idea where to go next. If erosion is an issue, a better route connector is good there for flow.

NT6a is a good option for someone who finds themselves in over their head and needing a bailout option to the road. We often run out of time and need to make better time back on the road so leaving connections to the road for in and outs rather than encouraging cross country riding is important.

Map area 7 is the most concerning: NT10a is an important route due to excessive usage along NT 10 trail as an out and back route with honestly, too many dogs. This area is the most heavily used of the North Shore trails by far. NT10a is a flat easy route with fewer maintenance issues elsewhere. The high water, mud and mosquitos are a real problem in the proposed close between NT10D and NT10f. The blue reroute is needed but will still place too much demand on 10d and 11b. 10a is just a great route to get away from too many dogs and people, trail conflicts need to be considered for safety also. 10f is actually a more feasible route for many people than the 10g ride.

I hope to attend the meeting tomorrow night to get a few questions answered and may submit more comments but have a busy night and want to make sure I get my comments in now.

Kim Arline, runner, hiker, mountain biker, overall trail enthusiast

719-671-6077

**Alex San Filippo-  
Rosser** <sanfilipporosser@gmail.com>

Sun, Apr 28, 9:08 PM

to Lake.Pueblo.Park

Dear Colorado Parks and Wildlife,

I write to encourage you to keep the following trails open: Rock Canyon, Skull Canyon, Free Ride, Keyhole Canyon, Lower Dog, Sidewinder, The Buttes, and Waterfall.

I am very happy that CPW has created the draft plan. I personally share many of the plan's goals, and I will abide by the final plan. I recognize that mountain bikers can have significant negative effects on wildlife and other sensitive areas. Thus if the final plan closes trails for important reasons, I will support the final plan.

However, I believe that the Public Draft has gone too far in recommending closures. The trails listed in this Comment include some of the best and most entertaining trails at Lake Pueblo. I moved to Pueblo seven years ago, and mountain biking has been a fantastic activity for myself, my family, and my friends. We are annual season pass holders, and we encourage friends from other cities in Colorado to visit for the mountain biking alone. The trails listed in this Comment are fun, challenging, exciting, and add much to the experience of visiting the Park.

When I read that certain trails are recommended for closure because they are "redundant," "unnecessary," "lead to nowhere," or there are "too many trails" (e.g., Free Ride, Lower Dog, Rock Canyon, Sidewinder), it made me enormously frustrated. Only someone who has not ridden those trails could make closure recommendations for these reasons. I ride to be outside, challenge myself, and spend time with people I care about, not to commute from point A to point B. Each trail has its own character and challenges. How is riding these trails any more "redundant" or "unnecessary" than hauling a boat into the Park behind a truck and boating around the Reservoir?

Indeed, mountain biking appears relatively mild compared to other other Park activities. Car camping, water skiing, or partying on a pontoon boat would seem seem to have a more detrimental effect on sensitive areas than non-motorized trail use.

I implore you, please do everything you can to keep these trails open. These trails make mountain biking here special.

Sincerely,

---

Alex San Filippo-Rosser

**Ben  
Anderson** <benlikeshikes123@gmail.com>  
to Lake.Pueblo.Park

Sun, Apr 28, 9:13 PM

Parks and wildlife,

You guys do lots of wonderful work, and much of it is very important. For the most part, me and the majority of mountain bikers love seeing wildlife and enjoying wild places, and we want the best for these places. But, we also enjoy having trails to ride, and the more we have to ride, the better. We also don't understand why these trails "need" to be closed, and I think if you can't make it make sense, then the trail closures are unnecessary.

Another thing to consider, is that of you've studied much history, you will see many examples of something becoming illegal, and then the problem becomes much worse. For example, Fruita and Grand Junction Colorado have lots of sustainable and well built trails, and hardly any, if any illegal trails, which are far worse for the environment than well built trails. But in contrast, El Paso Texas (until recently) had no legal trails, but hundreds of miles of illegal trails. And illegal trails take far more effort and resources to take care of than well built legal trails. So please, for the sake of the wildlife, ecosystem, mountain bikers and your own sake, please, keep the trails open. And if you want to reduce traffic on these trails, build other trails that people can ride instead.

Sincerely,  
Mountain bikers

**Daniel  
Banaszak <djbanaszak@hotmail.com>**  
to lake.pueblo.park@state.co.us

Sun, Apr 28, 9:50 PM

Hello Lake Pueblo State Park representative,

I was very discouraged to learn about the proposed permanent and seasonal trail closures at Lake Pueblo State Park. I have been engrossed in mountain biking for two decades and Lake Pueblo has been one of my frequent destinations, but especially during cold weather months. As my skills developed, I embraced the challenging and exhilarating network located between Hwy 96 and South Shore known as The Canyons. Each of these trails (or lines) was masterfully built with reliable technical rock moves and wooden ramps that can engage and excite even the most advanced riders. Outside of the features, the hard-packed single track and sturdy berms along these canyon trails are very sustainable and provide for a thrilling and confident descent. I have ridden all of them numerous times. They each have their own unique moves and calling them redundant ignores the rider's perspective. Many mountain bikers seek a technical experience on their adventures and closing trails would become detrimental to Lake Pueblo's reputation, possibly putting the park's mountain biking scene on the fringes of irrelevance. Personally, my regular renewal of a CO State Parks pass hangs in the balance. Please reconsider closing any of these extraordinary trails. I will miss them.

Thank you for your time and consideration,

Dan Banaszak  
719-232-7702

**David  
Ataian** <davidnataian@gmail.com>  
to lake.pueblo.park

Sun, Apr 28, 10:40 PM

Good evening, I have traveled to pueblo from broomfield several times this winter to ride my mountain bike. If the canyon trails are closed I see no point in driving 2 hours each way to ride the easy cross country trails there. It is sad that they are potentially being closed. I hope that you have received enough feedback to reconsider the proposed closures.

---

- David Ataian

**Lindsee  
Malmstrom** <lindsee@gmail.com>  
to lake.pueblo.park

Sun, Apr 28, 10:58 PM

To Whom It May Concern,

I do not approve of the proposed plan to close several popular mountain bike trails at Lake Pueblo State Park.

Even if you are not a mountain biker, or do not care about mountain biking, this change may have a critical impact on your local economy and this is why:

I have been a frequent visitor of the park from the Denver area for several years. If this proposed plan passes I no longer will visit the park. Anytime I have visited the park, at least one third to half of the recreational users I saw on the trails were mountain bikers, many whom were also commuters to the area. They will likely no longer visit either.

I predict a significant decline in seasonal park revenue with this change and this also translates to less tourism dollars going to Pueblo.

I don't feel that these changes are 100% tied to "overseen" environmental impacts and I would not be suprised that this is due to a combination of reasons that will not be transparent to the public.

I think this decision will not only hurt Pueblo's reputation (not recreation-friendly) but also revert its image back to the stereotype the city has formerly held - an undesirable place to live (higher crime, undesirable socio-economics) and even less desirable place to visit.

I appreciated the creation of these trails and the progressive direction Pueblo was moving in. It is a great place to experience the outdoors in a fun and enjoyable setting and I will always reflect fondly on all of the times I was able to be on the trails with my

friends.

Thank you for your time and for all the wonderful park memories.

Sincerely,

Lindsee

**Brian**  
**Mullin** <gram.mullin@gmail.com>  
to Lake.Pueblo.Park

Mon, Apr 29, 1:45 AM

I have been coming down to the Pueblo South Shore trails for over eleven years now, and dearly love the place, and it has a special place in my heart. I visit there between 20-30 times a year.

I am glad that the Trail Management Plan will retain almost all of the current trails system, but I am extremely troubled by a couple of things.

First off is the total or partial closure of some the technical canyons, such as Freeride, Lower Dog, Skull Canyon, Hooters, and Water Tower, which I find extremely disturbing. I have had many days that I sometimes only ride those canyons and nothing else, making multiple loops to capture the fun and entertainment of those technical aspects. There are very few trips that I make down there that I don't at least ride down a couple of sets of those technical canyons. I am not sure how you could call these redundant trails since each of them have different character and flair, and provide access to other areas while looping.

The second issue is the seasonal closure of South Shore, Inner Limits and Pedro's during the height of winter mountain season at Pueblo. I rarely outside the Nov-Mar timeline and those areas are critical to my riding adventures.

The next issue is the closure of Rock Canyon and the closure/reroute of Arkansas Point trail system. Both of these trails are significant arteries that provide primary access to other trails in the park, and shutting these off will hamper movement in the system

Those issues that I have listed will limit my enjoyment of the South Shore trails, and I'll be much less likely to venture down to Pueblo from Colorado Springs, and therefore I'll go elsewhere.

When I go elsewhere my money will no longer be spent in Pueblo, so gas stations, stores, restaurants, etc., will not get my business (less revenue). I'll also be much less likely to buy a State Parks Pass since Pueblo is the principal place that I visit in the system.

I'll be glad to see the trails to become official/systemized, and that trails will be maintained, and that erosion controls will be implemented, and that unsustainable trails will be removed. Also, I love to get additional parking and access points, fee stations, trail signage, and interpretive signage.

I believe the current plan goes too far with the overheavy closure of the technical canyons, Rock Canyon and Arkansas Point, and the seasonal closures.

Regards,

Brian

**Jen <jennr207@gmail.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 6:26 AM

Good morning,

I am taking a moment to write regarding proposed closure of portions of the trails system at Lake Pueblo.

We drive from the Denver area to use the trail system predominantly for mountain biking. We have not used the camp sites or used the reservoir itself for recreation. We understand and support trail closure as necessary for things like maintenance, erosion control and protecting breeding habitats. Our hope is that the proposed trail closures are done in a way that preserve the park system yet still allows decent access to the park's trail system.

Respectfully,

Jen Roberts

**Chris Vandivere <chris@vandivere.com>**  
to lake.pueblo.park@state.co.us

Mon, Apr 29, 7:03 AM

Please please please reconsider closing the trails. I was really looking forward to introducing my daughter to those trails this summer!

Thanks

Chris

---

**Carrie**  
**Isaac <carrie@thecircagroup.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 8:11 AM

To Whom It May Concern:

I'm writing to express concern over the proposal to close many of the canyon trails at Lake Pueblo State Park. My family has only recently become a user of these trails, but would be sad to see them close. Like many mountain bikers, we began exploring Lake Pueblo SP this winter, when the trails were muddy in Colorado Springs.

It was in part due to the great canyon trails at your park that we purchased annual park passes for both of our vehicles. Unfortunately, if trails are closed, it will seriously decrease our trips to not only the state park, but also Pueblo itself, where we often stopped for lunch. Without the many short canyon trails to provide variety, the park becomes much less attractive to us to drive an hour to visit the park.

Please don't close the trails! Please work with the local organizations who are willing to help rebuild trails in more sustainable ways if needed, but please reconsider the closure of the trails.

- Carrie

**Carrie Isaac, Marketing Specialist**

**Circa Real Estate Group**  
9475 Briar Village Point, Suite 325  
Colorado Springs CO 80920

**Heather Dix <hhalus@gmail.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 8:14 AM

Please keep the Lake Pueblo trails open. We come every summer to camp and ride at these trails. My son learned to mountain bike there. You will be doing a great disservice to mountain bike rides all over the state by closing thses trails

Thanks!  
Heather Halus Dix

**Christopher Goffredo** <cgtile303@icloud.com>  
to Lake.Pueblo.Park

Mon, Apr 29, 8:15 AM

To whom this may concern,

I just wanted to drop a few lines concerning trail closures at Lake Pueblo State Park. My friends and I ride those trails for at least 6 months of the year, primarily in the "off season", October through May. We are paying customers and ethical riders, policing our own, attracted to the high quality canyon riding that is unique and inherent to the area as well as the climate. Many great times and camping excursions have been a tradition since the discovery of LPSP trails, in addition we find ourselves shopping and eating locally, which I'm glad to support such a great town. Without these trails, this bursts our winter bubble on the front range. I have not seen any incident nor had any negative trail experiences in all my time riding these beautiful trails, always using photos of Pikes Peak trailside on social media and tagging Pueblo: Inspired America the Beauty which I firmly believe. Please find a way to include mountain biking and the canyon trails in future plans for the park, we as mountain bikers are always wanting to be the best stewards for recreational experience among all users.

Thank you for your attention!

Sincerely  
Chris Goffredo

**Giff Cutler** <gcutlersales@gmail.com>  
to lake.pueblo.park

Mon, Apr 29, 8:54 AM

Hello

Very sorry to hear you are considering the closing of some of the greatest winter mountain bike riding on the front range.

I do understand that these trails originally were not part of your plan or officially designated. But please consider they are there now and it seems a shame with the front range demand for trails to close them.

They are extremely unique as well, very technical and challenging. I would not pay the park fee and drive from Castle Rock if these trails were not open.

Please reconsider  
Picture was attached:



**Dan Banaszak**

🚴 March 1, 2019 at 10:02 AM

### PTO in Pueblo.

👹 and 🦉 trophies 🤘 but there was component carnage.

Distance

33.26 mi

Elev Gain

2,860 ft

Achievements

🏆🏆🏆 25



**Dan Steuer** <dansteuer@gmail.com>  
to Lake.Pueblo.Park

Mon, Apr 29, 9:13 AM

To whom it may concern,

I fully support the position statement of the Southern Colorado Trail Builders and hereby adopt those comments as my own. Please don't close all the canyon trails that you propose to close. These are a huge resource to bikers and are a significant economic engine for the park and for Pueblo.

Thank you

---

Dan Steuer  
4645 Talbot Dr  
Boulder CO 80303

**ken**  
**berkley <kberkle@yahoo.com>**  
to lake.pueblo.park@state.co.us

Apr 29, 2019, 9:19 AM

Management at Lake Pueblo State Park,

Closing trails at Lake Pueblo State Park is a BAD idea! People come from all around and want a diverse trail system to utilize. Closing nearly all of the challenging trails will leave the trail system only with mildly challenging trails and this will detour many people from coming here. In the winter months it can be seen in the amount of cars filling the parking lots around the South Shore camping area. People come here from up north to ride challenging trails (I know because I am a frequent trail user who drives from Colorado City and often talks to the other bikers). Pueblo has actually made a positive name for itself with the mountain bike trail system available here. Residents that live in the northern part of the state generally tend to avoid Pueblo. However, they will drive hundreds of miles to use the trail system especially in the colder months. True outdoor recreationalists are very devoted to their sport/hobby. A trail system with only mild, bland trails will not attract many trail users. You could relate this to the sport of skiing as well. If all that was available at the many Colorado ski resorts were green and blue runs, far fewer people would use the ski resorts. As with all sports, mountain biking requires challenging trails. These trails draw people here. Mountain bikers come to Pueblo and spend money on activities that bring revenue to the region such as: camping, dining out, grocery stores and the local bike and retail shops. Southern Colorado already lacks good trails as well as other forms of outdoor recreation. In fact, just the other morning on News 5, they ran a story about the obesity epidemic among the youth in Pueblo. The news story went on to talk about the importance of outdoor recreation including biking trails and how new trails were being developed in Pueblo West. Why develop new trails in Pueblo West when we already have an amazing trail system in Pueblo. Pueblo's youth should be encouraged to use the existing trail system. Further up north along the I25 corridor there is a disproportionate amount of outdoor recreational opportunities. Even Canon city, which is smaller than Pueblo, has more trails than we do! Please don't take away from Pueblo what little we have. Lower Dog, Freeride, Skull canon, Rattlesnake, Voodoo Two and whatever I might be missing are all important trails in keeping this trail system intact and relevant for future recreation.

Thank You,  
Ken Berkley

**Travis**  
**Leonard <tbarjranchtravis@gmail.com>**  
to lake.pueblo.park

Mon, Apr 29, 9:51 AM

Mountain biking has proven to be a huge economic booster for towns and counties. This includes Pueblo, it is a popular destination especially during the winter months which typically is a slower time economically anyways. Choosing to close the reservoir to mountain bike trails would just further a slow winter economy in Pueblo. Since this is my hometown, I hate to see this resource and viable economic boost deleted. There are many small businesses in Pueblo that certainly thrive on this crowd. Pueblo has always lacked sufficient outdoor open space, the reservoir has compensated for this for the past 40 years I have been alive. Please use this as opportunity to capitalize on the potential and bring more community to the outdoors rather than chasing a majority of it away.

Thanks for your time,

Travis Leonard

**Tracy Thelen** <[tracy.thelen@yahoo.com](mailto:tracy.thelen@yahoo.com)>  
to Lake.Pueblo.Park

Mon, Apr 29, 9:58 AM

While I appreciate the work that has done into the master plan and the fact that many of the trails will become legitimate system trails, I'm a little disappointed that some of the best technical climbs in the park (rock canyon/skull canyon) and descents (lower dog/free ride/sidewinder/keyhole canyon) are being targeted for closure due to "redundant trails." Anyone who has ridden there will agree that it's not redundant to have some challenging climbing trails that allow easy loops for riders interested in the canyon trails. Having multiple access points to the top of the Mesa also decreases traffic on any one trail, decreasing the impact riders and runners have. Having trails that can be climbed in the middle of the Mesa and canyon systems also decreases possibility of user conflicts between runners, hikers and riders. Those trails are used to travel to a destination further into the park - the trails and the loops that can be created with them are the destination themselves. The technical features found in the canyons - both climbing and descending - are the primary reasons many people travel hours to ride at Lake Pueblo State Park. Closing the loops and sanitizing the remaining canyons will decrease the draw of LPSP and thus diminish the economic impact upon the park and surrounding areas.

Vale!

Tracy

[www.tracythelen.blogspot.com](http://www.tracythelen.blogspot.com)

[www.thelencoaching.com](http://www.thelencoaching.com)

**james** <[jamesthepeach@msn.com](mailto:jamesthepeach@msn.com)> Mon, Apr 29, 10:06 AM  
to lake.pueblo.park@state.co.us

Greetings. I am a non resident mountain biker who has enjoyed the trails developed thus far at Pueblo Reservoir on a few occasions. I also administrate a Facebook user group of about 14,000 members concerned with all things Trail Conditions related, known as 303 Trail Monitor. We are comprised of multiple user types, many of whom are hikers, but the majority of whom are mountain bikers. I am here to tell you that deletion of a good many of these advanced canyon trail options is very unpopular.

I recognize that the trails were developed informally, but, also - as I understand it - with a not insignificant amount of approval by those managing the park. I also understand the needs of land managers to have a plan in place and to sanction trails formally. I would encourage you to look at the proposed deletions again in terms of the value they have to the mountain biking community as well as the local economy.

Every winter, riders along the Front Range are willing to travel several hours to ride dry, FUN trails. This has an economic impact that many communities desire and are building trails for. The trails that you have offer a very unique set of riding options that can be ridden year round, to a large degree. Deleting these technical options will lessen much of the appeal of making that journey. There are many, many beginner to intermediate trails to be found, yet very few advanced ones, relatively speaking. Those that I've explored at Pueblo seem to have been well done, are relatively safe for advanced riders, and shouldn't be viewed through the lens of lowest common denominator design. Please, keep as many of these in the trail mix as possible.

Respectfully,

James Herklotz  
Boulder, Colorado.  
Founder of 303 Trail Monitor

**Mark Brodis** <mabrodis@colorado4x4.net>  
to lake.pueblo.park

Mon, Apr 29, 10:29 AM

Please do not close the mtn bike trails at Pueblo State Park. Those trails are literally the only reason anyone I know would ever go to the state park (and pay the fees).

I know rogue trails are a problem at many areas and that creates chaos and serves to embolden people trespassers. However, well designed trails do just the opposite, they invite visitors, families, groups to come and have a good time, enjoy the sustainably built trails (trails that shed water correctly that well self-care and not need lots of maintenance.

So, that said, would love to be able to keep riding at Pueblo State Park.

---

-Mark Brodis  
Castle Rock, CO

**LEE ROSSITER**  
725 Humboldt Street  
Denver, Colorado 80218  
Cell: 720-988-6406 Email: [leerossiter@hotmail.com](mailto:leerossiter@hotmail.com)

April 29, 2019

To Whom It May Concern:

#### 44 Public Comments for Draft Lake Pueblo State Park Trail Plan: April 2019

RE: Lake Pueblo State Park (LPSP), Draft Trail Management Plan

I just returned home to Denver from a visit to the park last week where I spent time camping, hiking and mountain biking. I learned from some local mountain bikers that the Draft Trail Management Plan had been released and comments were being sought. After downloading the over 300 page report I realized I would not be able to thoroughly read it in its entirety and send comments by the April 29 deadline. So, before addressing any specific content of the report I simply have to ask:

*For such a comprehensive report, which appears to be years in the making, why are only twelve days being allowed for comments from various stakeholders? A comment period of at least thirty or preferably sixty days would be more reasonable.*

Over the years I have been to LPSP many times to recreate and have always enjoyed the extensive trail system on the South Shore. As a volunteer trail builder in the greater Denver area I am familiar with what it takes to design and execute a well-planned trail system. I do not know the history of the trail system build-out at LPSP, but these are not just unauthorized/social trails as noted in the report. Perhaps the right process was not followed due to the different entities involved (CPW, BOR) but clearly someone with authority allowed those trails to be built. Fortunately, the report does not recommend closing all of the "unauthorized/social" trails.

Clearly, there are a number of issues which need to be addressed with the South Shore trail system. As noted in the report a high priority should be given to reroute trails out of riparian and wetland zones. I recall there was once a bridge on the south end of Boggs Creek to move trail users above the wetlands, however it was severely damaged a number of years ago during a storm and never replaced.

After reviewing the South Shore Closures Map and Table 20, South Shore Permanent Closures I agree that small sections, which appear to be cross-cutting could be closed with no loss of experience to the various trail users. However, the report author uses the term "redundant" as a reason to permanently close a number of trails. Trail systems built with mountain bikers in mind often contain alternate lines or sub-trails to accommodate mountain bikers with different skill levels. Just because two nearby trails deliver trail users to the same ending location, they should not be considered redundant if their purpose is to provide mountain bikers with different skill levels a safe and enjoyable trail experience. Additional trails also help relieve pressure by spreading users throughout the system.

The proposed reduction of both 9 miles (permanent) and 5.6 miles (seasonal) is significant. The 9 mile permanent reduction represents 17% of the existing total of 53 miles. The seasonal closure represents another 13% of the new total trail mileage of 44. The report notes there are two red tail hawk nesting sites and two great horned owl nesting sites. As an outdoor enthusiast, I appreciate the natural world and the flora and fauna during my biking and hiking outings. But to close trails seasonally for four bird nests, which are not even endangered species is not a reasonable proposition. Please reconsider this suggestion.

I did not see any economic impact statement in the Trail Management Plan. With the wide variety and overall length of the trail system, LPSP is an economic driver for the city of Pueblo. Visitors patronize local businesses by fueling their vehicles, eating in restaurants, shopping for groceries, etc. The overall reduction in trails as proposed could have a negative effect on visitation. Outdoor enthusiasts could choose other locations such as Grand Junction, Fruita or Moab.

From the CPW Your Guide to Colorado's 41 State Parks:

LPSP: Various trails, both paved and natural, and from easy to challenging, beckon hikers and mountain bikers of all skill levels.

Pueblo.org also promotes hiking and biking within the park.

"Pueblo is the busiest state park in Colorado: We get 2.4 million visitors each year"

Monique Mullis – Park Manager

Pueblo Chieftain, April 28, 2019

## 45 Public Comments for Draft Lake Pueblo State Park Trail Plan: April 2019

With strong population growth of cities within the region, more residents will seek more opportunities to enjoy the great outdoors, which make Colorado such a wonderful place to live. More visitors on fewer trails will have a negative effect on the trail system and user experience.

I have read and concur with the Position Statement from Southern Colorado Trail Builders dated April 28, 2019.

LPSP is a gem for the region as a whole. Thank you for the comprehensive report. Although I clearly do not agree with most of the suggested trail closings within the draft, I believe we can find common ground and work towards making LPSP better for years to come.

Sincerely,

Lee Rossiter

**Nick**  
**Thelen <Nick.Thelen@entegris.com>**  
to Lake.Pueblo.Park@state.co.us

Mon, Apr 29, 10:45 AM

Hello,

I am very disappointed that some of the best technical climbs in the park (rock canyon/skull canyon) and descents (lower dog/free ride/sidewinder/keyhole canyon) are being targeted for closure due to “redundant trails.”

I am not doing the (bullets below) to look at the reservoir or enjoy the views. I am doing these (bullets below) to ride the trail / the actual terrain under my tires.

- Purchasing my annual park pass (supporter for 10+ years)
- Traveling to Pueblo.
- Eating / groceries.
- Buying gas.
- Paying to camp

The “redundant” trails is one of the huge positives of this park. I want to come down and ride lap after lap. I typically ride 2-3 hours, 20-30 miles, 2000-3000+ feet of elevation gain and loss, and I only ride Arkansas point and all the canyon tributaries off that road usually. I have done this for years. I want multiple “redundant” options so I can hone my skills, practice riding, have many options if there are other users out and about I can simply choose to climb or descend another trail. Mtn bike riders are about many things but #1 is the terrain or trail under you tires. Some people want flow, others up, others down, I want rocky challenging un-sanitized trails, and lots of potential loops.

Most people who have ridden here will agree that it's not redundant to have some challenging climbing trails that allow easy loops for riders interested in the canyon trails. Having multiple access points to the top of the Mesa also decreases traffic on any one trail, decreasing the impact riders and runners have. Having trails that can be climbed in the middle of the Mesa and canyon systems also decreases possibility of user conflicts between runners, hikers and riders. Those

trails are used to travel to a destination further into the park - the trails and the loops that can be created with them are the destination themselves. The technical features found in the canyons - both climbing and descending - are the primary reasons many people travel hours to ride at Lake Pueblo State Park. Closing the loops and sanitizing the remaining canyons will decrease the draw of LPSP and thus diminish the economic impact upon the park and surrounding areas.

You want the “economic” impact, then please give us more of what we want not take away. If you take away you could very well see an empty campground in the winter like 15 years ago. 15 years ago only a small number of mountain bikers knew about this place, now (the past 5 years or so) due to demand you were able to add better bathrooms and showers with the camping fees. So you want our \$\$, you want our free labor, please provide what we want. Leave the existing trails alone.

Thank you,  
Nick

**Nick Thelen** Eng III, Mech  
CMH ME Global Solutions  
Email: [nick.thelen@entegris.com](mailto:nick.thelen@entegris.com)  
Desk Phone: 719-528-2685

**Josh Tetreault** <[joshtetreault@hotmail.com](mailto:joshtetreault@hotmail.com)>  
to lake.pueblo.park@state.co.us

Mon, Apr 29, 10:55 AM

I am writing to voice my opposition to closing the canyon trails to mountain biking. Your park has a lot of special trails and while I enjoy them all, it's the canyon trails that bring me to the park. I would not come nearly as often if they weren't there due to the technical nature of the trails compared to other areas in the park.

Please consider keeping the canyon trails open.

Thank you for your time.

Sincerely,

Josh Tetreault  
1698 S Zephyr Ct  
Lakewood, CO. 80232  
303.638.5705  
[JoshTetreault@hotmail.com](mailto:JoshTetreault@hotmail.com)

**Patrick**  
**Drawe <pdrawe@gmail.com>**  
to lake.pueblo.park

Mon, Apr 29, 11:08 AM

Hi there

I'm writing this to express my concern for the potential canyon closures in the park. As a volunteer that puts in more than 400 hours per year on the Denver Area Front Range trails, I'd like to pass along what those canyons mean to our local riding community and the impact that it more than likely has on your local economy during the winter months.

Being a part of multiple Denver area groups, each one of our groups makes multiple trips down to Pueblo from November through Mid April and enjoy riding the Canyons in the park. The canyons themselves are the main reason that many of us travel down there to ride our mountain bikes.

This is my opinion, but I firmly believe that closing down the canyons to mountain bikes would greatly impact the amount of Denver area bikers who travel down there to ride, but also spend money in your area restaurants, stores, and hotels.

Just my .02, but I hope you don't close them down.

Best regards

---

--

Patt Drawe  
20+ Year Mortgage Professional  
303 883 1687 cell/text

**John <johnehunyadi@hotmail.com>** Mon, Apr 29, 11:08 AM  
to lake.pueblo.park@state.co.us

Dear Colorado Parks & Wildlife Trails Coordinator and the US Bureau of Reclamation,

I am a 40 year old native Coloradan, born and raised on the outskirts of Pueblo, Colorado and I currently reside in Colorado Springs, CO. I am an educated professional. I vote in elections, responsibly pay my state and federal taxes, and purchase annual CO State Parks Passes for multiple vehicles, as well as purchase OHV tags for many vehicles in my young and growing family.

I have watched Colorado explode in population growth and observed the stress it puts on local, regional, and statewide trail systems to include those for jeeps, side x sides, motorcycles, and now mountain bikes. More often than not, I have observed the State or Federal preferred response is to close trail systems entirely to ANY of these forms of recreation. **Given the continued push for growth by our local, state, and federal leadership here in Colorado, I STRONGLY object to any plan that calls for closure of existing trails systems for these recreational pursuits.** My objection is based in the fact that the population base and the recreational interest is so huge and so strong, respectively, that there will only be illegal development of other trails in other areas! Instead of closing trail systems, there needs to be a focused effort to rehabilitate what has existed for 15 + years (in this case) to meet the needs of the recreational user AND the environment.

The best example of this achievement is the Bureau of Land Management (BLM). They have been involved in MANY areas/trail systems in Colorado that both meets the needs of the recreational user, while maintaining the environment. They should serve as the example of PARTNERSHIP in trail development/management as opposed to heavy handed over regulation.

Lake Pueblo State Park Southshore trails are considered the "Fruita of the Front Range" (<https://www.mtbproject.com/trail/3590206/lake-pueblo-state-park-south-shore-trail-network> ). This is considered a huge recreational advantage to the community of Pueblo, CO, where its geographical location necessarily makes these kinds of recreational opportunity more limited. Congressional and local County and City leadership should be aware of the opportunities these trails create that 1. provide opportunities for local youth to recreate and learn about the environment by experiencing it. 2. learn a lifelong recreational skill that will maintain health and drive opportunity to grow. 3. provide tourism growth to Pueblo as many mountain bikers travel to these trails all through the late fall into winter into summer to ride these trails and spend their hard earned money in Pueblo establishments.

Specific proposed closures and COMMENTS

**Trail Closure Recommendations:**

- **Rock Canyon Trail:** Closing any of Rock Canyon trail's contiguous length from the Red Gate to South Shore Trail would be challenging at best, and disastrous at worst. Rock Canyon is an exceptionally popular trail for every user group of the trail system. This trail often serves as the backbone of a trail experience on the south shore. It is the most widely accessible canyon based on difficulty, and an important connector trail in the overall system. Closing Rock Canyon Trail would introduce a major user communication challenge because of its popularity, exacerbated by how hard it would likely be to reclaim the area given its composition and the park's resources.

**Additionally, the trail invert is located in Niobrara formation shale and DOES NOT experience incisive erosion that creates damaging environmental conditions.**

- **Arkansas Point Trail:** Closing any contiguous portion of the Arkansas Point trail between the Red Gate and Arkansas Point will eliminate access to a main portion of the trail system. The proposed alternate route includes a technical descent/climb only suitable for advanced users. Furthermore, this trail offers a profound opportunity for users with limited mobility to experience the park and the powerful vista at its terminus. We feel this cannot be understated. Lastly, if the trail is closed, the flat contour and open nature of the area will inevitably lead to further trail proliferation causing unnecessary destruction to virgin resources.

- **Technical Canyons:** Short canyon trails such as Skull Canyon, Freeride, Hooters, and Water Tower diversify the user experience with technical features. Mountain bike users take a particular affinity to these types of features and historically will construct them when system trails do not offer options. Closing these types of trails

would prove extremely challenging, would rob the trail system of part of its rugged and diverse character, and would inevitably lead to trail proliferation and thus, additional destruction of virgin resources. Due to the difficulty in revegetating and closing these types of trails, we believe the best way to prevent undue damage is to maintain and improve the existing canyon trails.

**This cannot be overstated. I am a highly skilled trials and technical mountain bike rider. The recreational opportunities I seek are highlighted within these types of technical canyons. If the only trails left are the long, flat, minor undulating trails at Lake Pueblo State Park south shore, I strongly object and would encourage re-evaluation of ALL recreational opportunities at Lake Pueblo State Park, including boating, fishing, fisheries, and camping. These all put undue strain on the ecosystem from the leaky motorboats, invasive aquatic species, and heavy use from the multitude of campers, surface erosion off of hardened roads and campsites, etc. The environmental impact (EIS evaluation?) from these types of activities have a much more significant impact than the trails on the south shore.**

**Seasonal Closures:**

Seasonal closures of major arteries of the trail system during high volume times will be unmanageable with current resources. Due to Pueblo's mild climate, the trail system attracts its largest number of visitors from November - March. Closing South Shore, Conduit, Pedro's Point Trail, Inner Limits and Arkansas Point Trail make the trail system noncontinuous and inaccessible to users. This is analogous to closing portions of major highway arteries in a city – the effects will be detrimental to other areas of the system. It is highly unlikely that users will adhere to these closures and that existing resources will be insufficient for monitoring and enforcement.

**CLOSING**

I strongly object to the 2019 Draft Trail Management Plan. I will be involving my local Congressman and Representatives as well as reaching out to members of the Pueblo County Board of Commissioners. I call upon CPW and USBR to act as STEWARDS of the resource you support through tax dollars and PARTNERS with the local thriving community.

Sincerely,

John E. Hunyadi, PE

**Elvin H <elvin15w@gmail.com>**  
to lake.pueblo.park@state.co.us

Mon, Apr 29, 11:09 AM

Good morning,

I thought I'd take a minute to reach out and say that I think you shouldn't close these trails. A lot of the trails you're closing are the only fun and challenging ones, and honestly the only reason I'd bother going to Pueblo.

**kim**  
**dodds <kdodds65@msn.com>**

Mon, Apr 29, 11:13 AM

to Lake.Pueblo.Park@state.co.us

Hello,

I understand that there is a meeting this evening regarding proposed trail revamping, maintenance and closures. Unfortunately I am working but have a few concerns North Shore trail access- please do not close the trails that allow those living close to the trails easy walking access.

South Shore- many concerns in regard to "seasonal closing"

Kim

**Katie Branham** <branham.kt@gmail.com>  
to Lake.Pueblo.Park

Mon, Apr 29, 12:01 PM

Dear Lake Pueblo State Park Administrators,

I am a resident of Colorado Springs, and I love visiting Pueblo to visit Lake Pueblo State Park. My colleagues will give me a sideways glance when we are discussing weekend plans, and I say that I'm going to Pueblo - most of my colleagues have never been to Pueblo on purpose. But I love telling them about this amazing oasis at Lake Pueblo State Park.

I am a hiker, a trail runner, a mom and mountain biker. Based on the plans for the park that I have seen online, I am very concerned about the direction the park is going. With limited trails available in the future, it seems like the park will be too crowded for all trail users to get along peacefully. With limited trail options to pick from, I would be very unlikely to take my family to spend the weekend, or any money, in Pueblo.

Thankfully Canon City seems to have a thoughtful and forward thinking approach to sustainable recreation. We just spent last weekend camping, hiking, playing with our son, riding bikes and eating out in Canon City. While Pueblo is taking a step back, Canon City is creating a world-class destination for enjoying and protecting the front-range environment.

Please re-think your plans to close the trails at Lake Pueblo State Park. We love visiting and hope we are able to do so in the future. If I could be of help in the process at all, please let me know how.

Best,  
Katie Branham  
Colorado Springs

**McKeown Sean** <sean.m.mckeown@gmail.com>  
to lake.pueblo.park

Mon, Apr 29, 12:13 PM

Hello-

I am a mountain biker living in Manitou Springs, CO, and I have frequented the Lake Pueblo trail system for many years. I fully support the position statement, attached below, from the Southern Colorado Trail Builders association. In particular I'm most concerned about the potential loss of the technical trails in the canyons, as those are the main draw for me and my fellow riders. Without those trails, I will have little incentive to make the trip down to Pueblo, enjoy the park's amenities, and to spend money in the Pueblo economy.

Regards,  
Sean McKeown  
Manitou Springs, CO

Technical Canyons: Short canyon trails such as Skull Canyon, Freeride, Hooters, and Water Tower diversify the user experience with technical features. Mountain bike users take a particular affinity to these types of features and historically will construct them when system trails do not offer options. Closing these types of trails would prove extremely challenging, would rob the trail system of part of its rugged and diverse character, and would inevitably lead to trail proliferation and thus, additional destruction of virgin resources. Due to the difficulty in revegetating and closing these types of trails, we believe the best way to prevent undue damage is to maintain and improve the existing canyon trails. Southern Colorado Trailbuilders position statement was attached.

**Jillian Alvarado** <jleylady@gmail.com>  
to lake.pueblo.park

Mon, Apr 29, 12:18 PM

Pueblo is a struggling town caught in the crosshairs of what has been and what could be. Efforts are continually made to better the economy and yet this decision of the master plan is another step in the opposite direction of progression and growth. Loss of jobs. Loss of tourism. Loss of public interest. Pueblo loses again.

Change the master plan before it's too late! Let pueblo become what it could be!

**christian** <christian\_stover@hotmail.com>  
to Lake.pueblo.park@state.co.us

Mon, Apr 29, 12:34 PM

Hello! I understand that there is a meeting to discuss the potential to close some of the trails in the state park to mountain biking. I am an avid user of these trails in the winter, and travel from Denver to bike and fish in your park. I'd like to voice that i would like to see these trails remain open to all users. Thank you!

Christian Stover  
303.818.2854

**SL <shooiebug@gmail.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 12:47 PM

To whom it may concern:

I would like to thank everyone who has put in time and effort on the trail system. I love these trails and I hope they will stay open and thrive.

I am very concerned that this issue hasn't been publicized more for our community; I think many people have just learned about the draft plan a few days ago, which is a little unfair when the Park is saying they welcome community input. At any rate, I would like to share some of my concerns:

Firstly, I implore LPSP and CPW to really listen and value the mountain biker feedback. I believe a lot of the trails were built many years ago by locals, and unfortunately if CPW and/or LPSP failed to regulate it properly from the start, I do not believe that makes it OK for you to now step in and completely railroad these stakeholders. They have put a tremendous amount of time and effort into developing a thriving mountain bike community. Mountain bike enthusiasts are usually outdoor enthusiasts in general. They support state and federal lands and respect the environment. I would argue these people are probably among those who utilize state parks the most. Additionally, as state tax-payers, our opinions on how state park land should be revoked or redesigned are important.

1). "Unnecessary and Repetitive" - This is probably the most ridiculous thing in the trail plan. Who makes that decision?? Certainly not the mountain bikers! You don't have the authority as the non-mountain biking interest, to say it's unnecessary and repetitive. That's ridiculous. Any solo sport involving motion is all about finding new lines and new ways of traveling from one point to another!! Every ski mountain in the world has multiple trails, side by side, going from the top to the bottom. That means only one run on every mountain is "necessary." But what fun would that be? No one would pay for that and that is not a "sport." The current setup at the South Shore trails is virtually identical to a typical ski mountain, with multiple trails going from the top, at Arkansas Point trail, to the bottom, at the South Shore Trail. The entire purpose of sports is to be fun and entertaining, so to say a route is unnecessary and repetitive is completely irrelevant. All **SPORTS** are unnecessary and we do them repetitively. We do them to enjoy our time on this planet. Life is unnecessary and repetitive. Sports bring us joy! It is up to the people who bike on the trails to offer an opinion on whether they are necessary. And everyone who rides out there spends their time going down one trail and then up another, over and over again. **THAT IS THE WHOLE POINT AND IS EXACTLY WHAT MAKES IT FUN!** All of the different trails to explore and riding the obstacles that are unique to each and every trail is what makes the entire system we have so amazing! Variety is the spice of life! The same goes for most sports! Road biking, running, skateboarding, surfing, climbing, kayaking, etc., it's all about finding new lines and exploring new terrain. Please, please do not close these amazing trails that have features and beauty on par with **Moab!!** They offer unique obstacles and challenges and **THEY** are the draw of the bikers! These trails, Rock Canyon, Skull Canyon, **Freeride**, etc., they represent **WHY** people enjoy biking here. The park offers something for everyone! Sports grow and attract more people when there's something to work towards. Nobody who likes to ski would ski at a mountain that only offers beginner trails. If you are only going to offer mostly beginner trails, then that really has very little value to riders. It is a slap in the face to the mountain bike stakeholders to say, "here, we left all these trails open for you," when it's mostly boring trails, while you've closed all the trails that people love. If you are seeking to add a fee for trail use, I believe you will see far less use and make far less money if you close these beloved trails.

2). Economics: Mountain biking in Pueblo is growing in popularity everyday. However, I am out there frequently and I can attest that the trails are nowhere near being overused or too crowded. I have only been out there one day when it was somewhat crowded. Leaving the amount of trails that we currently have intact allows for growth with increased tourism due to mountain biking. It seems like a lot of trails out there, but it's really not all that much. Trail closures will make it a lot less appealing to both locals and

visitors, because the less mileage to ride, the less likely anyone would come more than one time (and if they look at the map and it's all beginner, they might not come at all...). It would be more of a once-and-done trip versus a beloved regular activity. I have talked to people on the trails many times that are visiting from around the state, and came here specifically to mountain bike. What else generates that in Pueblo?? Not a whole lot besides boating, quite frankly. ANY REASONABLE PERSON who lives here has to see the value in this. People see Pueblo in a new light, they come enjoy the trails, the weather, the views. They talk with other people on the trails who live here, and actually like, Pueblo. For lots of folks, it is their first time visiting LPSP, so it encourages repeat park visitors/fee collection. It is truly eye-opening for people around the state that have bad impressions of Pueblo. These visitors spend money at restaurants, getting gas, hotels, etc. And let's not forget the impact to our locally-owned bike shops!! We have great shops here and it has a lot to do with the interest in our local trails. Less trails=less interest=less business.

3). Quality of life- Let's face it, Pueblo has it's share of problems. Probably more than it's fair share. In the 11 years I have lived here, at least 12 close friends have moved out of town! That's absurd! Always seeking better schools and safer neighborhoods. With the recent uptick in drug abuse, crime and homelessness, and our ongoing economic challenges as a city/county, it gets harder and harder for the people who work and contribute to making this town better, to actually want to stay here. It is equally challenging to recruit professionals to come here. These things that seem small (like the number of trails at the south shore), they are not. I have heard firsthand from medical professionals considering jobs here about how excited they are, or they become more interested in the job, when they hear about our thriving outdoor community. We have something for everyone when it comes to the Colorado lifestyle and it is HUGELY important to not only maintain that, but make it better! (i.e. don't diminish the number of open trails)

Personally, I became a mountain biker while living here and learned on these trails. I'm still learning and many of the trails you are considering closing, I am just now starting to be able to attempt obstacles on! Finding this new sport, making new friends, getting out on those BEAUTIFUL and fun trails, it gives me Pueblo-pride and warms my soul! I frequently say this to friends and family after a few hours of riding; "I needed this today. Every time I get out here it makes me feel happy to live here. These trails are such a gem." Our love for the trails is why we purchase a State Parks Pass.

4). I really question the overall value of your supposed efforts to improve environmental concerns by closing trails now. The "damage" is already done, isn't it? The one-time wide trail has already been established, any plants in the way are already gone (there's hardly any, it's all shale!). The trail is going to remain there even if you "close" it. Are you going to spend the money and manpower to cover over every single trail? That seems like a massive waste of resources! You will probably create more damage to the bedrock and surrounding flora trying to close, cover, and re-route trails than what is actually occurring from riding a bike on the trail. And impact to wildlife? If it going to statistically improve when there's still people riding and hiking very nearby? I think you'd have to close the entire area to really make an impact, and again, what's the point

of that? You might as well close all state parks so that no humans can ever go there and disrupt it. Which brings me to my last point;

5). Illegal dumping- Pueblo has a massive problem with illegal dumping. The more remote you make this area, by closing the trails and drastically diminishing mountain bike ridership, the more likely the area will start seeing lots of illegal trash dumps-TVs, furniture, mattresses, and tires. Take a ride through PMI; I believe the only reason you don't see it at the south shore is because of the frequent foot traffic of hikers and cyclists.

I fully support your plans to add parking, close the red gate and the other gates out west, and add a fee, if that is what you feel needs to be done in order to get these trails more organized and regulated. I will happily pay a fee to continue to use all the trails out there. I **do not** support your plans to close many of the beloved trails, whether seasonal or permanent, and I will instead ride in Canon City and elsewhere if that happens.

Thank you,

Shauna Likes  
1305 S. Liberty Point Blvd  
Pueblo West, CO 81007

**Adam Strunk** <astrunk@gmail.com>  
to lake.pueblo.park

Mon, Apr 29, 1:52 PM

Dear Parks Personnel:

I am writing to ask that you please ensure that access to the excellent trail system on the south shore of Lake Pueblo is not closed or restricted. There are myriad reasons to ensure that these remain open.

1) To begin with, there are limited recreation opportunities in Pueblo. The populace very much needs to remain active with a 30% incidence of diabetes. Closing the trails will decrease activity in the populace, leading to poor health outcomes.

2) Closing established trails will lead to trail poaching and off-trail riding, increasing environmental impact.

3) The Lake Pueblo mountain bike trails are a large draw for riders from across the front range, particularly in winter. They then buy lunch, gas, bike parts, etc in the area. As Pueblo is economically disadvantaged this will have an undue impact on the economy.

4) They are great trails and I enjoy riding them. Riders on these trails are habitually responsible. Closing them is simply mean and unfair.

Thank you,  
Adam Strunk, MD  
Pueblo, Colorado

**Anthony Meis** <ameis@ameiscpa.com>  
to lake.pueblo.park@State.Co.Us

Mon, Apr 29, 2:19 PM

That is the only reason I go there and will not go anymore. Makes no sense.

Regards,  
Anthony C. Meis CPA

Phone 303-526-4585  
Fax 303-526-4269

**Alex Leaming** <aleaming@me.com>  
to lake.pueblo.park

Mon, Apr 29, 2:28 PM

To whom it may concern,

It would be very silly to close down the majority of the mountain biking trails at Lake Pueblo. I live in Denver and have zero reason to visit Pueblo and rent a hotel and spend my money other than to go mountain biking on your CURRENT amazing trail system. If you close them, people will stop coming, the tax revenue will go away. It's your tourism and by closing trails you are telling your potential tourist, we don't want you to come visit our city and help out local economy.

---

-Alex Leaming

**larry  
hoffer** <larry.hoffer@gmail.com>  
to lake.pueblo.park

Mon, Apr 29, 2:56 PM

I heard that some of the fun trails at Lake Pueblo State park may be closed to mountain biking?????

PLEASE DON'T!

I bring my MTB group to Pueblo at least 2x per year (from Denver) and do an excursion of if - spending money in the local economy on lodging and food.

Thank you for your consideration.

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**Larry Hoffer**  
Founder/CEO  
RESORTIA, LLC  
303-979-9300

**Rick  
Margolin** <rick.margolin@gmail.com>  
to Lake.Pueblo.Park

Mon, Apr 29, 3:02 PM

Good afternoon,

I would like to express my support for efforts to ensure the long-term, multi-faceted sustainability of the Lake Pueblo trails, but request the committee endeavor to preserve the "technical" and challenging nature the existing trails offer.

Numerous jurisdictions across the world are developing trail networks that feature such challenges while minimizing (or even improving) the environmental impact of the trail and its features. The mountain bike community is willing and prepared to assist in an effort to make this happen at Lake Pueblo through input of knowledge, donations, and labor.

Keeping Lake Pueblo trails technical and challenging are critical components to maintaining their appeal, which itself has served as an engine for sustainable economic and social development in the city and county of Pueblo. As a kid growing up in Denver I would go to Pueblo for the state fair, but as an adult had not visited the area in

decades. That changed, however, with the development and growth of the trails network at the Lake. I now visit the area with family and friends 5-6 times per year, for 3-4 day stretches per visit. If these trails were simplified or removed I would no longer have reason to frequent the area.

Thank you very much for all your work and efforts.

Sincerely,  
Rick Margolin  
29506 Buckboard Lane  
Evergreen, CO, 80439

**Greg Greenwood** <[greg.i.greenwood@gmail.com](mailto:greg.i.greenwood@gmail.com)>  
to lake.pueblo.park

Mon, Apr 29, 3:11 PM

My wife of 28 years is from Pueblo and her Parents live on Pueblo West. EVERY time we visit, I bring my MTB and ride the trails on the south side of the reservoir.

I cannot understand how it would ever make sense to close some or any of these trails given they are mostly used and ridden by MTBers (and most often in the off-season).

I was down there 4 weeks ago and most of the campers at the main trailhead had MTBs in their camp.

How can this attempt to close trails make sense for Pueblo Reservoir? Or would you like everyone to start going to Canon City to ride their new epic Oil Well Flat trails and spend their hard-earned money.

Please stop the nonsense. Hasn't Pueblo gotten in its own way long enough?

Respectfully,

Greg Greenwood  
Denver, Colorado

**sarah@arexcavating.com**  
to lake.pueblo.park

Mon, Apr 29, 3:36 PM

Lake Pueblo State Park  
Regarding 2019 Draft Trail Management Plan

Being a local trail runner in Pueblo for the past 10 plus years I come with a mix of emotions for this step toward officiating Pueblo's main (and only) set of trail systems. I am hopeful that the end result of this plan will be well maintained, professionally built trails in Pueblo similar to other Colorado trail systems that my husband and I so often travel to run and mountain bike. I, like many other long distance athletes find myself honestly fantasizing of new additional trails in Pueblo adding to the distance and value of the experience. To some 40-50 miles could seem like more than enough, but for trail running and mountain biking the thought of losing any mileage is devastating! Maybe this is how we got to this point....the local outdoor enthusiast became impatient and did not want the hassle of the "red tape" to go enjoy our outdoors and thus trails were built, more came to use and now here we are. Maybe the past should be the best indicator- we are here using the trails and if you take away some of the most widely used trails, user will just continue to build... with no plan. So lets not let this happen, let's not close good trails let us build bridges (literally) together.

Just coming off the Salida mountain trails I am in awe on how well built and maintained their trail system is, when you create and maintain such great trails it's natural to stay on them, thus preserving everything around them. I truly believe there management system should be a vision for Pueblo trails. Maintain the trails we have or build even better, use this as a resource for Pueblo. Why shouldn't Pueblo be known as the "winter" mecca for single track? Please allow our community be known for our trail system, just as we flourish off our State Park camping and boating at the reservoir. Pueblo's trail system is something the locals should be proud of! Outdoor trails have built and maintained communities this should be Pueblo's heart and soul of our tourism. Think Moab, Manitou Incline, Salida, Colorado Trail, even Canon City see's the vision of adding and maintaining trails. Remember, it was the mountain bikers that saved the town of Leadville.

The Management plan suggests better maintained access, designated parking, restrooms and use fees- all great ideas! I'm in full support! I completely understand and respect that there should be maintained control of trail braiding, and building and I respect that we should be conscious of staying on trail and respecting our wildlife and eco system. Yet I am concerned that as this plan is considering closing many of our Southshore Canyon trails due to the fact of "redundancy". The suggestion of closing Rock Canyon Trail felt like you're completing closing off the main artery in our Canyons. In addition, the thought of the loss of most any part of Inner or Outer Limits or Voodoo Loop would be a huge blow to our outdoor community, as without those three trails it can be very difficult to get mileage. My hope is that aside from the great many experts, actual local trail users opinions will be taking into consideration. We need to keep in mind that recreational trails are not just to get from point A to point B. We also use the south shore canyon trails for their elevation gain/loss , which can be a challenge to have in Pueblo. In addition Pueblo has some of the best technically challenging trails around-this makes us stand out from the rest. We are lucky that Pueblo's climate is so nice year round. So next time your drive the I-25 corridor notice all the cars with mountain bikes headed to Pueblo. They are coming to add the value of Greater Pueblo, they will eat here, they will stay here and yes the will love our trails!

So I hope is that we can all come together with Greater Pueblo in mind! Thank you all for the hard work, time a resources that have and will continue to be put into Pueblo's lifeline to outdoor athletic activities!

Respectfully,

Sarah Blackwell  
A&R Construction LLC  
2802 W 11<sup>th</sup> St  
Pueblo, CO 81003  
[sarah@arexcavating.com](mailto:sarah@arexcavating.com)  
719-544-2832 O  
719-240-0318 C

**jckcco <jckcco@centurylink.net>**  
to Lake.Pueblo.Park

Mon, Apr 29, 3:38 PM

Hi,

I just read that many of the canyon trails are slated for closure due to being redundant, but those trails are the reason I drive down there to ride. Since they are so established, I can't imagine any more 'damage' to resources is taking place. I hope you realize these trails are really loved and if they go away, I'll ride elsewhere and take my money with me. Please reconsider closing any of the trails.

Thank you,  
Jim Chott

**Michael**  
**Orendorff <michaelo.ga@gmail.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 4:27 PM

I have become aware of this draft plan too late to address it as adequately as it deserves since it appears, on initial reading, to be professionally prepared with voluminous data compacted nicely and presented well. Congrats to those who prepared it.

Other local Pueblo folks will have better, more thorough comments -- such as the folks of the Southern Colorado Trail Builders, well-known to park personnel, and Kim Arline,

the leading local bicycle advocate in the City and County of Pueblo. So my first request is that priority be given to their comments -- to the degree that if *any* face-to-face meetings occur, (yes, unusual these days but still significant for us humans :) ), I do hope that those important face-to-face meetings will be done with at least those persons.

So with the unfortunate limit of time on my part (my fault), I'll make just a few suggestions. I do hope that the following closures will be reconsidered: Lower Rock Canyon, Upper Skull Canyon and Arkansas Point Road. Over the years of using the South Shore Trails since they came into existence (and I actually used those 1970's created cliff face trails in the early 90's when they were still in quite good shape with heavy chain link railings still in place, etc.), I have noticed far less erosion and habitat destruction in those 3 trails than in many, many other areas. I was actually surprised I did not see what I would agree with and think is much needed -- that is, a significant re-routing of the upper portion of Rock Canyon trail entry. The Arkansas Point old two lane dirt road is significant in that when I have had visitors to town many of them cannot manage even what you and I might consider simple single-track trail walking but they are able to walk to the end of that old dirt road and view what the Pueblo area and, in particular, Lake Pueblo State Park has to offer in beauty and resources.

#### OPEN-WATER SWIMMING:

The failure of the State to still address open-water swimming in the LPSP area, particularly the COL area below the dam, stuns me. That is GREATLY disappointing. And y'all do not have to re-invent the wheel nor do much detail research for including that in this plan. The State is already running a program that LPSP just needs to humbly copy. Chatfield State Park has a program in place using a small separate body of water which we in Pueblo have at least two of a similar nature. They have the forms, procedures, insurance requirements, hours of usage, etc existing already to implement the use of our small lakes as places to do open-water swimming. (Note for non-swimmers: Swimming at a beach is NOT open-water swimming, of which there are several competitions throughout the summer in Colorado in various lakes -- especially as part of triathlons.)

So congrats on the work done to prepare this plan and presenting it well to us. I regret greatly not having stayed in touch with your process and so then I would have time to spend reviewing it over a period of days. Still, the tables are well done and the maps are well marked and the goals are well stated and the assessment procedure seems clear. Thank you.

Michael Orendorff  
323 Dupps Ave  
Pueblo, CO 81005

**Donielle Kitzman** <donielle@pueblochamber.net>  
to lake.pueblo.park@state.co.us

Mon, Apr 29, 4:58 PM

Dear Monique,

I have had the opportunity to review the Trail Management plan for Lake Pueblo State Park and the resulting position statement from the Southern Colorado Trail Builders.

Over the last 5 years I have had the opportunity to speak with you many times on this issue. It is complex and requires attention to many details. I have also had the opportunity over the years to speak with numerous community members, tourists and statewide tourism professionals. In all of those cases, it is clear that Pueblo is gaining in popularity statewide for our outdoor activities and attractions. The Lake Pueblo Trails undoubtedly have the potential to be a crown jewel for our community. I have fielded countless comments about what an amazing resource we are in this growing group of outdoor enthusiasts.

While we support tourism and economic development in Pueblo, we are also keenly aware of the responsibilities to the environment and maintaining the habitat. We are encouraged to see a management plan that can do both.

The Greater Pueblo Chamber of Commerce supports the analysis and position of the Southern Colorado Trail Builders for that reason. We are hopeful to continue to advocate for a responsible use plan for this amazing asset.

**Donielle Kitzman | Vice President**  
**Visit Pueblo Convention & Visitor's Bureau**  
302 N. Santa Fe Ave., Pueblo, CO 81003  
P|719.542.1704 F|719.543.4851 Cell|719-240-8716

**joseph graves** <joseph.graves.senate@gmail.com>  
to lake.pueblo.park

Mon, Apr 29, 5:15 PM

I would like to support keeping the trails in Pueblo. Not only do these trails keep the people and community of Pueblo happy, they also provide tourism to the community.

The trails promote health, social activity and an appreciation of the of the parks. Let's keep the trails.

---

**Joseph Graves**

*Outreach Director*

*Colorado Senate Democrats*

[joseph.graves.senate@gmail.com](mailto:joseph.graves.senate@gmail.com)

303-866-2540(office)

303-378-5901(cell)

**Nick**

Mon, Apr 29, 5:46 PM

**Gradisar <ngradisar@gmail.com>**

to Lake.Pueblo.Park

I write to support the comments and position of the Southern Colorado Trail builders with respect to the proposed trail system at Lake Pueblo State Park. I believe that their comments and suggestions will result in an amenity that is manageable and will be sustainable.

The City of Pueblo is anxious to have the trail system recognized by the Bureau and Colorado Parks.

Please let me know if you need anything further.

Nicholas Gradisar

Mayor, City of Pueblo

**Stephanie**

Mon, Apr 29, 6:51 PM

**Chambers <stephaniechambers3@yahoo.com>**

to Lake.Pueblo.Park@state.co.us

To the Colorado Parks and Wildlife Planning Team,

My husband, Sam Chambers, and I, Stephanie Chambers, are co-writing this email with our thoughts about the Lake Pueblo State Park: Trail Management Plan, 2019.

We are both avid outdoor enthusiasts - bicyclists, hikers, kayakers and photographers who enjoy and respect our regions natural habitats for wildlife and plants as well as the unique geological and paleontology opportunities. We purchase park passes every year, and enjoy the connectivity of the trail systems from the paved trails to the mountain bike trails along the river and water systems throughout the park on both the North and South sides.

We do not agree with trail closures in general; however, many of the reroutes displayed looked acceptable make sense.

We definitely do not agree with closing the following trails with are for intermediate to advanced bikers and / or hikers: Skullridge, Logdrop, Waterfall, Rock Canyon, Stonehedge B, Sidewinder, Freeride, ST5b and ST5c. These trails are already in place and in use and should continue to be supported.

## 63 Public Comments for Draft Lake Pueblo State Park Trail Plan: April 2019

We also do not agree with a 10 month closer on Arkansas Point, Water Tower and Conduit. We aren't opposed to a short period of time closure for nesting purposes - ie: 6 - 8 weeks, but 10 months is excessive. It is also excessive for 6 months closure on the other trails mentioned seasonally for the same reason. Short term closures in general make sense, not the longer ones.

Thank you for allowing our input,

Stephanie Chambers and Sam Chambers

*Walk and Roll,*

Stephanie Chambers

P.A.C.E. (Pueblo Active Community Environments) Volunteer  
[stephanie.chambers@activepueblo.net](mailto:stephanie.chambers@activepueblo.net)

**Patti Schreiber** <[patti.schreiber@gmail.com](mailto:patti.schreiber@gmail.com)>  
to Lake.Pueblo.Park

Mon, Apr 29, 6:57 PM

While I understand that reclamation is important, please don't close any sections of Arkansas Point Trail. This trail is accessible to hikers of all levels, including our elderly family members.

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Patti Schreiber

**Seth Hughes** <[sphugh1967@gmail.com](mailto:sphugh1967@gmail.com)>  
to lake.pueblo.park

Mon, Apr 29, 7:20 PM

To whom it may concern:

Please do not close the more challenging trails at Lake Pueblo State Park.

My wife and I have for the past several years enjoyed these trails immensely during the winter months while the rest of the state is covered with snow/mud.

These trails are more interesting and challenging for advanced riders. When we attend the park we spend money in nearby businesses thus providing a economic boost to the local community.

I cannot understand why it has been proposed to remove this southern Colorado gem from an already economically disadvantaged region.

I urge you to reconsider your proposed trail closures at Lake Pueblo State Park.

Thank you for your time, consideration and service to our state.

---

Seth Hughes

**Ethan  
Clarke <theethanclarke@gmail.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 7:56 PM

To Whom it may concern

I live in Lakewood, CO and I'm a semiannual user of the Lake Pueblo Trails. I love them, and have spent at least one weekend the past few Fall seasons camping there to ride the unique topography. I have talked the trails up to freinds from out of state and have recruited several to come ride with me. Everyone agrees that these trails are the main draw in the Pueblo area and such a fun area of Colorado. Please don't sanitize or otherwise alter the trails for no reason. I know the volunteer trail organization in the area is one of the most committed and active and their social medial posts draw folks from all over the state to help. Please allow this amazing community to remain valid and valuable to Southern Colorado. Thank you.

---

Ethan Clarke  
13584 W Virginia Dr, Lakewood, CO 80228

**Sarah  
French <sarahkfrench@gmail.com>**  
to Lake.Pueblo.Park

Mon, Apr 29, 8:06 PM

I am a local passholder, and I love the trails. I use them weekly. I know it is important to protect wildlife and balance the needs of different stakeholders, but I believe the closure plan is excessive.

Many of the trails you plan to close are the most popular mountain biking trails (Skull, Rock Canyon, Keyhole, Waterfall, Lower Dog, and Free Ride). Lake Pueblo competes with the Grand Junction area for Denver Metro mountain bikers in the winter and spring. The town of Pueblo economically benefits from the out-of-town visitors. If these trails are closed, many riders would not travel to Lake Pueblo anymore. These trails are unique and interesting and cannot be replicated.

I don't understand the rationale for closing the Waterfall Trail. The draft plan suggests it is too dangerous. However, intermediate riders such as myself can ride it. If you are concerned about safety, maybe consider putting up a sign that the upcoming feature is more difficult and beginning riders should dismount?

I also don't understand closing "redundant" trails. Closing a redundant trail would make sense if these were used for commuting, but they are used for mountain biking. Even if there are two trails in the same drainage, each trail has different and unique features that make it fun to ride.

I also urge you to consider to the relatively minimal effects of mountain biking on the trails compared to other state park users.

The most popular time for riding the Lake Pueblo Trails are from November to March. I urge that, if there are going to be seasonal closures for nesting to have the closures occur during the low season (April-October).

The report notes that Yellow-Billed Cuckoo has been spotted at the reservoir. It is a rare visitor to the reservoir and there is no documented evidence of nesting there. If the Cuckoo did nest, it would prefer to nest in "dense deciduous stands, including forest edges, tall thickets, dense second growth, overgrown orchards, scrubby oak woods...willow groves around marshes. In the west, mostly in streamside trees, including cottonwood-willow groves in arid country." The South Shore Trail system does not have any of the above-mentioned habitats. If and when the Cuckoo was present at the reservoir, it would likely appear along the river below the dam. Decisions about closing the South Shore Trails should not hinge on the activity (or lack thereof) of the Yellow-Billed Cuckoo.

See <https://www.audubon.org/field-guide/bird/yellow-billed-cuckoo>

Great Horned Owls do not make their own nests, and they often switch nest locations year by year. To close trails permanently because of a bird that often moves its nest defies logic. See <http://www.birds.cornell.edu/page.aspx?pid=2710#nest-location> (Great Horned Owls nest in a wider variety of sites than any other bird in the Americas. The owls most commonly use nests built by other species in whatever tree is available, but also use cavities in trees and snags, cliffs, deserted buildings, artificial platforms, ledges, and pipes, and will even lay eggs on the ground. Only one nest will be used per year. A pair of Bald Eagles have used this nest for the past two years and successfully raised one chick in 2012 and two eaglets in 2013. Often a tree nest deteriorates so much during a season's use by a Great Horned Owl that few can be used again in a subsequent season. This may be the last time this nest is used, depending on how well it stands up to this year's wear and tear, although former eagle nests tend to be sturdy and substantial.)

Thank you for your consideration,  
Sarah

**Craig Stevens** <tvrcraig@mac.com>  
to Lake.Pueblo.Park

Mon, Apr 29, 8:09 PM

Hello,

Trails of all skill levels should be kept for bikers. A bunch of smooth trails won't attract every user. Keep the natural ruggedness and avoid neutering every trail!

Thanks

---

Craig Stevens,  
Monument, CO

**Kristyn Econome** <strawberriski@yahoo.com>  
to lake.pueblo.park@state.co.us, Brian

Mon, Apr 29, 9:12 PM

Colorado State Parks and Wildlife

Lake Pueblo State Park

Re: comments on the Public Draft: Lake Pueblo State Park: Trail Management Plan

Dear CPW:

Having utilized the trails on both the North and South Shore of Lake Pueblo State Park (LPSP) over the past 10 years, and having reviewed the "Public Draft: Lake Pueblo State Park: Trail Management Plan" (Plan) in the incredibly short review period, we find three major issues that need to be remedied before the plan is taken past the draft phase:

1. Many trails and trail segments are slated for permanent closure and the reason stated in the Plan is: "unnecessary, redundant." This reasoning is specifically provided for the following trails:

- Free Ride (a)
- Rock Canyon
- Sidewinder
- The Buttes
- The Edge

We have personally used all of these trails during visits to LPSP and have thoroughly enjoyed the trail experience they provide. If these trails were truly unnecessary and redundant then surely our (and many others') use patterns would not put the trails to use. But that is clearly not the case. Our last recreational use of the South Shore trails area lasted only a couple of hours, but we still managed to enjoy the Rock Canyon trail twice during the short window during which time we were riding. As you know, all of these trails see significant use and therefore we question the "unnecessary, redundant" reasoning for permanent closure. We ask that all of the above-listed trails labeled with this "unnecessary, redundant" reasoning for closure be removed from the list of trails slated for permanent closure. Of special note, The Edge trail is listed as "Redundant, near large drop off." That large drop off provides a unique user experience and should be a reason for incorporating the trail into the system rather than a reason for permanent closure.

2. The proposed seasonal closure is problematic to the use of the remaining trail system. In particular, the South Shore trail is a major trail that supports quite a bit of use while providing key access to the rest of the trail system. It appears that the red-tailed hawk nest that is the cause of this proposed seasonal closure is on the west side of the Boggs Creek, and thus we question the true need to close the South Shore trail. If the seasonal closure is implemented, we assume reservoir access in the Boggs Creek area will likewise be limited during the closure. After all, motorized watercraft surely cause more impact on the nest than non-motorized use on the other side of the reservoir. Please remove South Shore from the proposed seasonal closure.

3. We question the need for a seasonal closure/buffer given that the red-tailed hawk nest has either coexisted with the trails for a decade, or was occupied since the time the trails were in place.

4. Finally, it is unreasonable that CPW and the BOR would go to the effort to close (either permanently or seasonally) existing trails based on their paleo, cultural, habitat, or riparian properties, while the impacts of the adjacent reservoir are not put into proper perspective. Pueblo Reservoir continues to drown over 10 miles of the Arkansas River, including hundreds of acres of riparian habitat, untold number of paleo and cultural resources, and has clearly displaced numerous species of wildlife, not to mention the degraded hydrologic implications to the river downstream. Apparently, those impacts remain completely acceptable in order to provide a resource (water) for human use and consumption (including frivolous uses such as non-native, ornamental, non consumptive blue grass). We ask that the LPSP management agencies understand that trails provide a similar human resource - for human health, recreation, & diverse opportunities to enjoy nature - and relative impacts should be put into proper perspective when considering trail closures. We request that the true impacts that the existing trails have to the area be properly compared and analyzed relative to the impacts that the reservoir itself continues to have on the land.

Our family's use of LPSP provides us with great health benefits, opportunities to enjoy nature, as well as an economic benefit to both LPSP and the surrounding community. Our trail use often overlaps with the proposed seasonal closure, which, if implemented, will adversely impact our use of the park and thus any economic benefit to the greater Pueblo area. When one considers permanent closures, our use of LPSP will be significantly curtailed, if not outright stopped. Our decision to purchase an annual state parks pass (which we have done every year for the past ten years) will be re-examined and likely no longer pursued.

Regards,

Brian LeDoux & Kristyn Econome  
Cañon City, CO 81212

**Blackburn,**  
**Jeffrey <Jeffrey.Blackburn@nrel.gov>**  
to Lake.Pueblo.Park@state.co.us

Mon, Apr 29, 9:13 PM

Hi there,

Thank you for engaging in sensible management of the Lake Pueblo trail system. I live in Golden and have been a frequent visitor the trail system for many years now. My wife and I visit the trail system to mountain bike, and my daughter (7) is now joining us on the trails as well. Managing the trails sustainably is an important task, so thank you for your hard work and attention on this. As you embark upon the management plan, I would encourage you to engage some of the members of the mountain bike community for input on some of the trails that are heavily used by mountain bikers. Some of the tails like Broken Hip, Free Ride, KeyHole, and Skull Canyon are some of the most unique riding in the state and are the primary reason we make the trip to Lake Pueblo each year to camp and ride. It would be disappointing to see these trails diminished by rerouting the difficult/technical parts or 'sanitizing' them in a way that takes away their character.

Thanks again for taking the time to manage these trails sustainably so we can all continue to enjoy them. My family, and many other families who enjoy mountain biking on these great trails, would be happy to contribute to the ongoing discussion about how these trails are managed if you ever desire any bike-specific input. Please don't hesitate to contact me if that is the case.

Thanks, and best regards,

Jeff

**KIMBERLY**  
**ARLINE** <kimarline@comcast.net>  
to Lake.Pueblo.Park

Mon, Apr 29, 9:23 PM

A few more comments after the meeting: From Kim Arline, 270 W Ben Hogan Dr. Pueblo West, CO 719-671-6077

Relieved to hear the seasonal closures will only be in effect if an animal of concern is nesting or breeding in the area that year.

Map 7: trail NT10a is really a great trail for full moon hikes and mountain bike rides. The trail is not technical, it is easy to access for more beginners, more visible in low light conditions. It is a great way to separate out dogs on different trails since many are out and back trails farther to the east.

Duke trail inlet from the paved road when you first enter the park from Hwy 96 is important to keep. Many people ride to the trails. We should not have to drive our bike to ride the great trails at Lake Pueblo. It is nice to pop in onto the trails off the road and not be forced to access the trails at a parking lot. It also is a great advertisement for the trails as many people are not aware they are right there. The connections to the roads and neighborhoods on the north side are also important. Please let Pueblo become more bike friendly allowing people to bike more and drive less. Please don't make these trails car-centric only. The worst place to ride is in a parking lot with cars backing up!

Arkansas Point double track road is the main spine of the trail system on the top of the bluff area. All other trails drops into the gullies and become more technical or difficult for people with mobility issues. That could be a hip replacement going for a walk, foot injuries not needing to be stressed on steep or slippery areas. People are lazy and will make short cuts thru areas so please provide a reroute in this area to avoid sensitive artifacts or fence along the road to keep people on track.

Kim ARline

**David Bal <ddbal1@yahoo.com>** Mon, Apr 29, 10:03 PM  
to Lake.Pueblo.Park@state.co.us

I read some posts on Facebook about closing trails at Lake Pueblo for mountain bikes. I enjoy riding the trails at Lake Pueblo. Many residents of Pueblo, and nearby towns, gain great exercise, stress relief and friendship building through mountain biking at the Pueblo Reservoir trails. Particularly during the winter months those trails are uniquely available to mountain bikes while most other trails are snow covered. These trails are an important asset that benefits many members of the community. Leave the trails open to mountain bikes.

---

-David Bal  
5425 Kates Dr  
Colorado Springs

**Dylan Monke <dylanmonke@gmail.com>** Mon, Apr 29, 10:33 PM  
to Lake.Pueblo.Park

Hello,

Please don't close the trails you intend to. They are the only reason I happily pay the kiosk to park right in front of them. The trails are the only reason I make the trip down to Pueblo if I'm being completely honest. Without them I never would have discovered that part of the desert, It's prettty charming.

Lastly, they are just downright responsible fun. Resources like this where people can harmlessly roll a few features in nature are hard to come by. You'll be setting the mountain biking community back quite a bit with this one. If trails must be closed, consider legalizing and improving whichever you can, I'll chip in for it.

Thanks for your time and consideration.

Best,  
Dylan

**Kerry Norman <kerry.j.norman@me.com>** Mon, Apr 29, 11:42 PM  
to Lake.Pueblo.Park

Dear Sirs/Madams,

I am writing to provide feedback on the State Park Management Plan for Lake Pueblo.

It appears to be a thorough review but I am concerned with some aspects of the plan as presented in the public draft, dated April 17, 2019. I am not sure if they are because the mapping is not presented clearly or other if consideration has not been given to certain area.

I am a mountain biker and I travel to Lake Pueblo to ride the Shore Shore trails. The idea time to travel there is in the Spring as the summer gets too hot to ride without any shade.

In the project summary you state that you would keep over 80% of trails but reviewing the impact on specific trails this number is may not necessarily represent the impact in a categorized way. Mountain biking seeks trails of different technical merit. The trails on the South Shore area, while not significantly long, provide a rich trail riding experience that is not available in much of the Front Range. In fact, for me, this is the only reason to drive the 2-1/2 hours from the Boulder area to visit Pueblo. It is the free-ride like trails on South Shore. This plan significantly impacts that trail riding experience.

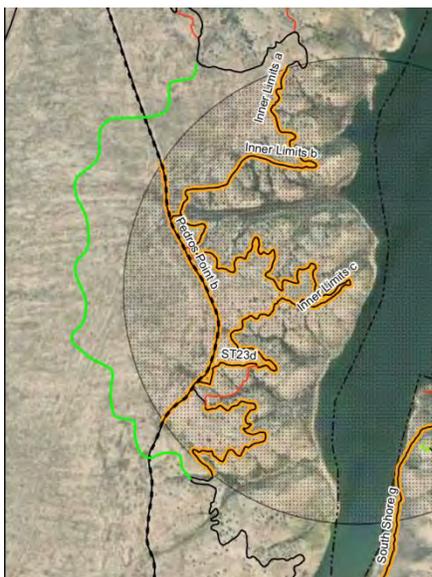
The primary issue with the proposal that impacts the usable of the trails on the South Shore is the seasonal closure. The most popular time to visit Pueblo is in the Spring when trail conditions are not great in the north or Colorado. During the summer it is too hot to ride at Lake Pueblo. This proposal enacts the closure of significant trails during February 15 through tp July 15. In particular South Shore e and g, Broken Hip a. Trails that descent the canyon that are not closed during this time feed into South Shore with no particularly option to get back out if South Shore is closed. For example, if a rider descends Broken Hip b, based on the proposed map, there is no exit point when Broken hip a is closed 2/15 to 7/15. Similarly Scull Canyon also dead ends during this time; this one is particularly concerning as the intersection point is slo close to the end of the seasonal closure area. I recommend you make allowance for Scull Canyon to connect up with South Shore during 2/15 to 7/15 closures.



This means that by closing South Shore, you effectively close other trails. But not taking this into account you effectively distort the trail impact quota you state in the project summary.

Another significant impact is the closing of Inner Limits (a, b and c) and ST23d during 2/15 and 7.15, along with Pedros Point b. Closing this effectively closes access to the Outer Limits, as you have provided no accessible connection point during the closure.

There is ST2a to get back to Proghorn but these are not really acceptable alternatives for riding enjoyment. Basically, the western end of the South Shore is likely to get very little use during 2/15 to 7/15 which then impacts Voodoo as well with the loss of Inner Limits. I would highly recommend that you add a new single track to work around the closed area, similar to the green line in the image below.



The plan appears to target certain trails that have man made features on them. Slating to close Log Drop is very unfortunate. There are very few trails like this across the front range and while short this is very enjoyable. If Log Drop much close I strongly request that Colorado Parks and Wildlife find alternative options that can use the fall line of the bluffs with the ability to add man made features for technical riding. In addition to this I am concerned that you have Free Ride (a, b, c) slated to be closed. The map here is confusing. Free Ride contains several ladder/log features that are fun to ride and provide an alternative riding experience. I strongly hope that you are not listing that trail for closure as this would be a catastrophic loss to the quality riding that Lake Pueblo provides. In the reasons for closure you state for "Free Ride a" that it is "Unnecessary, redundant" and for "Free Ride c" that it is "Leads to nowhere, redundant". I hope these are trails that I have not noticed and do not include the log features. Please, please consider trails for expert riders. What you may find as a trail to nowhere is really a trail to extreme technical riding that expert riders appreciate. Please remember, those trails would not exist if there wasn't a need for them.

Finally, back to the seasonal closure. You plan to close Watertower between 12/1 and 9/30. This basically means that this trail, a fun technical trail, will only be open for two months of the year, basically October and November. I am really concern that you are closing natural surface trails in this area yet the water tower is accessed by a service road for commercial vehicles. This seams contrived and unnecessary to me that Watertown and the associated Conduit a be closed for such a long period of time when there are Utility operations in the same area. Please reconsider this.

#### Final Statement

Pueblo provides a unique riding experience that is not available across much of the Front Range. It's main draw for mountain bikers is in the Spring and late fall when the weather is cooler. These are the times when the trails are most impacted by seasonal closure. Please reconsider this, or provide new connection options to work around closed areas that still take in the geographical features (inclines, bluffs) of the area.

Thank you,  
Kerry Norman  
195 W Elm St  
Louisville Co 80027.

**Cathy Reynolds** <whoaga@gmail.com>  
to lake.pueblo.park

Tue, Apr 30, 10:34 AM

Dear Sir or Madame,  
Two hours is not enough time to allow for public comment, and I appreciate your flexibility here. Here is my written comment from last nights Open House. Please reply so that I know you've received it.

Thank you,  
Catherine Reynolds  
1701 W 20th St  
Pueblo, CO  
719-252-7634  
email: [whoaga@gmail.com](mailto:whoaga@gmail.com)

Comment:

All of these trails are public rights of way and access to water, therefore as a Pueblo citizen I reject the plan to close any trails withing this system unless clear evidence of damage by human presence to the said "sensitive resources".

I motion for a second hearing with a map of full area including adjacent roads and trails and an explanation of the "sensitive resources" and the effects of human presence on them, or a publication of the documents supporting your reasoning with specifically identified resources and their impact.

End of Comment

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Cathy Reynolds  
719-252-7634  
Whoa-Ga! Eight Limbed Yoga for Horse / Rider Harmony  
Author and Clinician  
Like us on FB and Twitter

**Peter**  
**Marlowe** <[marlowepe@gmail.com](mailto:marlowepe@gmail.com)>  
to Lake.Pueblo.Park

Tue, Apr 30, 3:45 PM

My submission:

Greetings. I am a non resident mountain biker who has enjoyed the trails developed thus far at Pueblo Reservoir on a few occasions. I am here to tell you that deletion of a good many of these advanced canyon trail options is very unpopular.

I recognize that the trails were developed informally, but, also - as I understand it - with a not insignificant amount of approval by those managing the park. I also understand the needs of land managers to have a plan in place and to sanction trails formally. I would encourage you to look at the proposed deletions again in terms of the value they have to the mountain biking community as well as the local economy. I have also been in contact with the Pueblo chamber of commerce to let them know the closure of these trails will affect my decisions to visit other communities the value the economic impact of mountain bikers, like canyon city. They are actively developing trails in their

community and are welcoming to cyclists.

Every winter, riders along the Front Range are willing to travel several hours to ride dry, FUN trails. This has an economic impact that many communities desire and are building trails for. The trails that you have offer a very unique set of riding options that can be ridden year round, to a large degree. Deleting these technical options will lessen much of the appeal of making that journey. There are many, many beginner to intermediate trails to be found, yet very few advanced ones, relatively speaking. Those that I've explored at Pueblo seem to have been well done, are relatively safe for advanced riders, and shouldn't be viewed through the lens of lowest common denominator design. Please, keep as many of these in the trail mix as possible.

Respectfully,

Peter Marlowe  
Boulder, Colorado.

**jay bailey <2baijay@gmail.com>**  
to lake.pueblo.park

Tue, Apr 30, 6:53 PM

----- Forwarded message -----

From: **jay bailey <[2baijay@gmail.com](mailto:2baijay@gmail.com)>**

Date: Tue, Apr 30, 2019 at 3:03 PM

Subject: Lake Pueblo State Park Trail Management Plan- Public Draft

To: <[monique.mullis@state.co.us](mailto:monique.mullis@state.co.us)>, <[robert.seel@state.co.us](mailto:robert.seel@state.co.us)>, <[jeff.thompson@state.co.us](mailto:jeff.thompson@state.co.us)>, <[megan.barton@state.co.us](mailto:megan.barton@state.co.us)>, <[nick.dellaca@state.co.us](mailto:nick.dellaca@state.co.us)>

As I read through the proposed trail management plan I was pleased with what I was reading. I have been visiting the areas around the lake since before there was a lake. In 2005 I first started to realize what the "social trails" around the lake were becoming and I knew from my experience with similar recreational sites, such as Moab, Utah and Fruita, Colorado, that planning and management was needed so that trails were developed in a environmentally sensitive and sustainable way. At that time my thoughts couldn't get much traction. Around this period of time Southern Colorado Trail Builders (SCTB) came along. I initially was happy to see grass roots folks getting involved with the trails. Over a period of a few years I was alarmed by the proliferation of trails up and down almost every canyon. The trails were being built with little evidence of trail building knowledge, environmental sensitivity or sustainability. It was obvious that SCTB was a mountain bike specific entity. I attended SCTB meetings to share my concerns and was met with little sympathy or understanding. I spoke with a representative of SCTB last night at the public meeting held at the Lake Pueblo State Park (LPSP) visitors center last night (4/29/19). He was well spoken and knowledgeable. After thinking about our conversation I realized that SCTB will be responsible for building and maintaining

the trails within the proposed trail management plan. I have read SCTB "Position Statement". I also realized that SCTB remains a mountain biking specific entity. We talked specifically about the trails that have become known as "Steep Tech" (previously known as "The Stairway to Heaven") and the other stair way trail out of Arkansas Point Campground. I asked if these two trails should be closed to mountain bikes and horse travel due to their fragile and difficult terrane. Mountain bike travel has seriously damaged these two trails in the last few years and they are inappropriate and dangerous for horse travel. The SCTB representative claimed that they can rebuild them for mountain bike specific travel. These two trails were constructed by the Youth Conservation Corp in the 1970s. This youth program was started and administered by Jack Shelhimer who at that time was a biology professor at The University of Southern Colorado. Larry Fancher was Jack's trail boss and the engineer of the two trails. What you see there is Larry's creation. Jack passed away a few years ago. My thought is that these two trails should be returned to their original condition along with whatever safety improvements are necessary and that acknowledgment be given to the trail's original creators. History is important to understand the past. People should know how those two trails came to be and the trails should be preserved as historical sites.

My concern is that the fox is being put in charge of the hen house. In the LPSP Draft Trail Management Plan the park's stated intention is to develop trails for multiuse (ADA, horse, foot and bike). My fear is that the trails will become a mountain bike theme park dominated by one group of users that over time drives wildlife and other users away. I am impressed with the detailed LPSP Trail Management Plan that I read through. It was done professionally and completely. I am very grateful for the effort that all of you put into its creation. Good Job. I have doubts that SCTB is an honest broker for all of the intended users of the trails. Over several years I have witnessed SCTB single minded purpose in trail development. They have a proclivity to alter terrane and build features that are unnatural and specific to mountain biking. SCTB have tunnel vision that does not see the trails from a horseman perspective, a hiker perspective or a disabled person perspective. My hope is that LPSP closely supervises trail construction and maintenance to ensure that multiuse is key. The loudest voice in the room shouldn't be allowed to dominate the conversation.

I did supply my written comments prior to the 4/29/19 deadline for public input, by hand, to the LPSP visitors center. I also included copies of letters I have written over the years concerning this subject. Again I want to thank everyone for what you do. I love Lake Pueblo. My annual state parks pass is the best \$105 bucks (it went up this year) I spend every year.

Respectfully,

Jay Bailey  
2633 Norwich Ave  
Pueblo, Co 81003  
719-544-4333  
[2baijay@gmail.com](mailto:2baijay@gmail.com)

## Appendix J: Author Credentials

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## **MELISSA M. BELMAR, Collective Ecological Consulting**

Natural Resources Planner, GIS Analyst

### **Professional Experience**

Melissa has nine years of natural resources planning experience with a focus on ecology and wildlife conservation and management. The majority of Melissa's experience has been concentrated in the western United States, with several projects being located in Colorado, Nevada, Utah, and California. Melissa is proficient in conducting field surveys for plant and wildlife species. Melissa is intimately familiar with environmental regulations and regularly writes technical documents for compliance with various environmental laws, including NEPA, ESA, BGEPA, CWA, and MBTA. She also has assisted with conservation planning aimed at long-term management and conservation of natural resources. Melissa is very proficient in using ArcGIS as a tool for impact assessments to natural resources and for conservation planning. ArcGIS has been an integral part of all positions she has held. Melissa has worked for a variety of clients during her consulting career. She has worked for federal agencies, including the National Park Service, US Fish and Wildlife Service, Colorado Parks and Wildlife, Colorado Department of Transportation, Bureau of Land Management, US Forest Service, Department of Defense, and the Bureau of Reclamation. She has also worked for private entities and land trusts throughout the west.

### **Work History**

- Consultant, Collective Ecological Consulting LLC (2016 to Present)
- Consultant, Amec Foster Wheeler (2012 to Present)
- Biological and GIS Technician, Colorado Parks and Wildlife (2011 to 2012)
- Conservation Biologist, Colorado Audubon Society (2011 to 2012)
- Researcher, University of Wisconsin (2005 to 2008)

### **Education**

Indiana University

Bloomington, IN

*Master of Science, Applied Ecology*

2010

University of Wisconsin

Madison, WI

*Bachelor of Science, Biology*

2008

### **Interest, Service, and Membership**

- Certified Ecologist – Ecological Society of America
- USFWS Yellow-billed Cuckoo Survey Permit Holder
- Colorado Field Ornithologists – Member
- Bird Conservancy of the Rockies – Member and Bird Banding Volunteer (2016 to present)
- Bat House Construction and Implementation Volunteer, Denver Parks and Rec (2017)
- Colorado Parks and Wildlife, Castlewood Canyon Breeding Bird Survey (2016)
- Boulder County Parks and Open Space, Preble's Meadow Jumping Mouse Trapping (2016)
- Indiana University, Northern Saw-whet Owl Banding (2010)