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RECLAMATION

# Pueblo Reservoir Resource Management Plan

**Pueblo Reservoir  
Fryingpan-Arkansas Project  
Eastern Colorado Area Office  
Upper Colorado Basin Region**



in cooperation with

Colorado Division of Parks and Wildlife  
Southeast Region

**Approved:** *signed-Jeffrey Rieker* **Date:** *July 9, 2020*

Department of Interior

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# **PUEBLO RESORVOIR RESOURCE MANAGEMENT PLAN**

**Fryingpan-Arkansas Project, Colorado  
Upper Colorado Basin Region**

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The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

## **Mission of the Bureau of Reclamation**

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# Abbreviations and Acronyms

1981 Plan	Pueblo Reservoir Area Management Plan
ABA	Architectural Barriers Act of 1968
ADA	Americans with Disabilities Act
ANS	aquatic nuisance species
APE	area of potential effects
Early AVC	20 <sup>th</sup> Century Arkansas Valley Conduit
BLM	Bureau of Land Management
BMPs	Best Management Practices
CDPHE	Colorado Department of Public Health
CPW	Colorado Parks and Wildlife
CWA	Clean Water Act
DNR	Colorado Department of Natural Resources
EA	Environmental Assessment 2015-025
ESA	Endangered Species Act
FHWA	Federal Highway Administration
GIS	Geographic Information System
GSSP	Global Boundary Stratotype Section and Point
LPSP	Lake Pueblo State Park
MBTA	Migratory Bird Treaty Act
MU	Management Unit
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	Non-Point Discharge Elimination System
NRHP	National Register of Historic Places
PFYC	potential fossil yield classification
Reclamation	U.S. Bureau of Reclamation
RMP	Resource Management Plan

RMP Planning Area Resource Management Plan Planning Area

SHPO State Historic Preservation Office

SWA Pueblo Reservoir State Wildlife Area

USFWS U.S. Fish and Wildlife Service

# Executive Summary

## Chapter 1 Introduction & Purpose

The Bureau of Reclamation, Eastern Colorado Area Office (ECAO), as the lead federal agency, has prepared a Resource Management Plan (RMP) for Pueblo Reservoir, Pueblo County, Colorado. Pueblo Reservoir and the surrounding lands are managed for Reclamation by Colorado Parks and Wildlife (CPW) and known as Lake Pueblo State Park (LPSP) and the Pueblo Reservoir State Wildlife Area (SWA). The RMP will replace the existing 1981 Reservoir Area Management Plan (1981 Plan) and direct future use, management, and development of Reclamation land at LPSP and the SWA.

The RMP is a planning document with programmatic resource management goals and objectives, while also proposing management actions for each Management Unit (MU) within Pueblo Reservoir and the surrounding lands area (RMP Planning Area). The resource management goals, objectives, and management actions together describe a desired future condition for the entire RMP Planning Area and specific natural resources, land use, travel management, water resources, invasive species, educational, and recreation goals within each MU. The resource management objectives are consistent with the mission and goals identified in Reclamation's Upper Colorado Basin Region's mission and vision statements ([https://www.usbr.gov/gp/about\\_us/vision.html](https://www.usbr.gov/gp/about_us/vision.html)) and the Department of Interior's Strategic Plan. The management goals and associated objectives are described in detail in Chapter 4.

Reclamation's authority to prepare the RMP is under the Reclamation Act of 1902 (Chapter 1093, 32 Stat. 388); the Reclamation Project Act of 1939 (Chapter 418, 53 Stat. 1187), the Federal Water Project Recreation Act (Public Law 89-72), 79 Stat. 213; and the Recreation Management Act of 1992 (Public Law 102-575, Title 28 [2805(c)(1)(A)]).

Pueblo Reservoir is a terminal and principal storage feature of the federal Fryingpan-Arkansas (Fry-Ark) Project, a multipurpose trans-mountain, trans-basin water diversion and delivery project in Colorado. It makes possible an average annual diversion of approximately 69,200 acre-feet of surplus water from the Fryingpan River and other tributaries of the Roaring Fork River, on the western slope of the Rocky Mountains, to the Arkansas River basin on the eastern slope. The Fry-Ark Project was authorized by Congress in 1962 (Public Law 87-590) and the construction of Pueblo Reservoir was completed in 1975. The reservoir is located on the Arkansas River, approximately six miles upstream of the city of Pueblo. The Fry-Ark Project's authorized purposes include supplying water for irrigation, municipal, domestic, and industrial uses, generating and transmitting hydroelectric power and energy, controlling floods and for other useful and beneficial incidental purposes thereto, including recreation and the conservation and development of fish and wildlife.

The RMP Planning Area is 13,483 federally owned acres, 4,002 surface acres of water, and about 60 miles of shoreline associated with both LPSP and the SWA, which are located on the eastern slope of the Rocky Mountains in Pueblo County. The City of Pueblo, Colorado is east and Pueblo West, an independent metropolitan district, is north of the RMP Planning Area. Lands to the south are primarily undeveloped rangeland. Other major cities within 100 miles include Colorado Springs



and Denver, Colorado. The RMP Planning Area enjoys a high desert climate with low rainfall, high evaporation, high winds, and low humidity and is broken down into seven MUs based on use, natural resources, and existing facilities. The MU's include: South Entry, Arkansas River Corridor, Operations, South Shore, North Shore, Pueblo Reservoir, and LPSP Wildlife Area.

The RMP Planning Area does not include 2,160 acres of lands within the LPSP that is owned and managed separately by CPW (Land Board properties, CPW Honor Farm and Chain of Lakes) or lands associated with Reclamation issued use authorizations to Southeastern Colorado Water Conservancy District's Pueblo Hydropower Project and Colorado Springs Utilities' Southern Delivery System. Finally, the RMP does not include Fry-Ark Project facility operations (i.e. Pueblo Dam).

The RMP Planning Area is currently being used for Reclamation's primary purposes of the Fry-Ark Project, which is to supply water for irrigation, municipal, domestic, and industrial uses, generating and transmitting hydroelectric power and energy, and flood control. However, public recreation and conservation and development of fish and wildlife is also a present and increasing use.

Recreational opportunities within the RMP Planning Area include:

- two marinas and boat launch ramps;
- three campgrounds containing a total of 400 camp sites;
- three dump stations;
- 24 vault toilet facilities;
- 13 comfort stations with flush toilets and running water (12 with showers);
- five picnic areas, including four picnic shelters for large groups and day use;
- a swim beach, including developed facilities, and;
- trails for hiking, horseback riding, and off-road bicycling.

Reclamation and CPW work together under Lease No. 14-06-700-8018, where Reclamation assigned management of recreation, fish, wildlife, and associated resources for federal lands to CPW. CPW manages these lands as LPSP and SWA. The 1975 Lease expires in 2025.

CPW also administers two concessions; North Shore Marina and the South Shore Marina. The concessions are fully open to the public and provides a variety of public services regarding boating, boat slips, fishing equipment, tackle, bait, picnicking, and a store at LPSP.

Reclamation may revise or amend the RMP within the established 10-year planning period as necessary. During the implementation or monitoring phases of the RMP, Reclamation, other agencies, or the public may identify problems, deficiencies, or additional issues that should be addressed. Changes in the social, economic, physical, or environmental conditions may also necessitate changes to the RMP. Reclamation expects that minor changes in project descriptions that do not conflict with the established goals and objectives would be documented and would not require further public involvement and National Environmental Policy Act (NEPA) compliance. Changes that would modify one or more of the prescribed decisions and require major changes to the established goals and policies would be documented by an amendment to the RMP and may

require further public involvement and NEPA compliance. Reclamation will determine the appropriate level of public involvement and appropriate NEPA compliance. The RMP is expected to be re-evaluated at the end of the 10-year planning period (2030) to determine whether or not the RMP should be revised.

Reclamation's Lease No. 14-06-700-8018 with CPW is set to expire in 2025. However, CPW has requested to start the process of a new agreement. Currently, Reclamation is working with CPW on a new agreement and plans to finish the process in 2020.

## **Chapter 2 Planning and Scoping Process**

The RMP was prepared using an established planning process that incorporated NEPA requirements and Reclamation policies and regulations. The process determined issues, opportunities, and constraints for various land uses on Reclamation lands. Prior to public scoping activities, an assessment of facilities and operations was starting in 2014 and completed in 2012. The assessment identified issues and opportunities concerning visitor experience, park management, and park facilities. These issues, opportunities, and concerns were combined with internal and public scoping and lumped into two major categories: resource management and recreation/visitor services.

The assessment along with a list of issues was used to develop recreational and resource management actions that made up the Proposed Action Alternative. The 1981 Plan was used as the No Action Alternative. Reclamation completed Environmental Assessment Number 2015-025 (EA 2015-025) (Appendix A), which analyzed and disclosed potential effects of the Action Alternative as stated in the RMP. The RMP can only be implemented after the issuance of a Finding of No Significant Impact (FONSI). Impacts from proposed activities are discussed broadly since project details, designs, and specifications have not yet been fully developed for each management action. Prior to implementation of the proposed management actions, Reclamation must consider public safety, potential environmental impacts, facility operations and maintenance, and cultural resources before any ground disturbing activities. When activities are proposed and move to construction phase, the plans will be reviewed and assessed for the need for further environmental analysis and documentation beyond this RMP. If there is a need, site specific impacts may be analyzed separately under NEPA but, tiered to the programmatic EA 2015-025.

Reclamation provided a variety of public involvement activities in order to gather data. A January 14, 2014, news release announced the initiation of the 30-day public scoping period to assist in the development of a resource management plan for Reclamation lands managed by CPW as LPSP and the SWA. The scoping period identified issues, opportunities, and resources of concern that should be addressed in the RMP. An Open House was held at the LPSP Visitor Center on January 22, 2014. Public comments were accepted through February 21, 2014, with a total of 116 comments received. The announcement was also posted on the Reclamation web page and sent via email to potential stakeholders inviting them to take part in the public process.

The RMP process was put on hold in 2015 due to issues raised by the public and Reclamation concerning the 50 miles of unauthorized trails in MU 4 South Shore. Safety became a concern due to erosion and degradation along various trails. Reclamation and CPW completed an assessment of the trails in the fall of 2015, which documented natural and cultural resource impacts from the unauthorized trails. Due to the extensive expansion of unauthorized trails during the past decade on

both the north and south side of Pueblo Reservoir, a separate trail management plan was needed. Over the next three years, CPW collected additional natural resource data and developed the Lake Pueblo State Park Trail Management Plan (Trail Management Plan) through a public process with a final plan in May 2019 (Appendix B). The Trail Management Plan will include implementation of Secretarial Order 3376. Secretarial Order 3376 set forth Department of the Interior policy that electric bikes (E-bikes) should be allowed where other, non-motorized types of bicycles are allowed and not allowed where other, non-motorized types of bicycles are prohibited. Accordingly, the proposed rule would include a definition for E-bikes. E-bikes may have 2 or 3 wheels and must have fully operable pedals. Reclamation is currently amending this regulation to include a definition for E-bikes. Once amended, the amended regulation would apply to all Reclamation lands.

The Planning Team which consisted of Reclamation and CPW staff developed a list management issues and criteria that were used to develop the management actions that are further detailed in Chapter 4.

The RMP is necessary to address increasing use at Pueblo Reservoir and associated recreational facilities in the RMP Planning Area. At the same time, the RMP will preserve, protect and enhance natural resources, including vegetation and wildlife diversity and health, as well as protecting and preserving cultural and paleontological resources.

The implementation of the RMP by Reclamation and CPW will be guided by existing and future laws, Executive Orders, regulations, policies and guidelines. The RMP is designed to supplement existing direction provided by these sources. Once approved, it is anticipated that the RMP will be reviewed and updated periodically as needed no sooner than every 10 years.

Chapter 4 describes the proposed management actions for each MU. These actions will be implemented, starting in 2020, based on Reclamation and CPW funding and staffing levels. Projects will be completed on a phased approach and will be prioritized in accordance with the public health and safety concerns, required to protect existing resource, and based on public desire. Reclamation, CPW, and selected contractors will follow the Best Management Practices (BMPs) during implementation of the proposed Management Actions. A full list of the BMPs is located in Chapter 2.

The RMP will be monitored annually at the end of the federal fiscal year (September 30). Management Actions will be prioritized and will become part of an annual work plan to help budget and develop designs for each project.

## **Chapter 3 Planning Area Resources**

Chapter 3 describes the affected environment also known as the existing resource condition for each resource both generally and when specific to a MU. While impacts from the management actions are not significant or may not have any impacts, each existing resource condition is described to provide background information for management and implementation of the RMP.

The resources described include: Paleontological Resources, Soils Resources, Water Resources, Water Quality, Vegetation Resources, Aquatic and Wildlife Resources, Cultural and Historic Resources, Travel Management, Socioeconomic Conditions and Environmental Justice, Recreation and Visitor Services, Visual Resources, Air Quality and Noise, and Indian Trust Assets.

The resources were discussed and analyzed in detail with an affected environment and associated environmental consequences and cumulative impacts documented for each in EA 2015-025. No

unavoidable adverse impacts or irreversible and irretrievable commitment of resources was found under the Proposed Action Alternative and the No Action Alternative. For a full description of affected environment and impacts see EA 2015-025, Appendix A.

## **Chapter 4 RMP Framework**

Reclamation's ECAO has primary responsibility to implement the RMP and monitor associated activities. The RMP is designed to supplement existing executive orders, regulations, Reclamation policies, and guidelines. Implementation of the specific management actions to accomplish RMP goals and objectives will require coordination with CPW. The goals, objectives, and management actions described in Chapter 4 are intended to be implemented during a 10-year planning period, depending on funding, cooperation of other involved entities, monitoring, and other factors.

Project and resource management actions under the RMP for Pueblo Reservoir are listed below.

### **MU -1 South Entry Management Actions**

- Expand existing Pueblo State Fish Hatchery immediately to the north.
- Construct new fish cleaning station at the South Marina ramp area.
- Construction of new South Park entrance road, Visitor Center, maintenance office, aquatic nuisance species inspection station, CPW Wildlife Office relocations, existing maintenance shop compound expanded; new shop building within expanded compound footprint; new security fence installed around perimeter of compound expansion.
- Assess possibilities and redevelop all existing campground areas in place to accommodate larger vehicles, multiple vehicles, and trailers; update furnishings; tables; grills; fire rings; shelters; signage; playgrounds; repair damaged paving; site drainage.
- Design and construct new Bogg's Creek Trail. Formalize trail access from/around ramp to shoreline at Bogg's Creek and access to Pueblo Reservoir. Restore previous disturbance.
- Design and construct new trail connection going west from existing Valco Parking upstream to provide access to the Arkansas River.
- Sign and enforce prohibited parking on shoreline above high water mark at Pueblo Reservoir.
- Require paid parks pass for use of parking lot at spillway east of river and across from the East Entrance.
- Work with Colorado Department of Transportation to improve lanes on Hwy 96 at Reservoir Road.
- Consolidate Park Entry/Point of Contact. Close South Marina Road from Juniper Road to State Hwy 96. Improve intersection of Juniper Road and Reservoir Road.
- Design and improve all existing road access.
- Develop and implement a plan for additional parking/access at South Marina ramp area.

- Enforce pet dumping restrictions, dog and pet waste removal and leash use in high-use areas. Develop and implement a plan to control off-leash dog use. Install dog waste removal stations (signs, bags, trash facilities) in high-use areas.
- Evaluate and design and implement additional riverbank erosion control improvements.
- Maintain trail and fisherman access across top of Pueblo Dam, per Reclamation policy and security.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.

## **MU – 2 Arkansas River Corridor Management Actions**

- Improve trail access to Arkansas River to reduce shoreline erosion on both sides of the Arkansas River from Cottonwood Picnic Area to Osprey Trailhead.
- Design and construct trail and ADA/ABA compliant access to the Arkansas River's edge at Cottonwood Picnic area, Anticline Pond, Osprey Trailhead, and picnic area.
- Design and construct new trail connection going west from existing Valco parking lot (MU1) to provide access to Arkansas River.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.
- Improve trout habitat in the Arkansas River and develop/implement plan to maintain bank stability, access and vegetation.
- Develop and implement a program for succession planting of native cottonwood trees along the Arkansas River Corridor to include beaver mitigation.
- Design and implement additional recreational access areas within the Arkansas River Corridor MU to help meet public demand for additional use areas, while reducing impacts to resources.
- Develop and implement a plan for additional parking/access as needed for Arkansas River Corridor.
- Enforce pet dumping restrictions, dog and pet waste removal and leash use in high-use areas. Develop and implement a plan to control off-leash dog use. Install dog and pet waste removal stations (signs, bags, trash facilities) in high-use areas.
- Develop and implement a revegetation plan for the Arkansas River Corridor. Include recommended native plant species, seed mixes, and maintenance guidelines.
- Evaluate and design and implement additional riverbank erosion control improvements for the Arkansas River.

- Develop and implement a Hazard Tree Removal Plan for Arkansas River Corridor.

### **MU – 3 Operations Management Actions**

- Adopt and implement Environmental Protection Agency BMPs for managing lead at outdoor shooting ranges.
- Design and implement expanded parking capacity, and install vault toilets, at Law Enforcement Weapon Range.
- Maintain as existing service and operational access only.
- Develop a plan/location for proper future disposal of woody debris. If current accumulation of dead wood does not contain invasive tree species, chip existing accumulated wood at the current woody debris disposal site over time as needed and use the material as organic mulch or for other revegetation uses.
- Maintain and monitor existing Sanitary Sewer Treatment Facility and maintain required certifications and permits.

### **MU – 4 South Shore Management Actions**

- Permanently close Old Highway 96 at intersection of SWA access road. Remove asphalt east of terminus trailhead and rehabilitate roadbed as natural surface ADA/ABA trail.
- Design and construct Red Gate South Shore public access trailhead, parking, permanent ADA compliant vault toilet, and self-service fee station at current undesignated location at Highway 96.
- Identify and construct formal administrative motorized access points and additional parking into MU4 for management and enforcement, as needed.
- Design and improve all existing road access in South Shore MU.
- Develop and implement a plan for additional parking/access as needed in South Shore MU.
- Assess impacts of undesignated, unauthorized uses on resources in South Shore MU.
- Develop and implement a revegetation plan for South Shore MU. Include recommended native plant species, seed mixes, and maintenance guidelines.
- Designate hunting or remove hunting in South Shore MU.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.
- Trail maintenance, restoration, and/or variances to an assessed trail will be implemented under the Trail Management Plan. Site specific environmental and cultural resource compliance will be completed prior to any repairs or maintenance of trails.

## **MU – 5 North Shore Management Actions**

- Remove and evaluate alternate uses for the Model Airplane Field.
- Install picnic tables between Loop Road and top of slope.
- Repurpose 1/3 to 2/3 existing Day Use Picnic Sites at G-Loop and Wagon Wheel Day Use Areas as walk-in camp sites and eliminate the remaining picnic sites.
- Formalize current dirt parking lot at North Marina ramp area.
- Sign and enforce prohibited parking on shoreline above Pueblo Reservoir's high-water mark.
- Remove entrance off Juniper Road and relocate along North Marina Road. Incorporate ANS Inspection, camp permits, entrance fees, registrations and wildlife licenses. Eliminate Wildlife Area Access Road to create a connection to North Marina Road further south.
- Redesign and reconstruct road/culvert to raise road above high water line at Kettle Creek Loop between Campsites 530 and 532, near existing restroom.
- Include a project-specific revegetation plan as part of the design for all planned infrastructure construction and improvements in this MU. This would include re-seeding with native plant species and interim/long-term noxious weed control.
- Maintain and monitor existing LPSP Sanitary Sewer Treatment Facility and maintain required certifications and permits.
- Relocation of the north boundary between SWA and LPSP (relocated to the north of the railroad tracks, on north side of Pueblo Reservoir). Relocation of the south boundary between SWA and LPSP (relocated to the west shoreline at Turkey Creek, on north side of Pueblo Reservoir). These proposed relocations would create a new LPSP boundary (increasing the area managed by LPSP). Also, would create a new SWA boundary (decreasing the area managed by SWA primarily for wildlife resources). West entrance station would be relocated, and new roads added to the transferred parcel managed LPSP.
- Pueblo West has secured FHWA funding to construct about 1.6 miles of paved connecting trail along Nicholls Road just north of the RMP Planning in Pueblo West. The new trail will include a pedestrian bridge on Nicholls Road over the railroad. The trail will connect with the existing LPSP trail network on Reclamation lands. Reclamation will issue any necessary land use authorization after review of final design.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.

## **MU – 6 Pueblo Reservoir Management Actions**

- Develop and implement bank stability, vegetation and access plan to Arkansas River. Coordinate improvements of trout habitat with CPW.

- Improve existing South Marina courtesy dock. Design and construct breakwater jetty at South Shore Boat Ramp.
- Monitor buoy line locations and adjust as necessary.
- Seek regulatory change to permit swimming in specific areas in Pueblo Reservoir. Review CPW swimming policy.
- Monitor Pueblo Reservoir for woody debris and remove as necessary.
- Designate hunting or remove hunting in Pueblo Reservoir MU.

#### **MU – 7 Lake Pueblo State Wildlife Area Management Actions**

- Install gate and close Old Highway 96 at intersection of the SWA access road and upgrade to include trailhead amenities. Remove asphalt east of terminus trailhead and rehabilitate roadbed as natural surface trail.
- Develop and implement bank stability, vegetation, and access plan to Arkansas River on west end.
- Replace existing vault toilets with ADA/ABA compliant vault toilets.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.
- Design and improve all existing road access in SWA MU.
- Inspect, strengthen, and repair perimeter fencing to discourage unauthorized access in SWA MU. Include fencing sections that allow wildlife to cross.
- Relocation of the north boundary between SWA and LPSP (relocated to the north of the railroad tracks, on north side of Pueblo Reservoir). Relocation of the south boundary between SWA and LPSP (relocated to the west shoreline at Turkey Creek, on north side of Pueblo Reservoir). These proposed relocations would create a new LPSP boundary (increasing the area managed by LPSP). Also, would create a new SWA boundary (decreasing the area managed by SWA primarily for wildlife resources). West entrance station would be relocated, and new roads added to the transferred parcel managed LPSP.
- Reopen boat ramps for wildlife access, perform ANS inspections, and make improvements as necessary (if the boundary is relocated and area is managed by LSPS and the North Entrance relocated).
- Develop and implement wildlife habitat management plan to include prescribed burns: i.e. food plots, Scaled Quail habitat, wetland habitat, fisheries, etc.

Reclamation will conduct monitoring throughout the lifespan of the RMP to track progress and effectiveness of the desired conditions and identify unacceptable effects.

Reclamation will implement the RMP consistent with the 2002 the Recreation Facility Design Guidelines and signage guidelines in Reclamation's 2015 Visual Identity Manual. The Reclamation



manuals and guidelines for signs and recreation facility design and can be found at: <https://www.usbr.gov/recreation/publications/RecreationFacilitiesDesignGuidelines.pdf> and <https://www.usbr.gov/recreation/publications/signguide2006.pdf>

# Chapter 1-Introduction and Overview

## 1.1 Introduction

The Bureau of Reclamation is the federal agency responsible for administering lands and resources associated with Pueblo Reservoir. Reclamation's Eastern Colorado Area Office (ECAO) prepared the Pueblo Reservoir Resource Management Plan (RMP). The purpose of the RMP is to establish a ten-year plan to help guide and ensure future management decisions regarding existing infrastructure and resources. The RMP will be consistent with Reclamation's management objectives and authorized purposes and maximize recreational benefits, minimize resource use conflicts, and manage and protect resources on Reclamation lands. Land use descriptions and RMP implementation can be found in Chapter 2. Chapter 3 includes a description of resources within the RMP Planning Area. Chapter 4 contains the proposed management actions for each Management Unit (MU).

Achieving balance between management for visitor recreation use and management of the natural resources has been an ongoing challenge at Pueblo Reservoir. The last RMP developed for Pueblo Reservoir was in 1981. This RMP will replace the 1981 Reservoir Area Management Plan (1981 Plan) and direct future use, management, and development of Reclamation lands in Lake Pueblo State Park (LPSP) and the Pueblo Reservoir State Wildlife Area (SWA). Since the 1981 Plan was written, recreation trends and demands have changed, resulting in new or altered management issues and new information and technologies exist. Examples include: annual visitation has increased to nearly 1.8 million (2015); recreational uses such as mountain biking and off-leash dogs have increased or were never contemplated; management of aquatic invasive species, like quagga and zebra mussels is needed; recreational facilities do not meet current standards for the Architectural Barriers Act of 1968 (ABA) and Americans with Disabilities Act (ADA); and data, knowledge and tools for management of natural, cultural, and paleontological resources have increased.

## 1.2 Authority

Reclamation's authority to prepare RMPs is vested in the broad authority of the Reclamation Act of 1902 (Chapter 1093, 32 Stat. 388); the Reclamation Project Act of 1939 (Chapter 418, 53 Stat. 1187), the Federal Water Project Recreation Act (Public Law 89-72), 79 Stat. 213; and more specifically in the Reclamation Recreation Management Act of 1992 (Public Law 102-575, Title 28 [2805(c)(1)(A)]). The Reclamation Recreation Management Act authorized the preparation of RMPs to "provide for the development, use, conservation, protection, enhancement, and management of resources of Reclamation lands in a manner that is compatible with the authorized purposes of the Reclamation Project associated with the Reclamation lands."

Reclamation's Recreation Management Policy (LND P04) further defines Reclamation's overall responsibilities and establishes the basic principles for planning, development, management, and protection of public recreation resources on Reclamation's lands and waters.

The resource management objectives are consistent with the mission and goals identified in Reclamation's Upper Colorado Basin Region's mission and vision statements ([https://www.usbr.gov/gp/about\\_us/vision.html](https://www.usbr.gov/gp/about_us/vision.html)) and the Department of Interior's Strategic Plan.

Pueblo Reservoir is a feature of the Fryingpan-Arkansas (Fry-Ark) Project, authorized by Public Law 87-590 in 1962.

### **1.3 Project History and Use**

Pueblo Reservoir is the terminal and principal storage feature of the federal Fry-Ark Project, a multipurpose trans-mountain, trans-basin water diversion and delivery project in Colorado. It makes possible an average annual diversion of approximately 69,200 acre-feet of surplus water from the Fryingpan River and other tributaries of the Roaring Fork River, on the western slope of the Rocky Mountains, to the Arkansas River basin on the eastern slope. The Fry-Ark Project was authorized by Congress in 1962 (Public Law 87-590) and the construction of Pueblo Reservoir was completed in 1975. The reservoir is located on the Arkansas River, approximately six miles upstream of the city of Pueblo. The Fry-Ark Project's authorized purposes include supplying water for irrigation, municipal, domestic, and industrial uses, generating and transmitting hydroelectric power and energy, controlling floods and for other useful and beneficial incidental purposes thereto, including recreation and the conservation and development of fish and wildlife.

### **1.4 Location and Setting**

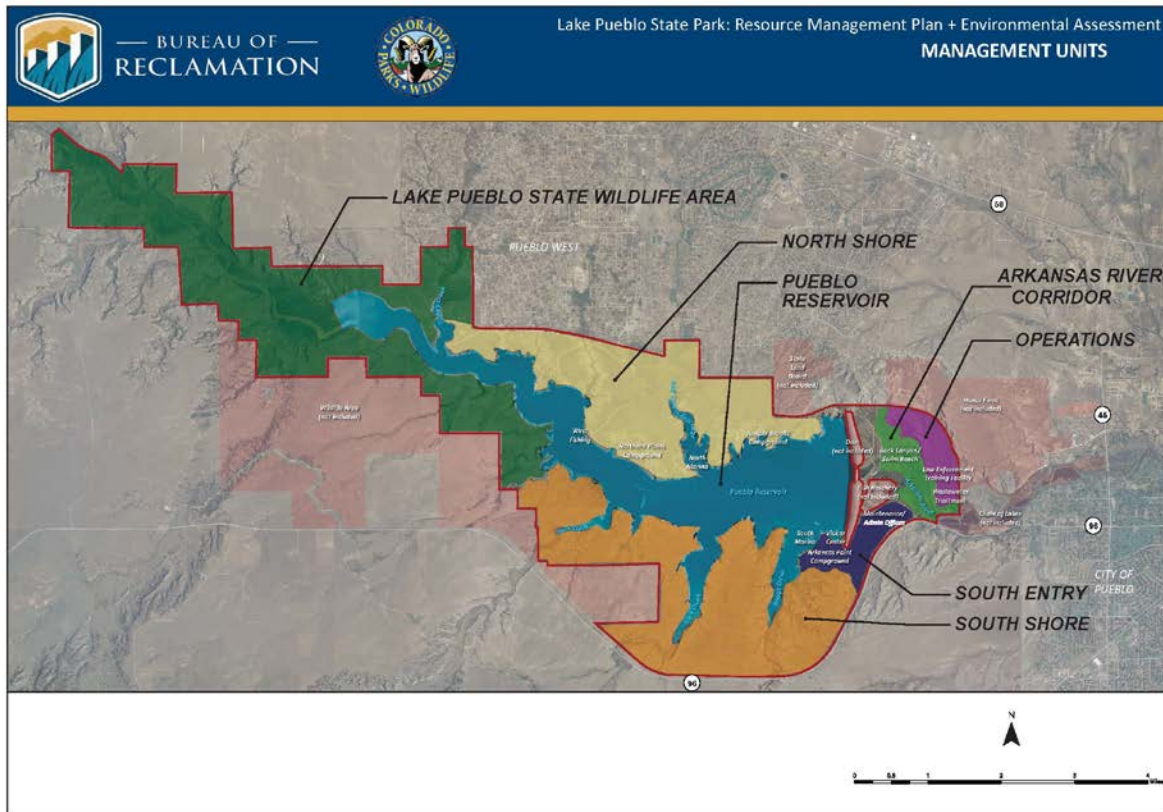
LPSP Park and the SWA are located on the eastern slope of the Rocky Mountains of Colorado in a high semi-arid area in Pueblo County. The RMP Planning Area, Figure 1.1 is located at a transition zone between the Great Plains to the east and the Southern Rocky Mountains to the west and transitions between the shortgrass prairie to the north and desert grasslands to the south. Views from Pueblo Reservoir include Pikes Peak to the north, the Wet Mountains to the west, and the Sangre de Cristo Mountains to the southwest. LPSP's Visitor Center is located at 4,932 feet above mean sea level.

The RMP Planning Area is about 6 miles east of the City of Pueblo's historic Downtown Riverwalk. Pueblo West, an independent metropolitan district with a population of over 30,000, lies immediately north of the RMP Planning Area and lands to the south are primarily undeveloped rangeland.

Interstate 25 is about 10 miles east of the RMP Planning Area, connects the Cities of Colorado Springs and Denver with Pueblo which are about 45 and 110 miles to the north, respectively. Trinidad, Colorado is about 90 miles south of Pueblo and the RMP Planning Area is about 100 miles north of the Colorado-New Mexico border.

The general setting is high desert with light rainfall, high evaporation, moderate to high winds, and low humidity. Average high temperatures range from near 50°F in winter to 90°F during the

summer. Average low temperatures are near 10°F in the winter to 60°F in the summer. Average annual precipitation is 13 inches and sunny days are typical.



**Figure 1.1 RMP Planning Area**

Detailed descriptions of resources in the RMP Planning Area are discussed in Chapter 3.

## 1.5 Land Use and Management Framework

The RMP Planning Area includes 13,483 federally owned acres, 4,002 surface acres of water, and about 60 miles of shoreline associated with both LPSP and the SWA. LPSP and the SWA are located about 6 miles upstream from Pueblo, Colorado and are bounded to the east by Colorado Parks and Wildlife (CPW) and other State-owned lands, Pueblo West Metropolitan District (Pueblo West) to the north, and Highway 96 to the south.

The western boundary is about 13.7 miles upstream of Pueblo Dam. The RMP addresses all natural, cultural and paleontological resources within the RMP Planning Area.

Bureau of Reclamation RMP Planning Area – Land Managed as State Park...	7,298 acres
RMP Planning Area – Land Managed as SWA... ..	6,185 acres
Total RMP Planning Area Lands.....	13,483 acres
Bureau of Reclamation RMP Planning Area – Surface water.....	4,002 acres

Formerly two divisions within Colorado Department of Natural Resources (DNR) had resource management responsibilities: Colorado State Parks and Colorado Division of Wildlife. In 2013, The two divisions were combined into CPW and CPW administers recreation, fisheries, vegetation resources, and wildlife management activities in the RMP Planning Area. The lower portion of the RMP Planning Area is managed as a state park and the upper portion as a SWA.

There are seven different MU's within the RMP Planning Area, developed based on use, natural resources, and existing facilities (Chapter 4). Management goals and objectives were developed for each resource and MU and used as the basis for development of the RMP's management actions. Appendix D shows the management goals, objectives, and management actions in a matrix style for this RMP. Some of the 1981 Plan's management actions were the same as the RMP's management actions, thus they were retained.

The MUs are:

1. South Entry
2. Arkansas River Corridor
3. Operations
4. South Shore
5. North Shore
6. Pueblo Reservoir
7. LPSP Wildlife Area

### **1.5.1 Lands Not Included in Planning Area**

The 2,160 acres of adjacent lands owned and managed by CPW as part of LPSP include State Land Board properties, CPW Honor Farm, and Chain of Lakes. Management of these lands are not included in 1981 Plan or RMP. CPW is has prepared a separate Supplemental Park Management Plan to address these properties.

Fry-Ark Project facility operations (i.e. Pueblo Dam) and Pueblo Reservoir water levels are not part of the RMP. The Pueblo State Fish Hatchery is operated separately from the State Park and the SWA and expansion of the hatchery is included in the RMP. Lands associated with Reclamation issued use authorizations to construct and operate Southeastern Colorado Water Conservancy District's Pueblo Hydropower Project and Colorado Springs Utilities' Southern Delivery System are also excluded from the RMP Planning Area.

### **1.5.2 Visitor Populations**

According to a report on Colorado's demographics and trends in outdoor recreation that was commissioned for the CPW 2015 Strategic Plan, Colorado's population is currently the fifth fastest growing in the country and will continue to grow by more than 40 percent between 2015 and 2040 (CPW 2015).

Seventy-five percent of the growth is expected to occur on the Front Range. Because growth has focused on the Front Range, visitation and demand for Front Range parks and natural resources are likely to increase as well.

### **1.5.3 Reservoir Access Points**

Southeastern access to the RMP Planning Area is via Highway 96 (see Figure 1). Visitors to LPSP can enter at the South Entrance which connects to the Visitor Center, South Marina, and Arkansas Point Campground. Highway 96 continues along the southern edge of RMP Planning Area. Visitors can also access the SWA using Old Highway 90 from the south and Swallows Road from the north.

Visitors can also turn northward onto Juniper Road, cross the Arkansas River below Pueblo Dam, and access the Rock Canyon and Swim Beach areas to the east, or continue to the North Marina toward the west. Access to the RMP Planning Area from the north is via Highway 50 through Pueblo West on McCulloch Boulevard to Juniper Road.

### **1.5.4 Existing Uses of Reservoir Lands**

The primary purposes of the Fry-Ark Project are to supply water for irrigation, municipal, domestic, and industrial uses, generating and transmitting hydroelectric power and energy, and flood control. However, Public Law 87-590 also recognizes other useful and beneficial purposes incidental thereto, including recreation and conservation and development of fish and wildlife.

Pueblo Reservoir and the adjacent natural resources support and create a range of recreational opportunities. Water activities for Pueblo Reservoir include sailing, sailboarding, motor boating, paddle-sports, waterskiing, and fishing. Water activities for the Arkansas River downstream include paddle-sports, river tubing, and fishing. Recreation areas are identified in Chapter 4. They include:

- two marinas and boat launch ramps;
- three campgrounds containing a total of 400 camp sites;
- three dump stations;
- 24 vault toilet facilities;
- 13 comfort stations with flush toilets and running water (12 with showers);
- five picnic areas, including four picnic shelters for large groups and day use;
- a swim beach, including developed facilities; and
- trails for hiking, horseback riding, and off-road bicycling.

## **1.6 Lease/Land Use**

With the execution of Lease No. 14-06-700-8018 in 1975 (Reclamation 1975), Reclamation assigned management of recreation, fish, wildlife, and associated resources for federal lands around Pueblo Reservoir to the State of Colorado through its DNR. CPW manages these lands as LPSP and SWA. The 1975 Lease expires in 2025. Section 4 of the 1975 Lease outlines development of the 1981 Plan, which DNR and Reclamation completed. Preparation of the 1981 Plan was required where

multiple use was planned or occurred to achieved proper land use, recognizing standards of proper land use, and aimed to achieve the highest utilization of said Reclamation land.

## **Chapter 2-Planning Process**

### **2.1 Planning Process and Public Involvement**

The National Environmental Policy Act (NEPA) of 1969 (P.L. 91-190 as amended) is the basic national charter for environmental responsibility. NEPA requirements direct government agencies to assess the effects of their actions. The regulations implementing NEPA provide several procedural avenues to determine if or how this requirement applies to a particular federal action. The alternatives developed for the RMP are broad in nature to address a ten-year planning period but provide sufficient detail to analyze potential environmental impacts for an Environmental Assessment (EA). The EA process ensures public needs are analyzed and provides opportunities for public participation. Public input increases the scope of the issues by ensuring a diverse examination of the resource. The public information is used to help make management decisions and plan for the future within the constraints of Reclamation's authority. It is intended to help decision makers determine whether to issue a Finding of No Significant Impact (FONSI) or to proceed with preparation of an Environmental Impact Statement (EIS). The selected alternative would become the RMP. Project revisions and project concepts that differ from those already considered under this RMP will be considered under separate NEPA, National Historic Preservation Act (NHPA), and other federal environmental laws and regulations compliance.

EA Number ECAO 2015-025 (EA 2015-025) and Finding of No Significant Impact number 2020-01 (FONSI 2020-01), was prepared in accordance with NEPA, the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and Department of the Interior's regulations (43 CFR Part 46), for the implementation of the RMP.

In addition to NEPA analysis, Reclamation completed both a facility and operation assessment (CPW 2012) and a variety of public involvement activities. The assessment identified issues and opportunities concerning visitor experience, park management, and park facilities. During the RMP development process, Reclamation had multiple meetings and site visits with CPW staff from the LPSP, Pueblo Reservoir SWA, and CPW's Southwest Regional Office. The Reclamation and CPW staff together became the Planning Team. These issues, opportunities, and concerns were combined with internal and public scoping and lumped into two major management action categories: resource management and recreation/visitor services, which are discussed in Chapter 2 below.

Reclamation provided a variety of public involvement activities in order to gather data. A January 14, 2014, news release announced the initiation of the 30-day public scoping period to assist in the development of a resource management plan for Reclamation lands managed by CPW as LPSP and the SWA. The scoping period identified issues, opportunities, and resources of concern that should be addressed in the RMP. An Open House was held at the LPSP Visitor Center on January 22, 2014. Public comments were accepted through February 21, 2014 with a total of 116

comments received. The announcement was also posted on the Reclamation web page and sent via email to potential stakeholders inviting them to take part in the public process.

The RMP process was put on hold in 2015 due to issues raised by the public and Reclamation concerning the 50 miles of unauthorized trails in MU 4 South Shore. Safety became a concern due to erosion and degradation along various trails. Reclamation and CPW completed an assessment of the trails in the fall of 2015, which documented natural and cultural resource impacts from the unauthorized trails. Due to the extensive expansion of unauthorized trails during the past decade on both the north and south side of Pueblo Reservoir, a separate trail management plan was needed. Over the next three years, CPW collected additional natural resource data and developed a Lake Pueblo State Park Trail Management Plan (Trail Management Plan) (CPW 2019) through a public process with a final plan in May 2019. The Trail Management Plan can be found in Appendix B. Reclamation has accepted the Trail Management Plan and will implement it under this RMP.

The Trail Management Plan will include implementation of Secretarial Order 3376. Secretarial Order 3376 set forth Department of Interior policy that electric bikes (E-bikes) should be allowed where other, non-motorized types of bicycles are allowed and not allowed where other, non-motorized types of bicycles are prohibited. Accordingly, the proposed rule would include a definition for E-bikes. E-bikes may have 2 or 3 wheels and must have fully operable pedals. Reclamation is currently amending this regulation to include a definition for E-bikes. Once amended, the amended regulation would apply to all Reclamation lands.

## **2.2 Management Issues and Constraints**

### **Issues**

The RMP is necessary to address increasing use at Pueblo Reservoir and associated recreational facilities in the RMP Planning Area. At the same time, the RMP will preserve, protect and enhance natural resources, including vegetation and wildlife diversity and health, as well as protecting and preserving cultural and paleontological resources. The RMP will address the following key issues while maintaining Fry-Ark Project purposes:

- Enhancement of the health, productivity, diversity, and integrity of native and other desirable plant communities.
- Protection of habitat for special status plant and wildlife species, and reduction of potential impacts of recreational use.
- Protection of wildlife security areas, habitat connectivity, habitat carrying capacity, movement corridors, breeding areas, and winter range.
- Compliance with and enforcement of federal regulations protecting all resources.
- Management of noxious weeds and aquatic nuisance species.
- Protection of water quality in the reservoir, tributary drainages, and the Arkansas River from land use and management practices in the RMP Planning Area.

- Protection and preservation of known paleontological resources.
- Protection and preservation of cultural resources.
- Guide decisions to ensure public and staff's safety on federal land.
- Guide Reclamation's planning and decision-making regarding existing and future infrastructure, while maintaining Frypan-Arkansas (Fry-Ark) Project purposes.

## **Constraints**

In 1975, a recreation and general development plan was completed by Reclamation and the National Park Service and focused on the development of recreation and visitor services primarily on Pueblo Reservoir. The 1981 Plan is the current management plan for the RMP Planning Area. The "lake-centric" orientation of the 1981 Plan provided a framework for design and subsequent development.

Public input during a LPSP facilities and operations assessment (CPW 2012) identified a need to develop new, non-lake-oriented uses. Physical constraints at the lake edge (i.e. steep sloped reservoir banks) have limited the potential number of park users. Sparsely vegetated sites and microclimates have resulted in very specific user trends, including "boats only" and extreme peaks in visitation. A common stakeholder feedback is the sense that the RMP Planning Area has untapped potential to increase visitation and expand activities and amenities.

Ongoing recreation development would still require a review of environmental, cultural and paleontological resources prior to any ground disturbing activities. A review of the various resources, existing data, and BMPs would need to be completed. Identified constraints may require consultation and/or permitting with outside agencies, limits where development can occur, and the placement of timing restrictions on construction.

**Chapter 4 describes specific constraints for each MU.**

## **2.3 Management Actions**

From 2014 to 2016, CPW, Studio CPG and Walsh Engineering worked to develop a range of management actions that set forth different priorities or actions to emphasize certain uses or resource values to achieve management goals and objectives for each resource. Management actions included "status quo", a "minimum management", and "intensive management" strategy goals and objectives.

The "status quo" management strategy was guided by the 1981 Plan, where applicable, with improvements made on an "as needed basis" to meet health, safety, ABA/ADA, and other legal requirements. Deferred maintenance of existing facilities would be addressed as funding became available and determination of need and compliance for future proposed projects would be handled on an individual basis.

The "minimum management" strategy balances resource protection and recreational use while providing some additional recreation development. Resources and facilities would be more actively



managed with additional emphasis on completing deferred maintenance. This strategy focuses on meeting the most pressing needs and priorities identified during public involvement and prior facilities and operations assessments. Under this strategy, lands currently managed as SWA north of Pueblo Reservoir and east of Turkey Creek, would be added to LPSP.

The “intensive management” strategy also balanced resource protection and recreation use but included additional measures of resource protection and recreation facility upgrades. This strategy includes all the “minimal management” actions, but also included additional boundary changes south of Pueblo Reservoir.

The “minimum management” and “intensive management” actions ended up being more similar and where combined created the preferred alternative for this RMP.

## **2.4 Implementation, Monitoring Plan, and Amendment**

The implementation of the RMP by Reclamation and CPW will be guided by existing and future laws, Executive Orders, regulations, policies and guidelines. The RMP is designed to supplement existing direction provided by these sources. Once approved, it is anticipated that the RMP will be reviewed and updated periodically as needed no sooner than every 10 years.

Chapter 4 describes the proposed management actions for each MU. These actions will be implemented, starting in 2020, based on Reclamation and CPW funding and staffing levels. Public Law 89-72 gives Reclamation the authority to cost share in planning, development, operation, maintenance, and replacement of recreation and fish and wildlife enhancement facilities with a non-federal managing partner. Federal cost sharing with non-federal partners may be provided for up to 50% of the cost of development of recreation facilities and 75% of the development of fish and wildlife enhancement facilities.

Available funding will be the limiting factor to accomplishing these improvement and additions. Projects will be completed on a phased approach and will be prioritized in accordance with the public health and safety concerns, required to protect existing resource, and based on public desire. Reclamation, CPW, and selected contractors will follow the BMPs during implementation of the proposed Management Actions.

### **2.4.1 Best Management Practices**

The purpose of Best Management Practices (BMPs) are to protect resources and offset any potential impacts to lands and water bodies while following applicable federal, state, and local laws and regulations. The RMP will require BMPs be followed and met. A list of environmental commitments from EA 2015-025 was included to supplement the BMPs and will be implemented followed by Reclamation, CPW, and selected contractors throughout the life of this RMP.

## General

- Construction activities will comply with all applicable laws and regulations.
- To the extent practicable, construction will avoid wetlands; federal, state, and local wildlife areas; designated critical habitats; migratory bird habitat during nesting brood-rearing season; known historic properties; hazardous materials sites; and other resource sensitive areas.
- Construction limits will be clearly marked with stakes or fencing before beginning ground disturbing activities. No disturbance will occur beyond these limits other than non-destructive protection measures for erosion and sediment control.
- Construction will typically occur during daylight hours, although these hours may be extended if needed for certain work aspects.
- Material and equipment storage will be only within well-defined, designated staging areas placed outside of wetlands and other sensitive areas.
- Structures affected by construction, including utilities, roads, highways, rivers, canals, railroads, agricultural irrigation facilities, fences, and other structures, will be replaced, repaired, or restored to current condition or better after construction.
- Construction debris will be hauled from the work site to a disposal location approved by Reclamation or CPW.
- Collocate utilities in common corridors and align them along roadways to reduce habitat loss and fragmentation.
- As much as possible, onsite materials will be used for construction.
- Disturbances of more than 1 acre requires a state stormwater discharge permit. More information can be found at: <https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits>.
- Minimize construction disturbance in areas where soils are thin.
- Temporary recreational closures may be necessary when construction poses a risk to visitor safety or resource damage.
- Proper regulatory and informational signage will be posted and maintained throughout the RMP Planning Area.
- Consult the Reclamation manuals and guidelines for signs and recreation facility design. More information can be found at: <http://www.usbr.gov/recreation/publications/RecreationFacilitiesDesignGuidelines.pdf>

## Water Quality

- Erosion control measures, grade controls, and practices to prevent or reduce erosion, soil loss, and non-point source pollution include but are not limited to silt fencing, filter fabric, sediment logs, hay bales, temporary sediment ponds, check dams, and/or immediate mulching of exposed areas to minimize sedimentation and turbidity effects as a result of construction activities. The placement and specific measures used will be dictated by site specific conditions. Erosion control measures will be inspected regularly and repaired as needed.
- Disturbed portions of riverbanks and riverbeds, and other waterways will be protected by rock riprap of adequate size and type to minimize erosion and scour. Any slopes greater than 3:1 will be protected with erosion-control blankets after seeding.

- Equipment or vehicles will not be refueled within 100 feet of rivers, streams, or identified wetlands.
- Design catchment basins, wetlands, or other Reclamation-approved stormwater control measures to detain and treat runoff from campgrounds and parking lots.
- Utilize vegetative swales with catchment basins or oil/water separator systems to treat runoff from campgrounds and parking lots. Stormwater systems would be designed to meet or exceed Pueblo County Stormwater Quality Ordinance requirements (Chapter 8.26) and comply with Pueblo County's Municipal Stormwater Separate Sewer System (MS4) permit.

#### **Aquatic Life**

- Identified potential habitat for state threatened, endangered, and special concern species will be avoided if feasible.
- To minimize effects on fisheries and stream habitat from bank improvements, recommendations from CPW would be followed.
- Any equipment used previously in a water body or wetland will be disinfected to prevent the spread of invasive aquatic species. Disinfection methods will follow U.S. Army Corps of Engineers Section 404 requirements.

#### **Wetlands and Riparian Areas**

- Permanent and temporary effects on jurisdictional wetlands will be avoided to the extent practicable in compliance with Section 404 of the Clean Water Act (CWA).
- Erosion control measures will be employed as appropriate in riparian areas and along stream banks during construction. Replant riparian areas as soon as construction is completed and based on suitable site conditions.
- During final selection of facilities or trails, all efforts will be made to avoid wetlands, riparian areas, cliffs, and steep and/or rocky slopes.
- All temporarily disturbed jurisdictional and non-jurisdictional wetlands and riparian areas will be reestablished following construction by doing the following;
  - o Restore contours to previous elevations
  - o Compact trenches sufficiently to prevent drainage along the trench or via bottom seepage
  - o Salvage and replace topsoil
  - o Backfill in such a manner as to not drain wetland or stream
  - o Reestablish wetlands to similar type of wetland and wetland function
  - o Monitor for success of reestablishment annually for a period of 3 years and take remedial actions as necessary until successful

#### **Vegetation**

- Sensitive vegetation communities, native prairie, or areas with sensitive plant species will be avoided to the extent possible. If these areas are disturbed during construction, topsoil will be replaced, and re-vegetation plans will be specifically designed to reestablish a similar type and quality of native vegetation. Monitor for success of reestablishment annually for a period of 3 years and take remedial actions as necessary until successful.
- Minimize the area disturbed during construction.
- Clean all heavy equipment before entering and existing construction sites to minimize transporting weeds.
- Reduce competition of undesirable plants with native and/or vegetation.

- Revegetate areas within 10-days of final grading after construction based on suitable site conditions and irrigate as appropriate.
- Vegetated areas temporarily disturbed by construction will be revegetated with species appropriate to the surrounding area's ecological conditions of, and in a manner that prevents erosion and noxious weed invasion. Revegetation will occur as soon as practicable after construction and will follow all pertinent local and state regulations. Temporary seeding may be required when areas remain disturbed for more than 30 days.
- Topsoil will be removed and stockpiled separately from surface soils for reapplication following construction.
- Install protective fencing to exclude foot or bike traffic from sensitive areas or areas being re-vegetated.
- Topsoil, soil amendments, fertilizers, mulches, and biodegradable erosion blankets will be reapplied selectively, as appropriate, before revegetation during favorable plant establishment climate conditions to match site conditions and re-vegetation goals.
- Re-vegetation will be found to be successful with a cover of local native species, obtains 90 percent established cover and will be monitored for a minimum of 3 years following reseeding. Areas will be reseeded as necessary for success.
- Reseed with native/local mix after construction, heavy maintenance, and other soil disturbing activities. Use clean fill material from weed-free sources. If straw or mulch is used for stabilization and erosion control, it must be certified weed-free or weed-seed free.
- Control runoff from disturbed areas during construction; build erosion resistance into project design to reduce costly maintenance and restoration; mitigate concurrently with construction.
- Control velocity of runoff in drainages by using appropriate grade controls and methods such as the use of buffers/filter strips, grassed swales, terraces, and water bars. Placement, materials, and spacing would be determined on-site at each location. Monitoring constructed controls, maintenance, and adjustments would be on-going.
- Reduce runoff by incorporating Low-Impact Development designs and methods for landscaping and development at new facilities and buildings. Methods include techniques for maintaining hydrologic functions for infiltration, depression storage, and interception using landscape features.
- Avoid soil-disturbing actions during periods of heavy rain or wet soils. Periods of heavy snowmelt should also be considered.
- Maintain compliance with the Federal, State and local noxious weed laws.
- To prevent introducing, and minimizing spread of, nonnative vegetation and noxious weeds, the following measures will be implemented during construction:
  - o Minimize soil disturbance.
  - o Pressure wash and/or stream clean construction equipment before entering construction zones from off-site locations and before moving from an infested site to a non-infested site within the construction zone.
  - o Cover haul tracks bringing fill materials to prevent seed transport.

- o Vehicles and equipment will only be parked in construction sites or approved staging areas.
- o Use fill, rock, and topsoil that is weed-free.
- o Minimize fertilizer in seeded areas.
- o Use certified weed-free seed and mulch.
- o Use weed-free straw bales for erosion control.
- o Monitor and follow-up on treatment of exotic vegetation after construction.
- o A vegetation management plan will be drafted and approved by Reclamation and Colorado Parks and Wildlife.

### **Wildlife**

- Identified potential habitat for federal or state threatened, endangered, and sensitive species will be avoided if feasible.
- If threatened or endangered species are identified and encountered during construction, all ground-disturbing activities in the immediate area will be stopped to consult with the U.S. Fish and Wildlife Service (USFWS) and determine appropriate steps to avoid affecting the species.
- Incorporate powerline and pole or tower designs, including burial, to minimize the risk of raptor electrocution as outlined in Avian Protection Plan Guidelines (APLIC 2012) developed by the USFWS and industry.
- Effects on migratory birds will be avoided and minimized during construction, including completing pre-construction surveys.
- Use of timing restrictions for construction will be April 15 to July 15, or as appropriate, including seasonal restrictions.
- If an active nest is detected, a buffer zone between the nest and the limit of construction will be flagged and avoided during the nesting season, or construction will be scheduled outside of the nesting season.
- In the event of discovery of threatened or endangered species, CPW and its contractors shall immediately cease all ground-disturbing activities in the vicinity and notify Reclamation. Work will not be resumed until approved by Reclamation and additional consultation under Section 7 of Endangered Species Act (ESA) is complete.
- In the event new species are added to Federal Endangered Species List during the RMP 10-year scope, Reclamation will consult with CPW and evaluate the potential for newly listed species to occur with the RMP Planning Area and be affected by RMP management actions. Reclamation will complete the additional Section consultation as appropriate.
- Avoidance of raptors and nests during construction consists of:
  - o Conducting nest surveys before construction.
  - o Establishing reasonable site-specific buffers and seasonal restrictions.
  - o Implement seasonal restrictions to avoid and minimize disturbance.

### **Noise and Vibration**

- Construction and operation activities will comply with state and local noise ordinances.
- Night construction will be avoided near residential and populated areas.

### **Visual Resources**

- Constructed structures, facilities, and features will be designed to blend with the architectural characteristics of surrounding structures.
- Recreation facility development will complement the surrounding landscape as much as practical.

#### **Air Quality**

- All construction equipment will be maintained in proper working order.
- Apply water with standard construction practices to control airborne fugitive dust within construction areas.

#### **Cultural Resources**

- Direct disturbance to historical properties will be avoided to the extent feasible and in accordance with Section 106 of the NHPA.
- If a burial or cemetery is encountered during construction, Reclamation will comply with the Native American Graves Protection and Repatriation Act, and Colorado Unmarked Burial Law, if graves are discovered.
- If unrecorded cultural resources or traditional cultural properties are encountered during construction, all ground disturbance activity within the area will be stopped, Reclamation and appropriate authorities will be notified, and all applicable stipulations of Section 106 of the NHPA will be followed. Activities in the area will resume only when compliance has been completed.
- If soil and/or groundwater contamination is encountered during construction, mitigation procedures will be implemented to minimize the risk to construction workers, the public, and to future operations.
- No ground disturbing activities associated with the Proposed Action shall begin prior to the completion of NHPA compliance.
- Any adverse effects on historic properties associated with the Proposed Action will be resolved through consultations with the Colorado State Historic Preservation Office (SHPO), tribes, and local historic preservation groups per 36 CFR 800.6.
- If human remains or cultural/paleontological resources are discovered during ground-disturbing activities associated with the Proposed Action, whether on the surface or subsurface, all ground-disturbing activities in the vicinity of the discovery shall cease and Reclamation's ECAO archaeologist shall be notified immediately. Ground-disturbing activities in the vicinity of the discovery shall not be resumed until approved by Reclamation.
- If any additional areas of impact are identified during implementation of the RMP, additional NHPA compliance may be required prior to the approval of any ground-disturbing activities.

#### **Hazardous Materials**

- A Hazardous Spill Plan or Spill Prevention, Control and Countermeasures Plan, whichever is appropriate, will be in place, stating which actions will be taken in the event of a spill, notification measures, and preventative measures to be implemented, such as the placement of refueling facilities, storage, and handling of hazardous materials.
- All equipment will be maintained in a clean and well-functioning operating condition to avoid or minimize contamination from automotive fluids. Oil, hydraulic fluids, antifreeze or other chemicals will not be drained to the ground.
- If on-site fuel tanks are used, approved containment devices will be required.

- Monitor and minimizing spread of lead by incorporating the Environmental Protection Agency's BMPs and develop a site-specific management plan for lead, prior to construction.
- If soil and/or groundwater contamination is encountered during construction, mitigation procedures will be implemented to minimize the risk to construction workers, the public, and to future operations.

To aid in planning for future needs and development at Pueblo Reservoir, Reclamation and CPW will work with interested individuals, stakeholders and user groups as needed to discuss issues, concerns, solutions and to identify funding sources.

The RMP will be monitored annually at the end of the federal fiscal year (September 30). Management Actions will be prioritized and will become part of an annual work plan to help budget and develop designs for each project.

If management actions are proposed that are not included within the scope of this RMP, amendment to the RMP may be necessary and may require additional NEPA and NHPA compliance, as well as all other federal laws and regulations.

# Chapter 3-RMP Planning Area Resources

The Chapter describes the resources that will be managed under this RMP. Resources are described in general throughout the RMP Planning Area and, where applicable, more specifically for each MU. Map illustrations for each MU can be found in Chapter 4.

## 3.1 Paleontological Resources

Paleontological resources are defined as any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth except those associated with archaeological resources or cultural items associated with the Native American Graves Protection and Repatriation Act. The Paleontological Resources Preservation Act (PRPA) of 2009 [Public Law 111-011] mandates that Reclamation manage and protect paleontological resources on federal land using scientific principles and expertise. Potential effects of the described alternatives on paleontological resources are the primary focus of this analysis. The affected environment for paleontological resources corresponds to the area of potential effect (APE) for direct effects for cultural resources.

The geology of the RMP Planning Area reveals about 128 million years of the earth's history. A notable feature captured in this snapshot is the shallow interior seaway, known as the Cretaceous Interior Seaway, which covered eastern Colorado intermittently from 100 to 80 million years ago. The bedrock geology from this time preserves numerous shellfish and other marine animals. One new genus and 20 new species of fossil mollusks that were not previously known have been discovered in the RMP Planning Area. The RMP Planning Area contains the Global Boundary Stratotype Section and Point (GSSP) for the Cenomanian and Turonian stages of the Cretaceous system. The GSSP is an internationally recognized reference point identifying the base of a geologic stage. There are only seven other GSSPs in the United States. The Pueblo GSSP is recognized as the best place to study the transition between the Cenomanian and Turonian stages, and geologists and paleontologists from all over the world come to study the GSSP the RMP Planning Area (Glasgow 2016).

Reclamation contacted the Bureau of Land Management (BLM) to obtain information concerning the Potential Fossil Yield Classification (PFYC) for paleontological resources within the RMP Planning Area. The PFYC is a system used by the BLM to assess the potential for discovery of significant paleontological resources or the impact of surface disturbing activities on these resources. According to the BLM, the entire RMP Planning Area has a Class 3, or Moderate, PFYC classification.

The geologic formations within the APE are generally known to contain vertebrate fossils and scientifically significant non-vertebrate fossils. The general potential for the proposed actions to impact a significant fossil locality is low but the impact potential is somewhat higher for common fossils. Incorporating appropriate language into all construction contracts that require work



stoppage in the event paleontological resources are discovered during ground disturbing activities, further reduces the potential for adverse impacts to paleontological resources. PRPA includes criminal and civil penalties for fossil theft and vandalism on federal lands.

### 3.2 Soils Resources

Underlying geology in the RMP Planning Area includes sandy clay residuum around Pueblo Reservoir with limestone chip loam along the steeper portions of the cliffs to the south along Rock Creek and Boggs Creek in MU 4. Alluvial deposits are present on the north side of Pueblo Reservoir along North Marina Road, Juniper Road, and West Fishing Access Road in MU 5. Alluvial deposits are also seen east of Pueblo Dam.

Slope gradients within the RMP Planning Area vary from relatively flat to vertical limestone bluffs. Rock outcrops support special status plant and wildlife species and are unique due to their representation of sedimentation during the Late Cretaceous period and associated paleontological records.

Twenty-three soil classifications are represented within the RMP Planning Area, excluding the SWA. No soils data has been compiled for MU 7. These units are listed in Table 3.1.

**Table 3. 1 - Soil Classifications in the RMP Planning Area\***

Soil Classification Units	Area (acres)	Portion of Planning Area (%)
Apishapa silty clay	12	0.09
Arvada-Keyner association	39	0.31
Baca silty clay loam	1	0.01
Bankard sand	185	1.45
Bloom silt loam	51	0.40
Cascajo very gravelly sandy loam, 5 to 25 percent slopes	1,114	8.75
Cascajo-Shale outcrop complex, 5 to 30 percent slopes	75	0.59
Unknown	9	0.07
Glenberg-Haverson complex	239	1.88
Haverson silt loam	88	0.69
Keyner loamy sand, wet	43	0.33
Kim fine sandy loam	251	1.97
Las Animas fine sandy loam	92	0.72
Limon silty clay loam, 0 to 2 percent slopes	67	0.52
Manvel silt loam, 1 to 5 percent slopes	1,923	15.11
Midway-Shale outcrop complex, 1 to 9 percent slopes	231	1.82
Minnequa-Manvel loams	44	0.35

**Table 3. 1 - Soil Classifications in the RMP Planning Area\***

Soil Classification Units	Area (acres)	Portion of Planning Area (%)
Otero sandy loam, 1 to 5 percent slopes	319	2.51
Penrose-Minnequa complex, 1 to 15 percent slopes	3,726	29.26
Penrose-Rock outcrop complex, 25 to 65 percent slopes	4,199	32.97
Rocky Ford silty clay loam, wet	7	0.06
Shingle silty clay loam, 1 to 9 percent slopes	13	0.10
Travessilla-Rock outcrop complex, 30 to 9 percent slopes	5	0.04
Total	12,733*	100

\*No data available for the SWA (MU 7)

(Source: NRCS 1979)

Erosion potential varies among soil types within each management unit and depends on soil type, slope, amount and type of vegetative cover, and the rate of runoff. Typically, soils found on steeper slopes and unvegetated areas have a higher erosion potential. The Penrose-Minnequa complex, 1 to 15 percent slope, and Penrose-Rock outcrop complex, 25 to 65 percent slope, comprise approximately 8,000 acres on the limestone and shale cliffs and slopes. Other potentially high erosion areas include the Travessilla-Rock outcrop complex, but the percentage of this soils type is only in a very small percentage of the RMP Planning Area.

Throughout the RMP Planning Area, soil erosion and loss of vegetation has resulted from both improved and unimproved trails and roads (CPW 2019a). Severe and very severe erosion hazards occur throughout the RMP Planning area. Appendix C-Soil Erosion Hazard Area includes a map that shows soil erosion hazard classifications within LPSP (CPW 2019a). Steep slopes cutting through erosive soils in the Liberty Point East (MU 2) and Rock Creek (MU 4) areas have created ongoing maintenance and water quality issues for LPSP.

The remaining soil types (approximately 1,400 acres) have lower erosion potential. Many are downstream of Pueblo Dam, but some low erosion potential soils are present near the South Marina in MU 1.

### **3.3 Water Resources**

Water resources within the RMP Planning Area included in this analysis are discussed below and include the following water features and tributaries:

- Arkansas River
- Pueblo Reservoir
- Anticline Pond
- Drainages with confluence with the Arkansas River and Pueblo Reservoir;
  - Peck Creek
  - Rock Creek
  - Bogg's Creek
  - Golf course drainage
  - Unnamed drainage swales.

#### **Arkansas River**

The Arkansas River flows east through Colorado, Kansas, Oklahoma, and Arkansas to its confluence with the Mississippi River. In Colorado, the native flow in the Arkansas River is augmented with transmountain diversions from the Fry-Ark Project, Independence Pass Transmountain Diversion System, Homestake Project, Busk-Ivanhoe project, Blue River Project, and Columbine, Wurtz, Ewing and Larkspur ditches. Approximately 129,000 acre-feet is annually imported into the Arkansas River Basin (Water Education Colorado 2017).

The Fry-Ark Project diverts water from the west slope through the Boustead Tunnel and delivers it to Turquoise Lake. Water from Turquoise Lake is then delivered through the Mt. Elbert conduit to the Mt. Elbert hydropower plant, which discharges into Twin Lakes Reservoir. Water released from Twin Lakes Dam travels downstream to the Arkansas River via Lake Creek, and then into Pueblo Reservoir.

Immediately upstream of Pueblo Reservoir, the Arkansas River corridor is the center of the SWA (MU 7). As such, it is a source of surface water and fisheries and supports extensive riparian wildlife habitat. Below Pueblo Reservoir, the Arkansas River corridor again provides aquatic wildlife habitat and supports riparian areas that provide terrestrial wildlife habitat (MU 2). This MU provides recreational opportunities such as an existing swimming beach, fishing, water sports, and a contiguous bike path.

#### **Pueblo Reservoir**

Completed in 1974, Pueblo Reservoir is the terminal water storage facility for the Fry-Ark Project. Pueblo Reservoir also stores water for downstream farmers under the Winter Water Program administered by the State of Colorado (during the period November 1st to March 15th). Releases from Pueblo Dam are typically at their lowest during the Winter Water storage period.

Excess capacity storage and exchange contracts also allow for the storage of non-Fry-Ark Project water in Pueblo Reservoir when space is available.

Water levels in Pueblo Reservoir can fluctuate as much as 97 feet based on the Active Conservation Pool to the top of Joint Use Pool storage as shown in Figure 3.1. Storage space for flood control from April 15th to October 31st follows the Army Corps of Engineers Water Control Diagram (ACOE 1994) when the reservoir is lowered to an elevation of 4,880.46 ft.

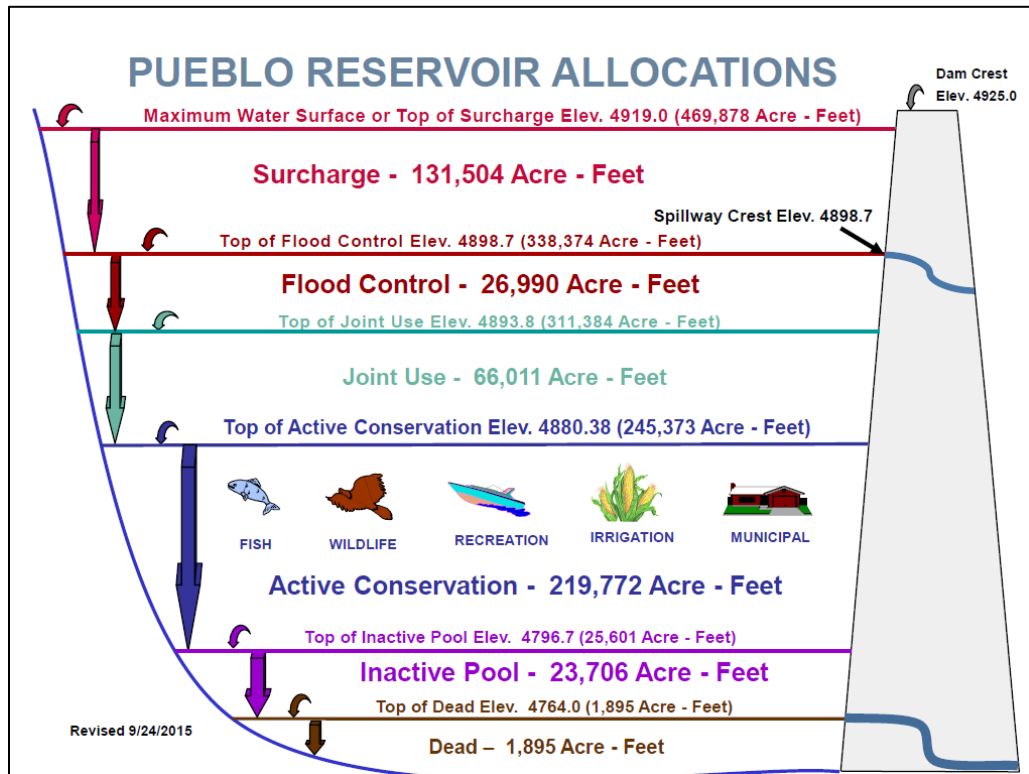


Figure 3.1 Pueblo Reservoir Allocations

Rapid changes in water levels are experienced during seasonal runoff, flood events, and during joint use pool drawdown to meet the April 15 flood storage requirements. Fry-Ark Project operations including Pueblo Reservoir management of Fry-Ark Project and Non-Project water are not subject to the 1981 Plan or the proposed RMP. Reservoir operations are address separately through the Fry-Ark Project Annual Operating Plan developed by Reclamation’s Pueblo Field Office.

### Arkansas River Tributaries

The mainstem of the Arkansas River conveys water to Pueblo Reservoir. However, Bogg’s Creek, Rock Creek, and Peck Creek (on the south shore), and Turkey Creek (on the north shore), as well as several unnamed intermittent drainages, also contribute surface water inflow to Pueblo Reservoir. Since Pueblo Reservoir was created, the corridors for these creeks are now back-filled with standing surface water, often forming steep-sided canyons.

### Pueblo State Fish Hatchery

One of the main features of the fish and wildlife component of the Fry-Ark Project is the fish hatchery below Pueblo Dam. Pueblo State Fish Hatchery has the capability of hatching and raising cold-water, and warm-water fish species for stocking water in Colorado. The State of Colorado

directed the design of this state-of-the art facility and assumed the operation, maintenance and replacement costs associated with the hatchery. Through a multi-level outlet system, water for the hatchery is provided from Pueblo Reservoir allowing year-round fish production. Pueblo State Fish Hatchery became operational in Fiscal Year 1998 (Reclamation 1993). The Pueblo State Fish Hatchery's return flows play an import role in meeting downstream Arkansas River flow targets below Pueblo Dam during low flow periods.

### **3.4 Water Quality**

The Colorado-Arkansas Headwaters and Upper Arkansas watersheds include impaired tributary reaches listed on the 303D list primarily due to historic mining operations. Constituents of concern include lead, cadmium, zinc, copper, aluminum, pH, and dissolved oxygen (CDPHE 2012). The mainstem Arkansas River above Pueblo Reservoir is not listed as impaired.

Pueblo Reservoir typically stratifies during the summer months, reducing mixing and can lead to periods of low dissolved oxygen near the bottom. When this occurs, manganese, other materials and nutrients will be very soluble and leach out of the sediments.

Downstream of Pueblo Reservoir, the Arkansas River also experiences degraded water quality. Portions of the downstream Arkansas River and associated tributaries are either on Colorado's impaired list or are of concern (CDPHE 2018). Constituents include selenium, sulfate, iron, uranium, as well as E. coli. The presences of radionucleotides are a concern for some Lower Arkansas municipal ground water supplies.

The CWA establishes the basic structure for regulating discharges into the waters of the United States. Section 404 of the CWA requires permits for the discharge of dredged or fill material into waters of the United States. Wetland areas adjacent to waters of the United States may also be subject to permit requirements. Authorization can either be issued under nationwide, general, or individual permits and are site specific. Nationwide permits include entire groups of activities. Pueblo Reservoir and the Arkansas River are waters of the United States and are regulated by the CWA.

In addition, Section 402 of the CWA states that any person who proposes to discharge pollutants from a point source to waters of the United States must apply for a National Point Discharge Elimination System (NPDES) 402 Permit. In Colorado, the Colorado Department of Public Health (CDPHE) Water Quality Control Division has been delegated to administer the NPDES program for non-federal facilities. CWA 402 permits are also typically required when construction activities require dewatering or discharges into waters of the United States.

### **3.5 Vegetation Resources**

The RMP Planning Area 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 2017). Rock outcrop features in the RMP Planning Area support abundant wildlife, including rare bird species, and have high educational value due to their representation of sedimentation that occurred during the Late Cretaceous period and the paleontological records they contain.

Ecological transitions, topographic and climatic factors, as well as a wide range of soil types (previously discussed in Section 3.2) are key physical factors that result in the diverse vegetation communities and habitats found within the RMP Planning Area. Regionally rare natural habitats occur in both LPSP and the SWA.

Vegetation resources were assessed and mapped in the RMP Planning Area in 2010 (Ecotone 2010). Further assessment of vegetation resources for the RMP Planning Area were conducted in 2011 by Land Stewardship Consulting, Inc. and Biohabitats, Inc. Vegetation mapping and assessment did not include the MU 7, small areas on the north side of MU 5, and the western edge of MU 3. Data for these areas were obtained from the National Land Cover Dataset (NLCD 2011). General vegetation types within the RMP Planning Area are illustrated in Appendix C-Vegetation Map and presented below in Table 3.2.

**Table 3. 2 - RMP Planning Area Vegetation Communities, Facilities, and Surface Disturbance Areas**

Community	Area* (acres)	Portion of Planning Area (%)
Barren lands	38	<1
Desert grassland	423	2
Prairie grassland	11,180	54
Desert shrubland	330	2
Foothills shrubland	24	<1
Prairie shrubland	1,002	5
Riparian shrubland	3,525	17
Juniper woodland	1,529	7
Riparian woodland	724	4
Emergent herbaceous wetlands	294	1
Non-native/weedy	264	1
Surface disturbance	1,024	5
Facilities	299	1
Total	20,656	100

\*includes equivalent community types delineated in Lake Pueblo State Wildlife Area (MU 7) and other areas noted in text.

Desert, prairie, foothills, and riparian shrublands account for approximately 24 percent of the RMP Planning Area. The distinctions between different shrubland communities are based on the relative dominance of representative shrub species. Foothills shrublands are distinguished by mountain mahogany and Gambel oak, with infrequent, scattered juniper trees. Juniper woodlands represent about 7 percent of the RMP Planning Area and are dominated by oneseed juniper, smaller amounts of piñon pine and mountain mahogany, and a sparse shortgrass prairie type understory. This community occurs primarily along canyon rims and is especially common on south-facing slopes. Piñon pine density within this community generally increases with elevation.

The condition of upland grasslands, shrublands, and woodlands varies considerably throughout the RMP Planning Area. Some areas of desert shrubland and shortgrass prairie remain relatively undisturbed and are vegetated with a diversity of primarily native species, and so are assessed as in excellent condition. Nearly all other upland vegetation types were assessed as in good or fair condition, although localized areas dominated by weeds were classified as in poor condition.

### **Riparian and Wetland Vegetation**

Riparian and wetland communities occur in areas of elevated soil moisture typically associated with water, most often adjacent to surface water. However, a few seeps of subsurface water do support small wetland pockets. These areas include the banks of the Arkansas River; several creeks, including Bogg's Creek, Rock Creek, Peck Creek, and Turkey Creek; and unnamed drainages, recreation pond shorelines, ditch banks, seep areas, the Pueblo Reservoir shoreline, and the drawdown zone (Appendix C-Vegetation Map).

Riparian shrublands, largely dominated by coyote willow, with far smaller amounts of other willows, represent 17 percent of the RMP Planning Area. The understory of these shrublands includes a sparse cover of grasses such as bluegrasses and slender wheatgrass. Riparian woodlands are distinguished by the presence of trees, including plains and narrowleaf cottonwood and peachleaf willow, with far fewer individuals of Siberian elm, white mulberry, hackberry, honey locust, and green ash. A sparse herbaceous understory in these tree stands includes the riparian shrublands species noted above. Some small, localized areas of these woodlands also comprise a more complex understory with a complement of riparian shrubs.

The wetland and riparian communities in the RMP Planning Area appear to be in fair condition but are affected by changes in flood magnitude and frequency that may jeopardize the long-term viability of this resource (CSP 2006). Historically, frequent flood events on the Arkansas River supported regeneration of native willows and cottonwoods by depositing seeds in newly exposed sediments along the floodplain. The availability of substrate at the time of seed release in spring and early summer contributed to seed germination and sapling establishment. Cottonwoods and willows are less successful now because the dam regulates water flow and prevents natural flooding. This is reflected in the skewed age class of trees in the riparian woodland communities where few, if any, sapling and young trees growing to replace older individuals. The lack of flooding has also allowed tamarisk (salt cedar), an invasive exotic species that cannot survive long periods of inundation, to establish in riparian and wetland communities (CPW 2017).

The total acres and percentages of RMP Planning Area vegetation condition classes are shown in Table 3.3. Vegetation conditions are based on a 2010 vegetation assessment and 2012 weed inventory (of LPSP). Additional detail can be found in the Draft LPSP Stewardship Plan (CPW 2017).

**Table 3.3 - RMP Planning Area Vegetation Condition Class\***

Condition Class	Area* (acres)	Portion of Planning Area (%)
Excellent	125.4	1.3
Good	3,927.7	42.1
Fair	1,752.4	18.8
Poor	601.7	6.4
Unclassified	2,931.9	31.4

\*does not include Lake Pueblo State Wildlife Area (MU 7) and other areas noted in text.

### Special Status Vegetation Species

No federally listed ESA plant species are known to occur in Pueblo County. However, the Colorado Natural Heritage Program (CNHP) identified six rare plant species and five significant natural communities known to occur within the RMP Planning Area (Table 3.4). Three of these plant species—golden blazing star (*Mentzelia chrysantha*), Arkansas River feverfew (*Bolophyta tetraeuris*), and Pueblo goldenweed (*Oonopsis puebloensis*)—are adapted to the same type of habitat and are therefore often found in proximity. Suitable habitats include barren slopes and road cuts in limestone, shale, or alkaline clay above the Arkansas River (CSU 2019). In general, the Pueblo State Wildlife Area (MU 7) is considered one of the best sites in Colorado for these Arkansas River-endemic plants (Dr. Sylvia Kelso, pers. comm.; in Colorado State Parks 2006).

**Table 3.4 - Rare Plants and Significant Plant Communities Present in RMP Planning Area**

Common Name	Scientific Name	Global Status <sup>1</sup>	Present in Planning Area
Golden Blazingstar	<i>Mentzelia chrysantha</i>	Imperiled	Yes
Pueblo Goldenweed	<i>Oonopsis puebloensis</i>	Imperiled	Yes
Roundleaf Four o'clock	<i>Oxybaphus rotundifolius</i>	Imperiled	Yes
Arkansas River Feverfew	<i>Parthenium tetraeuris</i>	Vulnerable	Yes
Dwarf Milkweed	<i>Asclepias uncialis</i> subsp. <i>uncialis</i>	Imperiled	Yes
Showy Prairie Gentian	<i>Eustoma grandiflorum</i>	Vulnerable/ Apparently Secure	Yes
Community Type	Associated Species	Global Status	
Foothills Shrubland	<i>Frankenia jamesii</i> / <i>Achnatherum hymenoides</i>	Imperiled	Yes
Plains Escarpment Prairie	<i>Artemisia bigelovii</i> / <i>Achnatherum hymenoides</i>	Imperiled	Yes



**Table 3. 4 - Rare Plants and Significant Plant Communities Present in RMP Planning Area**

Common Name	Scientific Name	Global Status <sup>1</sup>	Present in Planning Area
Great Plains Mixed-grass Prairie	<i>Hesperostipa neomexicana</i>	Imperiled	Yes
Shortgrass Prairie	<i>Bouteloua gracilis/Pleuraphis (Hilaria) jamesii</i>	Imperiled	Yes
Foothills Piñon-juniper Woodlands	<i>Juniperus monosperma/ Bouteloua gracilis</i>	Critically Imperiled	Yes

<sup>1</sup>CNHP (2016) status only. No plant species listed under ESA are known to occur in Pueblo County, nor the RMP Planning Area.

These species and plant community occurrences are currently in good condition, but because they are restricted to limited habitat types and ranges, these ecological resources are continually threatened by potential disruption by encroachment of noxious weeds as well as physical disturbance or destruction of their restricted habitat substrates.

#### Golden Blazingstar

This forb is Colorado endemic and member of the loosestrife family. Known occurrences are limited to Fremont and Pueblo Counties, in the Arkansas River Valley between Cañon City and Pueblo. Known populations are restricted to barren slopes of limestone, shale, or clay, primarily on the Smoky Hill member of the Niobrara shale, at elevations of 4,751 to 6,854 feet. The habitat of golden blazing star consists of moderately disturbed, wasting slopes such as those above the Arkansas River. Slopes are usually moderately steep in the shale barrens; no particular aspect is favored. This species occupies slopes and road cuts, where it grows prolifically and is often the only plant species growing in large numbers (CNHP 2016).

#### Pueblo Goldenweed

A perennial subshrub, Pueblo goldenweed, is endemic to Colorado, known only from occurrences in Fremont and Pueblo counties at elevations of 4,800 to 5,500 feet. This member of the sunflower family was identified as a distinct taxon in 1982 (CNHP 2007). It occurs in outwash deposits adjacent to Niobrara shale outcrops, especially the Smoky Hill shale member (CNHP 2016). Population sizes range from less than one hundred to thousands of individuals. It colonizes small washes or barren areas on toe-slopes associated with shale bedrock and adjacent alluvium. It can be quite weedy when associated with roads and tends to establish well in moderately disturbed roadside habitat (CNHP 2016).

#### Round-leaf Four- o'clock

This perennial forb is a member of the four o'clock family. Round-leaf four o'clock is endemic to Fremont and Pueblo counties, with a single disjunct occurrence in Las Animas County, Colorado. It is restricted to barren, shale-rock habitat between 4,800 to 5,600 feet in elevation. It is primarily found on the Smoky Hill shale member of the Niobrara Formation, although several occurrences have been noted in Carlile and Pierre shales (CNHP 2016). It does not tend to occur on road cuts, although it is found in areas adjacent to roads that were not impacted during construction.

### Arkansas River Feverfew

This perennial species is a member of the sunflower family. As with the three species above, it is a narrow endemic, limited to known occurrences in the Cañon City-Fort Carson-Pueblo area of Colorado, with a single disjunct location in Salida (CNHP 2016). Arkansas River feverfew occurs primarily on the Niobrara Formation although it has also been documented to occur on various shale layers, including Pierre and Graneros. A notably large population, consisting of tens of thousands of individuals of Arkansas River feverfew occurs in the SWA (MU 7). This population was first observed more than 50 years ago, indicating excellent viability within the population.

### Dwarf Milkweed

Dwarf milkweed is a member of the milkweed family. Historically, this species appears to have been found in two or three disjunct geographical areas: 1) the western Great Plains of eastern Colorado, northeastern New Mexico, and the adjacent Oklahoma panhandle; 2) central to southwestern New Mexico and scattered locations in Arizona; and 3) Sweetwater County in southwestern Wyoming. This small plant is found in small populations throughout most of its range. The known population within the RMP Planning Area is one of the largest (Decker 2006). This species occurs in shortgrass prairie, often on well-draining sandstone-derived soils and gravelly or rocky slopes at elevations of 4,000 to 6,500 feet.

### Showy Prairie Gentian

This very large-flowered perennial species is a member of the gentian family. Like dwarf milkweed, this species has a much larger geographical range, found in South Dakota to Texas and Mexico. In Colorado, known populations occur in Adams, Arapahoe, Boulder, Denver, Fremont, Jefferson, Kiowa, Larimer, Logan, Morgan, Prowers, Pueblo, Sedgwick, Weld and Yuma counties.

Unlike the other plant species described above, this species is found associated with mesic habitat along streams, in wet meadows, pastures, and fields, near old stream meanders or at the margins of lakes or ponds. These populations often occur in alkaline soils. The elevation range of showy prairie gentian is 3,500 to 6,000 feet.

### Foothills Shrubland Community

This community is characterized by an unusual association of James' seaheath and Indian ricegrass on cliffs and outcrops from the shortgrass prairie of the Middle and Upper Chalk members of the Smokey Hills Member of the Niobrara Formation (CNHP 2016). These outcrops support four of the rare plant species (golden blazingstar, Pueblo goldenweed, Arkansas River feverfew, and round-leaf four o'clock) described above.

### Plains Escarpment Prairie Community

This association of sparse Bigelow sagebrush and Indian ricegrass is found in southeastern Colorado on breaks and shale plains in shortgrass prairie. Soils are typically shallow, well-drained, calcareous loams and clay loams, derived from limestone, sandstone, shale, and alluvium. The soil surface has high cover of bare soil and rock (CNHP 2016).

### Great Plains Mixed-grass Prairie Community

This grassland community, dominated by New Mexico feathergrass, occurs in small areas within the RMP Planning Area and represents a prairie species community more common farther north in

Colorado and up into Wyoming, Montana, and the Dakotas. This community is dominated by grasses, including New Mexico feathergrass, which prefer well-drained rocky soils.

#### Shortgrass Prairie Community

Although the most common vegetation community within the RMP Planning Area, this grassland is considered much reduced from historic distributions and is not considered secure within Colorado. Once widespread, this vegetation community occurs throughout the intermountain western U.S. on dry plains and mesas. These grasslands occur in lowland and upland areas and may occupy swales, playas, mesa tops, plateau parks, alluvial flats, and plains. Sites are typically xeric. Substrates are often well-drained sandy- or loamy-textured soils derived from sedimentary parent materials but are quite variable and may include fine-textured soils derived from igneous and metamorphic rocks. When they occur near foothills grasslands they are at lower elevations. The dominant perennial bunchgrasses, including blue gramma and galleta grass, within this community are all very drought-resistant plants (CNHP 2016).

#### Foothills Piñon-juniper Woodlands Community

Oneseed juniper is the dominant tree species in this local woodland community, where blue gramma grass is the dominant herbaceous species in the understory. This southern Rocky Mountain ecological system occurs on dry mountains and foothills in southern Colorado, in mountains and plateaus of northern New Mexico and Arizona, and extends out onto breaks in the Great Plains. In Colorado, the southern Rocky Mountain pinyon-juniper woodlands are found in the south-central part of the state, around the San Luis Valley, southern mountain front east to Mesa de Maya, and north to the Arkansas River Valley and Palmer Divide (CNHP 2016).

These woodlands occur on warm, dry sites on mountain slopes, mesas, plateaus, and ridges. Severe climatic events occurring during the growing season, such as frosts and drought, are thought to limit the distribution of pinyon-juniper woodlands to relatively narrow altitudinal belts on mountainsides. Soils supporting this system vary in texture ranging from stony, cobbly, gravelly sandy loams to clay loam or clay.

#### Noxious Weeds

Noxious weeds are designated under the Federal Noxious Weed Act, Plant Protection Act of 2000 (7 USC 7701 et seq.), and Colorado Noxious Weed Act of 1996 and include the most invasive and most problematic species. As noxious weeds increase, they reduce the diversity of surrounding native plant communities, alter species composition and community structure, reduce wildlife habitat quality, and affect the aesthetic quality of the landscape. Noxious weeds can also displace desirable plant species in rangeland (Usher 1988, USFS 1998, Weiss and Murphy 1998, CNAP 2000) and can adversely affect forage quality and quantity for livestock.

Noxious weeds at LPSP were mapped by Land Stewardship Consulting and Biohabitats (2011) but mapping did not include the SWA. Noxious weeds known to occur in the RMP Planning Area are listed in Table 3.5. Their distributions are illustrated in Appendix C-Noxious Weed Map.

**Table 3. 5 - State Listed Noxious Weeds Mapped in the RMP Planning Area**

Common Name	Scientific Name	State Weed List <sup>1</sup>	
Blue mustard	<i>Chorispora tenella</i>	NL <sup>2</sup>	
Bull thistle	<i>Cirsium vulgare</i>	B	
Burdock	<i>Arctium minus*</i>	C	
Canada thistle	<i>Breca arvensis*</i>	B	
Cheatgrass	<i>Anisantha tectorum</i>	C	
Crane's bill	<i>Erodium cicutarium</i>	C	
Field bindweed	<i>Convolvulus arvensis</i>	C	
Flixweed	<i>Descurainia sophia</i>	NL	
Hoary cress	<i>Cardaria draba*</i>	B	
Houndstongue	<i>Cynoglossum officinale*</i>	B	
Kochia	<i>Kochia sieversiana</i>	NL	
Mullein	<i>Verbascum thapsus</i>	C	
Musk thistle	<i>Carduus nutans*</i>	B	
Perennial pepperweed	<i>Lepidium latifolium</i>	B	
Plumeless thistle	<i>Carduus acanthoides*</i>	B	
Puncturevine	<i>Tribulus terrestris</i>	C	
Quackgrass	<i>Elytrigia repens</i>	NL	
Redstem filaree	<i>Erodium cicutarium</i>	C	
Russian-thistle	<i>Salsola iberica</i>	NL	
Russian-olive	<i>Elaeagnus angustifolia</i>	B	
Tamarisk	<i>Tamarix ramosissima</i>	B	

\*on Pueblo County priority weed list

<sup>1</sup>Colorado weed list definitions:

**A - designated for eradication**

**B - state management plans, designed to stop continued spread**

**C - jurisdictions may choose to require management**

<sup>2</sup>NL - species no longer on Colorado noxious weed list, but mapped during weed surveys

Cheatgrass and hoary cress (whitetop) were introduced and are well established in the RMP Planning Area. Hoary cress spreads by creeping underground stems, making it difficult to control. Canada thistle, Russian-olive, and tamarisk in wetland and riparian areas are also problematic.

Russian knapweed, a very aggressive Colorado B-list noxious weed is not currently present in the RMP Planning Area. However, it has been in gravel pits outside the RMP Planning Area boundary (Carpenter, 2011). Yellow star thistle (Colorado A-list) has infested millions of acres in California but is still rare in Colorado. This species has recently been found and removed from an area just south of the town of Pueblo (Scott Cotton, pers. comm.; in Colorado State Parks 2006). Both of these weeds have the potential to profoundly impact natural resources if they become established in the RMP Planning Area.

## **3.6 Aquatic and Wildlife Resources**

Title 33 of Colorado Revised Statutes 33-1-101 declares that 1) it is the policy of the State of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of Colorado and its visitors, and 2) all wildlife not lawfully acquired and held by private ownership are property of the state. Wildlife resources within the RMP Planning Area are discussed in the following sections, grouped by type—aquatic, terrestrial and special status.

### **Aquatic Resources**

Anglers are attracted by the warm- and cold-water fishing opportunities along the Arkansas River and in Pueblo Reservoir. Fisheries species include walleye, wiper, large and smallmouth bass, black crappie, channel catfish, and rainbow trout. CPW manages fisheries and collects aquatic resource data. Reservoir species include black crappie, blue catfish, channel catfish, common carp, cutbow, flathead catfish, largemouth bass, rainbow trout, walleye, wiper, white sucker (CPW 2019b). Fish species found in the Arkansas River include brown trout, rainbow trout Snake River cutthroat trout, cutbow, and saugeye (CPW 2019c).

CPW is responsible for operation, maintenance and replacement of the Pueblo State Fish Hatchery constructed by Reclamation as part of the Fry-Ark Project under the lease. The hatchery rears both warm- and cold-water species for stocking in Pueblo Reservoir and other waters in Colorado. The fish hatchery was constructed in two phases. Phase I was completed in 1988 and consists of the constructed fish hatchery building and complex. Phase II facilities were designed by the State of Colorado, completed in 1994 and consist of 3 micro screens, a solar pond, 4 concrete raceways, 32 fish rearing ponds, 2 effluent ponds, pipelines, monitoring equipment, and fencing (Reclamation 2017).

### **Aquatic Nuisance Species**

LPSP conducts inspections for aquatic nuisance species in compliance with the State of Colorado Aquatic Nuisance Species (ANS) Act. ANS are defined as exotic or nonnative aquatic wildlife or any plant species that have been determined to pose a significant threat to the Colorado aquatic resources or water infrastructure. The Act makes it illegal to possess, import, export, ship, transport, release, plant, place, or cause an ANS to be released. The rules require mandatory watercraft inspection, and if necessary, decontamination of all boats coming in from out of state, leaving known positive waters in Colorado, and those boats entering a high-risk water where inspections and decontaminations are required by the managing agency. Two ANS inspection units are in the RMP Planning Area, at the north and south shore marinas. There is an additional boat ramp at the SWA. This boat ramp was closed in 2007 but may be opened in the future based on demand and CPW's ability to inspect all boats for ANS at this location.

Pueblo Reservoir has previously tested positive for zebra and quagga mussel larvae (veligers) through microscopic analysis of water samples. Previous detections confirmed zebra mussel veligers (*Dreissena polymorpha*) in 2007 and quagga mussel veligers (*D. bugensis*) in 2007, 2008, 2009 and 2011. No adult phases of either species have been detected. Pueblo Reservoir was de-listed for zebra mussels in January 2014 and for quagga mussels in January 2017 under the western regional standards for listing and de-listing water bodies following 5 years of negative sampling and inspection results.

Eurasian watermilfoil (*Myriophyllum spicatum*) is another ANS species known to occur in Pueblo Reservoir. The plant forms dense mats on the water surface. The Colorado Department of Agriculture requires management of this species, per the Colorado Noxious Weed Act. Watercraft inspection and decontamination containment programs are in place and existing populations of Eurasian milfoil in Pueblo Reservoir are controlled with herbicides.

Waterflea (*Daphnia lumholtzi*) was detected by CPW at the Pueblo State Fish Hatchery in 2013. CPW is currently reviewing past records to determine relative statewide distribution and working with the Fish Health Board to evaluate this species.

### **Terrestrial Wildlife Resources**

Terrestrial wildlife resources in the RMP Planning Area are in fair to good condition, with relatively high diversity overall due to the combined presence of prairie grassland, prairie shrubland, juniper woodland, and riparian shrubland.

The RMP Planning Area supports several populations of large mammals, including bighorn sheep, pronghorn, mule deer, white-tailed deer, elk, mountain lion, black bear, coyote, and bobcat (CPW 2017). Big game GIS data show the mule deer winter range extends over the entire RMP Planning Area (CPW 2019d). The general range for white-tailed deer is all along the riparian corridor of the Arkansas River and the edges of Pueblo Reservoir. Bighorn sheep and elk utilize portions of the RMP Planning Area south of the Arkansas River and Pueblo Reservoir as part of their overall range. Small mammals present include pocket gopher, deer mouse, vole, and ground squirrel.

The RMP Planning Area is in the central flyway for migratory birds, and in early spring and late fall is utilized by many different species of water birds, shorebirds, and waterfowl. Common species include Canada goose, snow goose, mallard, blue and green-winged teal, northern shoveler, gadwall, northern pintail, and lesser scaup. Non-game species, such as Great blue heron and American white pelican, are known to utilize open water within the RMP Planning Area.

Hunting is excluded in the developed areas of LPSP in MU 1, 2 and 5 from the Tuesday after Labor Day through the Friday prior to Memorial Day. Within the SWA, CPW manages hunting for deer, rabbit, turkey, dove, waterfowl and scaled quail. Hunting methods are limited to shotguns and archery for all area within the RMP Planning Area that are open to hunting.

The RMP Planning Area is popular for bird watching. The SWA has been nominated as an Important Bird Area by the Audubon Society due to special physical features such as open water, the presence of two heronries, and limestone bluffs, as well as the documented high level of bird species diversity. Non-game birds readily observed include turkey vulture, harrier, red-tailed hawk, American kestrel, magpie, meadowlark, American robin, red-winged blackbird, killdeer, and American avocet. In addition, raptor nests can be found throughout LPSP and the SWA with a majority occurring along the Arkansas River below Pueblo Dam and upstream tributaries that drain into Pueblo Reservoir (CPW 2017, CPW 2019d). Active raptor nests include bald eagle, golden eagle, osprey, red-tail and Cooper's hawks, prairie falcon, American kestrel, and great-horned and burrow owls.

Common reptile species in the RMP Planning Area include bullsnakes, rattlesnakes, sagebrush lizards, western terrestrial garter snakes, blackneck garter snakes, and the triploid checkered whiptail. Amphibians include bullfrogs, which are an introduced species, are common, which may preclude the presence of northern leopard frogs, a special status species.

### Special Status Species

Reclamation informally consulted with USFWS and requested a list of federally threatened, endangered, and candidate species (USFWS 2019). A total of fourteen federal and state special status wildlife species were identified as having potential to occur within the RMP Planning Area are listed in Table 3.6. Reclamation determined potential for these species to occur within the RMP Planning Area based on the habitat requirements for each species obtained from the USFWS's Environmental Conservation Online System accessed at: <https://ecos.fws.gov/ecp/>.

**Table 3. 6 - Special Status Species**

Common Name	Binomial	Status <sup>1</sup>	Present in RMP Planning Area
Black-footed ferret	<i>Mustela nigripes</i>	Federal Endangered	No
Canada lynx	<i>Lynx canadensis</i>	Federal Threatened	No
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Federal Threatened	No
American peregrine falcon	<i>Falco peregrinus anatum</i>	CO Special Concern	Yes
Bald eagle	<i>Haliaeetus leucocephalus</i>	CO Special Concern	Yes
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	CO Special Concern	Yes
North American wolverine	<i>Gulco gulco luscus</i>	Federal Proposed Threatened	No
Burrowing owl	<i>Athene cunicularia</i>	CO Threatened	Yes
Mountain plover	<i>Charadrius montanus</i>	CO Special Concern	Yes
Triploid checkered whiptail	<i>Cnemidophorus neotesselatus</i>	CO State Concern	Yes
<i>Species with Historic Records Only</i>			
Northern leopard frog	<i>Rana pipiens</i>	CO Special Concern	No
Southern redbelly dace	<i>Phoxinus erythrogaster</i>	CO Endangered	No
Greenback cutthroat trout	<i>Oncorhynchus clarkia stomias</i>	Threatened	No
Arkansas Darter	<i>Etheostoma cragini</i>	CO Threatened	No

<sup>1</sup>State of Colorado status follows CPW (2019e); for ESA-list, follows USFWS (2019).

Some special status species are relatively common species, such as the black-tailed prairie dog, and occur where prairie grassland is present. Other special status species are limited to one or a few observations. The southern redbelly dace and the northern leopard frog were documented historically in the RMP Planning Area but no recent records of occurrence for these species exist, and they no longer occur in the RMP Planning Area. Six special status species are known to occur in the RMP Planning Area or regionally, are briefly described below.

### **American Peregrine Falcon**

The American peregrine falcon is a Colorado species of concern and is also protected under the Migratory Bird Treaty Act (MBTA) (16 USC Code §703). It nests in high cliffs where there is nearby riparian habitat and open areas. The species is not documented nesting in the RMP Planning Area to date but is sometimes observed in the RMP Planning Area during migration and occurs regionally (Colorado State Parks 2006). The proximity of the cliffs and riparian habitat at the RMP Planning Area provide suitable habitat for this species.

### **Bald Eagle**

Bald eagles concentrate and winter in the RMP Planning Area, especially at the west end of Pueblo Reservoir and the Arkansas River upstream. Individual eagles have also been observed around the South Marina, the Bogg's Creek area, and the Arkansas River corridor below Pueblo Dam. The State of Colorado lists the bald eagle as a species of concern. It also has special protections under the Bald and Golden Eagle Protection Act (16 USC §668) and the MBTA. Eagles take advantage of the relatively mild local winter temperature and consistent fish prey base offered by the reservoir, as well as the large cottonwood trees that provide roosting habitat. Eagles also scavenge and use any available roadkill, hunting or fishing gut-piles, and even accessible garbage. The eagles' wintertime presence is celebrated in the annual Eagle Days Festival at LPSP. There is one known bald eagle nest located in the SWA, north of Pueblo Reservoir. The current status of the nest is unknown (CPW 2019e).

### **Black-tailed Prairie Dog**

Black-tailed prairie dogs are listed as a state species of concern. It is common in prairie grasslands and Eastern Colorado is nearly the center of the species' distribution in North America. They are adaptable and readily occupy prairie grassland. Black-tailed prairie dog numbers have dropped substantially throughout their range, including Colorado. There are seven mapped prairie dog colonies within the RMP Planning Area, all occurring on the north side of the reservoir in MU 5. Prairie dog burrows also provide habitat for additional species, such as burrowing owls and mountain plovers. Prairie dogs play an important role as prey base for several other wildlife species, including eagle and hawk species.

### **Burrowing owl**

Burrowing owls, also protected under MBTA, prefer treeless areas of prairie grassland and use abandoned burrows for nesting and cover. They are often found in association with prairie dogs. Burrowing owl have experienced a substantial decline in population numbers in Colorado and regionally. Nesting burrowing owls have been documented in MU 5.

### **Mountain plover**

Mountain plover is a Colorado species of concern and protected under the MBTA. It is native to the shortgrass prairie and occurs in open, dry areas. Mountain plover also favors prairie dog colonies for breeding and nest on the ground and in prairie dog burrows. Suitable mountain plover habitat within the RMP Planning Area overlaps with prairie dog habitat in MU 5.



### **Triploid checkered whiptail**

Triploid checkered whiptail is a lizard listed as a Colorado species of concern. It inhabits transitional areas in juniper and pinyon-juniper woodlands, rocky canyons, rocky hillsides, shrubby areas, and open savannahs along the Arkansas, Huerfano, Apishapa, and Purgatoire river and their tributaries. Triploid checkered whiptail habitat occurs in the RMP Planning Area in portions of MU 1, 2, 3 and 5.

### **Endangered Species Act Compliance**

For the purposes of compliance with Section 7 of ESA, the EA associated with this RMP also serves as the biological assessment. Reclamation has determined that both the No Action and Proposed Action alternatives would have no effect on federally endangered, threatened, or candidate species and their designated critical habitats. During implementation of the selected alternative, site specific threatened and endangered species review and surveys, as appropriate, would be conducted prior to implementation of surface disturbing activities. If federally listed ESA species are identified during these reviews including new species added to the ESA list, Reclamation would determine if planned management actions have potential to affect the federally listed species or their designated critical habitat and complete Section 7 consultation with USFWS prior to implementing the management action.

## **3.7 Cultural and Historic Resources**

Reclamation manages cultural resources at Pueblo Reservoir in accordance with Section 106 and Section 110 of the NHPA and other applicable laws and regulations. Section 106 of the NHPA requires Reclamation to consider effects on historic properties when planning and implementing actions. The actions identified in this RMP have the potential to affect historic properties. Under Section 110 of the NHPA, Reclamation has completed cultural resource inventories of Pueblo Reservoir and has conducted evaluations to identify historic properties. Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

Cultural resources within the RMP Planning Area were identified by conducting a Class I file and literature review with the Colorado Office of Archaeology and Historic Preservation to identify previous surveys and documented cultural resources within the analysis area. Cultural resources are evaluated for their eligibility to be listed on the NRHP. The federal agency determines cultural resources that are historic properties (eligible for listing on the NRHP) in consultation with the SHPO, the Tribal Historic Preservation Office, and appropriate tribes. Cultural resources qualified with the term “Needs Data” have not been formally evaluated but are considered potentially eligible for the NRHP. Unevaluated sites are those that may conform to the eligibility criteria but require further work to determine their significance. In most cases, these are prehistoric sites with suspected buried cultural material, or historic sites where additional archival research is needed to determine historical context and overall significance. Resources that do not meet any of the eligibility criteria and/or have lost physical integrity are recommended as not eligible for inclusion on the NRHP.

A total of 31 intensive cultural resource inventories have been conducted within the RMP Planning Area and 300 cultural resource sites and isolated finds have been identified. Sites that have officially

been determined eligible for inclusion in the NRHP include two prehistoric camp sites and the early 20th century Arkansas Valley Conduit (Early AVC). Another 19 sites have official “Needs Data” determinations and are considered potentially eligible for the NRHP. These sites include the Bessemer Ditch; a segment of Old Highway 96, the town of Swallows, and several historic artifact scatters and prehistoric sites.

Other historic properties include segments of the Denver and Rio Grande, Atchison, Topeka, and Santa Fe railroads. These historic properties are considered to support the NRHP eligibility of other linear resources located outside the RMP Planning Area.

The entire reservoir area was inventoried at a Class III level by Cultural Resource Analysts, Inc. from 2006-2009 (Brant et al. 2010). Sixty-one of previously recorded sites could not be evaluated because are they within the minimum pool level of the reservoir or could not be relocated because of dense vegetation, inaccurate location information, or lack of visible artifacts.

Prehistoric resources at Pueblo Reservoir include open camp sites, isolated artifacts, open lithic sites, and rock art. Archeological evidence indicates that Native American occupation of the RMP Planning Area extended from at least the Early Archaic period (7,800 years before present) until the mid-19th century. Euro-American settlement in the RMP Planning Area was sporadic from the 1660s to the 1860s when gold was discovered in Colorado. The Homestead Act of 1862, the Desert Land Act of 1877, and relocation of Native American populations also contributed to the increase in permanent Euro-American settlement of the area after 1860.

General information on known historic sites within each management unit are discussed below:

#### **MU 1-South Entry**

Seven sites and two site segments have been recorded and evaluated within MU 1. The site segments (5PE.486.3 and 5PE.486.4) are both part of the Bessemer Ditch (5PE.486). None of the sites are eligible for inclusion in the NRHP and both segments of ditch have been determined to not support the eligibility of the Bessemer Ditch.

#### **MU 2 – Arkansas River Corridor**

Five site segments and eight isolated finds have been recorded and evaluated in MU 2. None of the sites or finds have been determined eligible for inclusion in the NRHP.

#### **MU 3 - Operations**

Three sites and six isolated finds have been recorded and evaluated in MU 3. None of the sites have been determined eligible for inclusion in the NRHP.

#### **MU 4 – South Shore**

Sixty-seven sites, and forty isolated finds have been recorded and evaluated in MU 4. Two sites, a prehistoric camp and a segment of the early 20th century Early have been officially determined to be eligible for inclusion in the NRHP. In addition, a segment of the Early AVC is also located in MU 4 and is considered to support the eligibility of the entire linear resource. Three sites in MU 4 unit have “needs data” determinations (a prehistoric open camp, another is a historic stone quarry, and

the third is a segment of Old Highway 96). All other recorded sites in MU 4 are not eligible for inclusion in the NRHP.

#### **MU 5 – North Shore**

Seventeen sites and ten isolated finds have been recorded and evaluated in MU 5. A prehistoric open camp has a “needs data” determination and all other recorded sites have been determined not eligible for inclusion in the NRHP.

#### **MU 6 – Pueblo Reservoir Water Body**

Fourteen sites have been recorded within the normal pool volume of the reservoir in MU 6. Ten of these sites have never been evaluated because they are below the minimal pool level. Three sites are not eligible for the NRHP and one site has a “needs data” determination.

#### **MU 7 – Pueblo Reservoir State Wildlife Area**

Seventy-six sites and fifty isolated finds have been recorded and evaluated within MU 7. A prehistoric camp has been officially determined eligible for the NRHP and fourteen have official “needs data” determinations. The “needs data” sites include the historic town of Swallows, a segment of Old Highway 96, a rock art panel, historic foundations, historic trash dumps, prehistoric camp sites, a possible rock shelter, and sites with both historic and prehistoric artifacts. All other recorded sites in MU 7 been determined not eligible for inclusion in the NRHP.

### **3.8 Travel Management**

The RMP Planning Area has 23.8 miles of paved road. In 2011, paved roads were evaluated for 12 specific defects to develop an overall condition rating (CPW 2012). The conditions of the roads were lumped into five condition categories and are reported as follows:

- Excellent: none
- Good: 11%
- Fair 62%
- Poor: 19%
- Critical: 7%

The study noted that most of the roads rated as fair condition scored very low in that range and that any new defects could quickly reduce the road condition to the poor category. Since the 2011 assessment was completed, approximately 13.2 miles of roads and 13 miles of trail have been repaired. LPSP secured Federal Highways Administration (FHWA) funding which was used to remove and replace at total of 6.5 miles of road in MU 1 and MU 4 which was completed in 2016.

#### **MU 1 - South Entry**

Major roads in MU 1 are bound on the south by Highway 96 and includes South Marina and Reservoir roads, and the southern segment of Juniper Road. LPSP entrance stations are situated on South Marina Road and on Juniper Road south of the Arkansas River. CPW is concerned that two entrance gates on Juniper Road creates confusion and detracts from the “main entry” concept. The entrance south of the Arkansas River has an emphasis on transportation and access but detracts from the natural setting.

The condition of all paved roads in MU 1 in 2012 were rated as fair except the eastern 0.5-mile segment of South Marina Road. This road was rated as poor. The remain portion of South Marina Road was rated as being in good condition. On peak use days, the number of parking spaces at the boat launch does not meet the demand. A 0.62-mile length of Reservoir Road was paved and 3.0 mile of road in MU1 were removed and replace using the FHWA funding.

There is one main paved bike trail that runs throughout the RMP Planning Area. In MU 1, a segment of the trail runs adjacent to Juniper Road and another segment follows South Marina Road. These trail segments have been upgraded since the 2011 assessment (CPW 2012) to meet all design standards and park visitor needs.

### **Management Unit 2 - Arkansas River Corridor**

MU 2 includes the northern portion of Juniper Road and adjacent main bike trail below Pueblo Dam. This unit also includes the Rock Canyon/Osprey Access Road, which extends nearly the entire length of MU 2. The paved Arkansas River Trail which connects the RMP Planning Area to the City of Pueblo parallels the Arkansas River on its north side (MU-2 Map). Paved trail connections from Rock Canyon to North Shore and the South Entry above Pueblo Dam to the west are poor in terms of both design and condition.

### **Management Unit 3 – Operations**

The roads within MU 3 are unpaved and used for maintenance and law enforcement access only.

### **Management Unit 4 - South Shore**

MU 4 is bounded by Highway 96 on the south and Pueblo Reservoir on the north. There are no paved roads within the MU 4 except for a segment of Old Highway 96, which forms the western boundary of MU 4. One unpaved trail, the Arkansas Point Bike Trail, extends in a north-south direction, starting at Highway 96 and then turns westward near Arkansas Point, terminating at an overlook. An unofficial trail network of approximately 50 miles of mountain bike trails has been developed along the rims and in drainages by mountain bike organizations. These trails are not sanctioned by LPSP staff and are considered unauthorized. They begin at an unauthorized entrance referred to locally as “Red Gate,” which is also the trailhead for the Arkansas Point Bike Trail. A second, unauthorized, trailhead has been developed along Highway 96 approximately 1.3 miles west of Red Gate (MU-4 Map). There is no formal parking, and trail users park their vehicles along the shoulders of Highway 96.

In 2015 Reclamation and CPW started assessments of the unauthorized surface trails and additional collected data for analysis. The assessments identified where surface trails intersected with sensitive natural and cultural resources. In 2019, CPW completed Trail Management Plan involving public input. The Trail Management Plan proposes to close portions of trails impacting sensitive natural and cultural resources, rerouting trails around resources, and keeping trails that need maintenance to create a sustainable trail system. The Trail Management Plan can be found in Appendix B. Reclamation will formally approve the Trail Management Plan as part of the RMP process by incorporating it into both alternatives.

### **Management Unit 5 - North Shore**

Juniper Road begins in MU 1 extends through MU 5. Juniper Road connects with South Nichols Road just north of the RMP Planning Area in Pueblo West. There are four spur roads south of Juniper Road: North Marina Road links Juniper Road with the West Fishing Access parking area, Northern Plains Campground to North Marina; an unnamed spur road that leads to the Juniper Breaks Campground; and Hobie Cat Road, which provides access to two group picnic areas just south of the North Marina. At the western end of MU 5 near the West Entrance Station, Juniper Road forks. The northern branch leads into Pueblo West and the western branch continues into MU 7 (MU-5 Map).

The RMP Planning Area Facilities and Operations Assessment report (CPW 2012) indicated that Juniper Road through MU 5 is in critical condition (1.7 miles) and poor condition (approximately 2.8 miles). The campground roads are in fair condition and roads near the North Marina boat ramp are in good condition. In 2012, the portion of Juniper Road classified as “critical” was re-constructed and in 2016, a total of 3.5 miles of Juniper and North Marina Roads were improved using FHWA funding.

The amount of parking at the boat launch fluctuates with the water surface level in Pueblo Reservoir. When the reservoir level is lower, visitors are able to park along the shoreline. Below high-water line on peak use days. This occurs at the South Fishing, Sailboard, and N-1 areas in MU5. Parking in these areas is limited to below the reservoir’s high-water line in unvegetated areas and parking along the shoreline in the North Picnic Area is not permitted. When the reservoir level is higher and the shoreline is not available for overflow parking, the demand for parking exceeds the supply on peak use days.

Juniper Road is part of a larger, urban loop. Juniper Road provides access to recreation areas on the north side of Pueblo Reservoir but also functions as an urban arterial road that connects Pueblo West to downtown Pueblo (MU-5 Map). Urban commuter traffic confuses actual “visitor” counts to the RMP Planning Area and contributes to the wear and tear of Juniper Road. Although all Juniper Road users have paid an entry fee or purchased an annual state park pass, there are no clear data about who is using the road and for what purpose.

The North Bike Trail is adjacent to Juniper Road, and the North Shore Marina Bike Trail connects the marina complex to Juniper Road. The originally installed trail system extended only as far west as the West Fishing Access parking area. Subsequently, social trails along the cliffs have been extended and developed by mountain bicycle riders and by residents of Pueblo West. Off-road, bicycle, and off-leash dog use at the West Fishing Access along the western side of MU 5 is prevalent (MU-5 Map). “Off-leash” dog walking is creating additional unauthorized trails and contributing to management problems for Planning Area staff. The off-leash dogs are damaging existing resources and negatively affect the visitor experience (CPW 2012). CPW currently always has a regulation to keep pets on a 6 feet or shorter leash . Also, that pet owners are to pick up after pets

Pueblo West has secured FHWA funding to construct about 1.6 miles of paved connecting trail along Nicholls Road just north of the RMP Planning in Pueblo West. The new trail will include a pedestrian bridge on Nicholls Road over the railroad. The trail will connect with the existing LPSPs trail network on Reclamation lands. Reclamation will issue any necessary land use authorization after review of final design.

### **Management Unit 6 - Pueblo Reservoir**

MU 6 includes the surface of Pueblo Reservoir. The two boat ramps are provided at the South Marina and the North Marina.

### **Management Unit 7- Pueblo Reservoir State Wildlife Area**

MU 7 comprises of the westernmost Reclamation lands, both north and south of the Arkansas River upstream of the reservoir and western portions of the reservoir (MU-7 Map). Three unpaved river-access roads are north of the river. On the south side of the river, an unpaved road extends from Old Highway 96 for approximately 8 miles upstream and provides access to the river. MU 6 - Pueblo Reservoir MU 6 includes the surface of Pueblo Reservoir. A boat ramp is provided at the South Marina and one at the North Marina.

### **MU 7- Pueblo Reservoir State Wildlife Area**

MU 7 comprises of the westernmost Reclamation lands, both north and south of the Arkansas River upstream of the reservoir and western portions of the lake (MU-7). Three unpaved river-access roads are north of the river. On the south side of the river, an unpaved road extends from Old Highway 96 for approximately 8 miles upstream and provides access to the river.

## **3.9 Socioeconomic Conditions and Environmental Justice**

### **Social Conditions and Environmental Justice**

Visitation patterns in the RMP Planning Area, summarized in Section 4.12 reflect the social importance of LPSP and the SWA to the local community and Colorado residents. Ninety-six percent of visitors to the RMP Planning Area are from Colorado with 52 percent being local visitors driving less than 50 miles. Seventy-five percent arrive by car.

Among Colorado State Parks, Lake Pueblo ranked first for use by Hispanic visitors with 14 percent, compared with 6 percent in all other parks. LSPS also has a slightly higher than average percentage of African Americans visiting LSPS (2 percent as opposed to 1 percent in all other parks). LSPS has a slightly lower than average number of Caucasian visitors (81 percent) compared with 83 percent for all other Colorado State Parks. Eighty-eight percent of LSPS visitors are under the age of 65 and 7 percent are 65 years and older. (Corona Insight 2009; PricewaterhouseCoopers, LLP 2002).

The Arkansas River corridor downstream of the RMP Planning Area has been developed by the City of Pueblo as an urban park amenity and provides additional opportunities for recreation and outdoor experiences. A bike trail through this corridor provides additional access to LPSP and the public can currently park at the parking area in MU 1 below Pueblo Dam without a State Park pass or fee.

All Colorado State Parks provide the following accommodations to economically disadvantaged citizens, veterans, and senior and disabled citizens:

- Free park admission on Veteran's Day for veterans and active duty personnel and
- Free park admission for active and retired military during the month of August.
- Free park admission to veterans with a current Colorado Disabled Veterans license plate.
- Senior citizen discount entrance pass and discounted camping fee.
- Centennial Pass – reduced fee annual pass for low income individuals and families.

- Columbine Pass – reduce fee annual pass for disabled Colorado residents.
- Colorado residents on active duty and permanently stationed outside of the state can fish without a license while in Colorado.

### Economic Conditions

Pueblo Reservoir provides an economic stimulus to the Pueblo area through both direct spending for recreational services and indirect spending for services to support those activities. The APE is defined as Pueblo County and Front Range communities of Pueblo, Colorado Springs, Trinidad and the Denver Metro.

Social and economic trends affect management of LPSP. Table 3.7 presents demographic and economic trends and data within the RMP Planning area. The affected area used for the environmental justice analysis is Pueblo County. The population estimate for Pueblo county is 167,529 (U.S. Census Bureau, 2019), with 5.3 percent growth since 2010. Pueblo County and Colorado will likely continue to grow and influence the demand for recreational opportunities and access to public lands in the area. See Section 3.10 for visitation data and trends for the RMP Planning Area.

<b>Table 3.7 - Demographic and Economic Information<sup>1</sup> for RMP Planning Area</b>		
	Pueblo County	State of Colorado <sup>2</sup>
2019 Population Estimates	167,529	5,758,736
% Change 2010-2019	5.3%	14.5%
% Age 65 and Over	18.5%	14.2%
% White (not Hispanic)	52.0%	67.9%
% Hispanic or Latino	41.3%	21.7%
% Black or African American	2.6%	4.6%
% American Indian or Alaska Native	3.1%	1.6%
% Asian	1.1%	3.5%
% High School Graduate or Higher	89.4%	91.4%
% Bachelor's Degree or Higher	22.0%	40.1%
Mean Household Income	\$44,634	\$68,811
% Persons Below Poverty Level	17.2%	9.6%

<sup>1</sup>Source: U.S. Census Bureau, 2019

<sup>2</sup>Included for comparison purposes



Major sectors/industries that contribute to the economy and business in Pueblo County include Steel, Alternative Energy, Manufacturing, Healthcare, Service Industry and Recreation/Tourism (Pueblo County 2014).

In many cases, social effects are described in terms of quality of life, which could include the quantity and quality of access to recreational opportunities and natural resources. About 92 percent of Colorado residents recreate in the outdoors at least once every few weeks (CPW 2018). The statewide (Colorado) trends in outdoor activities indicate that groups and individuals enjoy walking, hiking, jogging, camping and wildlife viewing. Most popular in Colorado is walking, closely followed by hiking/backpacking, picnicking and tent camping.

In 2016 with 1.7 percent of the U.S. population, Colorado had 7.7 percent of the nation's tourism jobs. Tourism is one of the strongest economic drivers of Colorado's economy with 82.4 million visitors spending over \$19 billion in the State (COEDIT 2020). A large portion of Colorado's tourism economy relies on outdoor recreation resources and public lands.

### **Environmental Justice**

Executive Order 12898 on Environmental Justice requires federal agencies to analyze programs to assure that they do not disproportionately adversely affect minority or low-income population or Indian Tribes. Pueblo County has almost twice the percentages of Hispanic or Latino (41.3 percent vs. 21.7percent) and American Indian (3.1 percent vs. 1.6 percent) populations when compared to the State of Colorado as shown in Table 3.7. The estimated percentage of individuals living below the poverty level living in Pueblo County in 2019 was 17.2 percent compared to 9.6 percent for the entire State (U.S. Census Bureau 2020).

## **3.10 Recreation and Visitor Services**

### **Visitation Patterns**

In 2014 and 2015, the RMP Planning Area had approximately 1.8 million visitors annually. In 2019 CPW reports that the visitation is 2.4 million annually at LPSP. The most recent available descriptive data for visitor use comes from two market assessments (CPW 2012). Highlights from these assessments include the following:

- A car or recreational vehicle was the most common form of transportation to the LPSP.
- Visitors drove an average of 71 miles one-way.
- 96 percent of visitors are from Colorado.
- The RMP Planning Area ranked the third highest of all 42 state parks for multiple visits in a one-month period. Visitors returned an average of 4 times in one month. Annual repeat visitation was also high compared with other state parks, ranking eighth in the number of visitors making multiple return trips in a 1-year period.
- Most visitors use the RMP Planning Area for day use.
- 88 percent of visitors are under the age of 65 and seven percent are 65 years and older.

- 14 percent of the RMP Planning Area visitors are Hispanic.

## **Recreational Uses**

The 1975 Recreation and General Development Plan for the Pueblo Reservoir State Recreation Area (Reclamation et al. 1975) placed the focus of recreation and visitor services primarily on Pueblo Reservoir. CPW's goals for the RMP Planning Area included modifying the 1975 Plan from a "Lake-Centric" perspective to accommodate redevelopment alternatives that recognize and build on new, non-lake-oriented uses, and on recreation initiatives in adjacent jurisdictions (CPW 2012).

The "lake-centric" orientation of the original recreation and general management plan for LPSP (Reclamation et al. 1975) provided a framework for design and the subsequent development of successful recreation facilities (CPW 2012). But this framework and the inherent challenges to resource management in a lake setting has impeded long-term management. Physical constraints at the lake edge limit the potential number of park users by necessitating use of a car, boat, bicycle, and camping equipment. The exposed site and microclimates at the lake edge result in very specific user trends, including "boats only" and extreme peaks in usage. There are few opportunities for impromptu or informal activities such as walking, picnicking in the shade, or simply enjoying the views. A common theme that permeates most, if not all, of the stakeholder interviews, is the sense that the RMP Planning Area has untapped potential to increase visitation and expand activities and amenities (CPW 2012).

At Reclamation's request, LPSP prepared a Trail Management Plan (Appendix B) to address current and future trail management issues within LPSP portion of the RMP Planning Area. Of particular concern, are the informal trails developed over the past few decades from social trails by mountain bikers, equestrian riders, and hikers. Many of the trails lack formal designation by CPW or Reclamation LPSP is currently lacking a Reclamation approved trail management plan. Appendix B was developed by CPW and submitted to Reclamation for approval in 2019. Reclamation will formally approve the Trail Management Plan as part of the RMP process.

Recreation and visitor services and facilities at each management unit are described below and illustrated in MU-1 through MU-7 maps in Chapter 4.

### **Management Unit 1 - South Entry**

MU 1 contains the south entrance station, visitor center, fishing access, a group picnic area, and the Arkansas Point Campground. The campground has 93 campsites with electrical hookups, centrally located water hydrants, showers, flush toilets, and a dump station. Four of the campsites are ABA/ADA-accessible. The South Marina has two, six-lane public boat launching ramps. The South Marina offers 400 boat slips, includes a store and café, and is operated year-round by a concessionaire. CPW and Reclamation offices and maintenance buildings, a public archery range, and Pueblo State Fish Hatchery are also located in MU 1.

The visitor center building is aging but is in generally sound condition and ABA/ADA-compliant. The maintenance building entrance stations are not fully ABA/ADA-compliant.

An asset inventory completed in 2010 (Colorado State Parks 2010) assessed individual campsites at LPSP. Most of the campsites at the Arkansas Point Campground were rated in good condition. In recent years, ABA/ADA-compliant campsites have been added at each camp loop. Comfort station buildings are also ABA/ADA-compliant and the sanitary sewer and water systems at the campground have been upgraded.

The size, weight, and number of vehicles at any given campsite in MU 1 commonly exceed its design and have adversely impacted site drainage, roadways, and landscape.

### **Management Unit 2 - Arkansas River Corridor**

MU 2 includes a reach of the Arkansas River immediately below Pueblo Dam with river fishing access and paved trails, Anticline Pond and fishing pier, Rock Canyon Swim Beach with restroom and shower facilities, and Cottonwood and Osprey picnic areas. The Rock Canyon swim beach complex buildings were renovated in 2017 and are now ABA/ADA-compliant.

### **Management Unit 3 - Operations**

MU 3 does not contain any recreation or visitor services facilities. It includes LPSP's sanitary sewer treatment facility and the Law Enforcement Training Facility and is closed to public access. The Law Enforcement Training Facility consists of a shooting range and as well as other outdoor training facilities.

### **Management Unit 4 - South Shore**

With the exception of a segment of Old Highway 96, which forms the western boundary of MU 4, there are no additional authorized roads in MU 4. One unpaved trail, the Arkansas Point bike trail and extends in a north-south direction between Highway 96 and Arkansas Point. A total of 53 miles of undesignated trail and 4.9 miles of two roads in MU 4 were mapped and evaluated as part of the Trail Management Plan (CPW 2019). There are unauthorized gates (known as Red Gate and 2nd Red Gate) with two-track roads that leading from Highway 96 to a reservoir overlook between Rock and Bogg's creeks and to the South Shore Campground. Most of the undesignated trails have been constructed by mountain bike organizations.

There are unauthorized park access points all along the length of Highway 96 and are used for gatherings at the side canyon rims, walking dogs "off-leash," and off-road biking or trail running. Vehicles typically park on the shoulder of Highway 96 to access the trails. The bike trail system at LPSP is well-known among off-road bicycle enthusiasts throughout the region.

### **Management Unit 5 - North Shore**

MU 5 includes the North Entrance Station, North Marina, Juniper Breaks and Northern Plains campgrounds, North Plains Ranger Station, and the West Fishing, North Picnic, and two group day-use areas. North Marina includes one, six-lane public boat launching ramp and an aquatic nuisance inspection station. The North Marina offers 608 boat slips, includes a store and café, and is operated year-round by a concessionaire. A sailboard day-use area and a model airplane field are also included in MU 5.

Juniper Breaks Campground is divided into 4 loops (D, E, F & G) and has 74 non-electric campsites and 5 vault toilets. Four of its campsites are ABA/ADA-accessible sites. Northern Plains

Campground has four loops (Kettle Creek, Eagle View, Yucca Flats, and Prairie Ridge). Northern Plains Campground has a total of 334 camp sites. Thirteen of these campsites are ABA/ADA-accessible. Eagle View, Yucca Flats and Prairie Ridge loops have electrical service and shower restrooms. Kettle Creek Loop is more primitive and was designed primarily for tent camping. All its campsites are non-electric and services with vault toilets; seven of the campsites are walk-in only, however, CPW reports that the walk-in campsites have been removed. The restroom buildings in Kettle Creek and comfort stations in Yucca Flats, Prairie, and Eagle were updated in 2015 and are ABA/ADA-compliant. Northern Plains Campground is serviced by water hydrants scattered throughout the campground, two dump stations and two playgrounds. The sanitary sewer and water systems at both campgrounds were upgraded in 2011.

### **Management Unit 6 - Pueblo Reservoir**

MU 6 encompasses the water surface on Pueblo Reservoir. Water is the main attraction in the RMP Planning Area and mild water temperature makes Pueblo Reservoir ideal for water-skiing and fishing. Regular winds provide excellent conditions for sail boating and sailboarding, and the reservoir is open to all types of boating activities. Swimming, cliff-diving, and rock jumping are not permitted in MU6.

Pueblo Reservoir is an excellent fishery and provides one of the top walleye, wiper, and bass fisheries in the State (see Section 4.8). Fishing is permitted anywhere with a valid fishing license, except from boat docks, boat ramps, along the face of Pueblo Dam, and areas closed to public access.

### **Management Unit 7 – Pueblo Reservoir State Wildlife Area**

MU 7 comprises the westernmost portion of the RMP Planning Area, including land on both sides of the Arkansas River upstream of the Pueblo Reservoir and including the western portion of Pueblo Reservoir. MU 7 is designated as a SWA and CPW manages the unit for public hunting and fishing. Deer, turkey, dove, waterfowl and scaled quail hunting and cold-water stream and lake fishing are the primary recreation activities in this unit. Discharging firearms or bows are prohibited except for shotguns and bows while hunting. Bowfishing is also allowed. Other recreation activities include picnicking, hiking, and wildlife viewing. Camping, fires, and target practice are prohibited. Jumping, diving, swinging from cliffs, ledges or man-made structures are also prohibited.

## **3.11 Visual Resources**

Although not specifically mentioned in the 1981 RMP, visual resources in the RMP Planning Area are an important resource.

Below Pueblo Dam, a visual resource analysis was conducted for the Black Hill's Pueblo Reservoir Substation Project (Reclamation 2014) which identified observation points with unobstructed views of the RMP Planning Area including Pueblo Dam, Pueblo State Fish Hatchery, LPSP entrance stations, the archery range, and other public agency buildings. Single-family homes, vehicular traffic on some local roads and mountains in the background were also visible.

Other water delivery facilities including Fountain Valley Authority, Pueblo Board of Water Works, and Southern Delivery System Project are also within the viewshed. In addition, construction of a

hydropower plant and associated power lines below Pueblo Dam was completed in 2019 and is owned and operation by the Southeastern Colorado Water Conservancy District under a Lease of Power Privilege with Reclamation.

### 3.12 Air Quality and Noise

CPDHE has the authority to under the Clean Air Act (42 U.S.C. §7401 et. seq. (1970)) to regulate air quality standards, except in Indian Country where EPA Region 8 retains permitting authority. The RMP Planning Area is within the South-Central Region monitoring area for the Colorado Department of Public Health and Environment. The South-Central Region comprises Pueblo, Huerfano, Las Animas, and Custer Counties with urban centers in Pueblo, Trinidad and Walsenburg. Air quality is good within this monitoring area. The RMP Planning complies with the National Ambient Air Quality Standards (CDPHE 2019). In 2018, two particulate monitors (PM10 and PM2.5) were operated at a site located in the city of Pueblo.

Colorado Noise Statute 25-12-103 establishes maximum permissible noise levels in Colorado. Table 3.8 details established sound levels for time periods and zones, which if exceeded, constitute prima facie evidence that such noise is a public nuisance. Under Pueblo County regulations, construction sites are subject to the maximum permissible noise levels specified for industrial zones.

**Table 3.1 - State of Colorado Maximum Permissible Noise Levels**

Zone	Maximum Decibels (dbA)*	
	7:00 a.m. to 7:00 p.m.	7:00 p.m. to 7:00 a.m.
Residential	55 dbA	50 dbA
Commercial	60 dbA	55 dbA
Light Industrial	70 dbA	65 dbA
Industrial	80 dbA	75 dbA

\*Decibels are a measurement of sound intensity over the standard threshold of hearing. dbA is sound intensity with an “A” contour filter. The filter adjusts the measurement to account for the way in which the ear responds to different frequencies of sound (GSU 2015).

There are no noise sources or problems in the RMP Planning Area that register above the maximum permissible noise levels. Primary sources of noise are associated with flowing water released from Pueblo Dam and the operations of associated water delivery systems for the Fry-Ark Project, Pueblo Board of Water Works, Pueblo West, and Southern Delivery System. Vehicle traffic on Park roads, boating on Pueblo Reservoir, and generator use in campgrounds are also sources for noise.

### 3.13 Indian Trust Assets

Indian trust assets (ITAs) are legal interests in assets held in trust by the United States for Indian tribes and the Secretary of the Interior acts as the trustee. ITAs can include, but are not limited to, land resources, water rights, minerals, and hunting and fishing rights. The United States has a fiduciary responsibility to protect and maintain rights reserved by or granted to Indian tribes or tribal members by treaties, statutes, and Executive Orders. Secretarial Order 3175 requires that the

potential impacts of U.S. Department of the Interior bureau actions on Indian trust assets must be addressed in planning and decision documents.

Indian trust assets were assessed in consultation with the Bureau of Indian Affairs, the Northern Arapaho Tribe, the Cheyenne and Arapaho Tribes of Oklahoma, the Comanche Nation of Oklahoma, the Northern Cheyenne Tribe, the Southern Ute Indian Tribe, the Ute Mountain Ute Tribe, the Apache Tribe of Oklahoma, the Kiowa Tribe of Oklahoma, and the Jicarilla Apache Nation.

# Chapter 4- RMP Framework

This chapter describes the long-range management direction for Pueblo Reservoir and surrounding lands in response to public and management concerns, which creates the RMP. The RMP contains management actions that address management issues that once implemented create a desired future condition for the RMP Planning Area.

The management actions were developed through the following process: 1) The Planning Team developed a list of management issues per resource for each MU. Public comments were combined within the list of issues. These issues ranged from trails to recreation experience and from wildlife protection to habitat improvement. 2) Using the list of issues, goals were developed per resource and MU. 3) Objectives with associated management actions were then developed to meet the goals.

## 4.1 Issues Screening Criteria

The list of issues separated into each MU are described starting below in Section 4.5. Screening criteria was followed when evaluating existing uses and the list of issues within the RMP Planning Area. The following list of criteria used:

- Does not change the operation of Pueblo Reservoir.
- Does not adversely affect water quality.
- Complies with federal, state, and county regulations.
- Does not adversely impact threatened, endangered or special status species.
- Meets public health and safety standards and regulations.
- Complies with federal laws, regulations, and policies of the natural environment.
- Is reasonable and financially feasible.
- Can be implemented.
- Is contained within the RMP Planning Area and is consistent with restrictions and status of Reclamation land.

## 4.2 Goals and Objectives

Goals and objectives were developed for the RMP Planning Area in response to the list of issues for each MU. There are both resource-oriented goals that apply to the entire RMP Planning Area and there are goals specific to each MU. Along with each goal is a set of objectives that describes management action that must be completed in order to accomplish each goal. Once the objectives are implemented, the goal will be reached. Some of the goals and objectives apply to both a specific MU and the entire RMP Planning Area.

Resource-orientated goals and objectives are described in detail below. These goals and objectives apply to the entire RMP Planning Area and are not described further in each MU.

## **RMP Planning Area-Wide Resource-Oriented Goals and Objectives**

### **Goal Category: General Management**

**Emphasize balance in managing for protection of natural and cultural resources while accommodating recreational use.**

#### **Objectives:**

- Maintain and support local and regional partnerships and agreements to achieve RMP goals.
- Integrate natural resource management objectives into operations and maintenance (O&M) practices.

### **Goal Category: Paleontological Resources**

**Manage, protect and preserve paleontological resources and their scientific values using scientific principles and expertise under the PRPA 2009 (P.L. 111-011 Title VI Subtitle D**

#### **Objectives:**

- Evaluate, manage, and protect paleontological resources on public lands.
- Facilitate the appropriate scientific, educational, and recreational uses of paleontological resources, such as research and interpretation.
- Ensure that proposed land uses do not inadvertently damage or destroy important paleontological resources on public lands.
- Foster public awareness and appreciation of paleontological resources through interpretation.

### **Goal Category: Soil Resources**

**Maintain soil stability and health.**

#### **Objective:**

- Protect soils by implementing methods and techniques and control erosion.

### **Goal Category: Water Resources**

**Protect and improve water quality in Pueblo Reservoir, the Arkansas River, and Arkansas River tributary drainages by addressing physical, chemical, and biotic components.**

#### **Objectives:**

- Identify potential sources and minimize the potential for pollutants to enter Pueblo Reservoir, the Arkansas River, and its tributary drainages from adjacent lands.
- Increase awareness of, implement and promote watershed BMPs to protect water quality.



- Restore proper condition, function and structure in Arkansas River tributary drainages. Protect the values and promote awareness of the functions that drainages provide.
- Protect soil and native vegetation integrity in Arkansas River tributary drainages.
- Control soil erosion in priority areas where it affects water quality.
- Increase awareness of, implement, and promote watershed BMPs to protect water quality.

**Goal Category: Arkansas River**

**Maintain or improve water quality, including physical, chemical, and biotic components.**

**Objectives:**

- Minimize the potential for pollutants to enter the Arkansas River from adjacent lands.
- Increase awareness of, implement, and promote watershed BMPs to protect water quality.

**Goal Category: Drainages**

**Restore proper condition, function, and structure in drainages. Protect the values and promote awareness of the functions that drainages provide. Protect soil and native vegetation integrity in drainages.**

**Objectives:**

- Prevent pollutants from entering Arkansas River tributary drainages.
- Control soil erosion in priority areas where it affects water quality.

**Goal Category: Vegetation Resources**

**Manage vegetation resources for diversity and richness in a long-term sustainable manner, protecting the soil, hydrologic, and watershed conditions that support them.**

**Objectives:**

- Enhance the health, productivity, diversity, and integrity of native and other desirable plant communities.
- Increase woody vegetation in riparian areas.
- Protect, enhance, and/or restore wetland and riparian vegetation communities.
- Identify and protect sensitive plant communities.

**Goal Category: Noxious and Invasive and Integrated Pest Management**

**Maintain healthy native vegetation communities by reducing, preventing expansion of, or eliminating the occurrence of undesirable invasive, nonnative species, or noxious weeds (including predatory plant pests and disease and aquatic nuisance species).**

**Objectives:**

- Promote natural processes and healthy native plant communities and soils to deter noxious weeds.
- Reduce the aerial extent of all noxious weeds.
- Control invasive and non-native weed species and prevent the introduction of new invasive species, including aquatic nuisance species, through integrated pest management practices.

**Goal Category: Special Status Plant Species Management**

**Protect and enhance habitat for Federal and State Threatened, Endangered, and Candidate plant species as well as other special status plant species.**

**Objectives:**

- Manage listed, proposed, or candidate threatened or endangered species to comply with the provisions of the Endangered Species Act and promote their recovery.
- Manage special status species consistent with current CPW guidelines.

**Goal Category: Wildlife and Aquatic Resources**

**Maintain and protect terrestrial native wildlife habitats and protect aquatic habitat quality. Protect and enhance the quality of the fishery in the reservoir and the Arkansas River.**

**Objectives:**

- Protect wildlife security areas, habitat connectivity, habitat carrying capacity, movement corridors, breeding areas, and winter range.
- Protect raptor nests and nesting raptors from human disturbances.
- Comply with and enforce the MBTA and the Bald and Golden Eagle Protection Act.
- Manage for diversity and richness of wildlife and aquatic habitat and species.
- Prevent the establishment and/or spread of aquatic invasive species.
- Manage aquatic ecosystems to provide sustainable recreational and educational benefits to the public.
- Manage aquatic habitat to provide native and desirable non-native species diversity and viability, and sustain ecological, economic and social values while providing for multiple uses of public lands and waters.
- Retain important blocks of hiding, security and thermal cover for wildlife and implement habitat improvements in areas where there is limited or fragmented security habitat through vegetation treatments and travel route limitations.

- Fences identified as barriers to wildlife movement would be modified to accommodate wildlife passage. Fences would also be marked or modified to reduce wildlife collisions or entanglements.
- Manage locations of new facilities to minimize impacts on wildlife or fisheries habitat function and quality.
- Seasonal restrictions may be identified to protect critical nesting and brooding or spawning periods.
- Assist in the restoration, reintroduction, augmentation or re-establishment of threatened, endangered, and other priority or special status species populations and/or habitats in coordination with other federal and state and local agencies.
- Habitat improvement techniques would be used where appropriate to provide missing aquatic habitat components or improve existing aquatic habitats.
- Management activities would emphasize restoration and/or maintenance of riparian structure, composition, and processes, including physical integrity of riparian ecosystems, amount and distribution of woody debris to sustain physical and biological complexity, water quality and hydrologic processes and distribution and diversity of riparian vegetative communities and source habitats for riparian dependent species.

**Goal Category: Special Status Wildlife Species Management**

**Protect, preserve, restore, recover, and enhance special status fish and wildlife species and their habitats.**

**Objective:**

- Protect, maintain, or improve supporting habitat, ecosystem integrity and function, and manage in accordance with recovery plans.

**Goal Category: Cultural Resources**

**Protect, preserve, and interpret cultural resources in accordance with the NHPA.**

**Objectives:**

- In accordance with Section 106 of NHPA take into account the potential effects of federal undertakings on historic properties.
- In accordance with Section 110 of the NHPA, establish a preservation program for the identification, evaluation, and protection of historic properties.
- Provide interpretive information on cultural resources, as appropriate, at public access areas.

**Goal Category: Indian Trust Assets**

**In accordance with Department of Interior Policy (512 DM 2), protect and conserve Indian Trust Assets.**

**Objectives:**

- Identify and prevent impacts to existing Indian Trust Assets.

### **Goal Category: Travel Management**

**Provide adequate motorized and non-motorized access to all park resources. Manage access (motorized and non-motorized) to balance public use while protecting land resources and minimize user conflict.**

#### **Objectives:**

- Minimize conflicts between pedestrian access and existing infrastructure including the railroad crossing and Juniper Road.
- Reduce congestion at high-use areas.
- Promote general safety for all public land/water users.
- Minimize soil and vegetation resource impacts and eliminate or reduce the spread of noxious and invasive species through effective travel management strategies
- Provide visitor information and education to reduce and/or eliminate un-authorized, user-created routes that degrade land resources and result in accelerated soil erosion.

### **Goal Category: Trail Management**

**Identify a comprehensive travel management network to provide for a spectrum of motorized and non-motorized travel/trail experiences and opportunities.**

#### **Objective:**

- Minimize use conflicts between pedestrian, bike, and equestrian users along trails.

### **Goal Category: Socioeconomic and Environmental Justice**

**Contribute to economic sustainability at the local, state, and regional level. Identify and remediate, to the extent possible, disproportionate negative effects to minority or low-income populations (Executive Order 12898) and Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994).**

#### **Objectives:**

- Provide a diverse array of opportunities that result in socio-economic benefits for interested groups and individuals, including local residents, recreationists, local businesses, etc.
- The use of this area provides opportunities that contribute to local, state and regional economic development growth.
- Emphasize and support collaborative outreach, awareness events and programs that promote the area and encourage sustainable travel and tourism development with local communities.
- Provide for a diverse array of opportunities that result in social benefits for local residents, recreationists, visitors, businesses, and interested parties and future generations.

## **Goal Category: Recreation and Visitor Services**

**Provide for safe, diverse, quality recreational visitor opportunities in a manner that reduces conflict between uses and minimizes negative resource impacts. Provide a variety of recreational and visitor opportunities for both water and land-based activities to enhance visitor experience. Adapt to changing recreation trends (e.g. trail running, mountain biking, fly fishing tail water), if they are sustainable and compatible with CPW's Mission.**

### **Objectives:**

- Develop opportunities to promote access to recreation opportunities within LPSP to adjacent public lands and communities.
- Provide for and maintain quality recreational facilities. Site facilities in a way to eliminate or minimize user conflicts and congestion.
- Ensure protection of the public facilities and public resource value and alleviate conflicts with adjacent lands.
- Address existing trespass/encroachments.
- Maintain hunting opportunities consistent with CPW's mission and management.
- Address and resolve unauthorized access-related conflicts.
- Provide relevant informational, interpretive and educational outreach materials to the public.
- Maintain the existing primitive and developed recreation setting and experience, while providing for recreation opportunities and the continued protection of natural, paleontological and cultural resources.
- Implement ADA/ABA design standards for any new structures and retrofits and outreach programs.
- Provide adequate shoreline and water-based facilities to support the demand for boating and other water-based uses.
- Provide expanded opportunities for hiking, bicycling, and equestrian trails around Pueblo Reservoir.
- Achieve needed enforcement of rules and regulations, and protection of public health and safety.
- Partner and coordinate with other programs and agencies to provide and manage LPSP resources.
- Play an important role in a larger park, open space, and trail recreational system.
- Expand collaboration with related agencies and interest groups.

### **MU Specific Goals and Objectives**

Please refer to Section 4.5 for goals and objectives per MU. The list of objectives below shows the objectives that apply throughout the RMP Planning Area, however, not all apply to every MU.

#### **Land Use Management (LUM):**

Objective LUM 1: Ensure protection of the public facilities, and public resource values on Reclamation lands and alleviate conflicts with adjacent lands.

Objective LUM 2: Implement a Fire Management Plan to address public safety related concerns, as well as efforts that would enhance the natural resource values of the land.

Objective LUM 3: Address existing trespass/encroachments on Reclamation lands.

Objective LUM 4: Ensure that design and location of all new facilities, structures, roads, and trails on Reclamation lands maximize compatibility and integration with the open, rural environment and historic landscape of area.

Objective LUM 5: Minimize impacts on adjacent/surrounding lands resulting from land disturbing activities undertaken on Reclamation lands.

### **Natural Resources (NAT):**

Objective NAT 1: Provide hunting opportunities consistent with CPW's mission and management.

Objective NAT 2: Continue to provide access for hunting area as per state rules and regulations.

Objective NAT 3: Protect and enhance wildlife habitat.

Objective NAT 4: Minimize the potential for pollutants to enter the Pueblo Reservoir and its tributaries from adjacent lands.

Objective NAT 5: Manage shoreline areas to protect habitat for water birds and other migratory birds.

Objective NAT 6: Protect, enhance, and/or restore wetland and riparian habitats in accordance with existing federal regulations and consistent with RMP.

Objective NAT 7: Protect and enhance the quality of the fishery at Pueblo Reservoir.

Objective NAT 8: Enhance shoreline fishing opportunities and associated infrastructure.

Objective NAT 9: Avoid or minimize impacts of RMP actions on federal and state designated species of special concern and species of conservation value, including federally listed threatened or endangered, develop mitigations requirements where impacts occur.

Objective NAT 10: Protect and enhance resource values of and for native species (plants and animals), rare and sensitive plants on parcels or portions of parcels exhibiting mainly high-quality habitat (where native vegetation is dominant).

Objective NAT 11: Conserve and restore pockets of native vegetation on portions of larger parcels exhibiting mainly non-native vegetation.

Objective NAT 12: Control soil erosion in priority areas where it causes concern for water quality and damage to resources and facilities.

Objective NAT 13: Provide information and management actions to reduce the spread of noxious weeds through a variety of mediums.

Objective NAT 14: Provide opportunities for interpretation and public education on area prehistory and history, including the importance of, and requirements for, protecting these resources and environmental education on the areas native habitats and natural resources.

### **Recreation and Access (REC):**

Objective REC 1: Provide quality camping opportunities by improving and/or expanding existing sites and developing new sites in a sustainable manner.

Objective REC 2: Provide quality day-use sites and facilities to meet increasing demands while providing a buffer from adjacent uses (i.e. campgrounds).

Objective REC 3: Improve boat launch ramps and reduce peak period congestion.

Objective REC 4: Reduce conflicts between motorized and non-motorized watercrafts.

Objective REC 5: Achieve needed enforcement of rules and regulations, and protection of public health and safety.

Objective REC 6: Address and resolve unauthorized access-related conflicts pertaining to Reclamation lands.

Objective REC 7: Using Reclamation Visual Identity and signage guidelines and CPW's sign manuals to develop clear, consistent signage to guide public access to and the use of Reclamation lands.

Objective REC 8: Maintain the existing multi-use and developed recreation setting and experience, while providing for recreation and educational opportunities and the continued protection of natural and cultural resources.

Objective REC 9: Provide adequate sanitation and waste management facilities at all improved recreation sites (e.g., restrooms, trash containers, recreational vehicles, and boat dump stations, fish cleaning stations, as appropriate) to protect water quality.

Objective REC 10: Implement ADA/ABA design standards for any new structures or modifications of existing facilities.

Objective REC 11: Provide adequate shoreline and water-based facilities to support the demand for boating and other water-based uses.

Objective REC 12: Enforce trail use and safety, restricting trail use to designated trails only.

Objective REC 13: Provide expanded opportunities for hiking and bicycling on designated trails at Pueblo Reservoir.

Objective REC 14: Standardize non-motorized trails by planning, formalizing, and managing a multi-use recreational trail system while removing or mitigating natural and cultural impacts.

Objective REC 15: Provide a high quality, multi-use non-motorized trail system by standardizing routes, mitigating impacts and promoting resource stewardship of trails and natural resources.

Objective REC 16: Provide diverse quality of life opportunities by including a multi-use non-motorized trail system consisting of varying ranges of complexity, interpretive experiences and values.

Objective REC 17: Develop, standardize and map non-motorized trail systems by balancing public interests with natural resource protection.

Objective REC 18: Construct to American Association of State Highway and Transportation Officials regional trail standards.

Objective REC 19: Provide expanded opportunities for equestrian use on designated trails at Pueblo Reservoir.

**Cultural Resources (CR):**

Objective CR 1: In accordance with Section 106 of the NHPA take into account the potential effects of federal undertakings on historic properties.

Objective CR 2: In accordance with Section 110 of the NHPA, establish a preservation program for the identification, evaluation, and protection of historic properties.

Objective CR 3: Provide interpretive information, as appropriate, at public access areas.

## **4.3 Operation and Maintenance**

O&M of Reclamation lands and facilities will continue in accordance with Fry-Ark Project purposes and federal, state, and county laws as well as regulations and health and safety requirements. Routine O&M includes general, on-going day-to-day activities. These activities may require additional site specific environmental and cultural review, which will be addressed in an annual workplan compliance document. Routine O&M activities include the following:

**Utilities** would be maintained and improved throughout Reclamation lands around Pueblo Reservoir. Utilities currently include:

- Secondary electricity in campgrounds and to facilities.
- Water: well, two water towers, water booster station, wireless supervisory control and data acquisition, and delivery system.
- Sewer: 23 vault restrooms, 3 septic fields, 2 sewer lagoon systems, 3 lift stations and collection system.
- Telephone/Internet: park operations (private only), fiber-optic line, wireless internet between facilities.
- Liquid propane: private facilities.
- Natural gas: centralized system.

**Buildings, structures, day-use facilities and other public use facilities** would be maintained and improved throughout Reclamation lands around Pueblo Reservoir. These currently include:

- Visitor Center, Maintenance Shop (with fuel station, pole barn, equipment storage), 2 ANS inspection stations, 2 Ranger Stations, 4 entrance stations, Area 11 Service Center, Pueblo State Fish Hatchery, Swim Beach Compound.
- Day-Use Areas and lakeside use areas: 1 flush restroom, 13 vault restrooms, 1 playground, picnic shelters/tables, 1 fish cleaning station, kiosk, interpretive sites, 2 boat ramps with docks, volleyball courts.
- Campgrounds: 12 comfort stations with showers, 10 single and double vault toilets, campsites, playground systems, 3 dump stations, picnic tables, benches, fire rings, 2 amphitheaters.
- Marina/Concession Area: concession office/residence.
- Associated facilities such as sidewalks, patios, docks, public restrooms storage buildings, convenience store, food, boat fuel station, tire and dock breakwaters, boat slips and docking systems.



- Wildlife-proof trash containers.

**Roads parking areas, non-motorized trails and sidewalks** would be maintained or improved with the appropriate surface to provide adequate access throughout Reclamation lands around Pueblo Reservoir.

- Surfaces to be maintained include; natural, gravel, asphalt and concrete.
- Other features include, but are not limited to, lane/parking lot striping, handicap parking designation, parking barriers, barrier posts, curbs, curb ramps, associated drainage features (such as, culverts, ditches, and slopes), and traffic counters.

**Signing and safety devices** would be maintained for directional and regulatory information along roads and trails and at facilities and boundaries.

**Vegetation** would be maintained for the appropriate uses within the Mus, including:

- Mowing, trimming, and planting of ground vegetation, trees, and shrubs occur as appropriate to achieve MU objectives.
- Irrigation from well and two ground sprinkler systems utilized to maintain vegetation and plantings where appropriate.
- Shorelines are mechanically groomed to enhance public use at beach areas.
- Trees and shrubs are planted and replaced for shade and decorative purposes, as well as shelter belts and public use screenings as appropriate.
- Maintain existing food plots for wildlife.
- Invasive and undesirable species are managed by use of chemical applications, biological agents, and mechanical control in accordance with the Reclamation Integrated Pest Management Plan (IPMP) (Reclamation 2015).
- Native habitat restoration and dead or hazardous material removal would be done manually.

**Shoreline erosion repair** would occur by repairing existing areas that have valid Army Corps 404 Permit issued. This includes the use of riprap and concrete retaining walls.

**Fences and gates** would be replaced in-kind, in existing footprints and maintained to designate boundaries of properties or restricted use areas.

**CPW manages Pueblo Reservoir for public recreation, wildlife, and fisheries** by placing buoys for “NO WAKE ZONES” and “BOAT RESTRICTED” areas, improvement of fish habitat and structure for balanced fish quality and quantity, creel surveys, hazard removal and maintenance, or installation of proper navigation and lighting associated with human-made structures.

**Law enforcement** would promote public safety, provide emergency response, and perform public notification practices in accordance with State of Colorado Revised State Statute and Colorado Parks and Wildlife Commission Regulations.

**Non-routine O&M** are activities that are outside of general, on-going day-to-day activities. These activities require additional site specific environmental and cultural review, which can be addressed in an annual workplan compliance document or addressed separately in an environmental document.

## 4.4 Management Units

There are seven different MU's within the RMP Planning Area, developed based on use, natural resources, and existing facilities. Management goals and objectives were developed for each resource and MU in a matrix style and used as the basis for development of the RMP's Management Actions. The MUs are:

1. South Entry
2. Arkansas River Corridor
3. Operations
4. South Shore
5. North Shore
6. Pueblo Reservoir
7. LPSP Wildlife Area

Each MU is listed individually below. The MU list out goals, current use, facilities, issues, constraints, and management actions that pertain only to that MU. The management actions approved under this RMP are programmatic in nature. They do not include site-specific details and designs and will need additional environmental and cultural review.

A summary table that shows the RMP's goals, objectives and management actions in a matrix style is located in Appendix D. Some of the 1981 Plan's management actions were the same as the RMP's management actions, thus they were retained.

## 4.5 MU – 1 South Entry

### Goal

Manage the developed recreation facilities and opportunities, balance beneficial uses while protecting the natural resources consistent with the prescribed management objectives.

### Objectives

- CR 1, 2, 3
- NAT 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- LUM 1, 2, 4
- REC 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12

### Current Use

Boat Launch, ANS Inspection, Boating, Fishing, Kayak, Paddle Sports, Biking, Hiking, Walking, Running, Wildlife/Bird Viewing, Camping, Picnic, Group Picnic, Playground, Free Parking, Access for Tubing on Arkansas River, and Archery

## **Facilities**

South and East Entrance Station, South Marina Concessions, Visitor Center, Reclamation Operations and Facilities, CPW Operations and Facilities, Pueblo State Fish Hatchery (no public access), and Amphitheater.

## **Issues**

- Administrative buildings for the LPSP and SWA are in different locations within LPSP, which separates administrative staff and offices and is confusing to the public.
- Visitor Center is showing wear and needs to be updated both with internal and external upgrades to provide a better public experience and for special events for the public.
- Two entrances into LPSP from Highway 96 to Juniper Road.
- Arkansas Point Campground sites need resized, hardscaped, and updated.
- Ongoing unauthorized social trails and erosion.
- Need a connecting trail to access Bogg's Creek.
- Need a fish cleaning station in this MU.
- Proposed expansion of the existing Pueblo State Fish Hatchery to the north.

## **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

Special status species have potential to occur in this MU. Use of timing restrictions for construction will be from April to July, or as appropriate, including seasonal restrictions.

Special status vegetation species occur in this MU. Current data from the Colorado Natural Heritage Program as well as other data would be obtained and any additional on the ground surveys would need to be completed.

Moderate to highly erosive soils occur in areas where proposed development will occur in this MU. Design and budget would need to address remedial elements for long-term sustainability.

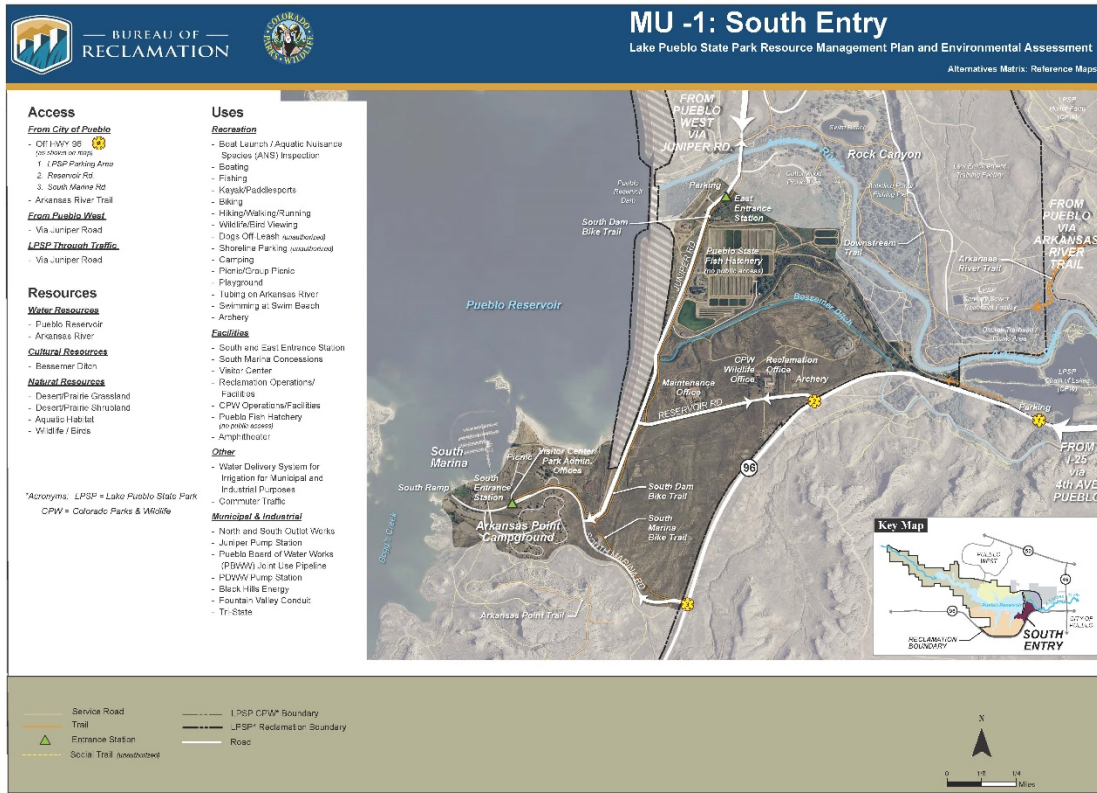
## **Management Actions**

- Expand existing Pueblo State Fish Hatchery immediately to the north.
- Construct new fish cleaning station at the South Marina ramp area.
- Construction of new South Park entrance road, Visitor Center, maintenance office, aquatic nuisance species inspection station, CPW Wildlife Office relocations, existing maintenance

shop compound expanded; new shop building within expanded compound footprint; new security fence installed around perimeter of compound expansion.

- Assess possibilities and redevelop all existing campground areas in place to accommodate larger vehicles, multiple vehicles, and trailers; update furnishings; tables; grills; fire rings; shelters; signage; playgrounds; repair damaged paving; site drainage.
- Design and construct new Bogg's Creek Trail. Formalize trail access from/around ramp to shoreline at Bogg's Creek and access to Pueblo Reservoir. Restore previous disturbance.
- Design and construct new trail connection going west from existing Valco Parking upstream to provide access to the Arkansas River.
- Sign and enforce prohibited parking on shoreline above high water mark at Pueblo Reservoir.
- Require paid parks pass for use of parking lot at spillway east of river and across from the East Entrance.
- Work with Colorado Department of Transportation to improve lanes on Hwy 96 at Reservoir Road.
- Consolidate Park Entry/Point of Contact. Close South Marina Road from Juniper Road to State Hwy 96. Improve intersection of Juniper Road and Reservoir Road.
- Design and improve all existing road access.
- Develop and implement a plan for additional parking/access at South Marina ramp area.
- Enforce pet dumping restrictions, dog and pet waste removal and leash use in high-use areas. Develop and implement a plan to control off-leash dog use. Install dog waste removal stations (signs, bags, trash facilities) in high-use areas.
- Evaluate and design and implement additional riverbank erosion control improvements.
- Maintain trail and fisherman access across top of Pueblo Dam, per Reclamation policy and security.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.

# MU-1 Map



## **4.6 MU – 2 Arkansas River Corridor**

### **Goal**

Manage the diverse recreation opportunities to provide a sustainable visitor experience, while protecting the natural resources consistent with the management objectives.

### **Objectives**

- CR 1, 2, 3
- NR 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- LUM 1, 2, 4, 5
- REC 2, 5, 7, 9, 8, 10, 11, 12, 13, 16

### **Current Use**

Fishing, Kayaking and Tubing on the Arkansas River, Biking, Hiking, Walking, Running, Wildlife and Bird Viewing, Picnicking, Special Events, and Swimming at the Swim Beach.

### **Facilities**

Swim beach, Anticline Pond and Fishing Pier, Paved Trails, and Picnic Facilities.

### **Issues**

- Existing ABA/ADA facilities in Arkansas River Corridor are limited.
- Pueblo Swim Beach Facility needs major repairs.
- Cottonwood tree regeneration and removal of dead and hazardous trees.

### **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

Special status species have potential to occur in this MU. Use of timing restrictions for construction will be from April to July, or as appropriate, including seasonal restrictions.

Special status vegetation species occur in this MU. Current data from the Colorado Natural Heritage Program as well as other data would be obtained and any additional on the ground surveys would need to be completed.

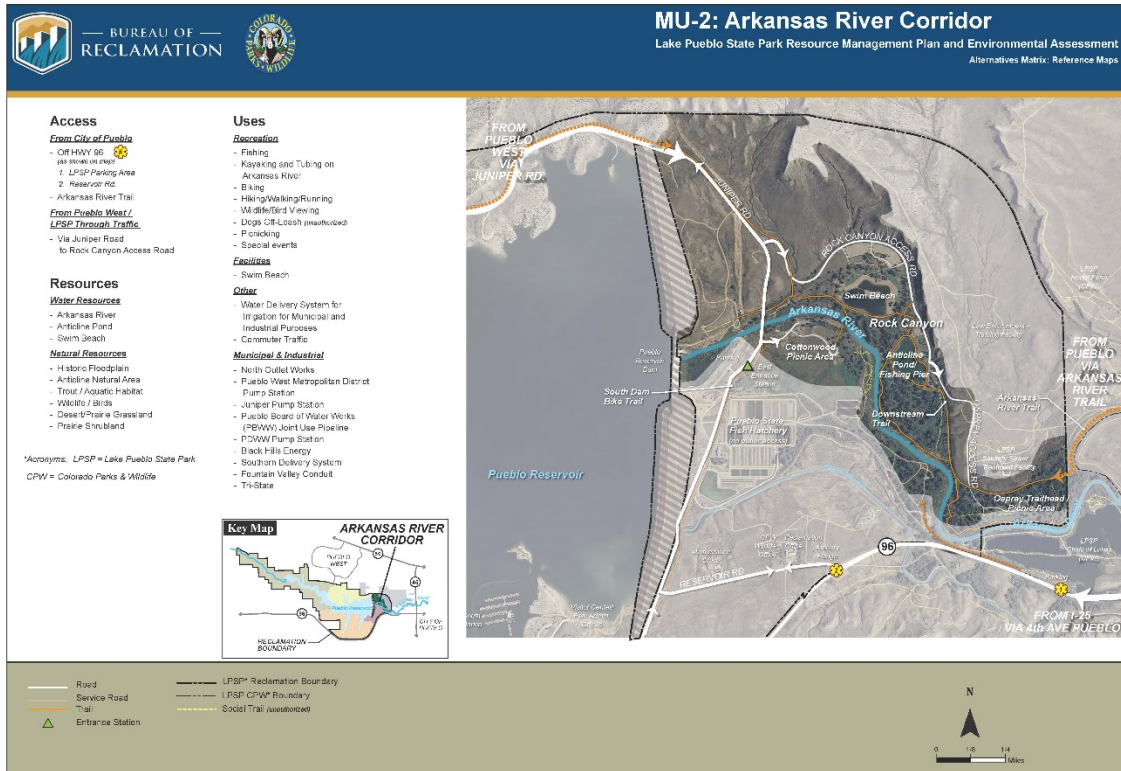
Moderate to highly erosive soils occur in areas where proposed development will occur in this MU. Design and budget would need to address remedial elements for long-term sustainability.

### **Management Actions**

- Improve trail access to Arkansas River to reduce shoreline erosion on both sides of the Arkansas River from Cottonwood Picnic Area to Osprey Trailhead.

- Design and construct trail and ADA/ABA compliant access to the Arkansas River's edge at Cottonwood Picnic area, Anticline Pond, Osprey Trailhead, and picnic area.
- Design and construct new trail connection going west from existing Valco parking lot (MU1) to provide access to Arkansas River.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.
- Improve trout habitat in the Arkansas River and develop/implement plan to maintain bank stability, access and vegetation.
- Develop and implement a program for succession planting of native cottonwood trees along the Arkansas River Corridor to include beaver mitigation.
- Design and implement additional recreational access areas within the Arkansas River Corridor MU to help meet public demand for additional use areas, while reducing impacts to resources.
- Develop and implement a plan for additional parking/access as needed for Arkansas River Corridor.
- Enforce pet dumping restrictions, dog and pet waste removal and leash use in high-use areas. Develop and implement a plan to control off-leash dog use. Install dog and pet waste removal stations (signs, bags, trash facilities) in high-use areas.
- Develop and implement a revegetation plan for the Arkansas River Corridor. Include recommended native plant species, seed mixes, and maintenance guidelines.
- Evaluate and design and implement additional riverbank erosion control improvements for the Arkansas River.
- Develop and implement a Hazard Tree Removal Plan for Arkansas River Corridor.

# MU-2 Map





## **4.7 MU – 3 Operations**

### **Goal**

Operate and maintain administrative area consistent with cultural, natural, and land use objectives.

### **Objectives**

- CR 1, 2, 3
- NR 3, 4, 6, 9, 10, 11, 12, 13,
- LUM 2, 4, 5
- REC 5, 6, 7, 10

### **Current Use**

LPSP Sanitary Sewer Treatment for Water System, Law Enforcement Training. This MU is an operations area and not available to the general recreating public.

### **Facilities**

Sanitary Sewer Treatment Facility and Shooting Range for Training.

### **Issues**

- Need additional parking at Law Enforcement Weapon Range.
- Improved lead disposal and management.
- Manage woody debris disposal site.

### **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

Special status species have potential to occur in this MU. Use of timing restrictions for construction will be from April to July, or as appropriate, including seasonal restrictions.

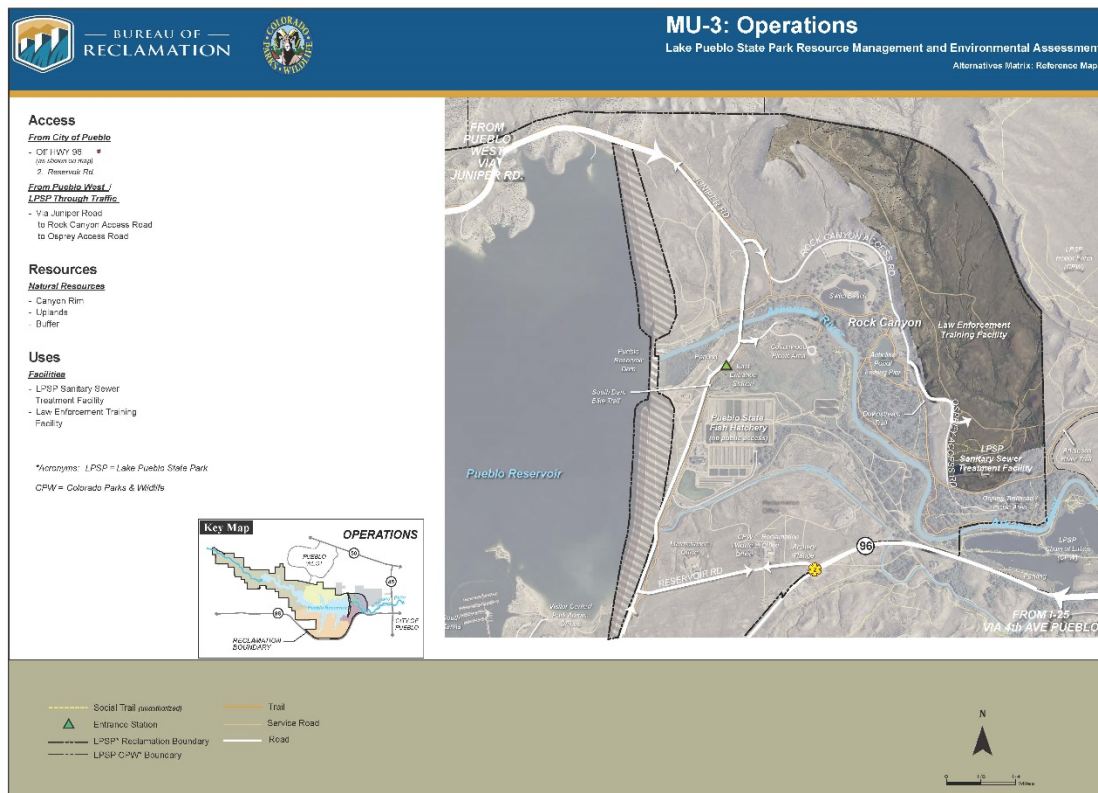
Special status vegetation species occur in this MU. Current data from the Colorado Natural Heritage Program as well as other data would be obtained and any additional on the ground surveys would need to be completed.

### **Management Actions**

- Adopt and implement Environmental Protection Agency BMPs for managing lead at outdoor shooting ranges.
- Design and implement expanded parking capacity, and install vault toilets, at Law Enforcement Weapon Range.

- Maintain as existing service and operational access only.
- Develop a plan/location for proper future disposal of woody debris. If current accumulation of dead wood does not contain invasive tree species, chip existing accumulated wood at the current woody debris disposal site over time as needed and use the material as organic mulch or for other revegetation uses.
- Maintain and monitor existing Sanitary Sewer Treatment Facility and maintain required certifications and permits.

## MU-3 Map



## **4.8 MU – 4 South Shore**

### **Goal**

Minimize user conflicts and impacts to natural resources while providing a multi-use recreational non-motorized trail system.

### **Objectives**

- CR 1, 2, 3
- NR 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- LUM 1, 2, 3, 4
- REC 2, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18

### **Current Use**

Fishing, Biking, Hiking, Walking, Running, Equestrian, Wildlife and Bird Viewing, and Hunting.

### **Facilities**

Arkansas Point Bike Trail and Social Trails.

### **Issues**

- Formalize unauthorized trails so as to not impact existing cultural and natural resources.
- Need trail access to Bogg's Creek from shoreline to MU 3.
- Dogs Off-Leash (unauthorized)
- Illegal Parking off Highway 96 in two locations to access LPSP.
- Need multi-use trails.
- Designate hunting or remove hunting in recreation areas.

### **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

Special status species have potential to occur in this MU. Use of timing restrictions for construction will be from April to July, or as appropriate, including seasonal restrictions.

Special status vegetation species occur in this MU. Current data from the Colorado Natural Heritage Program as well as other data would be obtained and any additional on the ground surveys would need to be completed.

Moderate to highly erosive soils occur in areas where proposed development will occur in this MU. Design and budget would need to address remedial elements for long-term sustainability.

## Management Actions

- Permanently close Old Highway 96 at intersection of SWA access road. Remove asphalt east of terminus trailhead and rehabilitate roadbed as natural surface ADA/ABA trail.
- Design and construct Red Gate South Shore public access trailhead, parking, permanent ADA compliant vault toilet, and self-service fee station at current undesignated location at Highway 96.
- Identify and construct formal administrative motorized access points and additional parking into MU4 for management and enforcement, as needed.
- Design and improve all existing road access in South Shore MU.
- Develop and implement a plan for additional parking/access as needed in South Shore MU.
- Assess impacts of undesignated, unauthorized uses on resources in South Shore MU.
- Develop and implement a revegetation plan for South Shore MU. Include recommended native plant species, seed mixes, and maintenance guidelines.
- Designate hunting or remove hunting in South Shore MU.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.
- Trail maintenance, restoration, and/or variances to an assessed trail will be implemented under the Trail Management Plan. Site specific environmental and cultural resource compliance will be completed prior to any repairs or maintenance of trails.



## **4.9 MU – 5 North Shore**

### **Goal**

Manage the diverse recreation opportunities to provide a sustainable visitor experience, while providing a multi-use recreation non-motorized trail system consistent with cultural, natural, recreation, and land use objectives.

### **Objectives**

- CR 1, 2, 3
- NR 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- LUM 1, 2, 3, 4, 5
- REC 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

### **Current Use**

Boat Launch ANS Inspection, Boating, Fishing, Kayaking, Paddle Sports, Biking, Hiking, Walking, Running, Wildlife and Bird Viewing, Camping Picnic and Group Picnic, Playground, and Model Airplane Special Use Area.

### **Facilities**

West Entrance Station, North Marina Concessions, LPSP Sanitary Sewer Treatment Facility, CPW Administration Building, and Amphitheater.

### **Issues**

- Realign access to SWA if there is a boundary change.
- Update Northern Plains and Juniper Breaks Campgrounds by resizing and hardscape with new camping facilities.
- Need to formalize single track use.
- Need to add overflow parking area.
- Repurpose Model Airplane Field due to low use.
- Improve pedestrian access across railroad.
- Need to add more picnic tables.
- Need highwater access and additional parking areas.

### **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

Special status species have potential to occur in this MU. Use of timing restrictions for construction will be from April to July, or as appropriate, including seasonal restrictions.

Special status vegetation species occur in this MU. Current data from the Colorado Natural Heritage Program as well as other data would be obtained and any additional on the ground surveys would need to be completed.

Moderate to highly erosive soils occur in areas where proposed development will occur in this MU. Design and budget would need to address remedial elements for long-term sustainability.

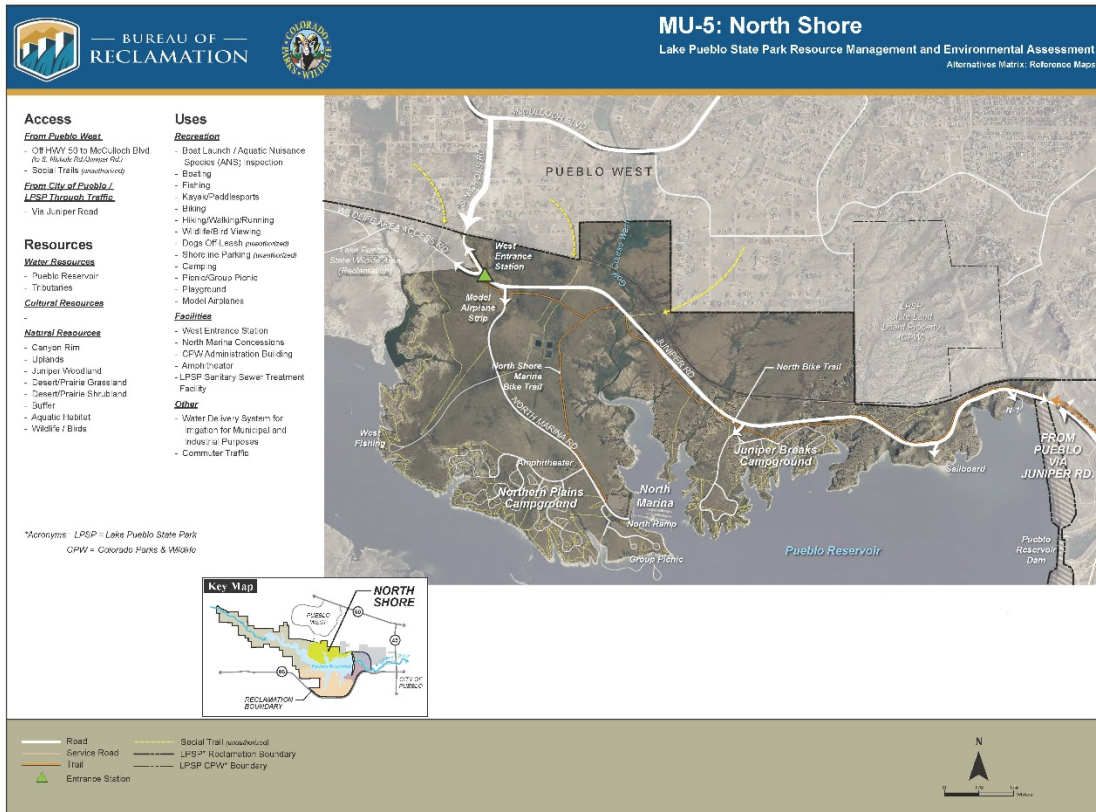
## **Management Actions**

- Remove and evaluate alternate uses for the Model Airplane Field.
- Install picnic tables between Loop Road and top of slope.
- Repurpose 1/3 to 2/3 existing Day Use Picnic Sites at G-Loop and Wagon Wheel Day Use Areas as walk-in camp sites and eliminate the remaining picnic sites.
- Redevelop campground areas in place to accommodate larger vehicles, multiple vehicles, and trailers; update furnishings; tables; grills; fire rings; shelters; signage; playgrounds; repair damaged paving; site drainage.
- Formalize current dirt parking lot at North Marina ramp area.
- Sign and enforce prohibited parking on shoreline above Pueblo Reservoir's high-water mark.
- Remove entrance off Juniper Road and relocate along North Marina Road. Incorporate ANS Inspection, camp permits, entrance fees, registrations and wildlife licenses. Eliminate Wildlife Area Access Road to create a connection to North Marina Road further south.
- Redesign and reconstruct road/culvert to raise road above high water line at Kettle Creek Loop between Campsites 530 and 532, near existing restroom.
- Include a project-specific revegetation plan as part of the design for all planned infrastructure construction and improvements in this MU. This would include re-seeding with native plant species and interim/long-term noxious weed control.
- Maintain and monitor existing LPSP Sanitary Sewer Treatment Facility and maintain required certifications and permits.
- Relocation of the north boundary between SWA and LPSP (relocated to the north of the railroad tracks, on north side of Pueblo Reservoir). Relocation of the south boundary between SWA and LPSP (relocated to the west shoreline at Turkey Creek, on north side of Pueblo Reservoir). These proposed relocations would create a new LPSP boundary (increasing the area managed by LPSP). Also, would create a new SWA boundary (decreasing the area managed by SWA primarily for wildlife resources). West entrance station would be relocated, and new roads added to the transferred parcel managed LPSP.
- Pueblo West has secured FHWA funding to construct about 1.6 miles of paved connecting trail along Nicholls Road just north of the RMP Planning in Pueblo West. The new trail will include a pedestrian bridge on Nicholls Road over the railroad. The trail will connect with

the existing LPSP trail network on Reclamation lands. Reclamation will issue any necessary land use authorization after review of final design.

- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.

## MU-5 Map





## **4.10 MU – 6 Pueblo Reservoir**

### **Goal**

Provide water-based recreation while protecting wildlife and aquatic habitat.

### **Objectives**

- CR 1, 2, 3
- NR 3, 4, 5, 6, 7, 8, 9, 10, 12
- LUM 1, 4
- REC 3, 4, 5, 7, 8, 10, 11

### **Current Use**

Boat Launch with ANS inspection, Boating, Fishing, Kayaking, Paddle Sports, Windsurfing, Jet Skiing, Wildlife and Bird Viewing, and Hunting

### **Facilities**

Boat Launch Marina Concessions, Reclamation Operations and Facilities, CPW Operations and Facilities.

### **Issues**

- Need to analyze and determine boating capacity on Pueblo Reservoir.
- South Marina needs a new breakwater jetty.
- Deadwood accumulation along shoreline.

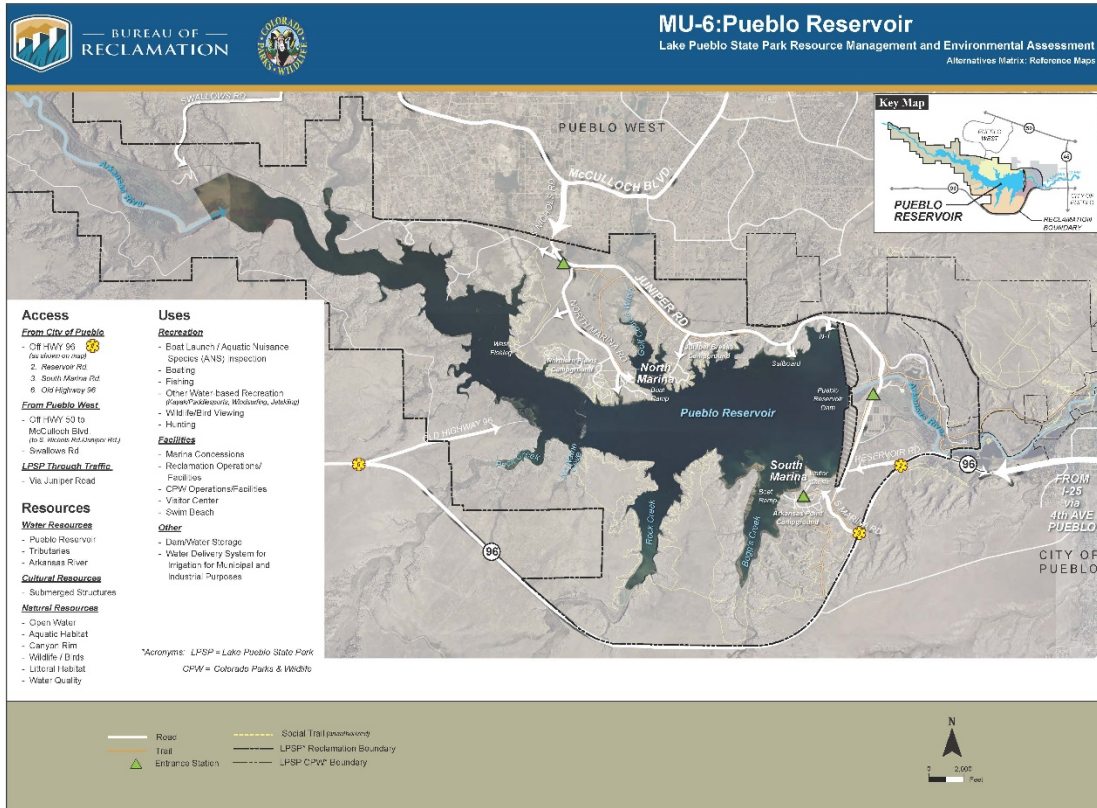
### **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

### **Management Actions**

- Develop and implement bank stability, vegetation and access plan to Arkansas River. Coordinate improvements of trout habitat with CPW.
- Improve existing South Marina courtesy dock. Design and construct breakwater jetty at South Shore Boat Ramp.
- Monitor buoy line locations and adjust as necessary.
- Seek regulatory change to permit swimming in specific areas in Pueblo Reservoir. Review CPW swimming policy.
- Monitor Pueblo Reservoir for woody debris and remove as necessary.

# MU-6 Map



## **4.11 MU – 7 Lake Pueblo State Wildlife Area**

### **Goal**

Protect and enhance habitat for wildlife, fisheries, while managing the natural resources.

### **Objectives**

- CR 1, 2, 3
- NR 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- LUM 1, 2, 3, 4, 5
- REC 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17

### **Current Use**

Boating, Fishing, Biking, Hiking, Walking, Running, Equestrian, Walk-in access for Paddle Sports, Wildlife and Bird Viewing, and Hunting.

### **Facilities**

Gravel Parking Areas, Gravel Roads with access from Highway 50 on the north side and Highway 96 on the south side.

### **Issues**

- Arkansas River is eroding and undercutting towards gravel road access on the south side.
- Assess food plots and enlarging or add new food plots.
- Management of habitat for Scaled Quail.
- Currently there is not overnight camping allowed.
- Encroachment issues.
- Unsolidified boundary between LPSP and SWA.
- Buoys shift due to flux in water levels.

### **Constraints**

Natural, cultural, and paleontological resource concerns occur within this MU. Consultation with SHPO and interested Tribes will be required for development in this MU.

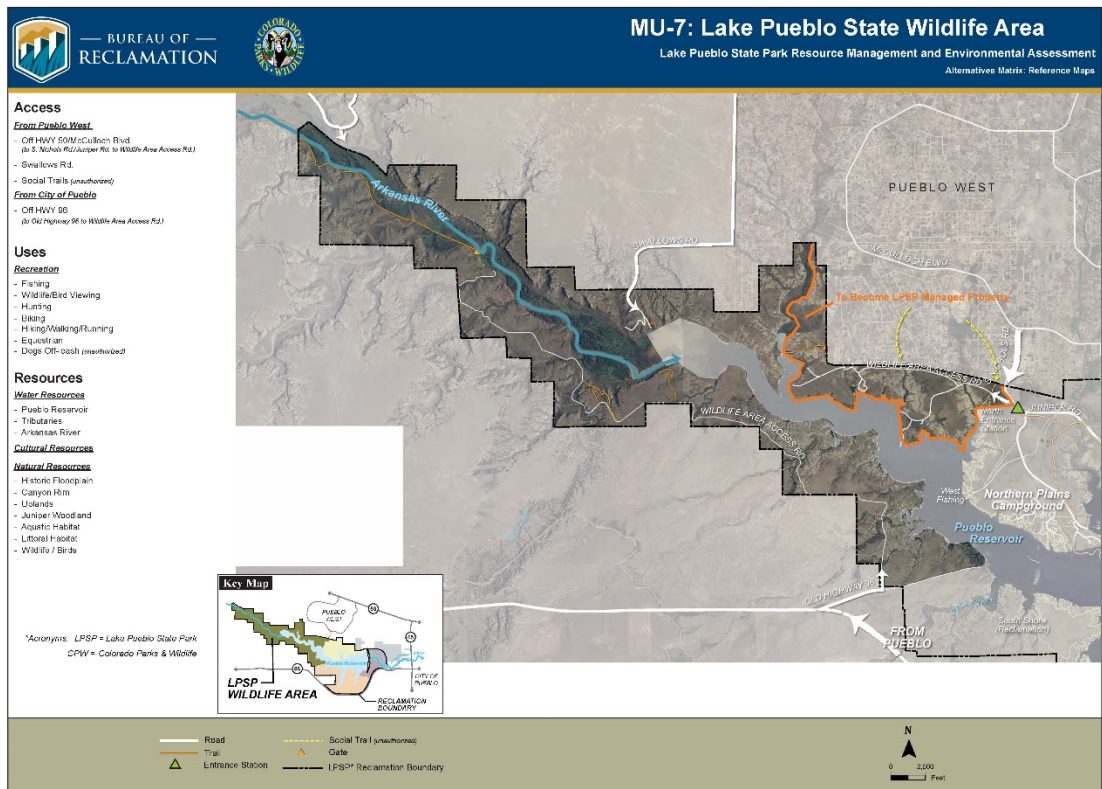
Special status species have potential to occur in this MU. Use of timing restrictions for construction will be from April to July, or as appropriate, including seasonal restrictions.

Special status vegetation species occur in this MU. Current data from the Colorado Natural Heritage Program as well as other data would be obtained and any additional on the ground surveys would need to be completed.

## Management Actions

- Install gate and close Old Highway 96 at intersection of the SWA access road and upgrade to include trailhead amenities. Remove asphalt east of terminus trailhead and rehabilitate roadbed as natural surface trail.
- Develop and implement bank stability, vegetation, and access plan to Arkansas River on west end.
- Replace existing vault toilets with ADA/ABA compliant vault toilets.
- All trails within Lake Pueblo State Park, including new developed routes, user created routes, spurs, reroutes, extensions, access and new types of trail use (such as E Bikes) will be assessed under and approved in the Lake Pueblo State Park Trail Management Plan. If adverse effects to resources, routes would be closed and restored.
- Design and improve all existing road access in SWA MU.
- Inspect, strengthen, and repair perimeter fencing to discourage unauthorized access in SWA MU. Include fencing sections that allow wildlife to cross.
- Relocation of the north boundary between SWA and LPSP (relocated to the north of the railroad tracks, on north side of Pueblo Reservoir). Relocation of the south boundary between SWA and LPSP (relocated to the west shoreline at Turkey Creek, on north side of Pueblo Reservoir). These proposed relocations would create a new LPSP boundary (increasing the area managed by LPSP). Also, would create a new SWA boundary (decreasing the area managed by SWA primarily for wildlife resources). West entrance station would be relocated, and new roads added to the transferred parcel managed LPSP.
- Reopen boat ramps for wildlife access, perform ANS inspections, and make improvements as necessary (if the boundary is relocated and area is managed by LSPS and the North Entrance relocated).
- Develop and implement wildlife habitat management plan to include prescribed burns: i.e. food plots, Scaled Quail habitat, wetland habitat, fisheries, etc.

## MU-7 Map



## Monitoring

Reclamation will conduct monitoring throughout the lifespan of the RMP to track progress and effectiveness of the desired conditions and identify unacceptable effects. Reclamation routinely monitors the lands and water in their jurisdiction including but, not limited to, review of concessions, facility condition assessments, environmental compliance site visits, instrumentation readings, and recreation compliance reviews.

Reclamation developed in 2002 the Recreation Facility Design Guidelines that provide examples of recreation facility designs. Use of these guidelines is intended to meet BMPs, assist in the planning and budget processes, and provide consistent designs throughout Reclamation's system of facilities. Reclamation's Sign Guidelines will be followed and implemented. The Reclamation manuals and guidelines for signs and recreation facility design and can be found at:

<https://www.usbr.gov/recreation/publications/RecreationFacilitiesDesignGuidelines.pdf> and  
<https://www.usbr.gov/recreation/publications/signguide2006.pdf>

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# **Appendix A- Lake Pueblo State Park and Pueblo Reservoir State Wildlife Area Resource Management Plan Environmental Assessment 2015-025**

[http://gspg/sites/ECA/Resources/RM/Outgoing%20Mail%20Routing%20Library/FRY-ARK/Appendix%20A-Lake%20Pueblo%20Draft%20EA%20for%20RMP\\_02102620.docx](http://gspg/sites/ECA/Resources/RM/Outgoing%20Mail%20Routing%20Library/FRY-ARK/Appendix%20A-Lake%20Pueblo%20Draft%20EA%20for%20RMP_02102620.docx)

## **Appendix B- Lake Pueblo Trail Management Plan**

<http://gpsp/sites/ECA/Resources/RM/Outgoing%20Mail%20Routing%20Library/FRY-ARK/Appendix%20B-Lake%20Pueblo%20Trail%20Management%20Plan.pdf>

## **Appendix C- Resource Maps**

[http://gpcsp/sites/ECA/Resources/RM/Outgoing%20Mail%20Routing%20Library/FRY-ARK/Appendix%20C%20Resource\\_Maps.pdf](http://gpcsp/sites/ECA/Resources/RM/Outgoing%20Mail%20Routing%20Library/FRY-ARK/Appendix%20C%20Resource_Maps.pdf)

## **Appendix D- Lake Pueblo Resource Management Plan Alternative Development Matrix**

<http://gpcsp/sites/ECA/Resources/RM/Outgoing%20Mail%20Routing%20Library/FRY-ARK/Appendix%20D-Lake%20Pueblo%20RMP%20Alternative%20Development%20Matrix.docx>