

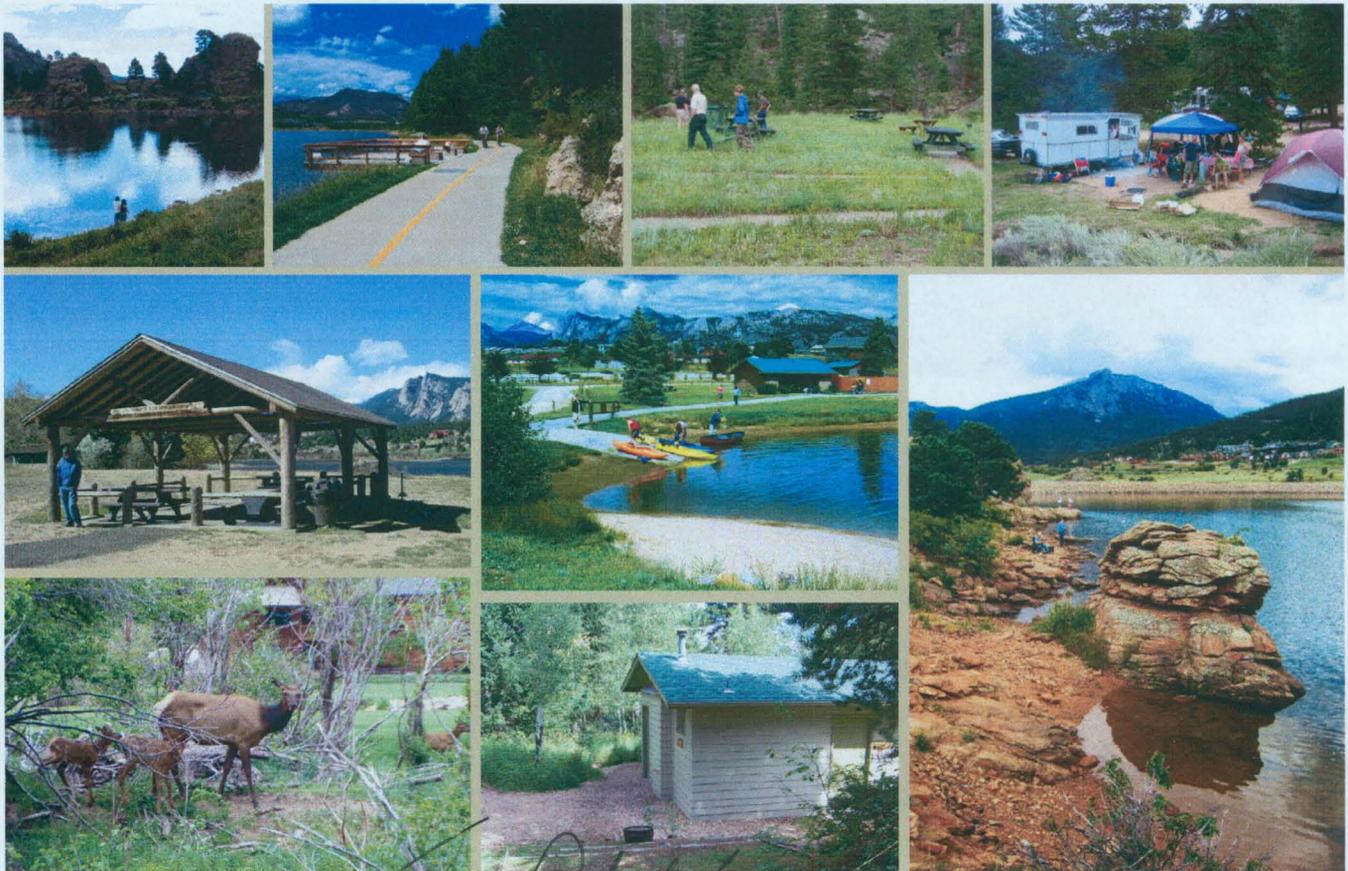
RECLAMATION

Managing Water in the West

FONSI No. EC-1300-08-01

Lake Estes, Marys Lake, East Portal, and Common Point

Resource Management Plan and Environmental Assessment
Finding of No Significant Impact



Approved: _____

Date: _____

7/9/08



U.S. Department of the Interior
Bureau of Reclamation
Great Plains Region
Eastern Colorado Area Office

July 2008

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INTRODUCTION

In accordance with the National Environmental Policy Act (NEPA), the Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA) to evaluate the environmental effects of the proposed ten-year development plan for four Reclamation properties in Estes Valley, Colorado. Details of this project have been encapsulated in a combined Resource Management Plan and Environmental Assessment (RMP/EA) entitled *Resource Management Plan and Environmental Assessment for Lake Estes, Marys Lake, East Portal and Common Point*. The current RMP and EA were completed in 1996 and were intended to provide management direction until 2006. This integrated RMP/EA will replace the 1996 documents, and will establish a 10-year plan detailing the management framework for the conservation, protection, development, and enhancement of the properties.

This Finding of No Significant Impact has been prepared to document the environmental review and evaluation of the proposed action in compliance with NEPA. Based on the following finding, the Bureau of Reclamation (Reclamation) has determined that the implementation of the Proposed Alternative would not result in a significant impact to the human environment, including natural and cultural resources.

PREFERRED ALTERNATIVE

Reclamation evaluated the effects of two alternatives, including the No Action Alternative and the Proposed Action Alternative, and has selected the later as the Preferred Alternative.

The Proposed Action Alternative improves existing facilities, develops new facilities, and encourages management actions that improve visitor experience and protects park resources. Under this alternative, ADA accessibility compliance retrofits or replacements would be provided to meet public needs or demands. Furthermore, additional facilities would be provided, including day use, overnight camping sites, and trails. In addition, management actions to prevent contamination with lead and to mitigate lead would be implemented at Common Point. A summary of the Proposed Action Alternative elements and concept plans is shown in Table 2-11 and Figures 2-2 through 2-10 of the RMP/EA.

ENVIRONMENTAL COMMITMENTS

The following environmental commitments are intended to be standard best management practices that would apply when implementing the Preferred Alternative.

Recreation Facilities, Trails, and Aesthetic Values

- During facilities or trails location, all efforts would be made to avoid wetlands, riparian areas, cliffs, and steep and/or rocky slopes.
- Designated campsites and signs would be used to limit ecological and social disturbance.

- Temporary recreation closures may be necessary when construction poses a risk to visitor safety or resource damage.
- As much as possible, on-site material would be used for construction.
- Recreation facility development would complement the surrounding landscape as much as practical and would follow: (1) site-specific plans; (2) design and construction criteria, guidelines, and standards; and (3) development criteria to protect the visual quality of the reservoir area.
- The replacement of existing infrastructure or facilities would occur within the existing footprint.
- EVRPD, county, and Reclamation would work with local law enforcement entities to ensure proper enforcement of all laws and regulations.
- Proper regulatory and informational signs will be posted in the parks, informing the public of rules and regulations governing the use. Consult Reclamation's manuals and guidelines for signs and recreation facility design (Sign Guidelines for Planning, Design, Fabrication, Procurement, Installation, and Maintenance of Signs for Outdoor Public Use Areas and Recreation Facility Design Guidelines). Reclamation would maintain oversight authority of EVRPD's recreation management at the properties, including approval of concessions' contracts and contracts with user groups.
- EVRPD would complete a financial analysis before development of new facilities or redevelopment of existing facilities to evaluate funding requirements, financial performance of the facilities/programs (if it would generate revenue), and costs associated with maintenance and management.
- New buildings and facilities would not be constructed over the top of C-BT Project infrastructure such as tunnels. Utility and infrastructure locates would be completed during final design and before construction.
- User-created, informal trails would be closed, restored, and discouraged.
- The visual impacts of freshly cut stumps would be mitigated by cutting trees to ground level and spreading soil and leaf litter over the remaining stumps.

Noxious Weeds and Pest Management

- Maintain compliance with state and local noxious weed laws.
- Control the invasion and spread of noxious weeds and other undesirable exotic plants that threaten native habitat or biological diversity.
- Reduce competition of undesirable plants with native and/or planted vegetation.
- Control vertebrate and invertebrate pests, as necessary, to protect public health and safety and to prevent damage to public and private property.
- Clean all heavy equipment before entering and exiting construction sites to minimize transporting weed seed.
- Reseed after construction, heavy maintenance, and other soil disturbing activities. Only native seed would be used in revegetation efforts.
- Minimize sources of weed seed. Use clean fill material from weed-free sources. If straw is used for stabilization and erosion control, it must be certified weed-free or weed-seed free.

- All known noxious weed populations at new construction sites would be treated or eliminated prior to project implementation to prevent the spread of these populations.

Forest Management

- Remove hazard trees from campgrounds, day use areas, and other high-use areas (e.g., popular shoreline fishing areas, parking areas).
- Conduct hazardous fuels reduction through mechanical thinning in areas with high fire risk that are immediately adjacent to residential land uses or have high value.
- Prevent MPB or other forest pest infestation in high risk areas (i.e. developed areas). The least harmful method would be chosen before progressing to more aggressive methods. Signs would be posted before spraying occurs.

Plants and Wildlife

- Protect known active and inactive raptor nest areas.
- Avoid disturbing threatened, endangered, and proposed species (both flora and fauna) during breeding, young rearing, or at other times critical to survival by closing areas to activities.
- Restore vegetation disturbed by construction, trampling, or erosion with native plant species.
- Maintain undeveloped areas for natural vegetation and wildlife habitat.
- Restore natural vegetation in areas affected by trampling or erosion.
- Use closures to protect human and elk safety.
- Collaborate with CDOW and other agencies on wildlife management concerns, particularly elk management activities.
- Livestock grazing would not be permitted at any of the properties because of the potential for conflict with recreational use and neighboring uses.

Soil and Water

- Where excessive soil impacts exist from prior activity, the emphasis shall be on reclamation and preventing any additional detrimental impact, where feasible.
- Build erosion resistance into project design to reduce costly maintenance and restoration (Clean Water Act Sections 402(p) and 404); mitigate concurrently with construction (disturbance of more than 5 contiguous acres per project requires a state storm water discharge permit; a 404 permit would be required if more than 0.5 acre of Waters of the U.S. are disturbed).
- Where required by state law, appropriate permits relating to discharge and sedimentation would be obtained prior to construction.
- Avoid soil-disturbing actions during periods of heavy rain or wet soils. Periods of heavy snowmelt should also be considered.
- Control adverse water quality effects from human activities below high water levels.
- Allow camping in designated sites only.
- Protect or restore shoreline vegetation as a means of controlling erosion.
- Control potential pollutants (gasoline, petroleum products) associated with boat activity.

- Develop a pamphlet for distribution at Lake Estes marina to educate the public about methods to minimize gasoline or petroleum leaks.
- Ensure that operations at the marina follow best management practices for fueling boats and use of fuel containers.
- Coordinate with the Larimer County Planning and Environmental Health Departments to minimize contamination from sewer systems and other land uses.
- Erosion control structures, such as waterbars, drain dips, checkdams, culverts, French drains, catchment basins, and/or wetlands would be installed, where appropriate, to control water movement and protect soils and vegetation.

Wetlands and Riparian Areas

- If stream crossings or other instream structures are necessary, they would be designed to provide for passage of flow and sediment, withstand expected flood flows, and allow free movement of resident aquatic life.
- Avoid any loss of wetlands such as fens and springs.

Heritage Resources

- In accordance with the NHPA, all significant archaeological sites would be protected. Should an unknown cultural resource site be discovered during construction or slope stabilization, a cultural resource specialist would be notified and appropriate measures implemented to preserve the integrity of the site.
- All contracts would include a "stop work" clause if evidence of cultural resources is found during construction. Any cultural property found eligible to the National Register of Historic Places (NRHP) would be protected through avoidance or project relocation. If cultural resources are encountered, further disturbance would be avoided. Protection of the resources discovered would occur whenever possible. If avoidance is not possible, Reclamation would enter into consultations with the State Historic Preservation Office (SHPO) regarding the eligibility of the subject sites for inclusion in the NRHP. This information would take the form of cultural resource report and site forms, and could also include the results of archaeological testing of the subject sites. If avoidance of sites that are determined eligible for inclusion in the NRHP is not possible, Reclamation would take measures to mitigate impacts to those sites. The nature and extent of those mitigation measures would be determined in consultation between SHPO and Reclamation.

FINDING OF NO SIGNIFICANT IMPACT

In the attached RMP/EA, Reclamation evaluated the environmental consequences associated with implementing the Proposed Action Alternative. The potential impacts are summarized in the table below. Based on this analysis, Reclamation has determined that the Preferred Alternative will not cause significant impacts.

Table 1 – Impact Summary

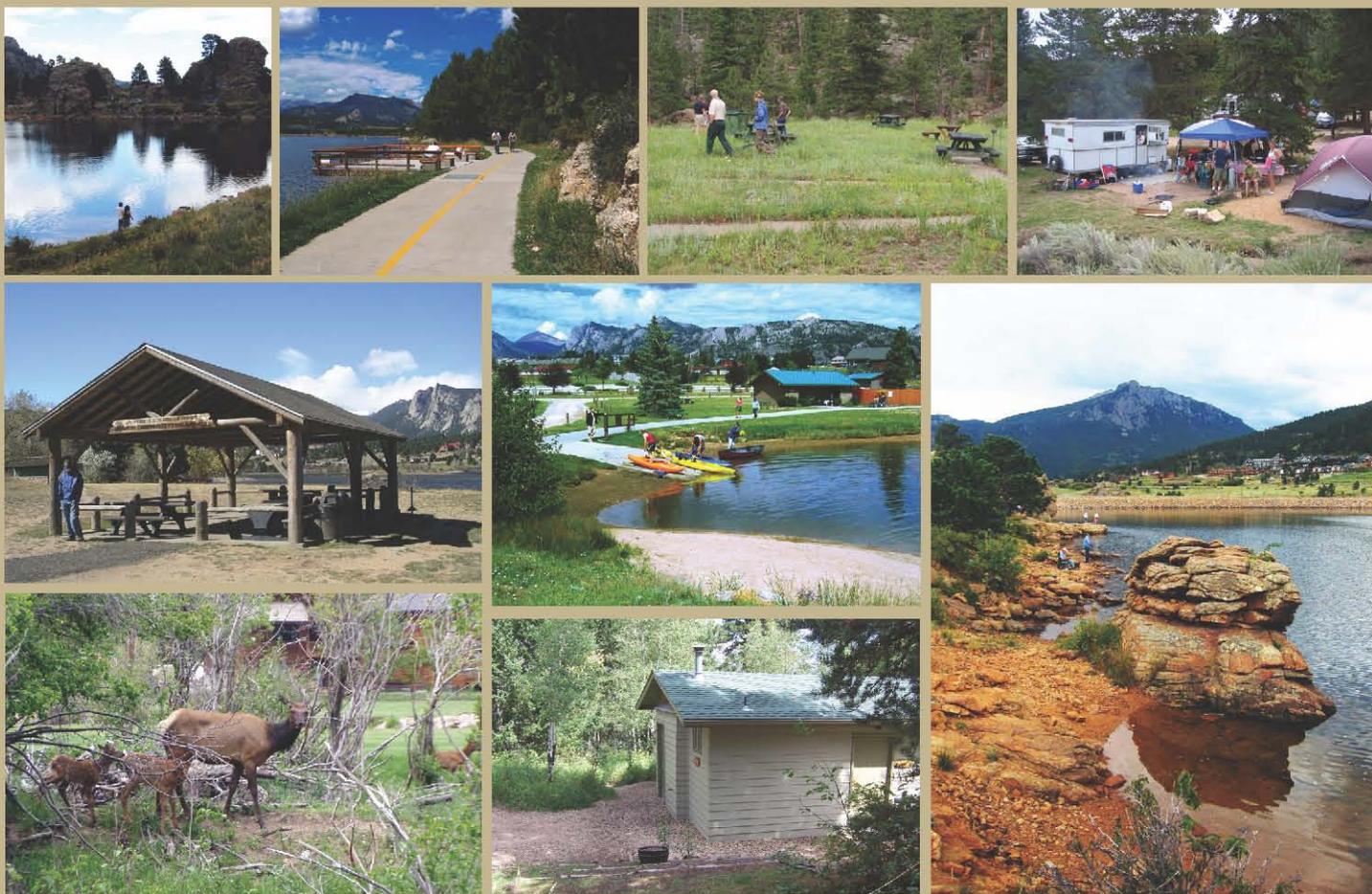
Resource(s)	Lake Estes	Marys Lake	East Portal	Common Point
Hydrology and Water Quality	Hydrology: No impact Water Quality: Negligible adverse short-term and long-term Considerations: Impermeable surfaces, wetland construction and excavation	Hydrology: No impact Water Quality: Negligible adverse long-term Considerations: Impermeable surfaces	Hydrology: No impact Water Quality: Negligible adverse long-term Considerations: Impermeable surfaces	Hydrology: Minor adverse short-term and long-term Water Quality: Minor beneficial long-term Considerations: Clean-up program, and soil disturbance
Soils, Geology, and Topography	Soils: Minor adverse short-term; negligible beneficial long-term Geology: No impact Topography: No impact Considerations: Soil disturbance, reduction of informal use	Soils: Minor adverse short-term; moderate beneficial long-term Geology: No impact Topography: No impact Considerations: Soil disturbance, reduction of informal use, reduction of erosion	Soils: Minor adverse short-term; minor beneficial long-term Geology: No impact Topography: No impact Considerations: Construction activities, Impermeable surfaces, reduction of erosion	Soils: Negligible adverse short-term and long-term Geology: Minor adverse long-term Topography: Minor adverse long-term Considerations: Clean-up program, and soil disturbance
Vegetation and Wetlands	Native Communities: Long-term moderate adverse to moderate beneficial Special Status Species (weeds): Moderate adverse short-term; minor beneficial long-term Considerations: Vegetation disturbance, reduction in over grazing, restoration, weed management, MPB management.	Native Communities: Moderate beneficial long-term Special Status Species (weeds): Minor adverse short-term; minor beneficial long-term Considerations: Vegetation disturbance, fencing of areas, restoration, weed management, MPB management.	Native Communities: Minor beneficial long-term Special Status Species (weeds): Negligible adverse short-term; negligible beneficial long-term Considerations: Vegetation disturbance, tree removal, restoration, weed management, MPB management.	Native Communities: Minor adverse short-term Special Status Species (weeds): Moderate adverse short-term; minor beneficial long-term Considerations: Vegetation disturbance, weed management, MPB management.

Fish and Wildlife	Wildlife and Habitat, general: Moderate adverse short-term; Long-term: negligible adverse to moderate beneficial Special Status Species Bald eagle: Negligible beneficial long-term Peregrine falcon: Negligible beneficial long-term Considerations: Vegetation disturbance, reduction in over grazing, restoration, weed management	Wildlife and Habitat, general: Moderate adverse short-term; minor beneficial long-term Special Status Species: Bald eagle: No impact Peregrine falcon: No impact Considerations: Vegetation disturbance, reduction in grazing, restoration, weed management	Wildlife and Habitat, general: Moderate adverse short-term; minor beneficial long-term Special Status Species Bald eagle: No impact Peregrine falcon: No impact Canada lynx: No impact (no effect) Considerations: Vegetation disturbance, restoration, weed management	Wildlife and Habitat, general: Minor adverse short-term Special Status Species: Peregrine falcon: No impact Considerations: Habitat disturbance, informal recreation use, shooting intensity
Recreation	Moderate adverse short-term; moderate beneficial long-term Considerations: Construction disturbances, ADA improvements, recreation facility improvements	Moderate adverse short-term; moderate beneficial long-term Considerations: Construction disturbances, ADA improvements, recreation facility improvements	Minor adverse short-term; moderate beneficial long-term Considerations: Construction disturbances, ADA improvements, recreation facility improvements	Minor adverse long-term Considerations: Construction disturbances, ADA improvements, closures
Scenic and Aesthetic Resources	Moderate adverse short-term; minor beneficial long-term Considerations: Construction disturbances, ADA improvements, facility enhancements	Moderate adverse short-term; moderate beneficial long-term Considerations: Designated use areas, construction disturbances, ADA improvements, facility enhancements, reduction of crowding in key areas, vegetative screening	Moderate adverse short-term; minor beneficial long-term Considerations: Construction disturbances, ADA improvements, facility enhancements	Adverse: negligible short-term and minor long-term Considerations: Construction disturbances
Land Use	Moderate beneficial long-term Considerations: Updated management guidance, land use compatibility	Minor beneficial long-term Considerations: Updated management guidance, land use compatibility, directional lighting, smaller fire rings, screening, reconfigured campsites	Long-term: minor beneficial to negligible adverse Considerations: Updated management guidance, directional lighting, smaller fire rings	No impact
Socioeconomics	Minor beneficial long-term Considerations: Increased growth in visitation	Minor beneficial long-term Considerations: Increased growth in visitation	Minor beneficial long-term Considerations: Increased growth in visitation	Minor beneficial long-term Considerations: Increased growth in visitation
Cultural and Heritage Resources	No known impacts Considerations: Ground disturbance, inadvertent disturbance	No known impacts Considerations: Ground disturbance, inadvertent disturbance	No known impacts Considerations: Ground disturbance, inadvertent disturbance	No known impacts Considerations: Ground disturbance, inadvertent disturbance

EA No. EC-1300-08-01

Lake Estes, Marys Lake, East Portal, and Common Point

Resource Management Plan and Environmental Assessment



Bureau of Reclamation
Great Plains Region
Eastern Colorado Area Office



Estes Valley Recreation and
Park District

July 2008

Resource Management Plan And Environmental Assessment for

Lake Estes

Marys Lake

East Portal

Common Point



Bureau of Reclamation
Great Plains Region
Eastern Colorado Area Office
Loveland, CO
www.usbr.gov/gp/eca0



**Estes Valley Recreation and
Park District**
Estes Park, CO
www.estesvalleyrecreation.com

July 2008

Mission Statements

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.

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.

Estes Valley Recreation and Park District's mission is to provide, manage, direct, and organize leisure programs and opportunities for residents of the District and visitors to the community. Programs are to be implemented to meet a wide variety of recreational opportunities to include both active and passive leisure experiences. Programming opportunities shall be made available to all age groups with diversity in programming. Activities and programs shall be made available within the financial limitations and scope of the District.

ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
BTWF	Big Thompson Watershed Forum
C-BT	Colorado – Big Thompson Project
CDOW	Colorado Division of Wildlife
CDPHE	Colorado Department of Public Health and Environment
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
CNHP	Colorado Natural Heritage Program
County	Larimer County
CSDO	Colorado State Demography Office
CWMA	Colorado Weed Management Association
E.O.	Executive Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
EV Plan	Estes Valley Comprehensive Plan
EVRPD	Estes Valley Recreation and Park District
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
MPB	Mountain Pine Beetle
NCWCD	Northern Colorado Water Conservancy District
NDIS	National Diversity Information System
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
OPPS	Office of Program and Policy Services
P.L.	Public Law
Preble's mouse	Preble's Meadow Jumping Mouse

Reclamation	U.S. Bureau of Reclamation
RMNP	Rocky Mountain National Park
RMP	Resource Management Plan
RV	Recreational Vehicle
SH	State Highway
SHPO	State Historic Preservation Office
SWMP	Storm Water Management Plan
TOC	Total Organic Carbon
U.S.C.	U.S. Code
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDI	U.S. Department of Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
UTSD	Upper Thompson Sanitation District
YMCA	Young Men's Christian Association

EXECUTIVE SUMMARY

Introduction

This document is a summary of the Lake Estes, Marys Lake, East Portal, and Common Point Draft Resource Management Plan and Environmental Assessment EA No. EC-1300-08-01. The document contains the Resource Management Plan (RMP) and associated National Environmental Policy Act (NEPA) compliance document for four Bureau of Reclamation (Reclamation) properties constructed as part of the Colorado-Big Thompson (C-BT) project and managed by Estes Valley Recreation and Park District (EVRPD).

The Environmental Assessment (EA) was prepared according to current Reclamation guidelines (Reclamation 2000a) and Council on Environmental Quality regulations in compliance with the National Environmental Policy Act of 1969. It provides an evaluation of the impacts of the proposed action and reasonable alternatives. It is not a decision document, but is intended to help decision makers determine whether to issue a Finding of No Significant Impact (FONSI) or to proceed with the preparation of an Environmental Impact Statement (EIS).

The EA component of the document identifies two management alternatives per property: a No Action Alternative and one action alternative, the Proposed Action. Existing resource conditions and environmental factors are described as well as the potential effects of the alternatives on these resources. The resources and environmental factors analyzed in this document include hydrology, water quality, soils, geology, topography, fish and wildlife, vegetation and wetlands, cultural resources, recreation, scenic and aesthetic quality, socioeconomics, and land use.

The preparation and implementation of an RMP is a Federal action that is intended to direct the management of resources within the study area to maximize overall public and resource benefits for the next 10 years. The RMP/EA will be used as the management framework for the EVRPD-Reclamation properties until 2018.

The integrated RMP/EA updates and supersedes the previous RMP (Reclamation and EVRPD 1996) and EA (Reclamation 1997).

Purpose and Need

The purpose of this RMP/EA is to provide formal program and policy guidelines, enabling the orderly use, development, enhancement, and management of the Reclamation properties in Estes Park. The RMP/EA will promote the following Reclamation and EVRPD management goals:

- Provide appropriate opportunities for recreation in a natural setting, while balancing natural resource considerations and accounting for future recreation demand.
- Manage and protect water quality and related natural and cultural resources.
- Promote active outreach efforts that celebrate park resources.
- Manage park resources in an efficient and economically sustainable manner.

The RMP/EA will identify specific strategies to accomplish these objectives, enabling Reclamation and EVRPD to make appropriate management decisions, and to effectively meet the recreation demands of park visitors both now and in the future.

The most basic challenge is to protect natural and cultural resource values while allowing recreational uses that have a minimal effect on these resources.

The current RMP and EA were completed in 1996 and were intended to provide management direction until 2006. This integrated RMP/EA will replace the 1996 documents, and will establish a 10-year plan detailing the management framework for the conservation, protection, development, and enhancement of the properties.

Current issues and needs have been identified by EVPRD, Reclamation, and through the public and stakeholder involvement process. The RMP/EA will address issues and needs relating to:

- Visitor experience, including safety, diversified experiences, recreational opportunities, and improved facilities
- Natural resources
- Socioeconomics and cultural resources
- Park administration, including fiscal responsibility

Additionally, the importance of homeland security measures and ADA compliance has been elevated since completion of the 1996 RMP. Subsequently, related new policies, procedures, and requirements will influence this plan update.

This RMP/EA will provide for the coordinated allocation of funds; planning and implementation of projects; and development of lands, facilities, and recreational opportunities.

History and Background

Lake Estes, Marys Lake, East Portal, and Common Point are operated together as a system for conveying water from the west

slope to the east slope of the Continental Divide. These lands were acquired by the federal government as part of the C-BT project, authorized by the Secretary of the Interior and approved by the President of the United States on December 21, 1937. The project features at Lake Estes, Marys Lake, East Portal, and Common Point are a part of the CB-T Project. In addition to water conveyance and hydroelectric power generation, the reservoirs and associated project properties also provide recreational opportunities, which is the focus of this plan.

The Federal Water Project Recreation Act (Public Law 89-72), signed on July 9, 1965, provided for the planning, land acquisition, and development of the recreation potential at existing water development projects. Public Law 102-575, Title 28, the Reclamation Recreation Management Act of 1992, provides additional authorities and removes previously established monetary limits on recreation facilities.

Overview of the Study Area(s)

Lake Estes, Marys Lake, East Portal, and Common Point are all located within the vicinity of the Town of Estes Park, Colorado (Map 1). Estes Park is located approximately 50 miles northwest of Denver. Denver, Boulder, Loveland, and Fort Collins are all within a 1.5-hour drive of Estes Park. Estes Park is the gateway community at the east entrance of Rocky Mountain National Park (RMNP). The Roosevelt National Forest also borders the community.

The Town of Estes Park, and the surrounding Estes Valley area located in western Larimer County, Colorado. Estes Park is the only incorporated municipality in the valley. Within the Estes Valley,

approximately 55% of the population resides in the Town of Estes Park, 44% resides in unincorporated Larimer County, and 1% resides in unincorporated Boulder County. From 1990 to 2006, the population of the town nearly doubled from 3,184 to 5,921. Over the last 15 years (1990 through 2006), the town's population has grown at an average annual rate of 3.9%.

Planning Process

The RMP/EA process relied on an extensive public involvement program to ensure that the resulting plan represented the needs, concerns, and desires of the interested public (Figure 1-1). The program allowed for public input through a variety of channels, including open house meetings, websites, written comments, and interviews. Newsletters were distributed to all interested parties, adjacent property owners, and at EVRPD visitor contact facilities. Press releases regarding the project and upcoming public meetings were published in local newspapers.

Management Responsibilities

Reclamation maintains primary jurisdiction of the lands and associated resources at the four properties and is responsible for the environmental resources; however, some of the resources, such as the fishery, are the responsibility of other entities. The EVRPD is a quasi-municipal corporation and a political subdivision of the State of Colorado. EVRPD administers the lands and recreational facilities at Lake Estes, Marys Lake, East Portal, and Common Point through a 25-year management agreement with Reclamation that extends from 2007 through 2032. The RMP/EA only addresses the Federally-owned properties that are managed by EVRPD agreement with Reclamation.

However, administration of the land and water areas at the four parks requires a coordinated effort between several entities with varying degrees of management responsibility. Implementation of actions proposed in the plan will require a cooperative effort between EVRPD, Reclamation, and others such as concession operators, CDOW, Larimer County, and the Town of Estes Park.

It is the intention of EVRPD, in cooperation with Reclamation, to administer the areas and provide high quality recreation that is both safe and enjoyable to the public. There are several areas throughout the properties that are closed to public recreation for public safety and security reasons.

Resource management for Lake Estes, Marys Lake, East Portal, and Common Point require the simultaneous management of recreation resources and natural resources. Recreation resources include land- and water-based amenities, facilities, and activities. Natural resources include natural areas, wetlands, wildlife, fisheries, and vegetation.

Alternatives

NEPA requires the consideration and evaluation of a range of reasonable alternatives that meet the Purpose and Need for a proposed Federal action and the assessment of potential effects to the human and natural environment. In addition to the action alternatives, NEPA requires the consideration of a No Action Alternative (in this case, an alternative describing the management of the parks in the absence of an updated RMP).

The basic goal in formulating alternatives was to identify various combinations of actions and resource management practices

that responded to the issues identified during the planning process. Issues were identified through collection and review of existing resource data, public involvement, agency review of internal programs and policies, and site visits to the park study areas.

Planning, management, legislative, and environmental constraints were also identified, which set the sideboards for alternative development.

Project goals, objectives, and guiding statements were established to assist in formulating and selecting combinations of management actions that could reasonably be implemented and, therefore, would be considered viable alternatives. The goals and objectives can be reviewed in section 2.3.

As part of the guiding statements effort, management zones were developed, which provided general guidance on the most appropriate locations for park activities. The management zones defined for these parks include:

- **Sensitive Resource Protection Zone**
- **Backcountry Zone**
- **Frontcountry Zone**
- **Developed Zone**
- **Limited Access Zone**
- **No Access Zone**
- **Calm Water Zone**
- **Passive Water Zone**

Definition for the zones can be found in Section 2.4. Figure 2-1 and Maps 2 through 5 illustrate how each park is subdivided into management zones. The combination and size of zones in the parks help define the visitor experience, resource conditions, and managerial conditions.

Using the goals, objectives, and guiding statements, Reclamation and EVRPD

developed a reasonable action alternative (i.e., an alternative that prescribes a change in resource management). The range of reasonable alternatives for this project is limited due to the intended uses of the properties, the scarcity of a developable land base, the maturity of the existing parks (e.g., majority of developable lands are already developed), and the purpose and need requirements outlined in Chapter 1.

Under the No Action Alternative (Alternative A), ADA accessibility compliance retrofits or replacements would be provided to meet public needs or demands. Management actions to prevent contamination with lead and to mitigate lead would be implemented (at Common Point only). Current resource management practices and operations would not change. Management actions would occur on a case-by-case basis to meet Federal, state, and local laws and regulations. Maintenance of existing facilities would occur as needed.

Existing facilities and recreational opportunities are shown in Table 2-2. Under the No Action Alternative, the total numbers of facilities are not expected to change; although, ADA compliance designated numbers may change.

Beyond the actions of the No Action Alternative, the Proposed Action Alternative (Alternative B) improves existing facilities, develops new facilities, and encourages management actions that improve visitor experience and protect park resources. Under this alternative, additional facilities would be provided, including day use, overnight camping sites, and trails.

See Table 2-9 for a summary of the existing and project alternative facilities. A summary of the Proposed Action Alternative

elements and concept plans is shown in Table 2-11 and Figures 2-2 through 2-11.

The implementation of the majority of these actions would be phased over the next 10 or more years. “Funding One Actions” would be financed with funding that has already been dedicated by Reclamation and EVRPD. “Funding Two Actions” would be financed with funds that are likely to be captured by EVRPD, which include EVRPD funds, Reclamation funds, grants, volunteer labor, local government contributions, and other existing sources of funding for recreation and conservation. “Funding Three Actions” could be financed with other funds such as Federal grants, bond funding, increased revenue from the parks, and other potential sources of funding. Any action identified in the plan would only be implemented if funding becomes available for the action. It may also be possible that a less expensive alternative (i.e. gravel instead of asphalt) would be selected.

Impacts

Existing physical, biological, and socioeconomic resources in the study area (Affected Environment) and the anticipated environmental effects (Environmental Consequences) of the alternatives were evaluated. The No Action Alternative was compared against current conditions to assess its level of impact on the resources. It provides a baseline condition, which was used to evaluate the level of impact caused by the Proposed Action Alternative.

Analysis of the potentially affected resources is based on the professional judgment and experience of Reclamation and EVRPD staff specialists, discussions with resource experts and professionals, literature review, and field trips to the study area by resource personnel.

The goal of the impact analysis is to disclose, to the extent possible, the impacts of each alternative on the analyzed resources. Direct, indirect, and cumulative impacts are analyzed for each impact topic and are described in terms of type, duration, and intensity. See below for descriptions of impact thresholds.

Direct, indirect, and cumulative impacts are analyzed for each impact topic and are described in terms of type, duration, and intensity; general definitions of each are provided in Section 3.2. All potential impacts discussed represent the residual impact expected after the successful implementation of the Standard Environmental Commitments presented in Section 2.7.

Table 3-7 summarizes the impacts expected with the implementation of the No Action and Proposed Action Alternatives.

How to Obtain More Information

More information can be obtained by reading the Lake Estes, Marys Lake, East Portal, and Common Point Draft Resource Management Plan and Environmental Assessment EA No. EC-1300-08-01. Also, visit Estes Valley Recreation and Park District website at www.estesvalleyrecreation.com/RMP.htm.

If you have any additional questions or concerns, please contact Kara Lamb with the Bureau of Reclamation at either (970) 962-4326 or klamb@gp.usbr.gov. To submit written comments, please mail to the attention of Ms. Kara Lamb at: Bureau of Reclamation, 11056 W. County Road 18E, Loveland, CO 80537-9711. Written comments may also be submitted via fax to the attention of Ms. Kara Lamb at (970) 663-3212.

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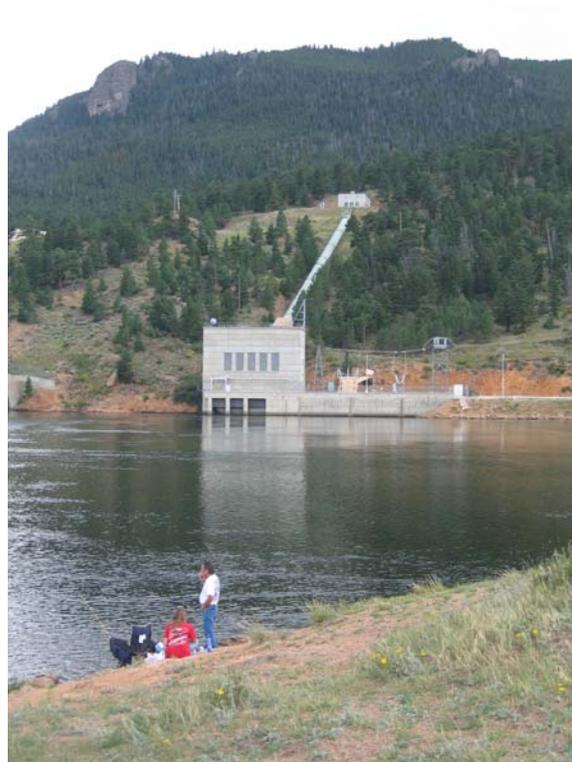
1.0 INTRODUCTION AND OVERVIEW

1.1 Introduction

This document contains the Resource Management Plan (RMP) and associated National Environmental Policy Act (NEPA) compliance document for four Bureau of Reclamation (Reclamation) properties constructed as part of the Colorado-Big Thompson (C-BT) project and managed by Estes Valley Recreation and Park District (EVRPD): Lake Estes, Marys Lake, East Portal, and Common Point. Typically, much of the same information and analyses required by NEPA are also included in an RMP; therefore, this RMP has been integrated with an Environmental Assessment (EA).

The RMP portion(s) of the document describes the management framework; the needs, opportunities, and constraints; public issues and concerns; Reclamation and EVRPD goals and objectives; and specific management objectives and actions for the study area. It also provides a description of the history and baseline conditions for measuring the progress and success of proposed management actions.

The EA was prepared according to current Reclamation guidelines (Reclamation 2000a) and Council on Environmental Quality regulations in compliance with the National Environmental Policy Act of 1969. It provides an evaluation of the impacts of the proposed action and reasonable alternatives. It is not a decision document, but is intended to help decision makers determine whether to issue a Finding of No Significant Impact (FONSI) or to proceed with the preparation of an Environmental Impact Statement (EIS). The EA component of this document identifies two



Shoreline Fishing at Marys Lake

management alternatives per property: a No Action Alternative and one action alternative, the Proposed Action. Existing resource conditions and environmental factors are described, as well as the potential effects of the alternatives on these resources. The resources and environmental factors analyzed in this document include hydrology, water quality, soils, geology, topography, vegetation, wetlands, fish and wildlife, recreation, scenic and aesthetic resources, land use, socioeconomics, and cultural and heritage resources.

The preparation and implementation of an RMP is a federal action that is intended to direct the management of resources within the study area to maximize overall public and resource benefits for the next 10 years. NEPA requires federal agencies to consider the potential impact(s) of their actions on the

environment before implementing projects. Therefore, a planning process and an appropriate level of environmental analysis were used to develop this RMP/EA. This RMP/EA will be used as the management framework for the EVRPD-Reclamation properties until 2018.

This integrated RMP/EA updates and supersedes the previous RMP (Reclamation and EVRPD 1996) and EA (Reclamation 1997).

1.2 Scope and Organization of the RMP/EA

The RMP/EA provides a conceptual framework for the protection, enhancement, and management of Reclamation properties and associated resources. The following summary of chapters briefly describes the scope of the RMP/EA:

Chapter 1.0: Introduction and Overview

Chapter 1.0 provides an overview of the study area, and states the purpose and need for this RMP/EA, overall objectives, public involvement process, management framework and responsibilities, and consultation and coordination efforts.

Chapter 2.0: Resource Management Plan Alternatives

Chapter 2.0 describes the alternative development process and the resulting alternatives by property. The alternatives were formulated in response to the issues identified by the public, Reclamation, and EVRPD. Alternative B, the Proposed Action, describes the RMP update. This chapter details the management directives, goals and objectives, and implementation strategies for the study area for the next 10 years.

Chapter 3.0: Affected Environment and Environmental Consequences

Chapter 3.0 describes the affected environment (existing condition) of each resource and discusses the expected environmental consequences of implementing each alternative. Existing condition(s) and potential effects are organized by property.

Chapter 4.0: Consultation and Coordination

Chapter 4.0 lists the names of persons involved in the preparation of the RMP/EA, including Reclamation, EVRPD, contractor personnel, stakeholder groups, consulting agencies, and tribal groups.

1.3 Authority

Reclamation's authority to prepare RMPs is defined in 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 [P.L.] 89-72, 79 Stat. 213); and, more specifically, in the Reclamation Recreation Management Act of 1992 (P.L. 102-575, Title 28 [2805(c)(1)(A)]):

The Reclamation Recreation Management Act authorizes 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." In addition, specific legislation for a Project may provide additional authorization to prepare planning documents such as RMPs (Reclamation 2003).

1.4 Purpose and Need

The purpose of this RMP/EA is to provide formal program and policy guidelines, enabling the orderly use, development, enhancement, and management of the Reclamation properties in Estes Park. The RMP/EA will promote the following Reclamation and EVRPD management goals:

- Provide appropriate opportunities for recreation in a natural setting, while balancing natural resource considerations and accounting for future recreation demand.
- Manage and protect water quality and related natural and cultural resources.
- Promote active outreach efforts that celebrate park resources.
- Manage park resources in an efficient and economically sustainable manner.

The RMP/EA will identify specific strategies to accomplish these objectives, enabling Reclamation and EVRPD to make appropriate management decisions, and to effectively meet the recreation demands of park visitors both now and in the future. The most basic challenge is to protect natural and cultural resource values while allowing recreational uses that have a minimal effect on these resources.

The current RMP and EA were completed in 1996 and were intended to provide management direction until 2006. This integrated RMP/EA will replace the 1996 documents, and will establish a 10-year plan detailing the management framework for the conservation, protection, development, and enhancement of the properties.

Current issues and needs have been identified by EVRPD, Reclamation, and through the public and stakeholder involvement process. The RMP/EA will address issues and needs relating to:

- Visitor experience, including safety, diversified experiences, recreational opportunities, and improved facilities.
- Natural resources.
- Socioeconomics and cultural resources.
- Park administration, including fiscal responsibility.

Additionally, homeland security measures and Americans with Disabilities Act (ADA) compliance requirements have emerged since the completion of the 1996 RMP. Subsequently, related new policies, procedures, and requirements will influence this plan update.

This RMP/EA will provide for the coordinated allocation of funds; planning and implementation of projects; and development of lands, facilities, and recreational opportunities.

1.5 History and Background

Lake Estes, Marys Lake, East Portal, and Common Point are operated together as a system for conveying water from the west slope to the east slope of the Continental Divide. These lands were acquired by the federal government as part of the C-BT project, authorized by the Secretary of the Interior and approved by the President of the United States on December 21, 1937. The C-BT project stores, regulates, and diverts water from the Colorado River on the western slope of the Continental Divide to the eastern slope of the Rocky Mountains. It provides supplemental water for land irrigation, municipal and industrial use,

hydroelectric power, and water-oriented recreational opportunities.

The project features at Lake Estes, Marys Lake, East Portal, and Common Point are a part of the CB-T project. Water flows into East Portal Reservoir from the Alva B. Adams Tunnel, which brings water from the western slope. From East Portal Reservoir, the water is siphoned and tunneled to Marys Lake Power Plant and into Marys Lake. The water then flows to the Estes Power Plant and into Lake Estes. Water from Lake Estes and some Big Thompson River floodwaters are conveyed to Reclamation facilities further east. Common Point has no reservoir or storage capacity, but is the location of a direction change in the underground conveyance system. In addition to water conveyance and hydroelectric power generation, the reservoirs and associated project properties also provide recreational opportunities, which is the focus of this plan.

The Federal Water Project Recreation Act (P.L. 89-72), signed on July 9, 1965, provided for the planning, land acquisition, and development of the recreation potential at existing water development projects. P.L. 102-575, Title 28, the Reclamation Recreation Management Act of 1992, provides additional authorities and removes previously established monetary limits on recreation facilities.

1.6 Guiding Statements

Guiding statements clarify basic assumptions about park use and management, and provide context for how the parks should be managed or used. These statements provide the foundation for goals, objectives, and actions outlined in this plan. Actions identified in this RMP should not conflict with the guiding statements.

1.6.1 Park Purpose

Park purpose defines the reason(s) the area was set aside as a Reclamation property:

- Lake Estes, Marys Lake, East Portal, and Common Point properties were purchased as part of the C-BT project to provide water for irrigation as well as generate electricity. The 1992 Bureau of Reclamation Recreation Management Act (P.L. 89-72, as amended) authorizes the use of the properties for recreation purposes.
- A management agreement between Reclamation and EVRPD authorizes EVRPD to manage the properties for recreation purposes through 2032.

1.6.2 Park Significance

Park significance is summarized in statements that capture the essence of each park's importance to natural and/or cultural heritage. Lake Estes, Marys Lake, East Portal, and Common Point have the following important qualities:

- Reservoirs and/or infrastructure constructed as part of the C-BT project in the 1940s are an important component of local history.
- Contribute to the scenic quality and character of the Estes Valley.
- Provide a good opportunity to view Rocky Mountain wildlife close to the Town of Estes Park.
- Offers the only open water boating and fishing opportunities in the Estes Park area (at Lake Estes).
- Provide recreational opportunities in a natural setting in proximity to the Town of Estes Park.

- Set aside state-significant bird habitat (at Lake Estes).



Lake Estes Trail

- Make an important contribution to the visitor experience and, therefore, the economy of the Estes Park area.
- Provide a shooting range experience in a natural setting close to Estes Park (at Common Point).

1.6.3 Desired Visitor Experiences, Resource Conditions, and Managerial Condition Statements

The following statements provide a vision for the actions identified in the plan.

Desired Visitor Experience

EVRPD will strive to provide opportunities for high quality, diverse recreational experiences in a natural and scenic mountain setting, which encourage repeat and year-round visitation from a wide range of park visitors. Camping opportunities will range from highly developed, full service and social, to less developed but with more opportunity for solitude. Day use opportunities will vary from passive recreation such as nature appreciation, wildlife viewing, and picnicking, to active recreation such as walking, bicycling, target

practice, bow hunting, fishing, golfing, bouldering, and no-wake boating. Potential conflicts between these different types of recreational activities will be limited through planning and management, with an emphasis on safety. The infrastructure and facilities to support the recreational activities will be concentrated in high-use areas, of high quality construction and durability, of a unique rustic mountain style, accessible to all persons, and strive to provide multiple services to visitors.

Visitors will learn about interesting and important themes through interpretation of:

1. The story of water in Colorado and the C-BT project
2. Local wildlife, particularly elk, and their habitat
3. Migration and habitat of birds at Lake Estes
4. The geography of the Estes Valley and the Rocky Mountains
5. Other parks, recreation lands, and opportunities in the Estes Park area

Desired Resource Conditions

EVRPD will strive to ensure that the physical, natural, and cultural elements of the parks are protected and managed for their own intrinsic value, as well as for the benefit of park users, the citizens of Estes Park, and the United States. For example, most of the remaining undeveloped land and water areas will remain in a natural state and, where feasible, ecological processes will be maintained or enhanced. Soil erosion will be controlled to protect water quality and natural resources. Water quality will be maintained so that is suitable for water supplies and healthy aquatic life. Vegetation and wildlife will be managed to promote healthy native populations and

habitats. There will be efforts to control the mountain pine beetle (MPB) epidemic, and wildfire risk will be controlled in the interest of safety, as well as park and community resources. And lastly, cultural resources will be protected and preserved.

Desired Management Conditions

Management of the parks will recognize the legislative authorities, C-BT project purposes, budgets, personnel, current policies, and land use and environmental limitations.

EVRPD will, above all, be customer service-oriented and will strive to meet desired visitor experiences. For example, EVRPD will provide adequate levels of staff presence at high use facilities to ensure good service, safety, and security. Higher use areas and roads will have a higher level of maintenance to ensure all areas are clean and well kept. EVRPD will also strive to manage the parks in an economically responsible manner.

To ensure safety, EVRPD will only permit recreation in and on water at Lake Estes and the Big Thompson River due to dangerous water undercurrents at the other reservoirs. Visitors will be ensured equal access to recreation facilities through ADA compliance.

1.7 Overview of the Study Area(s)

Lake Estes, Marys Lake, East Portal, and Common Point are all located within the vicinity of the Town of Estes Park in Larimer County, Colorado (Map 1). Estes Park is located approximately 50 miles northwest of Denver. Denver, Boulder, Loveland, and Fort Collins are all within a 1.5-hour drive of Estes Park. Estes Park is the gateway community at the east entrance of Rocky Mountain National Park (RMNP).

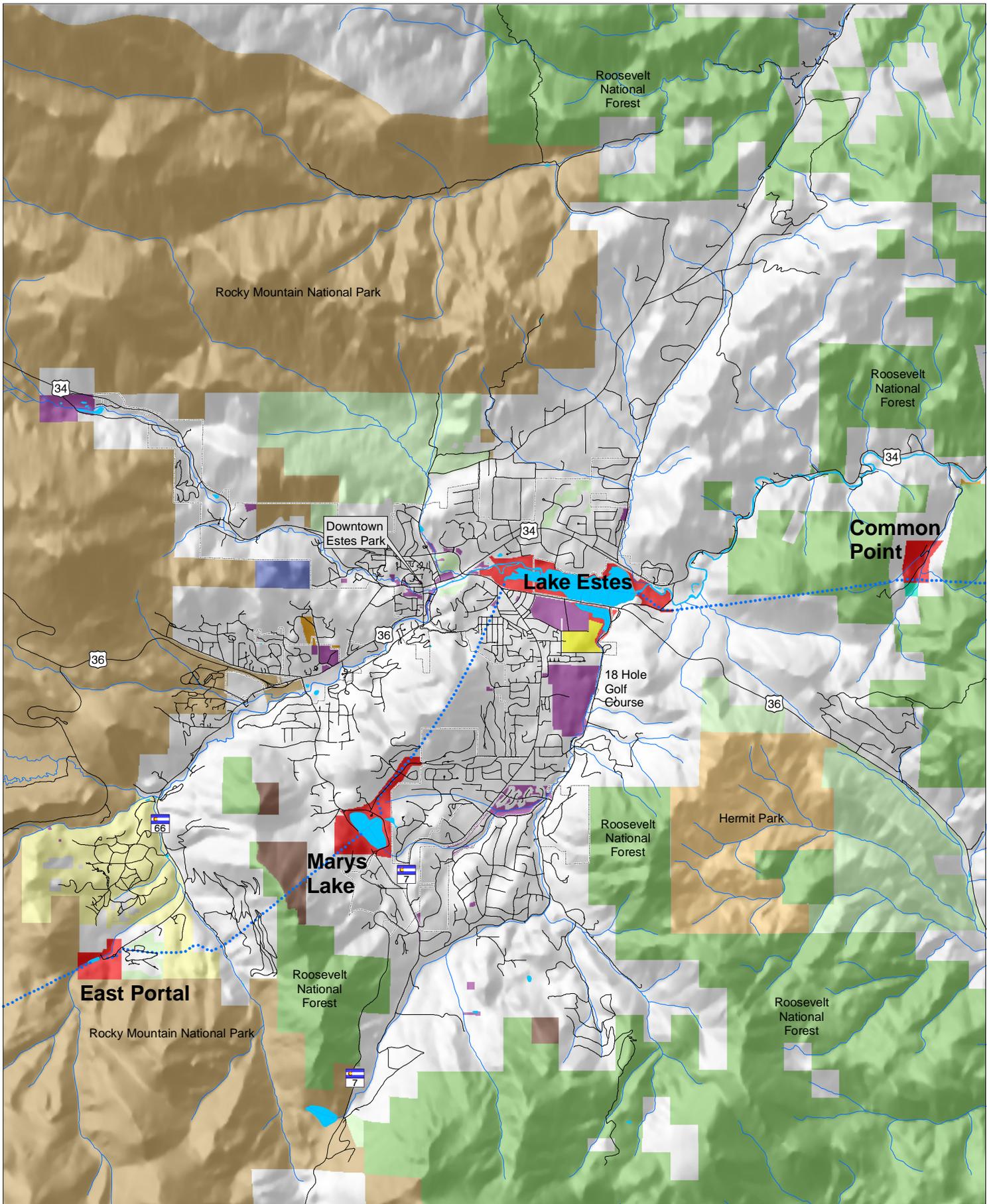
The Roosevelt National Forest also borders the community.

1.7.1 Lake Estes

The Estes Valley and upper reaches of the Big Thompson River basin form a region of outstanding scenic and natural resource qualities and outdoor recreational opportunities. The Estes Valley is approximately 30 miles from the Fort Collins/Loveland metropolitan areas in the eastern portion of Larimer County, and 35-40 miles from the northern portions of the Denver-Boulder metropolitan area.

Lake Estes is located on the east side of Estes Park. The reservoir was constructed in 1948 as an impoundment on the Big Thompson River. Drainage into Lake Estes comes from native flows of the Big Thompson River and transmountain diversions from the C-BT project. Water from Marys Lake is transported via the Prospect Mountain Conduit to the Estes Power Plant at the west end of Lake Estes. The 160-acre reservoir was created by constructing Olympus Dam. In addition to the lake surface area, there are approximately 145 acres of land surrounding the reservoir.

The primary functions of the reservoir are to provide regulation and storage of irrigation and municipal water, and to serve as an afterbay for hydroelectric power generation. Current recreation use of the reservoir and surrounding property includes golfing, hiking, fishing, boating, bird-watching, and picnicking. These activities are supported by existing facilities, including a nine-hole golf course, picnic tables, playground, marina, trails, restrooms, and fishing access.



Land Ownership in Estes Valley

- Bureau of Reclamation
- Estes Valley Recreation and Park District
- Town of Estes Park
- School District

- Larimer County Open Space
- Other Larimer County Land
- Bureau of Land Management
- Rocky Mountain National Park
- Roosevelt National Forest

- Colorado State University
- YMCA of the Rockies
- Private Conservation Land
- Other Private Land
- Estes Park City Limits
- ⋯ CBT Tunnels - Siphons - Conduits

Study Area & Park Locations

Estes Valley Recreation and Park District
 Bureau of Reclamation
 EDAW Inc.

1.7.2 Marys Lake

The primary functions of Marys Lake are to provide regulation and storage of irrigation and municipal water, to serve as an afterbay to the Marys Lake Power Plant and a forebay to the Estes Power Plant for hydroelectric power generation, and to provide recreational opportunities. The 42-acre reservoir supports facilities for operation of the C-BT project. In addition to the lake surface area, there are approximately 138 acres of land surrounding the reservoir. These areas are used by the public for a variety of recreational activities. Current recreation facilities include informal parking areas, picnic tables, restrooms, and a developed fee campground. Principal recreational opportunities on the property include fishing, picnicking, hiking, bouldering, and wildlife viewing.



Estes Park Campground

1.7.3 East Portal

The East Portal facility and reservoir are located approximately 4.5 miles southwest of Estes Park. The East Portal property includes a 2-acre reservoir and approximately 72 acres of land between the day use area and the Estes Park Campground. East Portal Reservoir is a component of the C-BT project, which serves as an afterbay for the Alva B. Adams

Tunnel and a forebay to the Marys Lake Power Plant. The area currently provides recreational opportunities such as fishing, picnicking, overnight camping, and trailhead access into RMNP.

1.7.4 Common Point

Common Point includes approximately 62 acres of land and is located approximately 2.5 miles east of the Olympus Dam at Lake Estes. This property is located at the junction of the Olympus and Pole Hill tunnels. These facilities are segments of the C-BT project, which transports water from Lake Estes to Pinewood Reservoir located in the foothills above the City of Loveland. Common Point provides Reclamation access to these tunnels for maintenance. EVRPD has an agreement with the Estes Park Gun and Archery Club, which has an open membership, to use this property as a shooting range.

1.8 Planning Process

The RMP/EA process relied on an extensive public involvement program to ensure that the resulting plan represented the needs, concerns, and desires of the interested public (Figure 1-1). The program allowed for public input through a variety of forums, including open house meetings, websites, written comments, and interviews. Newsletters were distributed to all interested parties, adjacent property owners, and at EVRPD visitor contact facilities.

A project Planning Team, including representatives from Reclamation, EVRPD, Larimer County Parks and Open Lands, and the project consultant, was created to direct and coordinate the RMP update. The Parks Work Group, a technical committee, was created to engage key government agencies and groups that contribute to the management of the parks and neighboring

lands. The Work Group was comprised of 10 members, selected by the project Planning Team. The Work Group met five times throughout the 10-month planning period. A list of the Work Group members can be found in Chapter 4.0.

Interested stakeholders, identified by Reclamation, EVRPD, and the Work Group, were invited to participate in interviews to discuss their group or organization's ideas and concerns regarding management of the parks. Stakeholders consisted of adjacent property owners, recreation and conservation groups, concessionaires, community organizations, and government agencies. Stakeholder interviews were conducted in July and August 2007. Additional individual meetings were held with the two campground concessionaires and the Estes Park Gun and Archery Club on November 29, 2007 to discuss the preliminary alternatives and solicit feedback.



Public Workshop During Planning Process

Two public meetings were held at key stages of the planning process. The first public session was held in Estes Park on August 28, 2007. The meeting provided the public an opportunity to identify issues, concerns, and needs at the parks. A subsequent public session in Estes Park on December 6, 2007 provided the public with an opportunity to comment on the preliminary alternatives.

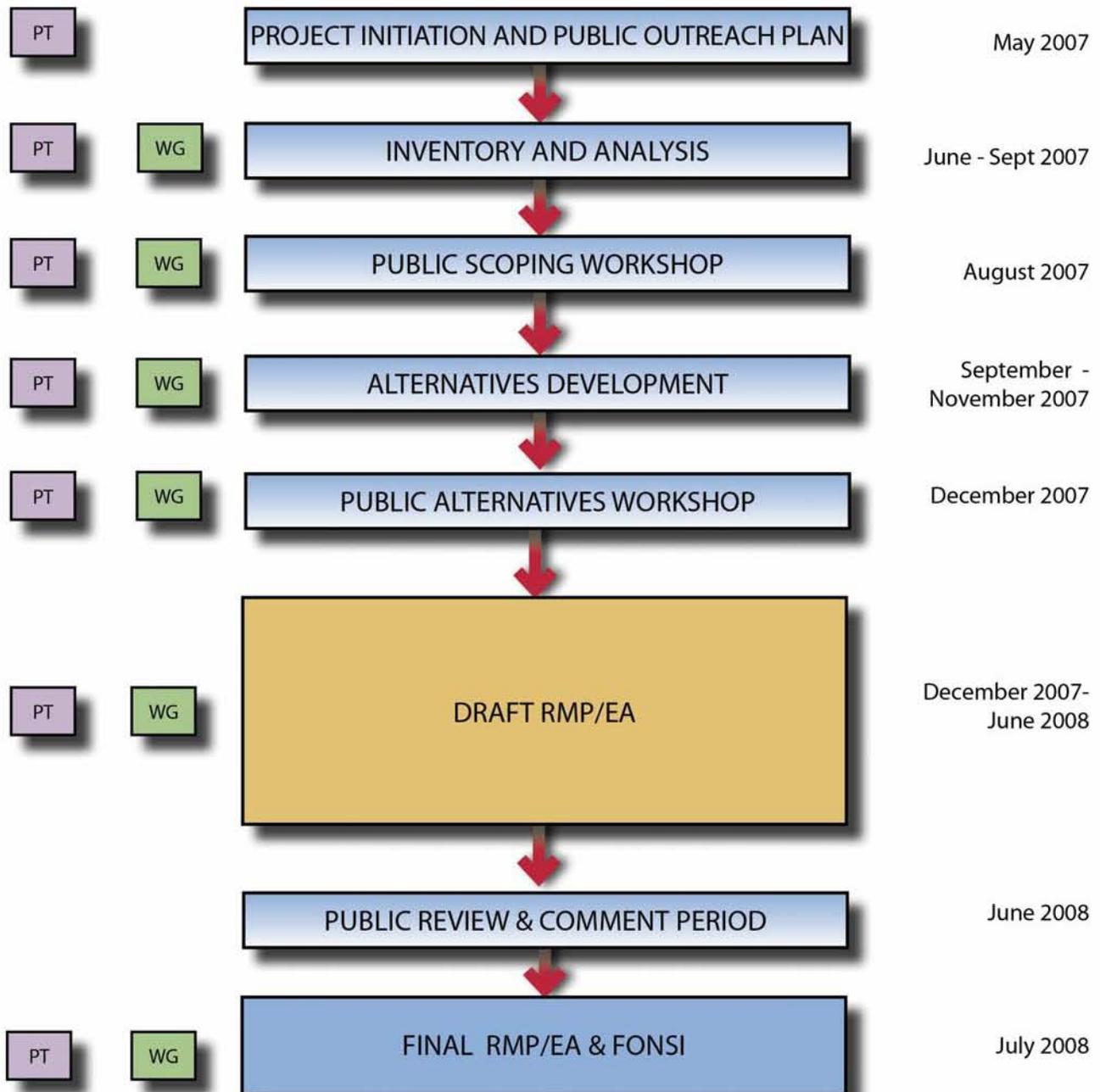
The outcome of these public sessions can be reviewed in Appendix C.

EVRPD hosted a project website (www.estesvalleyrecreation.com/RMP.htm) to inform the public of meeting schedules, the planning process, and participation opportunities. The website included links to meeting reports, information on the NEPA process, draft documents, and the Final RMP/EA. The website included contact information for project managers and provided instructions on submitting comments. The public could also track the progress of the RMP/EA by visiting the Reclamation website at:

<http://www.usbr.gov/gp/nepa/quarterly.cfm#eao>.

Press releases regarding the project and upcoming public meetings were published in local newspapers. A flier describing the project purpose and communicating the project schedule (including meeting schedule) was distributed to stakeholders during interviews and by email. The fliers were also distributed at each public meeting.

Figure 1-1. Project Schedule and Process



WG = Work Group Meetings
PT = Planning Team Meetings

1.9 Management Responsibilities

Administration of the land and water areas at the four parks requires a coordinated effort between several entities with varying degrees of management responsibility. Reclamation generally coordinates its planning activities with adjacent private and public landowners to ensure that authorized uses of its lands are compatible with adjacent land uses.

The water and land resources of Lake Estes, Marys Lake, East Portal Reservoir, and Common Point are managed for recreation by the EVRPD. It is the intention of EVRPD, in cooperation with Reclamation, to administer the areas and provide high quality recreation that is both safe and enjoyable to the public. There are several areas throughout the properties that are closed to public recreation for public safety or security reasons.

Resource management for Lake Estes, Marys Lake, East Portal, and Common Point require the simultaneous management of recreation resources and natural resources. Recreation resources include land- and water-based amenities, facilities, and activities. Natural resources include natural areas, wetlands, wildlife, fisheries, and vegetation.

Operations, maintenance, and capital improvement costs for recreation facilities at all of the parks are the primary responsibility of EVRPD. Costs associated with operations at the Marys Lake and Estes Park Campgrounds are currently the responsibility of concession operators. Likewise, the Estes Park Gun and Archery Club manages the shooting ranges at Common Point. Each concession operator has a written agreement with EVRPD that

stipulates the conditions for management and revenue sharing with EVRPD.

Implementation of actions proposed in this plan will require a cooperative effort between EVRPD, Reclamation, and others such as concession operators, CDOW, Larimer County, and the Town of Estes Park.



East Portal Reservoir

1.9.1 Bureau of Reclamation

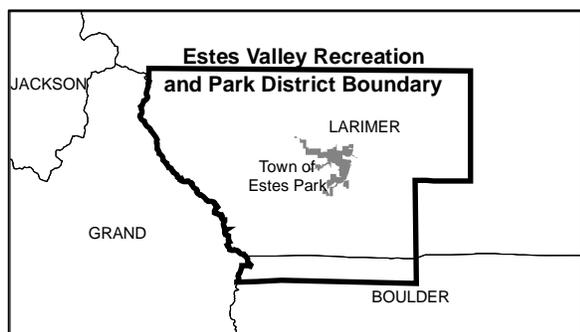
Reclamation maintains primary jurisdiction of the lands and associated resources at the four properties and is responsible for the environmental resources; however, some of the resources, such as the fishery, are the responsibility of other entities, as explained in Section 1.9.3. In providing proper stewardship of public lands, Reclamation is responsible for implementing and enforcing all federal laws, regulations, and executive orders (E.O.) dealing with natural resources, such as the Endangered Species Act (ESA); National Historic Preservation Act (NHPA); Fish and Wildlife Coordination Act; E.O.s 11644 and 11989, Off-Road Vehicles; E.O. 11889, Floodplains; E.O. 11990, Wetlands Protection; E.O. 12962, Recreational Fisheries; E.O. 13007, Sacred Sites; and E.O. 13186, Conservation of Migratory Birds. As such, Reclamation has ultimate

responsibility for protecting and managing most of the resources within the study area.

1.9.2 Estes Valley Recreation and Park District

The EVRPD is a quasi-municipal corporation and a political subdivision of the State of Colorado. EVRPD encompasses approximately 320 square miles in southwestern Larimer and northern Boulder counties. Included within its boundaries are primarily unincorporated land and the Town of Estes Park. EVRPD's boundaries have remained unchanged since its creation in 1955 as the Rocky Mountain Metropolitan Recreation District. In 1985 the name of the district was changed to the Estes Valley Recreation and Park District. EVRPD is governed by a voluntary board of directors consisting of five elected members.

Figure 1-2. EVRPD Service Area



EVPRPD is a public agency providing park and recreation programs for members of the community and visitors to Estes Park. EVRPD's first priority is to serve residents of the district; however, all visitors will be served. EVRPD is challenged with satisfying the outdoor recreational demands of a diverse and expanding population, while responsibly conserving the natural resources for future generations and for maintaining the resources for which Colorado is renowned. Various agencies throughout Colorado, including federal,

state, and local agencies, are constantly challenged by the growing demands and expectations for quality outdoor recreation experiences.

EVPRPD provides golf, marina, boat rentals, fishing, tennis, swimming, softball, baseball, playgrounds, picnicking, youth center, and many more recreational programs; however, not all of these recreation facilities and programs are available on Reclamation lands. Facilities operated by EVRPD, such as the Lake Estes marina, Estes Park (East Portal) and Marys Lake Campgrounds, and Common Point are governed by a 25-year management agreement between EVRPD and Reclamation that extends from 2007 through 2032.

EVPRPD is responsible for providing services to both permanent and seasonal residents, as well as visitors. While some services are intended primarily for permanent and seasonal residents (e.g., aquatics program, team sports), some services are provided for both residents and visitors (e.g., golf course, trails), and others are primarily intended for visitors (e.g., campgrounds). This position can be challenging from a financial perspective because only property owners (primary residents, seasonal residents, and commercial property owners) vote for increases in property taxes and related bond indebtedness.

EVPRPD issues and administers concession contracts in compliance with Reclamation's Policy on Concessions Management (LND-PO2) and Directives and Standards on Concessions Management by Non-Federal Partners (LND 04-02). EVRPD and Reclamation will ensure that concessions are developed and managed to meet public needs, protect natural and heritage resources, provide stewardship of all lands

and waters, and provide a variety of goods and services to the public while being consistent with authorized project purposes.

This RMP/EA only addresses those facilities on federally owned properties that are managed by EVRPD agreement with Reclamation.

1.9.3 Related and Adjacent Managing Entities and Functions

Colorado Division of Wildlife

The Colorado Division of Wildlife (CDOW) manages over 900 wildlife species within the state. CDOW regulates hunting and fishing activities by issuing licenses and enforcing regulations. CDOW also manages more than 230 wildlife areas for public recreation, conducts research to improve wildlife management activities, provides technical assistance to private and other public landowners concerning wildlife and habitat management, and develops programs to protect and recover threatened and endangered species (CDOW 2008).

The Reclamation properties are located within the Estes Park District of CDOW's Northeast Region. The Estes Valley project area is comprised of two bighorn sheep management units: the St. Vrain bighorn sheep management unit (East Portal and Marys Lake) and the Big Thompson bighorn sheep management unit (Lake Estes and Common Point).

CDOW is responsible for stocking Lake Estes, Marys Lake, and East Portal Reservoir with fish for recreation purposes. Monitoring fish populations for stocking purposes occurs on an unplanned, as needed basis. CDOW officers patrol the reservoirs at unspecified times to enforce fishing regulations and creel limits. CDOW also oversees the management and viability of

wildlife populations on all parklands by regulating hunting and fishing activities; enforcing the protection of sensitive species; and managing wildlife conflicts.

Concessions

EVRPD has management responsibility for the Marys Lake and Estes Park (at East Portal) Campgrounds, which are owned by Reclamation. EVRPD maintains multi-year agreements with two private concessionaires that manage each campground. Concessions currently operate under a 25-year management agreement (#1300-07-01). The current agreement was established in 1984 and will expire in 2009. Several different concessionaires have participated under this management agreement during the 25-year period.



Marys Lake Campground

Estes Park Gun and Archery Club. The Estes Park Gun and Archery Club currently manages the shooting ranges at Common Point under an agreement with EVRPD. The club has approximately 300 members and charges its members annual dues, parts of which are returned to EVRPD for the management of Common Point. Access to Common Point is mostly limited to club members; however, the club occasionally holds shooting events that are open to the public. Membership to the club is open to

the public with an annual payment of dues. Individuals or groups who are not members can arrange to use the range by contacting the club and paying a daily fee.

Land Uses and Land Use Planning

National Park Service (NPS). The National Park Service preserves “unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations,” (NPS 2008). The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout the country and the world (NPS 2008).

RMNP is an international recreation attraction that heavily influences recreation and tourism in the entire Estes Valley. The park attracts approximately 3 million visitors annually. This national destination significantly adds to the level of visitation at all of EVRPD’s park and recreation facilities. The National Park borders East Portal on the west and south property boundaries. The East Portal trail provides access to two trails that enter RMNP: Emerald Mountain and Wind River trails. The NPS pays the Estes Park Gun and Archery Club an annual fee to use Common Point shooting ranges for law enforcement training purposes.

U.S. Forest Service (USFS). The mission of the USFS is to sustain the health, diversity, and productivity of the Nation’s forests and grasslands to meet the needs of present and future generations. (USFS 2008).

The Roosevelt National Forest provides a multitude of recreational opportunities in the local area. While none of the parks are adjacent to USFS land, there is a road

easement to Common Point that passes through a small section of the National Forest.

The Roosevelt National Forest and Reclamation properties are confronted with similar resource issues, including wildland fire management, recreation and other public uses, MPB epidemic, and the stewardship of natural resources.

Estes Park Convention and Visitors Bureau. Reclamation manages the Estes Park Visitor Center at the west end of Lake Estes Park. The visitor center provides tourist information and serves as a parking area for the Lake Estes Trail.

Sanitation Districts. The Upper Thompson (UTSD) and Estes Park Sanitation districts manage water treatment facilities on and adjacent to the Lake Estes property, respectively. Both districts discharge effluent into the waterways of the park and are regulated by the Water Quality Control Division of the Colorado Department of Public Health and Environment. Reclamation has issued the UTSD a permit to build facilities and operate on Reclamation land.

Estes Park Fire Department. The Estes Park Fire Department has a permit from Reclamation to own and manage the Dannels Fire Station at the southwest end of Lake Estes. The department provides fire and rescue services for residents of Estes Park and four Reclamation parks.

Local Government. The Town of Estes Park, and the surrounding Estes Valley are located in western Larimer County, Colorado. Estes Park is the only incorporated municipality in the valley. Only the western portion of Lake Estes is within the Town of Estes Park limits. Most of project area is located in unincorporated

Larimer County (County). Development of new facilities, such as day use areas or campgrounds, is normally reviewed under a procedure called “Location and Extent,” which is intended to assure that proposed development is compatible with the county’s comprehensive plan. Federal lands and activities, however, are not subject to local land use regulations; any local reviews are conducted under a cooperative agreement. Reclamation defers to local and county codes, as appropriate.

Law Enforcement

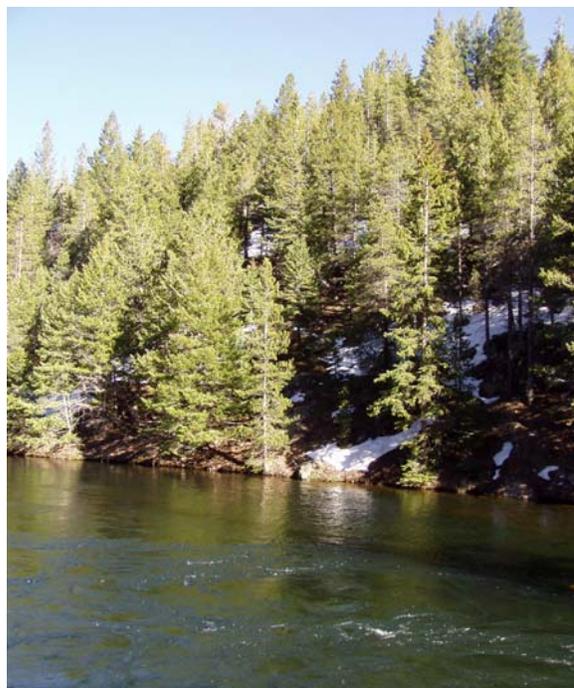
Lake Estes Park is located within the jurisdictional boundaries of both the Town of Estes Park and Larimer County. Law enforcement at the eastern portion of Lake Estes is provided by the Larimer County Sheriff’s Department; the Estes Park Police Department provides law enforcement at all other areas. The other three properties are located outside of Estes Park municipal boundaries. Therefore, law enforcement at Marys Lake, East Portal, and Common Point is the responsibility of the Larimer County Sheriff’s Department. Routine business and emergency calls are handled by both agencies. The nearest response team answers emergency calls, with other units providing additional assistance as needed. Both the county and town pay the Estes Park Gun and Archery Club an annual fee to use Common Point shooting ranges for law enforcement training purposes.

Fire Management

Pursuant to the Secretary of the Interior’s policy letter dated January 18, 2001, Reclamation is required to address the implementation actions contained in the updated 2001 Federal Wildland Fire Management Policy document. The 2001 Wildland Fire Management Policy states that every area with burnable vegetation must have an approved fire management

plan. Fire management plans will be developed for all Reclamation lands and related resources and facilities that contain burnable vegetation by the end of fiscal year 2015. Fire management plans are strategic plans that define a program to manage wildland and prescribed fires based on the area’s approved land management plan.

Reclamation’s lands and facilities will be managed to mitigate the occurrence and severity of wildland fire. This will include all components of wildland fire management, including: fire suppression, fire prevention and education, fire management planning, hazardous fuels reduction, emergency burned-area stabilization, and long-term burned area rehabilitation.



East Portal Reservoir

Accordingly, Reclamation will work with state, tribal, and non-federal organizations, as well as other federal agencies, in implementing the 2001 Federal Wildland Fire Management Policy.

2.0 RESOURCE MANAGEMENT PLAN ALTERNATIVES

2.1 Introduction

This chapter discusses the process used to formulate alternatives, describes the alternatives in detail, and provides a summary comparison of the alternatives and their impacts on resources in the parks.

2.2 Planning Issues and Opportunities

This section describes the key factors that have influenced the development of this RMP/EA. Reclamation land use planning focuses on resolving issues concerning the use and management of public lands, as well as providing opportunities for future use and demands. A planning issue can be an unresolved conflict or problem; an effort to implement a new management program as a result of new initiatives, laws, or regulations; a concern raised by the public; or a value being lost.

The key factors that influenced the development of the RMP/EA resulted from the following areas of investigation:

- Collection and review of existing resource data, including a review and update of the 1996 RMP and EA.
- Public involvement, including meetings, interviews, and comment periods.
- Agency review of internal programs and policies to identify issues, goals, and objectives.
- Site visits to the park study areas.

The planning issues identified in these investigations allowed Reclamation to formulate the necessary management actions and implementation strategies outlined in this chapter.



Estes Park Campground

A variety of issues and concerns were grouped into categories, which helped to (1) define the scope of each issue and concern, and (2) develop specific goals and objectives to address each issue and concern. Not all issues raised during the planning effort were related to resource management; some issues, concerns, and comments expressed were determined to be either outside the scope of this RMP/EA, or were planning issues that could not be resolved through this RMP/EA process. These issues and concerns were ultimately eliminated from the analysis. Issues concerning the conflicting demands for consumptive and nonconsumptive uses of the land have been identified. The following key resources and issues were identified by the public and planning teams as being particularly important to the development of alternatives and the assessment of potential impacts:

Hydrology and Water Quality.

Maintaining suitable water quality while allowing motorized boating and other water-based recreation (Lake Estes only) is important to meeting recreational needs and supporting a healthy aquatic habitat. Key considerations include the proper

containment of shot and other projectile material, and preventing such materials from entering the stream corridor at Common Point. Sediment buildup at Lake Estes prevents some recreational activities at low water levels. The need to remove sediment to improve recreation should be balanced with habitat considerations, such as area shorebirds (i.e., maintaining some areas of shallow water).

Soils, Geology, and Topography. The parks' landscape is generally characterized by steep, rocky slopes. These areas present challenges to recreational use and development. Construction activities and increased use may cause vegetation loss, soil compaction, increased erosion, and sedimentation into water bodies.

Vegetation and Wetlands. Native vegetation throughout the study area is susceptible to noxious weed infestations, MPB epidemics, excessive wildlife grazing, and wildland fire. Active forest management, noxious weed treatments, and area closures are necessary to manage native vegetation communities, which provide valuable wildlife habitat, to prevent further disturbance and to treat high-risk areas.

Fish and Wildlife. The parks contain potential habitat for sensitive wildlife species, including migratory birds, raptors, and possibly Canada lynx. The parks system provides valuable habitat and refuge for many different wildlife species. Excessive elk grazing and vegetation trampling are impacting riparian corridors and bird habitat. The Lake Estes shoreline provides valuable bird habitat for cover, forage, and wading. Human-wildlife conflicts are possible at each of the four properties. Bear-proof (wildlife-proof, in general) garbage receptacles and additional information kiosks are necessary to prevent

conflicts and to educate the public. Fishing and limited archery hunting are popular recreational activities at these properties (limited archery hunting is allowed at East Portal and Marys Lake).

Recreation. Recreational opportunities and access are increasingly important determinants of "quality of life" for many Estes Valley residents, the population within the region of influence, and visitors from far away. Challenges stem from the need to provide recreational opportunities for local residents as well as visitors. Some want to have developed parklands and facilities, and others are seeking a more primitive recreational experience. EVRPD is challenged with fulfilling current and future recreational demands and providing new and appropriate recreational opportunities and experiences.

Existing recreation facilities need to be reconfigured, enhanced, and in some cases, expanded to meet recreational needs. New recreational opportunities to be considered include expanding the off-season use and appeal, enhancing ease of use, new camper cabins, formalizing group use areas, constructing new trail connections, expanding shooting range opportunities and public use at Common Point, and a multipurpose grass sports field.

Visitor safety is a primary concern, including safety at the golf course, on trails and at pedestrian crossings, at the shooting ranges, and in campground and day use areas. Informational signage can inform users of risk and potential dangers. Increasing use at the parks will require additional maintenance to safely and effectively serve park visitors. Visitors should not be allowed access into areas where water storage and conveyance facilities present possible dangers to users or

to the normal operation of the facilities. Improved signage and/or fencing in all areas that are high-risk, or where access is prohibited, are necessary to ensure that visitors and facilities remained unharmed.

Ongoing issues and concerns include sensitivity to land uses adjacent to the campground areas (e.g., noise, light pollution, wildfire risks from campfires, litter, vegetation screening, and proximity of uses), dogs off-leash, character of and services at the campgrounds and day use facilities, ability of campgrounds to accommodate recreational vehicles (RV), and providing adequate tent camping opportunities.

Park infrastructure needs vary from providing additional basic facilities such as more trash cans, restrooms, road improvements, and trail maintenance, to enhancing existing facilities like campsite living areas, day use areas, the 9-hole golf course, and interpretive opportunities. Overall, ADA accessibility improvements in developed areas are necessary.

Scenic and Aesthetic Resources. The scenic landscapes (including the reservoirs) of the parks have been identified by park visitors and the local community as an important attraction.

Park improvements and new developments should be designed to consider the local character of the area, the desired recreational experience, and park aesthetics as part of new projects.

Land Use. Residential development continues to occur adjacent to existing Reclamation properties. These uses often conflict with uses in the parks. In some locations, residents are building close to established camping areas; this affects the

privacy of both the residents and park visitors. Issues associated with the parks and adjacent properties can include noise, light, litter, trespassing, and poor drainage. Improved fencing, signage, buffers, and vegetation screening are necessary to prevent trespassing and improve the sense of privacy and seclusion. Neighboring residents are also concerned about the risk of wildfire from escaped campfires.

Commercial uses of Reclamation properties include campground concessions and contracts for other services, such as recreation outfitters or maintenance needs. Park visitors and neighboring residents have expressed interest in increasing park management by concessionaires and providing additional and higher quality facilities and services.

Reclamation frequently receives requests from utility companies to cross Federal properties with pipelines, transmission lines, or roads. The local fire and emergency providers need access to each of the properties, particularly the water bodies, for training and emergency purposes.

Socioeconomics. The parks provide opportunities to attract visitors and contribute to the local economy. As such, the parks need to ensure that they are operated efficiently and in an economically sustainable manner for the safe provision of high quality recreational opportunities. Specifically, the parks need to ensure that adequate fees are collected from visitors, commercial outfitters, concessionaires, special use permit applicants, and lease holders. Park operations should not disproportionately affect minority groups or other disadvantaged populations.

Cultural and Heritage Resources. Historic sites and cultural resources have been identified at each of the parks and record a spectrum of historical events important to the overall history of the area. Reclamation has determined that the implementation of appropriate management actions is essential for the successful management of these resources. The implementation of an RMP can protect the quality of cultural resources within the study area and create a positive visitor experience.

The proceeding list provides a general summary of concerns. Public and stakeholder input is documented in more detail in Appendix C. Resources and site-specific issues are discussed in further detail, by park, in Chapter 3.0

Impact topics or comments that were considered beyond the scope of the EA and dismissed from further analysis due to the degree of impact, lack of concern from public agencies, or lack of public comment include: air quality, climate change, geologic and seismic concerns, hazardous materials, paleontological resources, prime and unique farmland, Indian trust assets, and environmental justice.

2.2.1 Planning Constraints

Planning constraints identify aspects of management that are pre-defined. Nothing that would interfere with the following planning constraints or facility purposes is proposed in this plan. Recreation is a secondary project benefit. Planning constraints at these parks include the following:

- Reclamation must maintain unlimited access to operate and maintain the C-BT project facilities.

- Dam and facility security is required and may prevent recreation activities near these areas.
- Changing water levels at reservoirs can affect shoreline fishing opportunities and boat storage at Lake Estes.
- Net loss of water storage is not allowed for the purpose of creating more land for recreation or administration purposes.
- Federal land must provide equal public access, which limits private groups from exclusively using Reclamation lands.
- Seasonal closures for wildlife may be necessary to ensure visitor safety and wildlife protection.
- Easements / permits for existing land uses include:
 - Dannels Fire Station
 - Upper Thompson Sanitation District (UTSD)
 - Marys Lake Water Treatment Plant (city)
 - Utility and road
 - Power generation at Lake Estes and Marys Lake
 - Other easements or permits

2.2.2 Management Constraints

When addressing management changes and other actions, agencies are constrained by their respective legislative authorities, budgets, personnel, current policies, and environmental limitations. Key policies affecting management have been discussed in Chapter 1.0. The ability of agencies to efficiently manage resources will depend on funding to maintain sufficient personnel, operate facilities, maintain equipment, manage programs, as well as protect and enhance resources.



Lake Estes

2.2.3 Legislative Constraints

When project planning and/or development are being considered on Federal land, there are rules, laws, and executive orders that must be observed (see Appendix D for a list of applicable laws, statutes, and regulations). These include, but are not limited to, the Clean Water Act, Clean Air Act, Americans with Disabilities Act, and the National Environmental Policy Act.

As described in Chapter 1.0, recreational use of the parks is secondary to water management and fulfillment of the C-BT project purposes approved in the 1937 legislation. Operating the reservoirs for irrigation, power generation, and other downstream purposes limits Reclamation's ability to manage exclusively for recreation and natural resources. Reclamation has a limited opportunity to change the historic operation of the project because of its obligations to water users, such as the Northern Colorado Water Conservancy District (NCWCD). This RMP/EA does not address changes to project water operations; therefore, existing authorities as well as operating requirements and contractual obligations are, in some cases, considered to be constraints on the development of recreation facilities and the enhancement,

development, and protection of natural resources.

2.2.4 Environmental Constraints

Beyond any previously mentioned legislation pertaining to environmental considerations, there are other limiting factors, such as those listed below, which constrain future development opportunities. Key considerations when locating developed recreation facilities include:

- Presence of a wetland or riparian vegetation or habitat.
- Sensitive habitat for certain wildlife species.
- Poor soils for constructing foundations, trails, and roadways.
- Inundation zones (e.g., 100-year floodplain).
- Slopes greater than 20%.
- Shoreline erosion areas, especially cliffs that are undercut by wave action.
- Noise sensitive areas.

Geographic Information System (GIS) mapping was used to delineate specific environmental resources within the study area that have constraints or limitations for development. In this way, GIS was used as a tool to determine if suggested management actions were compatible with existing land uses and natural resources. Natural constraints are mapped in Maps 6-9 and are discussed in detail in Chapter 3.0, Affected Environment and Environmental Consequences.

2.2.5 Land Use Authorizations and Land Disposal

Land use authorizations include easements, leases, licenses, and permits, which allow others to use Reclamation lands, facilities,

and water surfaces for a variety of purposes. Examples include: installation and maintenance of roads, canals, telephone lines, and other linear utilities; construction and operation of communication facilities; allowance of sporting events, agricultural uses, organized recreational activities; and removal of renewable and nonrenewable resources. Issuance of any land use authorization is discretionary and must conform to the requirements contained in 43 Code of Federal Regulations (CFR) 429 and Reclamation Directives and Standards for Land Use Authorizations (LND 08-01). Prior to issuing any land use authorization, Reclamation is required to collect administrative fees and receive fair market value for the use of its lands. Additionally, applicants requesting a land use authorization must complete either a Standard Form 299 (used for energy and utility systems) or Form 7-2540 when requesting other uses (grazing, farming, special events, etc.). These forms are available on the Reclamation website (<http://www.usbr.gov/recman/>).

Land use authorizations will not be issued when it is determined that the proposed use:

- Is incompatible with authorized C-BT project purposes.
- Poses health and safety concerns.
- Results in unacceptable impacts to the environment.
- Results in private, exclusive uses.
- Violates state, Federal, or local laws, regulations, ordinances, or zoning requirements.
- Jeopardizes the interests of the United States.
- Is an existing unauthorized use.
- Will result in other adverse and unacceptable impacts.
- Where other alternatives are available.

Reclamation will not issue any land use authorizations for these uses that does not clearly complement the goals, objectives, and recommendations contained in this plan. EVRPD will be consulted for comments and recommendations concerning any proposals that may affect areas they administer for Reclamation.

In the event that electrical utilities are permitted, they shall be buried; or if constructed above ground, they shall be constructed and only permitted if they do not interfere with the visual and aesthetic components of the landscape. All above ground utilities will provide measures of safety for the public and for wildlife species.

All land use authorizations will be considered on a case-by-case basis and issued at the sole discretion of Reclamation. If a use authorization is granted, it is the policy of Reclamation to grant the least estate possible and necessary to accommodate the intended use. Generally, this means that Reclamation will only issue a permit or a license, and will not issue leases or easements or other contractual documents that convey an interest in real property.

All of the lands are subject to a five-year review cycle to determine whether they are needed for project purposes or other beneficial values as determined by Reclamation. In the event Reclamation identifies any of the lands to be in excess of what has been identified in this plan, Reclamation will follow standard General Service Administration procedures to dispose of the lands and will complete additional NEPA compliance at that time, as necessary. The disposal process requires that any excess lands be offered first to other Federal or state agencies, then to local counties or municipalities, and lastly,

through sale at public auction to the highest bidder.

2.3 Management Goals and Objectives

Goals and objectives for the RMP were developed in direct response to the issues and opportunities identified during scoping and within the management, legislative, and environmental constraints. Goals and objectives identified in the 1996 RMP were also included. Each goal represents the desired future condition to be achieved through implementation of this updated RMP. Each goal is accompanied by a set of objectives, which provide general methods or strategies for achieving each goal.

Goal

Provide appropriate opportunities for recreation in a natural setting, while balancing natural resource considerations and accounting for future recreation demand.

Objectives

1. Provide access and recreational opportunities for people with a wide range of abilities and incomes.
2. Permit public access to all recreation facilities and unrestricted areas to prohibit the establishment of exclusive use of public resources. Exclusive use is defined by Reclamation as land or water areas that are limited to use by private groups or individuals.
3. Maintain and improve existing facilities and/or develop new facilities for high quality, multipurpose, and safe recreational experiences that provide access to all visitors.
4. Encourage the use of Reclamation design guidelines to ensure the provision of properly designed amenities in reasonable proximity to areas of concentrated use.

5. Limit development of facilities to concentrated use areas, and preserve undeveloped areas for recreational opportunities that are not facility dependent.
6. Maintain and improve existing trails, and develop additional trails that provide access to recreational opportunities within the parks or to adjacent public lands.
7. Improve visitor access and use of shoreline areas by rehabilitating existing development and minimizing development of new parking areas, roads, and facilities in these areas.
8. Enhance campgrounds to improve circulation, delineate use areas, provide more efficient visitor service areas, and extend the camping season.
9. Improve day use and overnight recreational opportunities that emphasize the natural setting of the area.
10. Educate and manage visitors to minimize user conflicts and improve safety.
11. Monitor visitor satisfaction and consider changing recreation trends to meet new visitor desires within the framework of this plan.
12. Partner and coordinate with other programs and agencies to manage park resources and provide complementary recreational opportunities in the area.



Bike Rentals at Lake Estes Marina

Goal

Manage and protect water quality, natural features and cultural resources.

Objectives

1. Partner and coordinate with CDOW to manage for healthy wildlife populations.



Big Thompson River below Lake Estes

2. Protect and/or improve key riparian, wetland, and native vegetation habitats through signs, fences, and/or altered irrigation regimes.
3. Control noxious weeds and rehabilitate impacted areas with native vegetation.
4. Minimize the use of nonnative species in landscaping and restoration efforts.
5. To the extent possible and in coordination with other agencies, manage MPB infestations and wildfire risk.

6. Control soil erosion through proper design features and storm water management.
7. Maintain water quality by limiting soil erosion and controlling pollution sources.
8. Monitor the parks' natural environment and adapt management techniques to meet deficiencies within the framework of this RMP.
9. Protect ecological connectivity through the preservation of key habitats and collaboration with managers of adjacent lands.
10. Protect cultural resources to ensure their preservation.

Goal

Promote active outreach efforts that celebrate park resources.

Objectives

1. Promote active outreach and communication efforts with stakeholders, community leaders, and the public to successfully implement plan recommendations.
2. Facilitate citizen-led initiatives and other community-based programs to implement the RMP.
3. Actively promote and distribute information about the parks, including recreational and natural/cultural interpretive opportunities.

Goal

Manage park resources in an efficient and economically sustainable manner.

Objectives

1. Use sound business practices in the operation and management of recreation facilities and concessions.

2. Exercise appropriate approval authority and oversight of managing partners and concessions to ensure the full implementation of these practices.
3. Provide appropriate resources, such as funding, staff, training, administrative facilities, and equipment to support district responsibilities of park operations and to meet visitor needs.
4. Obtain a fair market return for services provided by setting fees commensurate with amenities and level of service provided.
5. Account for market conditions and the real costs of developing and maintaining facilities by establishing fee policies, which ensure the park system is mostly self-supporting.
6. Seek adequate funding to develop, operate, and maintain recreation resources and staff at the level necessary to effectively manage the parks and provide quality visitor experiences.
7. Leverage resources through partnerships with Federal entities, state agencies, cities, counties, and private organizations.

2.4 Management Zoning Overview

As described in Table 2-1, management zones provide general guidance on the most appropriate locations for park activities, including resource management, visitor use, and future development. General management zones were developed based on consideration of available resource information and current management practices. Management zone boundaries can be modified, as needed, at the discretion of the EVRPD Board of Directors and Reclamation. The management zones defined for the parks include the following:

The **Sensitive Resource Protection Zone** contains important sensitive resources that could easily be disturbed. In general, the public is not encouraged to visit this zone, or public use is limited to carefully designed trails and shoreline/river fishing. The zone is dominated by nature and only receives the management level necessary to preserve its natural state and quality.

The **Backcountry Zone** provides a sense of being immersed in a natural landscape, away from modern comforts and conveniences. Visitors primarily participate in passive activities within this zone, such as hiking, birding, hunting, or fishing. Vehicle access, except for maintenance purposes, is limited as much as possible. Facilities present are unpaved, low-maintenance trails. The zone is dominated by nature and only receives the management necessary to preserve its natural state and quality.

The **Frontcountry Zone** is in an area that is predominantly natural, but with much evidence of human activity. Land-based park recreation occurs in this zone. Visitors can see, smell, and touch park natural resources without feeling removed from transportation or developed facilities. Facilities include well-maintained trails, signs, interpretation, benches, scenic overlooks, and service roads. The zone is mostly natural and receives the management necessary to preserve its natural state and quality, while providing well-maintained facilities.

The **Developed Zone** is an area with developed visitor facilities and where experiences are often facility dependent (parking, marina, campgrounds, golf course, trailheads, signs, restrooms, etc.). Human activity and vehicles are prominent. The zone is dominated by man-made landscapes and buildings, and receives a high level of

Table 2-1 Matrix of Management Zones, Zoning Criteria, and Acres by Zone Type

Zone/ Descriptors	Sensitive Resource Protection	Backcountry	Frontcountry	Developed	Limited Access	No Access	Passive Water	Calm Water
Management Definitions and Notes	Controlled or no access to protect wetlands, riparian areas, key wildlife habitat, etc.	Natural area somewhat difficult to access	Somewhat developed natural area with easy access	Campgrounds, picnic areas, marina, major visitor facility areas	Controlled public access for hazard or security reasons (land or water)	No public access for hazard or security reasons (land or water)	Moderate Use Boating and Limited Water Skiing Area on Lake Estes	Nonmotorized boating area on Lake Estes
Examples	Wetland in Marys Lake CG, wetland in Wapiti Meadows	Area west of Marys Lake	Trail areas around Lake Estes that are not developed	Lake Estes Marina, Campgrounds, Day Use Areas	Trails near or across some dams	East Portal Reservoir, Marys Lake	Eastern end of Lake Estes	Western end of Lake Estes
Challenge and Adventure of Experience	Low	Moderate	Low	Very Low	Very Low	NA	Low	Low
Dependence on Roads, Trails, and other Facilities	High	Low	Moderate	High	Very High	NA	NA	NA
Visitor-Visitor Encounter Expectations	Moderate	Low	High	Very High	High	NA	High	Moderate
Park Staff-Visitor Encounter Expectations	Moderate	Very Low	Moderate	High	Moderate	NA	Moderate	Low
Identified Corridors - Highest Standards for Roads/Trails	Rock/ Wood	Dirt/ Rock	Dirt/ Rock	Asphalt/ Rock	Asphalt/ Rock	NA	NA	NA
Management Action for Resource Protection	Very High	Low	Moderate	Very High	Low	Low	Moderate	Low
Management Action for Visitor Safety	Low	Low	Moderate	Very High	High	NA	High	Moderate
Level of Maintenance	Low	Low	Moderate	High	Very High	Very High	Moderate	Low
Tolerance for Resource Damage	None	Low	Moderate	High	Moderate	NA	Low	Low
Opportunities for Solitude	Moderate	High	Low	Very Low	Low	NA	Low	Moderate
Noise Level	Low	Low	Moderate	High	High	NA	Moderate	Low
Appropriateness of On-Site Interpretation	Low	Low	High	Very High	Low	NA	NA	NA
Appropriateness of Off-Site Interpretation	High	High	Moderate	Low	Low	NA	Moderate	Moderate
Diversity of Types of Trail Experience	Low	High	High	Low	Low	NA	NA	NA
Acres								
Lake Estes (307 total acres)	33.5	0	24.7	68.7	2.7	40.9	99.1	37.3
Marys Lake (181 total acres)	3.5	43.7	51.8	25.2	7.1	49.4	0	0
East Portal (74 total acres)	3.4	29.1	23.5	12.2	2.8	3.3	0	0
Common Point (62 total acres)	0	0	9.1	8.9	0	43.7	0	0

management to maintain facilities and limit environmental impacts such as soil erosion, vegetation trampling, wildfire risk, noise, and light pollution.

The **Limited Access Zone** is in an area that has safety and/or security risks, but still allows limited recreation. This zone can include areas such as dams, dikes, or other water management infrastructure facilities or safety/security areas. Access in this zone is limited to trail and road corridors. No shoreline fishing is allowed in this zone.

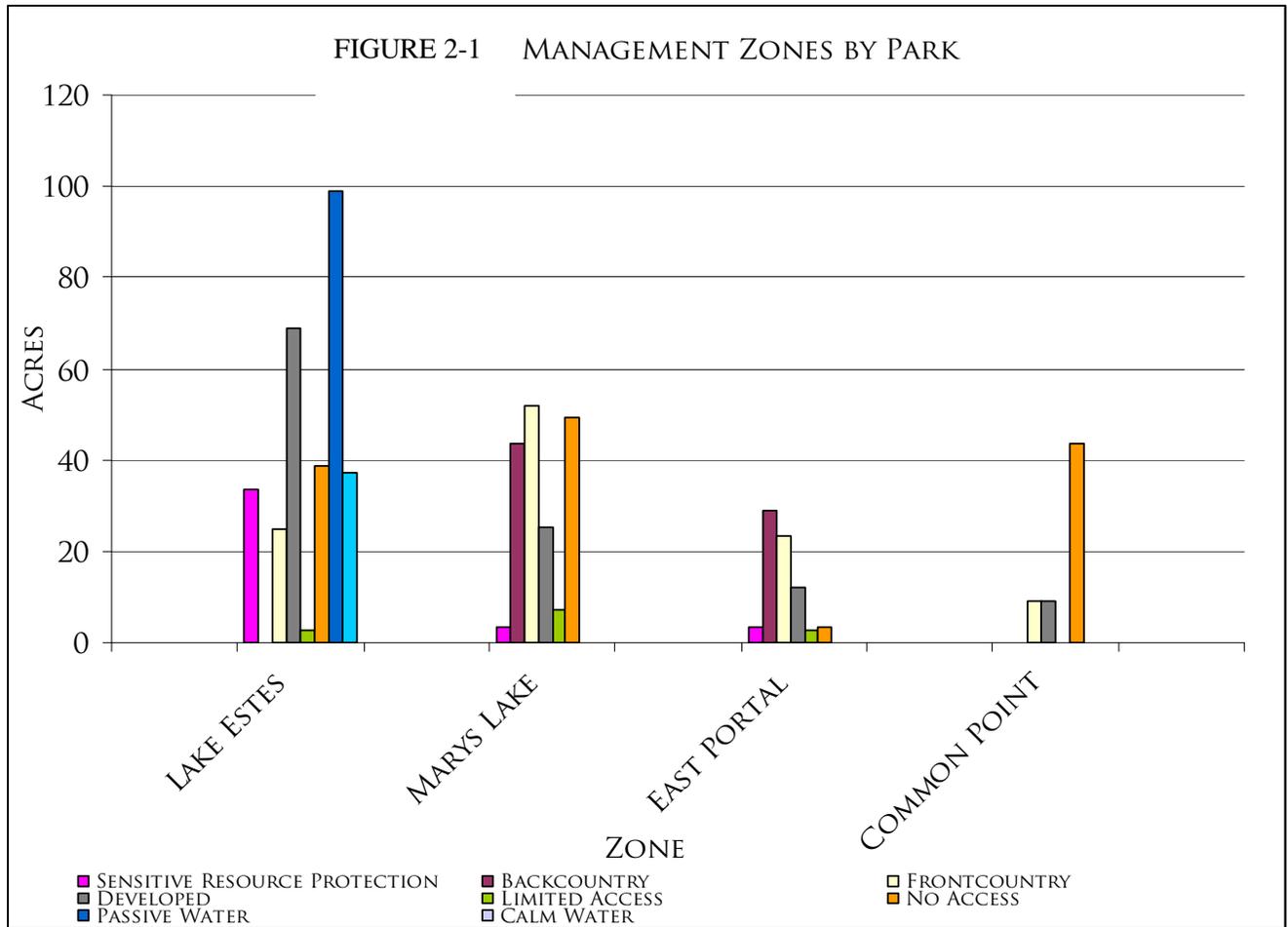
The **No Access Zone** is in an area (land or water) that has safety and/or security risks and does not allow public access. This zone can include areas such as dams, dikes, water areas with dangerous undercurrents, electrical generation infrastructure, other water management infrastructure safety/security areas, or shooting range safety areas. Managing authorities actively enforce closure regulations for these areas. Where a no access water zone is adjacent to another zone that allows recreational use,

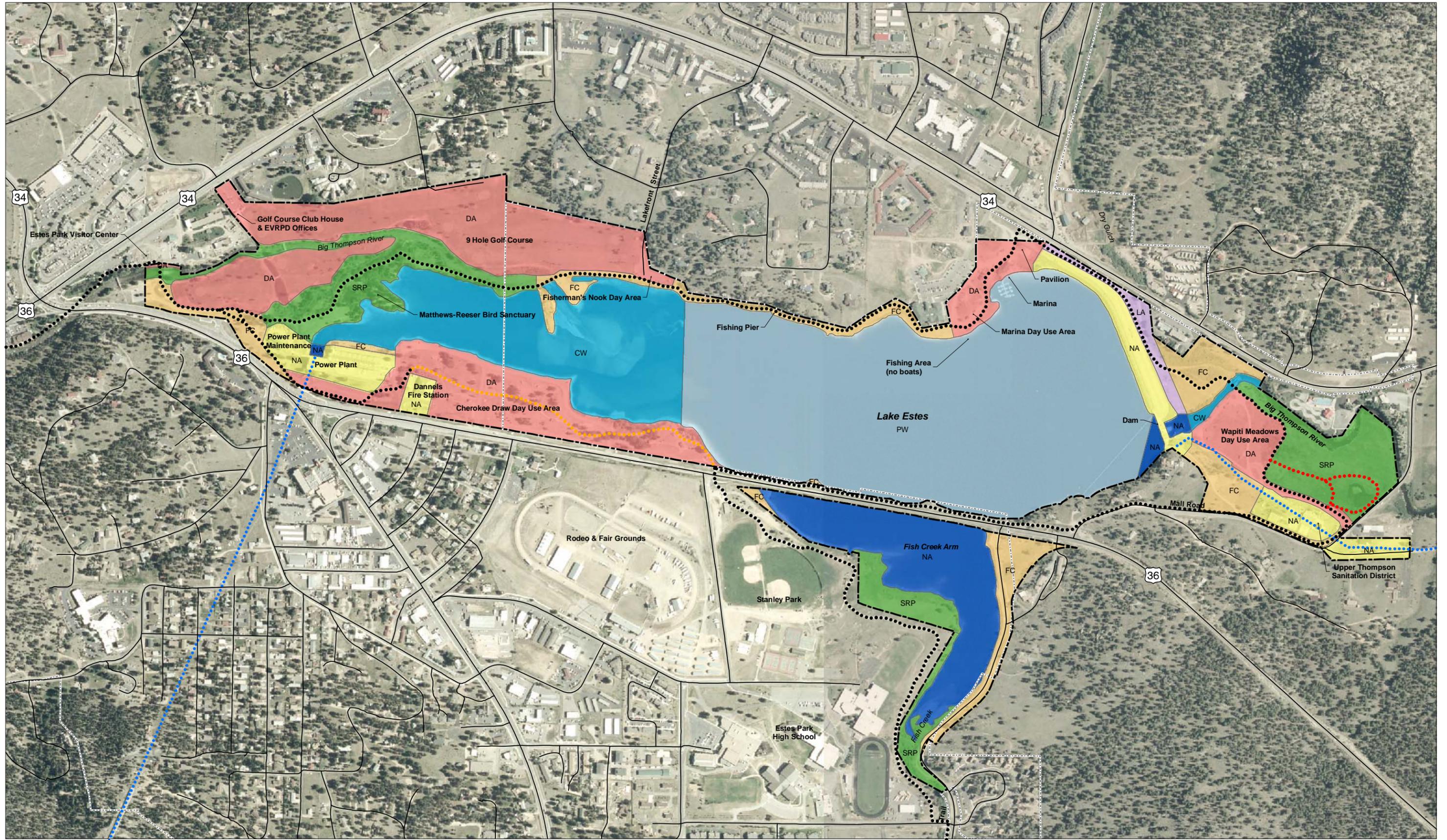
park visitors are allowed to fish from the shoreline into the no access zone without physically entering the water.

The **Calm Water Zone** is a water area with much evidence of the sights and sounds of people. Most water-based park recreation occurs in this zone, and water safety is emphasized. Boats are limited to no-wake speeds, with minor, seasonal exceptions. Water quality is maintained by limiting erosion and contamination from boat fuels. No seaplane landings are allowed in this zone.

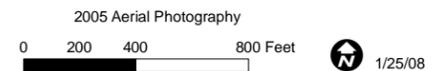
The **Passive Water Zone** is a water area with limited sights and sounds of people. Some water-based park recreation occurs in this zone and water safety is emphasized. Watercraft are nonmotorized only. Water quality is maintained by limiting erosion. No seaplane landings are allowed in this zone.

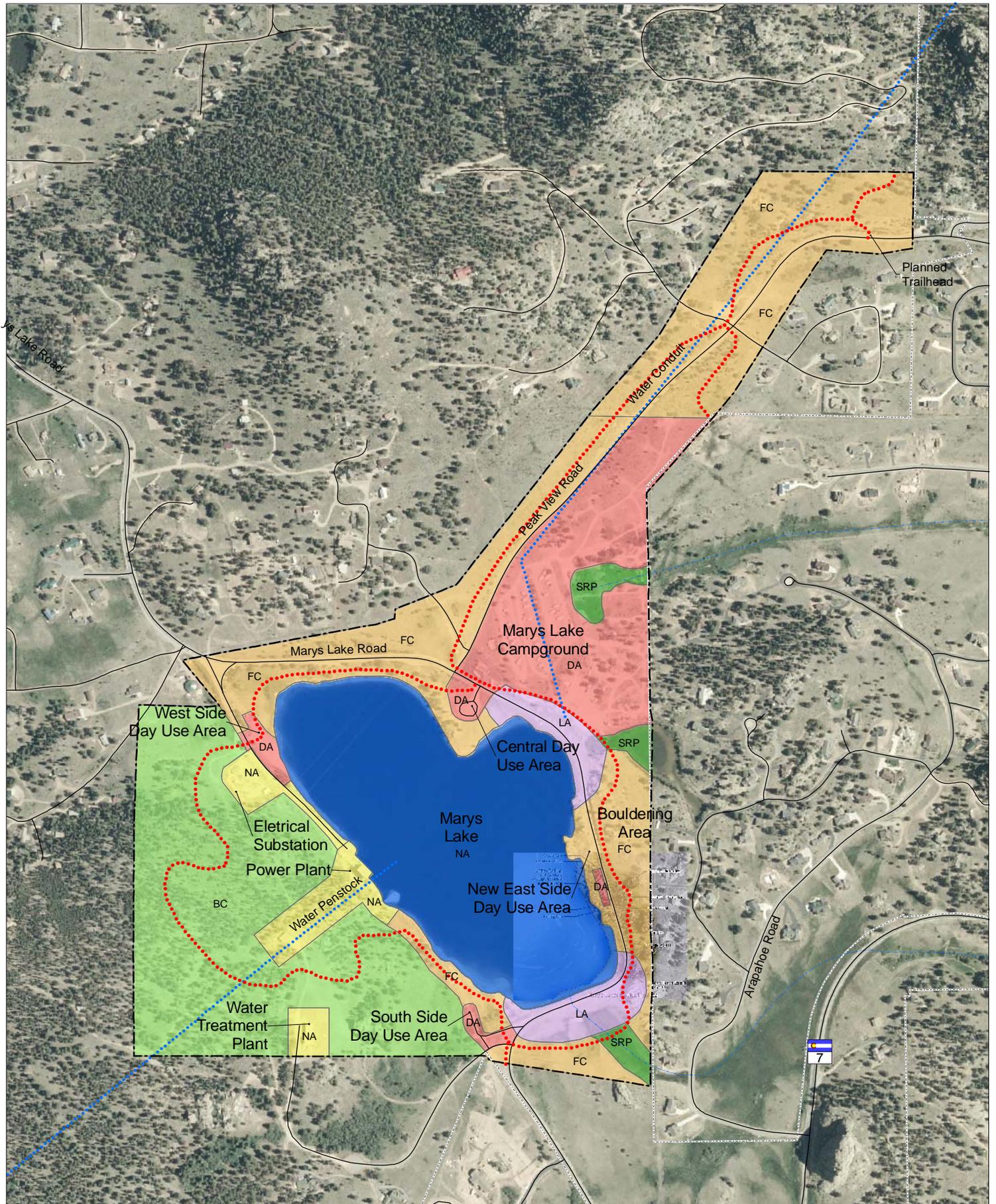
Figure 2-1 and Maps 2 through 5 illustrate how each park is subdivided into management zones. The combination and size of zones in the parks help define the visitor experience, resource conditions, and managerial conditions.

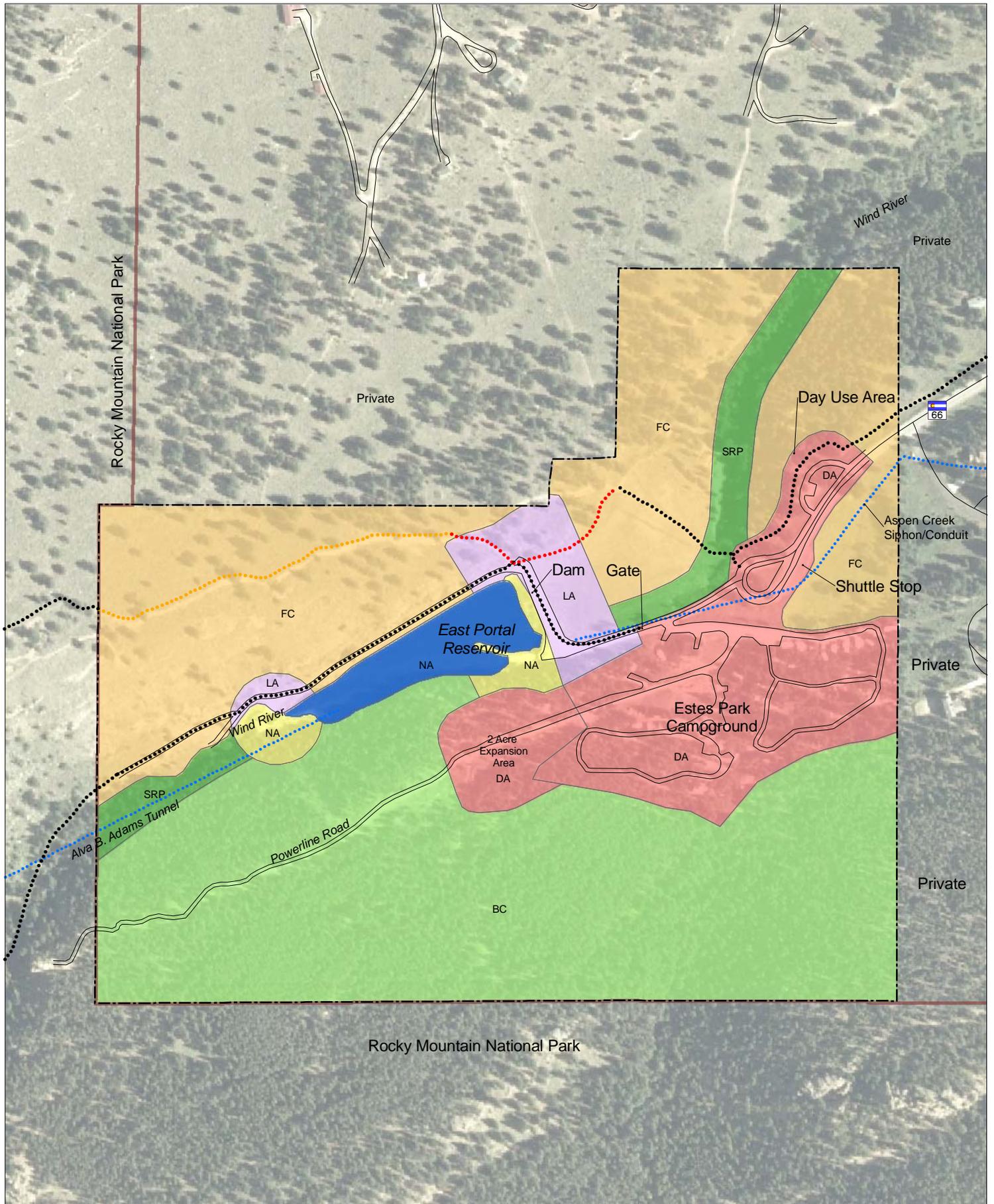




- Management Zones**
- Sensitive Resource Protection (SRP)
 - Developed Area (DA)
 - Front Country (FC)
 - No Access - Water (NA)
 - Limited Access (LA)
 - No Access - Land (NA)
 - Passive Water (PW)
 - Calm Water (CW)
- Other Symbols:**
- Plan Boundary
 - Existing Trails
 - Estes Park City Limits
 - Proposed Interpretive Trail
 - CBT Tunnels - Siphons - Conduits
 - Trail to be Partially Realigned







Management Zones

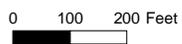
- Developed Area (DA)
- Front Country (FC)

- Back Country (BC)
- Sensitive Resource Protection (SRP)
- Limited Access (LA)

- No Access - Land (NA)
- No Access - Water (NA)
- ⋯ CBT Tunnels - Siphons - Conduits

- ⋯ Existing Trail
- ⋯ Proposed Trail
- ⋯ Trail to Rebuild

- Plan Boundary

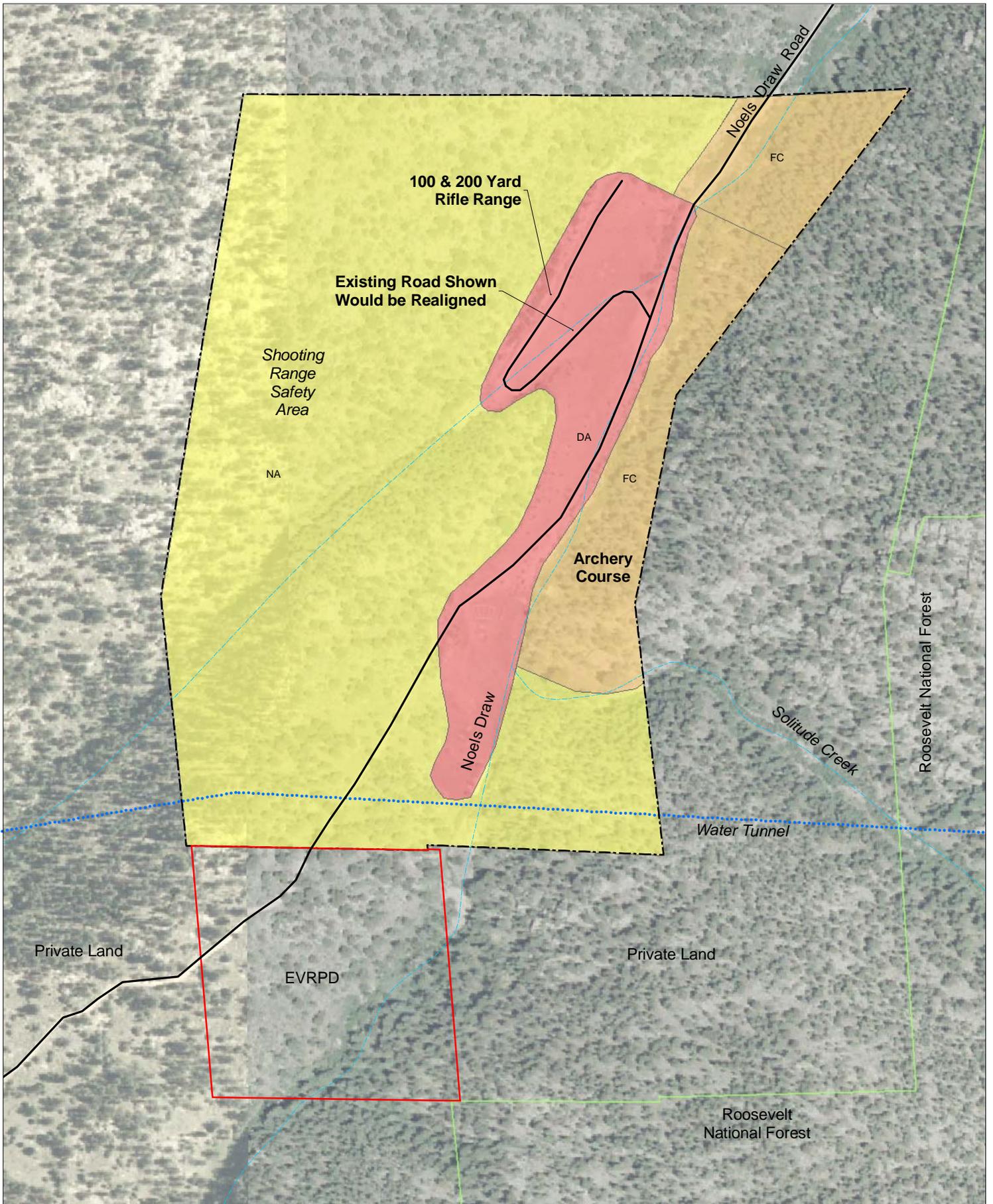


1/25/08 2005 Color Aerial Photograph

Map 4

East Portal

Estes Valley Recreation and Park District
Bureau of Reclamation
EDAW Inc.



Management Zones ■ Front Country (FC) EVRPD Land
■ Developed Area (DA) ■ No Access - Land (NA) Plan Boundary

⋯ CBT Tunnels - Siphons - Conduits



1/25/08

2005 Color Aerial Photograph

Map 5

Common Point

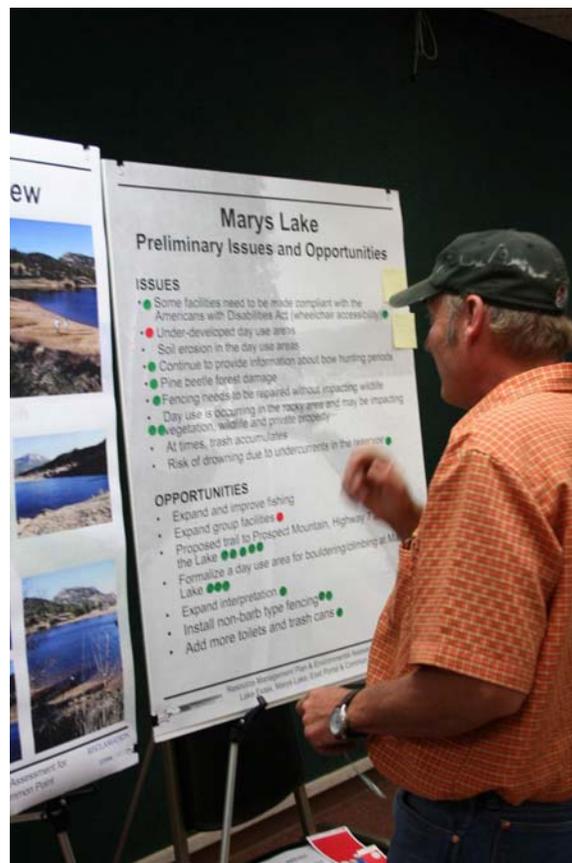
Estes Valley Recreation and Park District
 Bureau of Reclamation
 EDAW Inc.

2.5 Alternative Formulation

NEPA requires the consideration and evaluation of a range of reasonable alternatives that meet the Purpose and Need for a proposed Federal action and the assessment of potential effects to the human and natural environment. As discussed in Chapter 1.0, the proposed Federal action is to prepare and implement an RMP for four Reclamation properties in Estes Valley. NEPA facilitates planning by providing an established process through which Reclamation, interested agencies, and the public can formulate alternatives in response to identified issues and concerns. The basic goal in formulating alternatives is to identify various combinations of actions and resource management practices that respond to the issues identified during the planning process. In addition to the action alternatives, NEPA requires the consideration of a No Action Alternative (in this case, an alternative describing the management of the parks in the absence of an updated RMP).

Project goals, objectives, and guiding statements (Sections 1.6 and 2.3) were established to assist in formulating and selecting combinations of management actions that could reasonably be implemented and, therefore, would be considered viable alternatives. Using the goals, objectives, and guiding statements, Reclamation and EVRPD developed a reasonable action alternative (i.e., an alternative that prescribes a change in resource management). The range of reasonable alternatives for this project is limited due to the intended uses of the properties, the scarcity of a developable land base, the maturity of the existing parks (e.g., majority of developable lands are already developed) and the purpose and need requirements outlined in Chapter 1.0. Based

on the following criteria, the action alternative was designed to meet the purpose and need of the RMP/EA as described in Section 1.4. The action alternative was also designed to meet the goals and objectives, which were formulated to respond to the issues and concerns identified by the interested public, stakeholders, workshop, and Planning Team (see Management Goals and Objectives, Section 2.3).



Public Workshop during Planning Process

In order to thoroughly evaluate the proposed actions in this plan, conceptual designs and cost estimates were prepared and can be found throughout this chapter. The designs helped to determine the best use of space, configuration of facilities, and protection of natural resources. The general cost estimates are based on the conceptual designs and planning decisions, and are meant to roughly approximate costs associated with proposed

actions. These cost estimates helped the Planning Team evaluate the probability of actions based on potential funding. See Section 2.10.1 for a more detailed description of design and cost estimate accuracy.

Alternatives considered but eliminated from further analysis are described in Section 2.11.

2.6 Alternatives Considered in Detail

Two alternatives were formulated in response to the issues, concerns, and opportunities identified: **No Action Alternative** (Alternative A) and **Proposed Action Alternative** (Alternative B) (Proposed Action). A comparison of facilities under each alternative is provided in Table 2-9, at the end of Section 2.10. As detailed in Section 2.10, the implementation of the alternative elements would be contingent upon funding availability.

Under the No Action Alternative, ADA accessibility compliance retrofits or replacements would be provided to meet public needs or demands. Management actions to prevent contamination with lead and to mitigate lead would be implemented (at Common Point only). Current resource management practices and operations would not change. Management actions would occur on a case-by-case basis to meet Federal, state, and local laws and regulations. Maintenance of existing facilities would occur as needed.

Beyond the actions of the No Action Alternative the Proposed Action Alternative would improve existing facilities, develop new facilities, and encourage management actions that improve visitor experience and protect park resources. Under this alternative, additional facilities would be

provided, including day use, overnight camping sites, and trails.

For the purposes of alternative discussion and evaluation, “developed” areas consist of those park areas that have high visitor use, permanent facilities and infrastructure, and are regularly maintained by EVRPD or Reclamation staff. Examples of developed areas include campgrounds, day use areas, water storage/power generation infrastructure, and other permitted uses such as the UTSD or the Dannels Fire Station. These areas consist of a combination of developed infrastructure and both native and nonnative vegetation. In some cases, developed areas can include sensitive areas such as wetlands or riparian vegetation.



Group shelter at Lake Estes Marina

2.7 Environmental Commitments

The following environmental commitments are intended to be standard best management practices. The commitments would be applied, when applicable, during the implementation of both alternatives unless otherwise noted.

2.7.1 Recreation Facilities, Trails, and Aesthetic Values

- During facilities or trails location, all efforts would be made to avoid wetlands, riparian areas, cliffs, and steep and/or rocky slopes.
- Designated campsites and signs would be used to limit ecological and social disturbance (Proposed Action only).
- Temporary recreation closures may be necessary when construction poses a risk to visitor safety or resource damage.
- As much as possible, on-site material would be used for construction.
- Recreation facility development would complement the surrounding landscape as much as practical and would follow: (1) site-specific plans; (2) design and construction criteria, guidelines, and standards; and (3) development criteria to protect the visual quality of the reservoir area.
- The replacement of existing infrastructure or facilities would occur within the existing footprint.
- EVRPD, county, and Reclamation would work with local law enforcement entities to ensure proper enforcement of all laws and regulations.
- Proper regulatory and informational signs will be posted in the parks, informing the public of rules and regulations governing the use (Proposed Action only). Consult Reclamation's manuals and guidelines for signs and recreation facility design (Sign Guidelines for Planning, Design, Fabrication, Procurement, Installation, and Maintenance of Signs for Outdoor Public Use Areas [Reclamation 2002e] and Recreation Facility Design Guidelines [Reclamation 2002f]).

- Reclamation would maintain oversight authority of EVRPD's recreation management at the properties, including approval of concessions' contracts and contracts with user groups.
- EVRPD would complete a financial analysis before development of new facilities or redevelopment of existing facilities to evaluate funding requirements, financial performance of the facilities/programs (if it would generate revenue), and costs associated with maintenance and management.
- New buildings and facilities would not be constructed over the top of C-BT Project infrastructure such as tunnels. Utility and infrastructure locates would be completed during final design and before construction.
- User-created, informal trails would be closed, restored, and discouraged (Proposed Action only).
- The visual impacts of freshly cut stumps would be mitigated by cutting trees to ground level and spreading soil and leaf litter over the remaining stumps.

2.7.2 Noxious Weeds and Pest Management

- Maintain compliance with state and local noxious weed laws.
- Control the invasion and spread of noxious weeds and other undesirable exotic plants that threaten native habitat or biological diversity.
- Reduce competition of undesirable plants with native and/or planted vegetation.
- Control vertebrate and invertebrate pests, as necessary, to protect public health and safety and to prevent damage to public and private property.

- Clean all heavy equipment before entering and exiting construction sites to minimize transporting weed seed.
- Reseed after construction, heavy maintenance, and other soil disturbing activities. Only native seed would be used in revegetation efforts.
- Minimize sources of weed seed. Use clean fill material from weed-free sources. If straw is used for stabilization and erosion control, it must be certified weed-free or weed-seed free.
- All known noxious weed populations at new construction sites would be treated or eliminated prior to project implementation to prevent the spread of these populations.

2.7.3 Forest Management

- Remove hazard trees from campgrounds, day use areas, and other high-use areas (e.g., popular shoreline fishing areas, parking areas).
- Conduct hazardous fuels reduction through mechanical thinning in areas with high fire risk that are immediately adjacent to residential land uses or have high value.
- Prevent MPB or other forest pest infestation in high risk areas (i.e. developed areas). The least harmful method would be chosen before progressing to more aggressive methods (Proposed Action only). Signs would be posted before spraying occurs.

2.7.4 Plants and Wildlife

- Protect known active and inactive raptor nest areas.
- Avoid disturbing threatened, endangered, and proposed species (both flora and fauna) during breeding, young rearing, or at other times critical to survival by closing areas to activities.

- Restore vegetation disturbed by construction, trampling, or erosion with native plant species (Proposed Action only).
- Maintain undeveloped areas for natural vegetation and wildlife habitat.
- Restore natural vegetation in areas affected by trampling or erosion.
- Use closures to protect human and elk safety.
- Collaborate with CDOW and other agencies on wildlife management concerns, particularly elk management activities.
- Livestock grazing would not be permitted at any of the properties because of the potential for conflict with recreational use and neighboring uses.

2.7.5 Soil and Water

- Where excessive soil impacts exist from prior activity, the emphasis shall be on reclamation and preventing any additional detrimental impact, where feasible (Proposed Action only).
- Build erosion resistance into project design to reduce costly maintenance and restoration (Clean Water Act Sections 402(p) and 404); mitigate concurrently with construction (disturbance of more than 5 contiguous acres per project requires a state storm water discharge permit; a 404 permit would be required if more than 0.5 acre of Waters of the U.S. are disturbed).
- Where required by state law, appropriate permits relating to discharge and sedimentation would be obtained prior to construction.
- Avoid soil-disturbing actions during periods of heavy rain or wet soils. Periods of heavy snowmelt should also be considered.

- Control adverse water quality effects from human activities below high water levels.
- Allow camping in designated sites only.
- Protect or restore shoreline vegetation as a means of controlling erosion (Proposed Action only).
- Control potential pollutants (gasoline, petroleum products) associated with boat activity.
- Develop a pamphlet for distribution at Lake Estes marina to educate the public about methods to minimize gasoline or petroleum leaks.
- Ensure that operations at the marina follow best management practices for fueling boats and use of fuel containers.
- Coordinate with the Larimer County Planning and Environmental Health Departments to minimize contamination from sewer systems and other land uses.
- Erosion control structures, such as waterbars, drain dips, checkdams, culverts, French drains, catchment basins, and/or wetlands would be installed, where appropriate, to control water movement and protect soils and vegetation (Proposed Action only).

2.7.6 Wetlands and Riparian Areas

- If stream crossings or other instream structures are necessary, they would be designed to provide for passage of flow and sediment, withstand expected flood flows, and allow free movement of resident aquatic life.
- Avoid any loss of wetlands such as fens and springs.

2.7.7 Heritage Resources

- In accordance with the NHPA, all significant archaeological sites would be protected. Should an unknown cultural

resource site be discovered during construction or slope stabilization, a cultural resource specialist would be notified and appropriate measures implemented to preserve the integrity of the site.

- All contracts would include a “stop work” clause if evidence of cultural resources is found during construction. Any cultural property found eligible to the National Register of Historic Places (NRHP) would be protected through avoidance or project relocation. If cultural resources are encountered, further disturbance would be avoided. Protection of the resources discovered would occur whenever possible. If avoidance is not possible, Reclamation would enter into consultations with the State Historic Preservation Office (SHPO) regarding the eligibility of the subject sites for inclusion in the NRHP. This information would take the form of cultural resource report and site forms, and could also include the results of archaeological testing of the subject sites. If avoidance of sites that are determined eligible for inclusion in the NRHP is not possible, Reclamation would take measures to mitigate impacts to those sites. The nature and extent of those mitigation measures would be determined in consultation between SHPO and Reclamation.

2.8 Alternative A – No Action

2.8.1 All Parks

Under the No Action Alternative, existing use areas would in large part remain unchanged, with only the minimal improvements and maintenance activities required to keep the existing facilities in operation. The quality and development level of facilities, amenities, and resource

management practices would remain unchanged, with the exception of ADA improvements. Also, management actions to prevent contamination with lead and to mitigate lead would be implemented (at Common Point only).

Existing facilities and recreational opportunities are shown in Table 2-2. Under the No Action Alternative, the total numbers are not expected to change, although some changes may result with regard to ADA compliance..

Ongoing, routine maintenance would continue to occur on an as needed basis to keep the existing facilities in operation. This may include modifications of existing facilities and, in many cases, complete replacement of facilities to achieve ADA compliance.

ADA improvements and compliance actions at each of the properties are defined in the ADA Action Plan for Fiscal Years 2007-2010. The ADA compliance actions for the No Action Alternative would be the same as those identified in the Proposed Action Alternative. However, for the purposes of the analysis it will be assumed that improvements and modifications would occur within the developed area footprints of existing facilities and structures. The reason for this is because only with the concept plans involved with the Proposed Action Alternatives has it been possible to determine alternate locations. Generally, the modifications would include the replacement of some restroom facilities with ADA compliant vault toilets, designating universal parking spaces, improving ADA access to park facilities by resurfacing pathways, and, where applicable, raising bench, picnic table, and grill heights.

Other limited improvements and upgrades would be implemented as funding is available. However, for the purposes of this analysis, it will be assumed that any funding that becomes available for improvements and upgrades would first be applied toward ADA compliance improvements.

Although the shooting ranges at Common Point are generally located away from intermittent streams on the property, additional protection measures would be implemented as outlined in the Gun Club's lead mitigation plan and according to the Environmental Protection Agency's (EPA) best management practices for lead at outdoor shooting ranges to ensure that water quality is not degraded by range use.

Per the EPA's *Best Management Practices for Lead at Outdoor Shooting Ranges* (EPA-902-B-01-001, Revised June 2005, Region 2) a lead trap (similar to a sediment trap) would be installed in Noels Draw to capture lead and other shooting range projectiles and prevent these materials from entering the Big Thompson River. The lead trap would require additional design, engineering, and site-specific analyses prior to construction.

Table 2-2 Inventory of Existing Facilities at Lake Estes, Marys Lake, East Portal, and Common Point

	Lake Estes Marina	Fishermans Nook	Cherokee Draw	Fish Creek Arm	Wapiti Meadows	Lake Estes Golf Course	Lake Estes TOTAL	Marys Lake Campground	Central Day Area	West Side Day Use Area	South Side Day Use Area	Marys Lake TOTAL	Estes Park Campground	East Portal Day Use Area	East Portal Reservoir Area	East Portal TOTAL	Common Point TOTAL	GRAND TOTAL
Boating	yes	no	no	no	no	no		no	no	no	no		no	no	no		no	
Fishing	yes	yes	yes	yes	yes	no		no	yes	yes	yes		no	no	yes		no	
Sailing/windsurfing	yes	no	no	no	no	no		no	no	no	no		no	no	no		no	
Water skiing	yes	no	no	no	no	no		no	no	no	no		no	no	no		no	
Self-serve fee collection station	yes	no	yes	no	yes	no		no	no	no	no		no	no	no		no	
Picnic area	yes	yes	yes	yes	yes	no		no	no	no	no		no	yes	no		no	
Wading beach	yes	no	no	no	no	no		no	no	no	no		no	no	no		no	
Food/beverage	yes	no	no	no	no	yes		yes	no	no	no		yes	no	no		no	
Multiuse trails	yes	yes	yes	no	yes	no		no	no	no	no		no	yes	yes		no	
Horse trails	no	no	no	no	no	no		no	no	no	no		no	yes	yes		no	
Trails (miles)							5.5									0.9		6.4
Individual picnic shelters	2	1	9		4		16											16
Group picnic shelter	1		1				2											2
Basic campsite								60				60	39			39		99
Electric/water campsites								20				20	29			29		49
ADA electric campsite													7			7		7
Shower House								2				2	2			2		4
Disabled accessible fishing pier	1						1											1
Swimming Pool								1				1						1
Store/ Campground Office	1					1	2	1				1	1			1		4
Car parking spaces	78	50	151		20	56	355	15	27	14	6	62	8			8	20	445
Vehicle with trailer parking spaces	10						10											10
Vault toilet									1	1		2						2
Flush toilet	1		3		1	2	7	2				2	2			2		11
Potable water	1		3				4											4
Drinking fountain	1						1											1
Dumpster								2				2	2			2		4
Sanitary dump station								1				1	1			1		2
Boat ramp lanes	1						1											1
Dock	1						1											1
Marina	1						1											1
Boat slips/ moorings	44						44											44
Gasoline sales	no																	0
Boat rental	yes																	0
Outdoor shooting range																	1	1
Trash cans	16	2	18		4		40		4	2	2	8	7			7		55
Fish cleaning basin	1						1											1

The trap would need to be sized and designed to function during average and maximum flow volumes and velocities specific to the Noels Draw watershed.

Following the completion of additional site-specific study and design, Reclamation would submit a letter to the U.S. Army Corps of Engineers (USACE) describing the project and asking for concurrence that the project would be covered with Nationwide Permit (NWP) 43 which allows no more than 0.5 acre of waters of the United States to be disturbed (McKee 2008).

If concurrence is received, the lead trap would likely be constructed to divert flows from the natural drainage course, so that the more dense lead material could settle out while allowing natural sediment and gravel to flow back into the watercourse. The lead trap would likely include the construction of a detention basin to allow settling to occur. Typical maintenance would require emptying lead and sediment from the trap.

In addition to the on-stream lead trap, other lead trapping measures would be installed to capture bullets before washing into the watercourse. Specialized backstops would be installed at all ranges to ensure proper containment of lead shot. Lead cleanup

would regularly occur as part of ongoing shooting range maintenance and Estes Park Gun Club stewardship activities. All lead from the backstops and lead trap would be removed and delivered to a licensed lead recycler.

2.9 Alternative B – Proposed Action

2.9.1 Lake Estes

General Discuss and Elements Common to All Areas at Lake Estes

Over the past 10 years, many updates and modifications to facilities have been made to improve recreational opportunities at Lake Estes, including the enhancement of day use areas and the development of the 5.5-mile Lake Estes and Fish Creek trails.

Under Alternative B, most improvements would be limited to existing developed areas. New impact areas and proposed improvements are shown in Table 2-3. Throughout the park, day use areas would be improved to provide more opportunities and higher quality pedestrian use of the shoreline areas. In addition to recreation facility improvements, there are multiple opportunities to protect or enhance native vegetation and wildlife habitat.

Table 2-3 New Impact Areas at Lake Estes

Impact Area	Location	Approximate Size	Restored Area	Net Change
New Constructed Wetland	Wapiti Meadows	3 acres	0	+ 3 acres
New Interpretive Trail Around Wetlands	Wapiti Meadows	10ft x 2000ft	0	+ 10ft x 2000ft
Deepen Lake Bottom at the Shoreline of the Boat Docks	Marina	100ft x 50ft x 1ft	0	+ 100ft x 50ft x 1ft

Specific actions located outside developed day use areas include:

- Provide interpretive kiosks and/or a cell phone tour along the Lake Estes Trail to improve visitor experience and interpret park resources.
- Modify or replace existing benches along Lake Estes Trail with ADA accessible structures.
- Install approximately 1,050 feet of fencing within the Matthews-Reeser Bird Sanctuary, between the Lake Estes Trail and the shoreline of Lake Estes, to protect bird habitat from overgrazing by elk. The fence would be constructed to allow small wildlife movement under the fence while preventing elk from entering the area. Gates would be installed to allow visitors to observe birds within the fenced area at appropriate times (e.g., outside of nesting season).
- Continue periodic closures of the Lake Estes Trail to prevent potential conflicts with elk calving in the spring season.
- Install osprey nesting platforms at key locations around the lake.
- Preventative MPB spraying would occur in high use or highly developed areas.

Table 2-11 lists the proposed actions for Lake Estes, cost estimates for each action, and prioritization for each of the actions. A description of the prioritization methodology can be found in Section 2.10.



Elk Grazing in Riparian Community near Lake Estes

Lake Estes Marina and Day Use Area

All proposed improvements would occur within the existing developed areas; no new areas would be disturbed. Only one improvement, the lake bottom excavation, is proposed that would create a new impact area. The excavation of the lake bottom below the marina docks to increase the lake depth and resolve issues of mooring boats in shallow water during reservoir draw-down periods. Excavation activities would occur in an area of approximately 100 x 50 feet and to a depth of one foot. Lake Estes, an impoundment on the Big Thompson River, is considered to be a jurisdictional “water of the U.S.” and is, therefore, subject to Section 404 of the Clean Water Act, which is regulated by the USACE. Section 404 permit requirements would be determined at the time of final project design. The following permit considerations apply:

- If the type of equipment used is a front end loader or an excavator, no permit would be required (assuming that all material would be hauled off site).
- “Incidental fallback” in the excavation area is not regulated by the USACE.

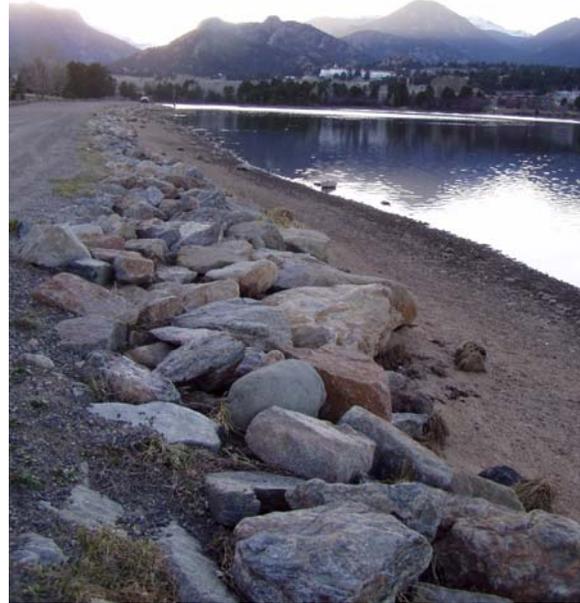
- If excavation operators used equipment to push material, rather than “scoop” or pull material, a Section 404 permit would be required.
- If the type of equipment is a bulldozer or scraper, which operates by pushing dirt, a Section 404 permit would be required.
- If recontouring is required beyond excavating and removing material to an off site, a Section 404 permit would be required.
- If any structures or boulders are added for fish habitat, a Section 404 permit would be required. However, if necessary, this work could be permitted under NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities.

The excavated material would be traded for service, sold, or donated. Removal of sediment is a standard practice that occurs in areas too shallow for boating and/or water movement.

Minor improvements would be made to the marina store, group shelters, parking lot, docks, and restrooms to ensure ADA accessibility.



Lake Estes Marina



Lake Estes Shoreline

Fisherman’s Nook Day Use Area

Minor improvements would be made to the picnic shelter and parking area to ensure ADA accessibility.

9-Hole Golf Course

Minor improvements to golf course facilities would include: updating the clubhouse and parking area to be ADA accessible, installing a new drinking fountain on the 4th hole, constructing a new ADA accessible toilet (including access) on the course, and installing a more efficient irrigation system. Areas that do not require irrigation would be restored with native vegetation; EVRPD would implement noxious weed control measures consistent with the Standard Environmental Commitments listed in Section 2.7.



9-Hole Golf Course

Cherokee Draw Day Use Area

Cherokee Draw provides a unique setting for lakeshore recreation with exceptional views. A naturalized shoreline area would be restored to create one of the area's best examples of lakefront day use areas. Figure 2-2 represents the design concepts for improvements at Cherokee Draw Day Use Area.

The access road and parking areas would be relocated and redeveloped to create a large open space along most of the shoreline. Road access and parking would still be provided at one location near the shoreline for visitors who require easy access to the shoreline. This area would also provide lakeshore access to the local fire department for emergencies or training purposes. A total of 16 ADA, 97 standard, and 16 large vehicle parking spaces would be provided. The access road and parking area would be surfaced with asphalt. In order to relocate the existing roadways and parking areas, the Lake Estes Trail would need to be relocated closer to U.S. 36, and a new trail would be developed to provide pedestrian access to the shoreline. In addition, a new irrigated lawn area would be developed to facilitate open play and field sports. Three ADA accessible restrooms would be constructed

and dispersed throughout the day use area. Five new picnic shelters would be dispersed throughout the redeveloped day use area in addition to relocating the 9 existing shelters. New ADA accessible fee stations would be installed at each of the two entrances.

Other improvements along the Cherokee Draw Day Use Area shoreline would include minor excavation of the lake bottom to increase lake depth and improve fish habitat. Excavation activities would occur in an area of approximately 30 x 30 feet and to a depth of up to 6 feet. The excavated material would be traded for service, sold, or donated. The excavated area would be partially filled with boulders and cobble to enhance fish habitat structure.

Wapiti Meadows Day Use Area

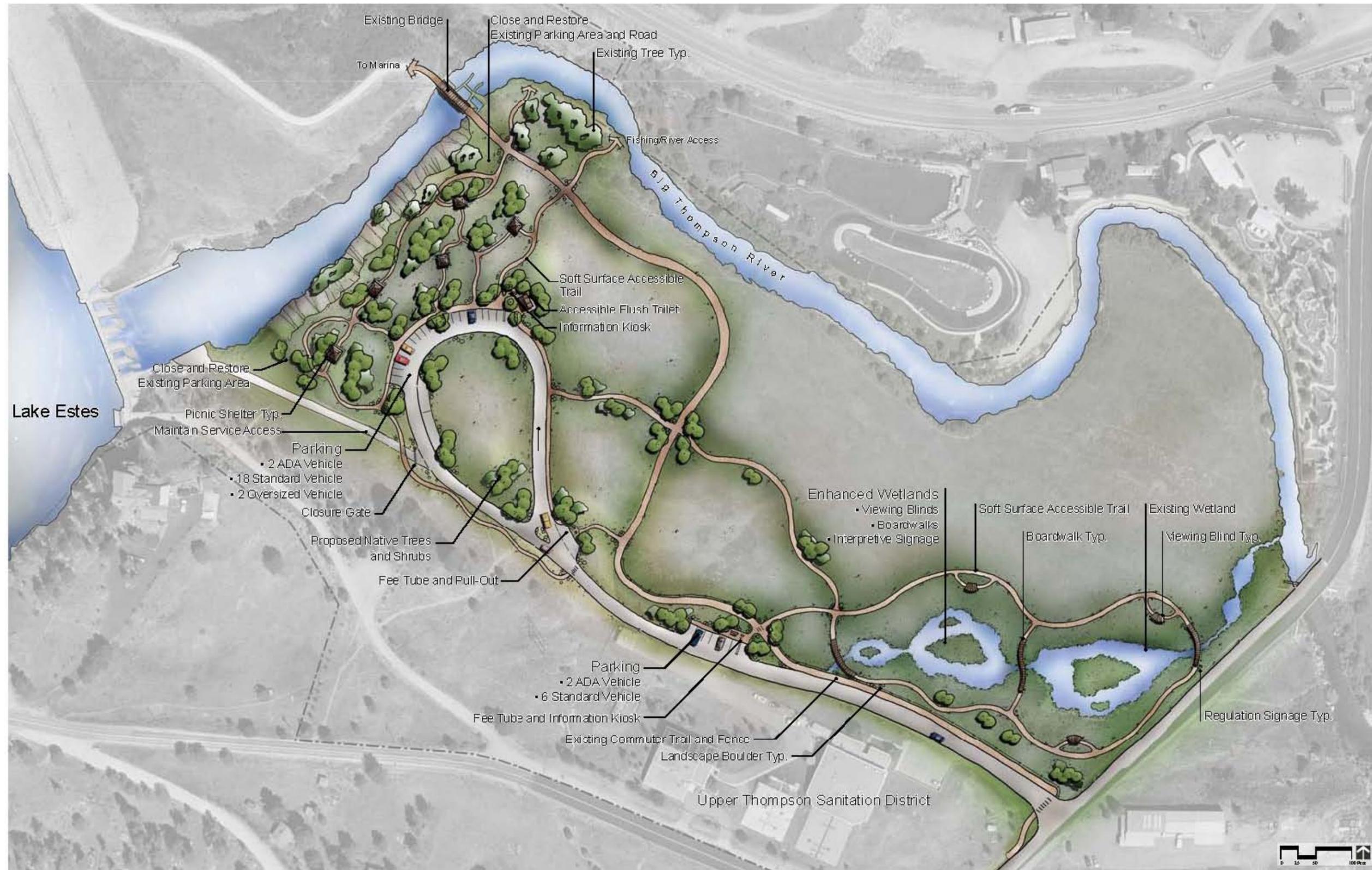
Wapiti Meadows Day Use Area provides fishing access to the Big Thompson River and a streamside picnicking area. Existing facilities are in disrepair and need to be replaced. The area would be improved to create a passive recreation area. Recreation opportunities would focus on fishing, picnicking, and nature interpretation.

As shown in Figure 2-3, 5 new picnic shelters and one new ADA accessible restroom would replace existing facilities and be installed near the main parking area.; architecture would be consistent throughout all parks in the Estes Valley. ADA accessible soft surface paths would be constructed to connect the picnic areas to the new parking area and Lake Estes Trail. The parking area would be redeveloped to include 2 ADA, 18 standard, and 2 oversized vehicle parking spaces. The access road and parking area would be resurfaced with recycled asphalt or base course.

Figure 2-2 Cherokee Draw Conceptual Design



Figure 2-3 Wapiti Meadows Conceptual Design



Conditional upon approval from the Water Quality Control Division of the Colorado Department of Public Health and Environment (CDPHE) and USACE, an additional three-acre wetland would be constructed to receive treated effluent from the Big Thompson Water Treatment Plant and to provide additional wildlife habitat. The specific design and filtration functions of the wetlands would be determined by the regulatory requirements of the state Water Quality Control Division, USACE, and potentially, the EPA.



Constructed Wetlands at Wapiti Meadows

Approximately 2,000 feet of ADA accessible trails and boardwalks would be built to provide access to the constructed wetlands and interpretive sites. A new ADA accessible fee station would be provided on the access road below the entrance to the

day use area. Three new viewing blinds would be constructed for birding and nature viewing.

2.9.2 *Marys Lake*

General Discussion and Elements Common to All Areas at Marys Lake

Over the past 40 years, facilities at the Marys Lake Campground and day use areas have essentially remained unchanged, with the exception of several new campsites and expanded utility services. Many campground facilities are in disrepair or do not fully accommodate current uses, such as modern RVs, which are typically longer and/or wider than the sites were originally designed to accommodate. Day use areas and campgrounds lack ADA accessible facilities.

Day use areas are also underdeveloped and/or in disrepair and need to be replaced. Under Alternative B, most improvements would be limited to existing developed areas; impact areas beyond the current impacted area footprint and improvements are shown in Table 2-4.

Table 2-4 New Impact Areas at Marys Lake

Impact Area	Location	Approximate Size	Restored Area	Net Change
Formalized Parking Area and New Toilet / Kiosk	East Side Day Use Area	0.16 acre	0	+ 0.16 acre
Relocated / Reconfigured Parking Area, Picnic Area and Toilet	West Side Day Use Area	0.8 acre	0.4 acre	+ 0.4 acre
New Trail around Marys Lake	Lake Area	2 ft x 8500ft	0	+ 2 ft x 8500ft
New Trail along Peak View Road	West of Campground	6ft x 4740ft	0	+ 6ft x 4740ft

Specific actions located inside developed day use areas include:

- Improve fencing and/or signs between the recreational use areas and private residential areas to limit trespassing on private land.
- Install bear-proof trash and recycling containers and signs to educate the public on proper food storage and waste disposal techniques, and to prevent human-wildlife conflicts or other wildlife impacts.
- Preventative MPB spraying would occur in high use or highly developed areas, such as at Marys Lake Campground and the day use areas.

Specific actions located outside developed day use areas include:

- Construct 8,500 feet of 2-foot wide soft surface trail around Marys Lake to connect day use areas and the campground. Provide interpretive kiosks and/or a cell phone tour along the trail to interpret park resources. See Map 3 for the location of the trail.
- Construct 4,740 feet of 6-foot wide asphalt surface trail to connect the Central Day Use Area, the campground, the proposed trail to Prospect Mountain, and the proposed trail to Fish Creek. The new asphalt surface trail would ultimately connect to the Estes Park trail network. See Map 3 for the location of the trail.

Table 2-11 lists the proposed actions for Marys Lake day use areas; cost estimates and prioritization for each action can be found in Section 2.10.

West Side Day Use Area

Improvements and upgrades at the West Side Day Use Area would affect approximately 0.8 acre of undeveloped land (Figure 2-4). Approximately 1 acre of existing developed area would be restored to approximate natural conditions. The restoration of native habitat would take anywhere from 2 to 10 years, depending upon the plant performance requirements as well as the level of effort given to maintenance requirements (e.g., watering). A reconfigured gravel parking area would be constructed to accommodate 9 standard and 2 oversized vehicles; 2 spaces would be ADA accessible. The new parking area would prevent vehicles from driving down to the shoreline and would improve pedestrian safety. A total of 5 new picnic tables, including 2 ADA accessible tables, and one new ADA accessible vault toilet would be installed. Approximately 1,000 feet of soft surface ADA accessible trails would be constructed or formalized to improve shoreline access, including ADA accessible shoreline access, to prevent soil erosion and vegetation trampling, and to provide access to the west side of the lake and to the backcountry zone. A kiosk providing information on visitation rules, dangerous undercurrents, and hunting activities/schedules would be installed at the parking area trailhead.

Central Day Use Area

All proposed improvements would occur within existing developed areas; there would be no new disturbance areas at the Central Day Use Area (Figure 2-5). A reconfigured gravel parking area would be constructed to accommodate 14 standard and 4 oversized vehicles; 2 spaces would be ADA accessible. Seven new picnic tables, including one ADA accessible table, and

one new ADA accessible vault toilet would be installed between the parking area and the shoreline. Approximately 1,500 feet of ADA accessible soft surface trails would be constructed or formalized to improve shoreline access, to prevent soil erosion and vegetation trampling, and to provide access to the campground. A pedestrian crosswalk would be installed where the trail crosses Marys Lake Road. A kiosk providing information on visitation rules, dangerous undercurrents, and hunting activities/schedules would be installed at the parking area trailhead.



Parking at Marys Lake Central Day Use Area

East Side Day Use Area (New)

The area on the east side of Marys Lake has historically been used for shoreline fishing and rock climbing/bouldering. Over time, visitor use of the area and informal parking on the west side of the road have caused vegetation trampling, littering, human waste, trespassing on private land, and erosion. The existing informal parking area on the west side of the road presents safety issues for visitors crossing the road to access the East Side Day Use Area. This area would be established as a new day use area (Figure 2-6).

Improvements and upgrades at the East Side Day Use Area would affect approximately 0.16 acre of currently undeveloped land. A reconfigured gravel parking area would be constructed to accommodate 10 standard vehicles, including one ADA accessible vehicle space. A new ADA accessible vault toilet would be installed on the south end of the parking area. An informational kiosk would be installed at the parking area. Approximately 1,500 feet of soft surface trails would be constructed or formalized to improve shoreline and bouldering access, to prevent soil erosion and vegetation trampling, and to provide access to the bouldering area and South Side Day Use Area. A pedestrian crosswalk and signage would be installed where the trail crosses Marys Lake Road. Bollards would be placed along the east side of Marys Lake Road to improve the safety of bouldering area visitors.



Figure 2-4 West Side Day Use Area Conceptual Design



Figure 2-5 Central Day Use Area Conceptual Design

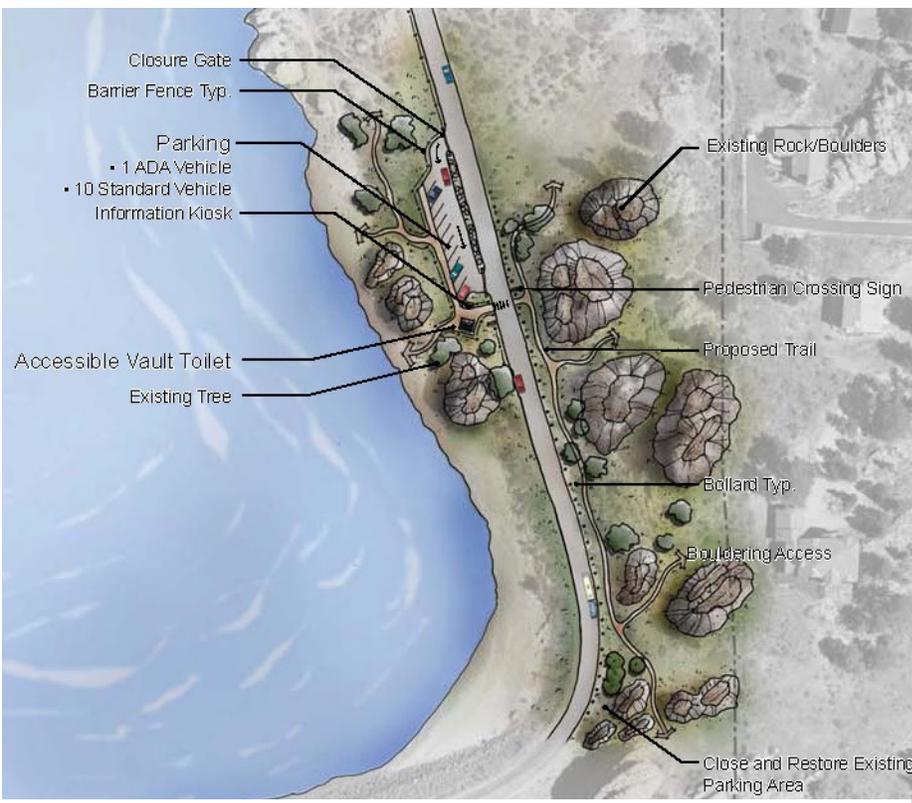


Figure 2-6 East Side Day Use Area Conceptual Design

South Side Day Use Area

All proposed improvements would occur within existing developed areas; there would be no new disturbance areas at South Side Day Use Area (Figure 2-7). Approximately 0.5 acre of existing developed area would be restored to natural conditions. A reconfigured gravel parking area would be constructed to accommodate 6 standard vehicles, including one ADA accessible space. A total of 3 new picnic tables, including one ADA accessible table, and one new ADA accessible vault toilet would be installed between the parking area and the shoreline. Approximately 500 feet of accessible soft surface trails would be constructed or formalized to improve shoreline access, to prevent soil erosion and vegetation trampling, and to provide access to the bouldering and backcountry areas. A kiosk providing information on visitation rules, dangerous undercurrents, and hunting activities/schedules would be installed at the parking area trailhead.



Shoreline Fishing at Marys Lake

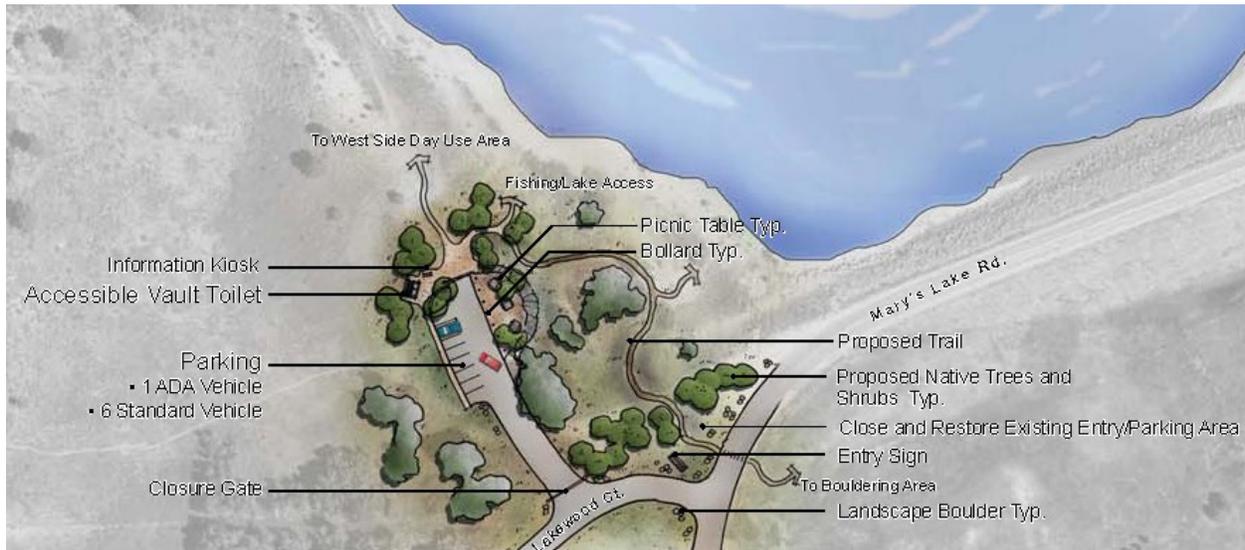


Figure 2-7 South Side Day Use Area Conceptual Design

Marys Lake Campground

The Marys Lake Campground would be reconfigured and upgraded to improve the visitor experience and to accommodate standard uses (Figure 2-8). While the overall number of sites within the campground would be reduced, the quality of the experience would be improved.

Currently, many campsites are located immediately adjacent to private property and/or private residences. The reconfiguration of the campground and individual campsites would include a 75-foot minimum setback from private property. All reconfigured campsites would have electricity; RV/camper sites would also have water, sewer, and cable television hookups. Designated blocks of campsites would be available for small family or group reservations. The campground would be reconfigured into loops; during low-use periods, entire loops could be closed as necessary. Table 2-5 lists the existing and proposed campsite numbers.

Table 2-5 Existing and Planned Campsites in Marys Lake Campground

Campsite Type	Existing	Planned	Difference
Large RV/ Camper	60	42 (2 ADA)	-18
Small RV/ Camper	40	22 (1 ADA)	-18
Tent	39	47 (3 ADA)	+8
Small Cabin	0	9 (1 ADA)	+9
Total	139	120	-19

A total of 9 small 380-square-foot camper cabins would be built close to Peak View Road. Each cabin would have an outdoor living pad, 2 parking spaces, and one tent pad. The cabins would have electricity only.

Two 800-square-foot, ADA accessible camper services buildings with men and women's showers and toilets would be located in the campground and would reduce walking times from all campground loops.

All campsite structures and furnishings, including tent/living pads and asphalt parking spaces, would be upgraded with high durability structures and developed according to Reclamation standards.

To limit air quality impacts and risk of wildfire, the existing portable campfire rings (i.e., not buried) would be replaced with smaller, recreational grade campfire rings that would be buried or embedded into the campsite living space. Reconfigured campsites would limit fires to areas hardened with crusher fines.

Improved storm water drainage control features (e.g., drains, culverts, pipes, grates) would be installed to direct storm water into natural drainages leaving the campground.

New low-level lighting would be installed with lamps that direct light into the campground and limit light pollution.

All of the proposed campground improvements would occur within existing developed areas. In areas where no additional development is proposed, shade trees would be planted and vegetation would be restored with native vegetation.

The two wetlands located in the middle of the campground and around the edge of the pond would be enclosed with a split-rail fence. Several existing campsites in and adjacent to the wetlands would be removed and the areas would be restored with native vegetation. The natural spring that feeds the

northern wetland in the middle of the campground would be protected to allow continued flow into the wetland.

The campground entrance/exit would be reconfigured to improve vehicle circulation, safety, and aesthetics. A new RV dump station would be located at the campground exit, across from the lodge.

All campground roads would be realigned to better accommodate larger turning radiuses and traffic circulation. All roads would be resurfaced with asphalt. A network of accessible soft surface trails (8-foot width), intended for pedestrian and bicycle traffic, would connect campground loops and campground facilities.

A new 5,000-square-foot campground lodge (office) would be constructed to accommodate registration/reception, offices, general store, deli and coffee shop, laundry facilities, a game room, and vending services. The lodge would provide men and women's restrooms with showers and toilets. The campground concessionaire would have the option to provide services to visitors who are not campground guests. The lodge would provide a central gathering place for campground guests, including a fire pit, seating area, and playground. A new campground day use area would be located near the lodge and pond. The new day use area would include a group picnic shelter (approximately 15 x 15 feet), picnic tables, and a group fire pit.

The campground lodge would be relocated near the pond, set back from the road as well as 100 feet from the toe of the dam (according to Reclamation standards), to allow more room for vehicles waiting to register during peak use periods. The campground lodge would have a separate parking area with 2 ADA accessible, 10

passenger, and 6 oversized vehicle spaces to accommodate camper registration and other lodge uses. The campground maintenance area would be relocated adjacent to the lodge and include a small fenced-in storage yard.

Decisions on the management of the campground are documented in the management agreements with the concessionaire contracted to manage the facility. Any changes to the management of the facility are amended to the agreement or incorporated into renewed agreements, which expire in 2009. These changes to management agreements can be made in consultation with Reclamation, EVRPD and the contracted organization, or as part of the management agreement renewal process.

Table 2-11 lists the proposed actions for the Marys Lake Campground, cost estimates for each action, and prioritization for each of the actions. A description of the prioritization methodology can be found in Section 2.10.



Marys Lake Campground

2.9.3 East Portal

Elements Common to All Areas at East Portal

Over the past 40 years, facilities at East Portal and the Estes Park Campground have essentially remained unchanged, with the exception of several new campsites and expanded utility services. Many of the campground facilities and roadways are now in disrepair or do not fully accommodate some passenger vehicles. Since the campground was constructed, private residences and land uses have been developed in proximity to the campground; this has led to conflicts between campground activities and residents. The day use area and campground lack ADA accessible facilities.

The day use area and trailhead are poorly defined and present soil erosion concerns. Parking area improvements and minor trail reroutes would occur within the existing disturbed area. Under Alternative B, most improvements would be limited to existing developed areas; new impact areas are shown in Table 2-6.

Specific actions located inside developed areas include:

- Install bear-proof trash and recycling containers and signage to educate the public on proper food storage and waste disposal techniques, and to prevent human-wildlife conflicts or other wildlife impacts.
- Preventative MPB spraying would occur in high use or highly developed areas, such as at Estes Park Campground and the East Portal Day Use Area.

Specific actions located outside developed areas include:

- Construct a new 550-foot segment of 2-foot wide soft surface trail to connect the day use area to the East Portal Reservoir. This redirected trail would simplify the trail network in the area by adding a four-way intersection. Some social trails would be closed and restored to approximate natural conditions. The restoration of native habitat would take anywhere from 2 to 10 years, depending upon the plant performance requirements as well as the level of effort given to maintenance requirements (e.g., watering). Some existing system trails would be reconstructed to reduce braiding and erosion. See Map 4 for the location of trail improvements.

Table 2-11 lists the proposed actions for East Portal; cost estimates and prioritization for each action can be found in Section 2.10.

Table 2-6 New Impact Areas at East Portal

Impact Area	Location	Approximate Size	Restored Area	Net Change
New Walk-In Tent Area	West End of Campground	2 acres	0	+ 2 acres
Rerouted Trail	Meadow Area	2ft x 550ft	2ft x 467ft	+ 2ft x 83ft

East Portal Day Use Area

All proposed improvements would occur within existing developed areas; there would be no new disturbance areas (Figure 2-9). The existing parking area would be reconfigured to accommodate 6 standard vehicles, including one ADA accessible space. A total of 3 new picnic tables would replace the existing tables, including one ADA accessible table, and one new ADA accessible vault toilet would be installed between the parking area and meadow. A kiosk providing information on visitation rules, dangerous undercurrents, and hunting activities/schedules would be installed at the parking area trailhead. The day use area trail would connect to the East Portal Reservoir and State Highway 66.



Horseback Rider on Multi-Use Trail at East Portal

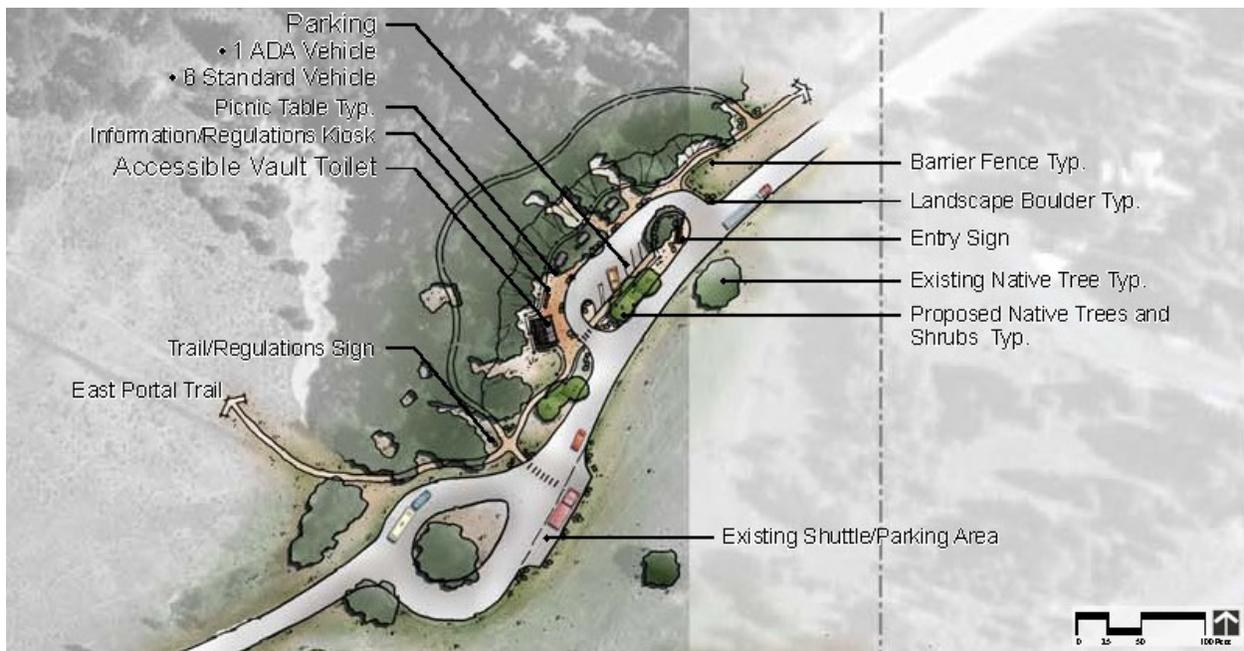


Figure 2-9 East Portal Day Use Area Conceptual Design

Estes Park Campground

The Estes Park Campground would be updated and expanded by 2 acres (approx. 20 walk-in sites) to improve visitor experience and to accommodate standard uses, such as RV/camper use and tent camping (Figure 2-10). Currently, many campsites are located immediately adjacent to private property and/or private residences. The reconfiguration of the campground and individual campsites would include a 75-foot minimum setback from private property. Twenty (20) walk-in tent only camp sites would be added on the west edge of the campground along Powerline Road. The walk-in tent area would have a small asphalt parking area with 28 standard vehicle spaces, 2 ADA vehicle spaces, and one ADA accessible flush toilet. The walk-in tent area and associated parking would occupy approximately 2 acres.

RV/camper sites would include water, sewer, and cable television hookups. Designated blocks of campsites would be available for small family or group reservations. The campground would be reconfigured into loops; during low-use periods, entire loops could be closed as necessary. Table 2-7 lists the existing and proposed campsite numbers.

Table 2-7 Existing and Planned Campsites in Estes Park Campground

Campsite Type	Existing	Planned	Difference
Large RV	9	9 (1 ADA)	0
Small Camper	28	28	0
Tent	27	17 (3 ADA)	-10
Walk-in Tent	2	20 (1 ADA)	+18
Total	66	74	+8

With the exception of the new walk-in tent camping area, all of the proposed campground improvements would occur within existing developed areas. In areas where no additional development is proposed, vegetation would be restored to approximate natural conditions. The restoration of native habitat would take anywhere from 2 to 10 years, depending upon the plant performance requirements as well as the level of effort given to maintenance requirements (e.g., watering). The forest and riparian vegetation at the Estes Park Campground is an attribute that is relatively unique to campgrounds in the Estes Park area. Campground improvements and the expanded walk-in tent area would be constructed to minimize disturbance to or removal of these vegetation types.

To limit air quality impacts and risk of wildfire, the existing portable campfire rings (i.e., not buried) would be replaced with smaller, recreational grade campfire rings that would be buried or embedded into the campsite living space. Reconfigured campsites would limit fires to areas hardened with crusher fines.

Improved storm water drainage control features (e.g., drains, culverts, pipes, grates) would be installed to direct storm water into natural drainages leaving the campground.

New low-level lighting would be installed with lamp shields to direct light into the campground.

All campsite structures and furnishings, including tent/living pads and asphalt parking spaces, would be upgraded with high durability structures and be developed according to Reclamation standards.

Figure 2-10 Estes Park Campground Conceptual Design



The campground entrance/exit would be reconfigured to improve vehicle circulation, safety, and aesthetics. A new RV dump station would be located at the campground exit across from the campground lodge.

All campground roads would be realigned to better accommodate larger turning radiuses and traffic circulation. All roads would be resurfaced with asphalt. A network of accessible soft surface paths (8-foot width) would be constructed to provide access to ADA facilities. The internal pedestrian connections would be on asphalt roads.

The two existing restroom and shower buildings would be replaced with three 520-square-foot ADA accessible flush toilet buildings. The buildings would be centrally located to the campground loops to reduce walking times from all sites.

A new 3,300-square-foot campground lodge (office) would be constructed to accommodate registration/reception, offices, general store, deli and coffee shop, laundry facilities, a game room, and vending services. The lodge would provide men and women's restrooms with showers and toilets. The campground concessionaire would have the option to rent services to campers from outside the Estes Park Campground. The lodge would provide a central gathering place for campground guests, including a fire pit, seating area, and playground adjacent to the lodge.

The campground lodge would be set back from the road (farther than the existing office building) to allow more room for vehicles waiting to register during peak use periods. The campground office would have a separate parking area with 4 ADA accessible spaces, 13 passenger, and 2 oversized vehicle spaces to accommodate camper registration and other office uses.

The campground maintenance area would be relocated adjacent to the campground host site and would include a small fenced storage yard.



East Portal Campground

Decisions on the management of the campground are documented in the management agreements with the concessionaire contracted to manage the facility. Any changes to the management of the facility are amended to the agreement or incorporated into renewed agreements. These changes to management agreements can be made in consultation with Reclamation, EVRPD and the contracted organization, or as part of the management agreement renewal process.

Table 2-11 lists the planned actions for Estes Park Campground, with cost estimates and prioritization for each of the actions. A description of the prioritization methodology can be found in Section 2.10.

2.9.4 Common Point

The Common Point property has not been used by Reclamation for operations and maintenance since the C-BT project was completed. C-BT project facilities on this property are minimal. In other areas where there is a similar extent of facilities present, Reclamation has an easement for access and

use on the lands rather than full ownership of the land. In order to reduce liability and risk to the Federal government associated with the activities of a shooting range, Reclamation would consider disposal of this property through the proper General Services Administration procedures. If Reclamation decides to pursue this option, an easement for access and use would be retained on the property through the appropriate land use instrument. There would likely be restrictions on access and use from others during times when Reclamation would be at the property, and there would need to be consideration in the future placement of structures and alignments of roads in order not to inhibit Reclamation's use and access. Additional NEPA compliance would be completed at the time a decision was made to dispose of the property, as necessary. If EVRPD was to acquire the property, it is likely the concept plan shown in Figure 2-11 would be adopted.

Until that determination is made, there would be limited improvements made to the gun range. The improvements would be restricted to those that are mandated by law, address safety issues, are very low in cost, and/or involve a change in use with little or no cost. The Proposed Action Alternative improvements are detailed below. Routine maintenance would be a part of this alternative. Under Alternative B, improvements would be limited to the existing developed area, with exception to the new impact area shown on Table 2-8.

Decisions on the management of the shooting range are documented in the management agreements with the concessionaire contracted to manage the facility. Any changes to the management of the facility are amended to the agreement or incorporated into renewed agreements. These changes to management agreements can be made in consultation with Reclamation, EVRPD and the contracted organization, or as part of the management agreement renewal process.

The portable toilet(s), shooting tables, parking areas, and access to the shooting ranges would be modified to comply with ADA standards.

Warning signs would be posted along the Common Point boundary to alert persons using the adjacent forest of nearby shooting range activities. Further, an informational kiosk with range safety regulations would be added near the first parking area.

The existing abandoned trap range, which is currently serving as a pistol range, would be converted to a multipurpose range for archery, rifle, and pistol use. The regulations for the multipurpose range would be determined as part of the overall range regulations, separate from this RMP/EA.

Table 2-8 New Impact Areas at Common Point

Impact Area	Location	Approximate Size	Recovered Area	Net Impact Change
New Lead Trap	North End in Noels Draw	10ftx10ft	0	+ 10ft x10ft

Figure 2-11 Common Point Conceptual Design



Table 2-9. Summary of Existing and Project Alternative Facilities.

	Large RV Campsites with Utilities	Small Camper Campsites with Utilities	Small Cabins	Tent Campsites (no utilities)	Shower House with Toilets	Restrooms or Vault Toilets	Trails (miles)	Picnic Shelters	Parking Spaces
Lake Estes									
Existing	0	0	0	0	0	7 (1 ADA)	5.5	18 (3 ADA)	365 (8 ADA)
No Action Alternative	0	0	0	0	0	7 (5 ADA)	5.5	18 (5 ADA)	365 (8 ADA)
Proposed Action Alternative	0	0	0	0	0	7 (7 ADA)	6.3	15 (15 ADA)	365 (8 ADA)
Marys Lake									
Existing	60	40	0	39	2	2	0	0	47 (2 ADA)
No Action Alternative	60	40	0	39	2 (1 ADA)	2 ADA	0	0	47 (2 ADA)
Proposed Action Alternative	42 (2 ADA)	22 (1 ADA)	9 (1 ADA)	47 (3 ADA)	3 (3 ADA)	3 ADA	2.5	2 ADA	51 (2 ADA)
East Portal									
Existing	9	28	0	29	2	0	0.9	0	8 (1 ADA)
No Action Alternative	9	28	0	29	2 (1 ADA)	0	0.9	0	8 (1 ADA)
Proposed Action Alternative	9 (1 ADA)	28	0	37 (4 ADA)	3 ADA	1 ADA	0.9	1 ADA	7 (1 ADA)
Common Point									
Existing	0	0	0	0	0	1	0	0	20 (1 ADA)
No Action Alternative	0	0	0	0	0	1 ADA	0	0	20 (1 ADA)
Proposed Action Alternative	0	0	0	0	0	1 ADA	0	0	20 (1 ADA)

Notes: ADA facilities would be wheelchair accessible; ADA parking spaces would be provided in all public parking areas as they are redeveloped

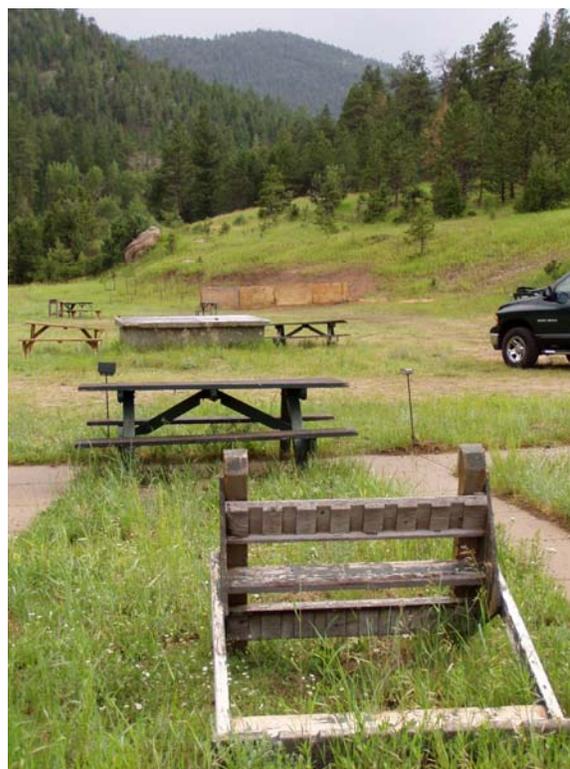
Although the shooting ranges at Common Point are generally located away from the intermittent streams on the property, additional protection measures would be implemented according to the EPA's best management practices for lead at outdoor shooting ranges to ensure that water quality is not degraded by range use.

Per the EPA's *Best Management Practices for Lead at Outdoor Shooting Ranges* (EPA-902-B-01-001, Revised June 2005, Region 2) a lead trap (similar to a sediment trap) would be installed in Noels Draw to capture lead and other shooting range projectiles and prevent these materials from entering the Big Thompson River. The lead trap would require additional design, engineering, and site-specific analyses prior to construction. The trap would need to be sized and designed to function during average and maximum flow volumes and velocities specific to the Noels Draw watershed. As shown on Table 2-8, for the purposes of this analysis, it will be assumed the size would be approximately 10 ft by 10 ft.

Following the completion of additional site-specific study and design, Reclamation would submit a letter to the USACE describing the project and asking for concurrence that the project would be covered with NWP 43, which allows no more than 0.5 acre of waters of the United States to be disturbed (McKee 2008).

If concurrence is received, the lead trap would likely be constructed to divert flows from the natural drainage course, so that the more dense lead material could settle out while allowing natural sediment and gravel to flow back into the water course. The lead trap would likely include the construction of a detention basin to allow settling to occur. Typical maintenance would require emptying lead and sediment from the trap.

In addition to the on-stream lead trap, other lead trapping measures would be installed to capture bullets before washing into the watercourse. Specialized backstops would be installed at all ranges to ensure proper containment of lead shot. Lead cleanup would regularly occur as part of ongoing shooting range maintenance and Estes Park Gun Club stewardship activities. All lead from the backstops and lead trap would be removed and delivered to a licensed lead recycler.



Shooting Facilities at Common Point

There is a high demand for public access to shooting ranges in Larimer County. Public use of the ranges at Common Point would be expanded. The ranges would be open to the public at select times, especially during high demand periods such as the fall hunting season. In addition, a sign would be added to the locked gate off Highway 34 with information about how a member of the general public could gain access to the range, who they should contact, and fees for use. This information would also be posted

on the EVRPD and Gun Club's website, and occasionally publicized through ads in local newspapers, radio channels, or other forms of communication.

Providing expanded public knowledge about access to Common Point would help ensure compliance with Reclamation's policy related to preventing the establishment of exclusive use.

2.10 Implementation Methods and Priorities

The following are general actions that were identified during the planning process to facilitate management of the parks and to achieve the goals and objectives established for the RMP/EA. These actions apply to all lands within the project areas. Management strategies would be adapted as necessary to resolve any problems identified in the following actions:

- Reclamation would continue to operate its properties for the purposes for which the project was authorized.
- Reclamation and EVRPD would adhere to existing and future Federal, state, and county laws, regulations, and ordinances, including accessibility regulations and guidelines.
- Decisions would be made for the benefit of the project and the general public.
- Visitor health and safety would be the primary focus when constructing or upgrading needed facilities and providing visitor use opportunities.
- The following indicators would be used to monitor the effectiveness of this management plan:
 - Visitor surveys would be implemented by EVRPD approximately every 5 years.
 - Public comments would be accepted and reviewed on an ongoing basis.

- EVRPD would annually review the quality of habitat particularly for wetlands.
- Weeds would be monitored annually under contract with the Larimer County Natural Resource Department
- Wildlife monitoring would be ongoing by CDOW
- CDOW Fisherman Surveys

In addition, each set of goals and objectives outlined in this chapter is accompanied by certain actions that would facilitate their completion.

The implementation of the majority of these actions would be phased over the next 10 or more years. Actions are categorized by funding source to match anticipated levels of funding and their importance in meeting existing laws and regulations (see Table 2-10). Funding one actions would be financed with funding that has already been dedicated by Reclamation and EVRPD. Funding two actions would be financed with funds that are likely to be captured by EVRPD, which include EVRPD funds, Reclamation funds, grants, volunteer labor, local government contributions, and other existing sources of funding for recreation and conservation. It may also be possible that a less expensive alternative (i.e. gravel instead of asphalt) would be selected. Funding three actions could be financed with other funds such as Federal grants, bond funding, increased revenue from the parks, and other potential sources of funding. Table 2-10 provides a breakdown of the implementation and funding, projected amounts, and potential sources of funding. Any action identified in this plan would only be implemented if funding becomes available for that action.

Table 2-10. Funding Sources.

REVENUE ASSUMPTIONS: FUNDING ONE, TWO AND THREE		
	Annual Amount	10-Year Amount
FUNDING ONE ACTIONS		
EVRPD provides 50% match for Reclamation funds that have been committed but not spent.	N/A	\$172,000
Reclamation funds already committed but not spent by EVRPD. (This includes expenditures for ADA improvements.)	N/A	\$172,000
Total Available for Funding One Actions		\$344,000
FUNDING TWO ACTIONS – INCREMENTAL REVENUES OVER FUNDING ONE		
EVRPD provides \$50,000 per year in cash as a match for Reclamation funds	\$50,000	\$500,000
EVRPD provides equivalent of \$26,400 per year in in-kind contributions as a match for Reclamation Funds	\$26,400	\$264,000
EVRPD is successful in attracting an average of \$50,000 per year from Great Outdoors Colorado for improvements on Reclamation property. EVRPD uses Reclamation grant and EVRPD capital investments as substantial match to make applications competitive.	\$50,000	\$500,000
Reclamation provides annual funding consistent with average annual funding for the last 5 years $[(\$382,000/5) = \$76,400]$	\$76,400	\$764,000
Total Available for Funding Two Actions	\$202,800	\$2,028,000
FUNDING THREE ACTIONS – INCREMENTAL REVENUES OVER FUNDING ONE AND TWO		
EVRPD manages Estes Park and Mary's Lake campgrounds and earns net income over historic concession fee revenues. Preliminary research shows that this level of net revenue could be earned by managing both campgrounds.	\$100,000	\$1,000,000
EVRPD issues voter approved General Obligations Bonds and uses proceeds to fund some capital projects.	Unknown	Unknown
EVRPD secures matching funds from local government.	Unknown	Unknown
Other potential sources of grants or contributions	Unknown	Unknown
Total Available for Funding Three Actions	Unknown	Unknown

Table 2-11. Overall Implementation.

	Funding 1	Funding 2	Funding 3	Total/ Notes
Proposed Elements: Elements Common to All Parks				
Manage forest/trees to reduce pine beetle damage and wildfire risk through thinning, fuel burning, spraying, and other techniques in developed areas.		\$84,000		Cost based on spraying trees at a cost of \$42/tree in campgrounds and day use areas. The number of trees is estimated at 2000.
Restore natural vegetation in areas affected by trampling, erosion or construction.	X	X	X	This would be achieved as part of redeveloped efforts and with trail/area closures.
Encourage CDOW to take elk management action and facilitate general wildlife management activities.	X	X	X	Coordinate with CDOW.
Survey and control exotic plants.	\$2,500	\$2,500	\$2,500	
Cost Estimate Total	\$2,500	\$86,500	\$2,500	\$91,500
Proposed Elements: Lake Estes				
Lake Estes Overall				
Provide interpretive kiosks and/or cell phone tour along Lake Estes Trail.			\$6,000	Some kiosk costs have been incorporated into day areas that have proposed improvements.
Fence approximately 4 acres of vegetation in the Matthews-Reeser Bird Sanctuary to protect bird habitat from overgrazing by elk, and to protect elk calving areas while improving safety of visitors.		\$3,500		Standard elk closure fencing - assumes a length of ,1050 feet at \$3.33/foot. The Estes Park Bird Club may be able to procure funding sources and/or provide volunteer labor.
Install osprey nesting boxes.			X	This activity would be completed with volunteers.
Cost Estimate Total	\$0	\$3,500	\$6,000	\$9,500
Marina				
Make minor improvements to store, group shelters, parking lot, benches, docks, and bathrooms to be ADA compliant.	\$27,275			
Replace playground equipment.	\$30,000			
Excavate under the docks to provide deeper water for boat access and parking.		\$760		Assume average excavation depth of 1ft over an area 100ftx50ft. Cost is \$4/cubic yard.
Cost Estimate Total	\$57,275	\$760	\$0	\$58,035

Table 2-11. Overall Implementation. (continued)

	Funding 1	Funding 2	Funding 3	Total/ Notes
Proposed Elements: Lake Estes (cont.)				
Cherokee Draw Day Use Area				
Provide new ADA compliant restrooms at key locations throughout the day use area.	\$44,704	\$114,554		
Improve vehicle circulation by defining driveways, providing regulatory signs and defined parking spaces. Provide ADA compliant entry fee stations. Provide open lawn area for play.			\$1,373,397	
Provide an ADA accessible fishing pier and benches.			\$19,050	
Cost Estimate Total	\$44,704	\$114,554	\$1,392,447	\$1,551,705
Wapiti Meadows Day Use Area				
Provide a new entry fee station, parking area, and trails.			\$462,111	
Provide a new ADA compliant vaulted toilet.	\$17,526			
Provide new picnic shelters and one that is ADA compliant.		\$76,200		
Construct a new wetland.			\$39,600	Assume average excavation depth of 2ft over a 3-acre area. Cost is \$4/cubic yard. Other costs would be shared with other organizations.
Provide a wildlife viewing blind, interpretive signs, and trail/boardwalk at the constructed wetlands.			\$320,918	
Cost Estimate Total	\$17,526	\$76,200	\$822,629	\$916,355
Golf Course and Clubhouse				
Install a new and more efficient irrigation system.			\$750,000	
Make minor improvements to clubhouse and parking lot. Replace drinking fountain at 4th hole. Improve the toilet and trail to toilet on course to be ADA compliant.	\$70,800			
Cost Estimate Total	\$70,800	\$0	\$750,000	\$820,800
Fisherman's Nook Day Use Area				
Make minor improvements to parking lot, benches and shelters to be ADA compliant.	\$19,500			
Lake Estes Cost Estimate Total	\$212,305	\$281,514	\$2,973,576	\$3,467,395

Table 2-11. Overall Implementation. (continued)

	Funding 1	Funding 2	Funding 3	Total/ Notes
Proposed Element:s: Marys Lake				
Marys Lake Park Overall				
Provide a new concrete path/trail on the west side of Peak View Road, from Prospect Mountain Trailhead to the campground and Central Day Use Area. A spur would also be provided to the east.			\$210,693	
Provide a new soft-surface trail with interpretation around Marys Lake. The trail would connect the day use areas, campground and backcountry area, and would connect to other proposed trails in the vicinity.			\$86,360	
Cost Estimate Total	\$0	\$0	\$297,053	\$297,053
West Side Day Use Area				
Rebuild parking area, picnic area, new trails, and information kiosk.			\$141,526	
Install new vault toilet that is ADA compliant.		\$17,526		
Cost Estimate Total	\$0	\$17,526	\$141,526	\$159,052
Central Day Use Area				
Rebuild parking area, picnic area; new trails and information kiosk.			\$165,847	
Install new vault toilet that is ADA compliant.	\$17,526			
Cost Estimate Total	\$17,526	\$0	\$165,847	\$183,373
East Day Use Area				
Formalize the parking area and new information kiosk.			\$53,814	
Install new vault toilet that is ADA compliant.		\$17,526		
Provide formal trails to the shoreline and a new crosswalk on Marys Lake Road.			\$10,160	
Install new fence along boundary with neighboring residents.		\$7,500		
Cost Estimate Total	\$0	\$25,026	\$63,974	\$89,000
South Side Day Use Area				
Rebuild parking area; new picnic area, trails and information kiosk.			\$62,819	
Install new vault toilet that is ADA compliant.			\$17,526	
Cost Estimate Total	\$0	\$0	\$80,345	\$80,345

Table 2-11. Overall Implementation (continued)

	Funding 1	Funding 2	Funding 3	Total/ Notes
Proposed Elements: Marys Lake (cont.)				
Marys Lake Campground				
Improve the entrance area, roads, campsites, paths, play areas, maintenance area, signs, gathering areas, lighting, and boundary fencing. Provide bear-proof and recycling containers and signs about correct food storage.		\$600,000	\$3,550,273	
Provide more landscaping with native plants throughout the campground to make the campground more attractive and natural, as well as to provide more shade. Protect and recover wetland areas.		\$88,340	\$44,170	
Provide new ADA compliant restrooms at key locations throughout the campground.		\$345,440		
Provide a new shelter for group gatherings, interpretive talks, etc.		\$15,240	\$15,240	
Provide new small cabins to diversify the camping opportunities.			\$285,750	
Provide a new campground lodge, including office/store/laundry/showers/ and bathrooms. This building would be ADA compliant.			\$1,428,750	
Cost Estimate Total	\$0	\$1,049,020	\$5,324,183	\$6,373,203
Marys Lake Cost Estimate Total	\$17,526	\$1,091,572	\$6,072,928	\$7,182,026
Proposed Elements: East Portal				
East Portal Overall				
Provide a newly constructed trail from the day use area on Spur 66 to the reservoir. Rebuild the trail leading to Emerald Mountain to reduce erosion and improve safety.		\$48,260		
Cost Estimate Total	\$0	\$48,260	\$0	\$48,260
Day Use Area				
Rebuild parking area, picnic area, trails and information kiosk.			\$67,166	
Install new vault toilet that is ADA compliant.			\$17,526	
Cost Estimate Total	\$0	\$0	\$84,692	\$84,692

Table 2-11. Overall Implementation. (continued)

	Funding 1	Funding 2	Funding 3	Total/ Notes
Proposed Elements: East Portal (cont.)				
Estes Park Campground				
Improve the entrance area, roads, campsites, paths, play area, lighting, signs, gathering areas and build new walk-in tent sites. Relocate and screen the maintenance area. Provide bear-proof and recycling containers and signs about correct food storage		\$450,000	\$1,695,760	
Provide more landscaping with native plants throughout the campground to make the campground more attractive and natural; as well as to provide more shade.			\$225,045	
Provide new ADA compliant restrooms at key locations throughout the campground.		\$69,850	\$139,700	
Provide a new campground lodge including office, store, laundry, showers, and bathrooms. This building would be ADA compliant.			\$942,975	
Cost Estimate Total	\$0	\$519,850	\$3,003,480	\$3,523,330
East Portal Cost Estimate Total	\$0	\$568,110	\$3,088,172	\$3,656,282
Proposed Elements: Common Point				
Common Point Overall				
Install an on-stream lead trap in Noels Draw.	\$15,000			
Contain projectiles in the shooting ranges by providing backstops and sand traps.	\$96,669			
Improve road access and parking to each shooting range area including ADA access.	\$0			Volunteer Labor
Install new ADA compliant portable toilet.	\$0			Provided by Club
Regularly clean-up the range and recycle lead.	\$0			Volunteer Labor
Prepare and adopt a list of range rules and fees.	\$0			Staff and volunteer
Provide signs at intervals around and through the range safety zone to warn about safe ingress/egress.	\$0			Volunteer Labor
Common Point Cost Estimate Total	\$111,669	\$0	\$0	\$111,669
Estimated Cost by Funding Source for all Parks	\$344,000	\$2,027,696	\$12,137,176	
Total Estimated Cost for All Elements				\$14,508,872

2.10.1 Cost Estimates

Orders of magnitude cost estimates for the proposed action are outlined in Table 2-11 and can also be found in the previous sections of this chapter. Actual development costs may vary after detailed designs and final cost estimates are prepared for each action. These estimates were prepared with the best information available at the time of the design (concept plan examples are provided in Chapter 2.0, Alternatives). The cost estimates (Table 2-11) are an opinion of probable costs for construction of the plan elements and areas, as shown on the concept designs for each specific area. Assumptions utilized in the development of the cost estimates include:

1. The estimate is a Class C estimate due to the conceptual level of planning and design that is in support of this estimate. The cost estimate should be used for preliminary budgeting purposes only.
2. The cost estimate is organized into the major specific site areas as shown on the Concept Plans. The individual items outlined in the cost estimate are not all illustrated on the Concept Plans, but they are typical elements found in this type of project as well as existing site elements inventoried at the site.
3. The preliminary unit quantities are both take-offs of features from the Concept Plans as well as assumptions based on similar project experience.
4. The unit costs are based on review and recommendations from EVRPD, current cost estimate data collected from similar types of projects bid in the past few years, as well as published cost data information for some project elements.

5. The cost estimate includes a contingency factor of 15% for conceptual level of design and 12% for contractor general cost conditions. The costs reflect estimated costs for 2007.
6. The cost estimate does not include overall project development or overhead costs that may be accrued if the project is developed in multiple phases.
7. Costs for compliance and/or mitigation permitting costs are not included.
8. The cost estimate does not include any contingencies.
9. The costs included for utilities are assumptions only, as existing and proposed utility plans were not available.

The *U.S. Department of Interior (USDI) Bureau of Reclamation Recreation Facility Design Guidelines (Reclamation 2002f)* provides examples of recreation facility design details. Use of these guidelines was intended to assist in the planning and budget processes, reduce design costs, and provide consistent designs throughout Reclamation's system of facilities. Reclamation, its managing partners, and concessionaires are encouraged to use these guidelines in the design and development of new recreation facilities and the renovation of existing facilities. As new designs, technology, and materials are developed, they would be added to the manual guidelines and existing materials would be reevaluated. The manual provided guidelines for the following facilities in this plan:

- Day use areas
- Camping facilities and camp spurs
- Visitor services buildings
- Boating facilities
- Fishing facilities

2.11 Alternative Elements Eliminated from Consideration

The following alternative elements were considered but eliminated:

2.11.1 Lake Estes

A combined pedestrian and commuter trail along the lakeshore through Cherokee Draw Day Use Area was considered. However, it was ultimately decided that these two uses should remain separate to avoid potential conflicts between these different trail users (for example, commuters would typically be traveling at higher speeds than recreational users).

2.11.2 Marys Lake

Initially, two design concepts were prepared for Marys Lake Campground. Ultimately, various elements from both designs were combined into Alternative B. The evaluation of two options for the campground helped the Planning Team understand the balance of campsite types and the costs associated with various road and campsite spur options. Elements that were considered but eliminated from the alternatives included: a higher number of RV campsites, a group walk-in tent area, a picnic site on the north edge of the campground, and locating the campground lodge closer to the entrance of the campground. The rationale for eliminating these elements is as follows:

- Providing additional RV campsites would have displaced more tent sites and caused additional visual impacts to campers and neighbors.
- It was ultimately decided that the campground is not suitable for medium to large groups. Larger groups typically cause disturbance to other campers, cause more resource damage, and are

more costly to manage when group camping is located too close to other campsites and at the edge of developed areas. (Small groups would still be able to reserve a block of campsites.)

- It was decided that the campground would not benefit from a communal picnic area, since campers have use of their own reserved campsites for dining.
- It was decided to locate the campground lodge further from the entrance road to provide more vehicle stacking space and to provide an improved pedestrian space outside the lodge, as well as being centrally located for camper use.

An additional recommendation from the neighboring residents included closing the Marys Lake Campground. This recommendation was eliminated because it is incompatible with the purpose and need of the project and the Reclamation Recreation Management Act of 1992. See section 2.2.5 regarding land use authorizations and land disposal for more information on the authorized use of Reclamation lands.

2.11.3 East Portal

In previous drafts of the Estes Park Campground designs, a group tent walk-in area was evaluated on the west end of the campground. While small groups would be able to reserve a block of campsites, it was ultimately decided that the campground is not suitable for medium to large groups. Larger groups typically cause more disturbance to other campers, more resource damage, and are more costly to manage when group camping is located in proximity to other individual campsites or adjacent to developed land uses, such as residences or businesses.

2.11.4 Common Point

An expansion of opportunities and facilities at Common Point was considered through the draft alternatives phase, as shown in the concept plan in Figure 2-11. However, the road widening and hardening, formalization of parking areas, group shelter, indoor shooting range, 25-yard pistol range, vault toilets, and realignment of the rifle range road have been eliminated from further consideration.

The Common Point property is relatively undeveloped at this time. Since Reclamation is considering disposal of this property in the Proposed Action Alternative, making large investments into the property would be untimely.

Until the determination is made to dispose of the property, Reclamation would allow improvements to be made that are mandated by law, address safety issues, are very low in cost, and/or involve a change in use with little or no cost, as detailed in the Proposed Action Alternative. Reclamation believes that allowing improvements beyond those listed would result in new and increased activities associated with a shooting range. One reason Reclamation is considering disposal of the property (even at its current level of development and use) is to reduce the liability and risk to the Federal government associated with these activities. Allowing new and increased use would go a step further in increasing liability and risk.

The containment of shot, especially at the trap range, is an ongoing challenge. Per EPA regulations and the Clean Water Act, shot or other projectiles are not permitted to fall into natural drainages from shooting ranges because of the potential for pollution discharge from discernible, confined, and discrete conveyances (i.e., point sources). Because there are three natural drainages in the Common Point area, it was decided that trap range shot cannot be contained in a feasible manner; therefore, the trap range was eliminated.

A separate, 50-yard archery range was considered but, due to space constraints at the site, was ultimately combined into the new multipurpose range.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This chapter discusses the existing physical, biological, and socioeconomic resources in the study area (Affected Environment) and the anticipated environmental effects (Environmental Consequences) of the alternatives presented in Chapter 2.0 (see Maps 6, 7, 8, and 9 located at the end of this chapter). The No Action Alternative describes anticipated future conditions if the Proposed Action Alternative is not implemented. It was compared against current conditions to assess its level of impact on the resources. It provides a baseline condition, which was used to evaluate the level of impact caused by the Proposed Action Alternative.

Analysis of the potentially affected resources is based on the professional judgment and experience of Reclamation and EVRPD staff specialists, discussions with resource experts and professionals, literature review, and field trips to the study area by resource personnel.

The goal of this chapter is to disclose, to the extent possible, the impacts of each alternative on the analyzed resources. If quantitative estimates are not possible, qualitative estimates are provided to facilitate comparison of alternatives by the public and decision makers. It assumes completion of identified elements of the alternatives. The reader should understand that depending upon funding availability some elements may not be completed or less expensive, shorter-term substitutes may be used until more funding becomes available (i.e. stone vs. asphalt).

It is assumed recreational use of the four Reclamation properties will continue regardless of which alternative is implemented.

3.2 Impact Thresholds

Direct, indirect, and cumulative impacts are analyzed for each impact topic and are described in terms of type, duration, and intensity; general definitions of each are provided below. All potential impacts discussed represent the residual impact expected after the successful implementation of the Standard Environmental Commitments presented in Section 2.7.

Type. Describes the classification of the impact as direct, indirect, or cumulative, and then determines whether the impact would result in beneficial or adverse effects.

- **Direct:** Effect caused by alternative and occurs in the same time and place.
- **Indirect:** Effect caused by alternative but is later in time or farther removed in distance, but is still reasonably foreseeable.
- **Cumulative:** Incremental effect caused by alternative when added to other past, present, and reasonably foreseeable future actions (see Section 3.2.1 for more information).
 - **Beneficial:** Positive change in the condition or appearance of the resource, or a change that moves the resource toward the desired condition or goals identified in Chapter 2.0.

- **Adverse:** Negative change that detracts from the condition or appearance of the resource, or a change that moves the resource away from the desired condition or goals identified in Chapter 2.0.

Duration. Describes the length of time an effect would occur as short or long term.

- **Short Term:** Lasting no longer than the immediate implementation period (e.g., construction period, build-out period).
- **Long Term:** Lasting for the life of the project or facility or RMP planning period (in this case, 10 years).

Intensity. Describes the degree, level, or significance of an impact as no impact, negligible, minor, moderate, or major.

- **No impact:** No discernable effect.
- **Negligible:** Effect is at the lowest level of detection and causes very little or no disturbance or improvement.
- **Minor:** Effect that is slight, but detectable, with some perceptible effects of disturbance or improvement.
- **Moderate:** Effect is readily apparent and has measurable effects of disturbance or improvement.
- **Major:** Effect is readily apparent and has measureable effects of disturbance or improvement that are of local, regional, or global importance; or sets a precedent for future project undertakings by Federal agencies.

3.2.1 Cumulative Effects Analysis

The Council on Environmental Quality defines cumulative impacts as:

The impacts on the environment which results form the incremental impact of

the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR 1508.7).

The cumulative effect analysis is focused on defining the incremental effects of this RMP (both No Action and Proposed Action alternatives) in context with the impacts from other past, present, and reasonably foreseeable projects.

Generally, spatial boundaries were initially based on the direct and indirect impact areas. These boundaries were then expanded until the direct and indirect alternative impacts were expected to diminish to negligible levels, or until a stable or decreasing trend of influence was evident. Where overall alternative impacts are anticipated to be negligible, the spatial boundaries for the cumulative effects analysis coincide with the direct and indirect impact areas, unless otherwise noted.

To analyze the implications of cumulative effects, this analysis considers background levels of effects, past project contributions, ongoing project contributions, effects from this RMP's proposals, as well as the effects anticipated from reasonably foreseeable actions. Additionally, these effects will be collectively evaluated against legal or administrative thresholds to judge the level of significance of the effects.

Public scoping comments, community and local trend analyses (demographic and recreational), and consultation with various agencies or entities such as Reclamation, EVRPD, USFS, RMNP, Town of Estes

Park, Larimer County, and project stakeholders, were used to develop an inventory of past, present, and reasonably foreseeable projects pertinent to this cumulative effects analysis.

Within each resource's Environmental Consequences discussion (at each park), the **Cumulative Effects** subsection is generally organized as follows:

- Introduction of the temporal and spatial boundaries used for the analysis and, if necessary, an explanation of the boundaries' significance.
- Clarification of the RMP's incremental contribution to the overall effect and determination of its importance / consequence to the resource.

3.3 Special Status Species

All Federally listed or state listed sensitive wildlife and plant species known to occur within Larimer County are shown in Table 3-1. Although all species shown have the potential to occur within the county, the one federally listed species and two state listed species shown below have the potential to occur and be impacted on the four Reclamation properties. These species will be carried to more in-depth analysis later in this chapter.

Federally Listed Species.

- Canada lynx (*Lynx canadensis*)

State Listed Species.

- American peregrine falcon (*Falco peregrinus anatum*)
- Bald eagle (*Haliaeetus leucocephalus*)

The information in Table 3-1 was compiled from U.S. Fish and Wildlife Service's (USFWS) 2007 County List for Larimer County, Colorado and Colorado Natural

Heritage Program's (CNHP) 2007 Species Tracking Lists for Larimer County, Colorado.

There are no Federal or state listed plant species within the project area. Brief statements regarding the rationale for elimination from further analysis are provided. These statements are based on information provided by various wildlife management and/or research agencies including, but not limited to, USFWS, CNHP, CDOW, Natural Diversity Information System (NDIS), and USFS.

All species identified as having potential to occur on any of the four Reclamation properties will be addressed under the "*Special Status Species*" subheading within the wildlife Affected Environment and Environmental Consequences discussions. A determination of effects is presented for all federally listed species with potential to occur in the project area(s). The determination is presented in **boldface type**.

Additionally, state and Larimer County noxious weed lists are provided in Appendix E. "Noxious" means that the species in question is both nonnative and invasive (can out-compete and exclude other types of vegetation); the term "noxious" has a legal connotation with the Colorado Department of Agriculture. Most noxious weed species found in Colorado originated in Europe and/or Asia, and were unintentionally introduced into the United States as a contaminant in crop seed or on farm machinery (Larimer County Weed Control District 2008c). Some were intentionally introduced as ornamental plants, forage, or plants used as wind breaks or for soil stabilization.

Noxious weeds displace our native plants at alarming rates. Ultimately, when the plants

that wildlife use for food, shelter, or nesting are gone, the wildlife leave the area. Noxious weeds also impact valuable agricultural lands and commodities. When resources are not available for their desired use, it takes more land to raise the same number of livestock or crops (Colorado Weed Management Association [CWMA] 2008). Weed and noxious weed infestations at each of the Reclamation properties are described in the following sections.

Table 3-1. Special Status Species with Potential to Occur in Larimer County, Colorado.

Common Name	Scientific Name	Status	Lake Estes	Marys Lake	East Portal	Common Point	Rationale for Dismissal from Further Analysis
FEDERALLY LISTED SPECIES							
Plants							
Colorado butterfly plant	<i>Gaura neomexicana</i> spp. <i>coloradensis</i>	FT					Out of elevational range.
North Park phacelia	<i>Phacelia formosula</i>	FE					Out of elevational range.
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	FT					Out of elevational range.
Mammals							
Black-footed ferret	<i>Mustela nigripes</i>	FE, SE					No suitable habitat present.
Canada lynx	<i>Lynx canadensis</i>	FT, SE			X		Carried to analysis
Preble's meadow jumping mouse©	<i>Zapus hudsonius preblei</i>	FT, ST					Out of habitat/range; isolated from nearest known population.
Birds							
Least tern (interior population)▲	<i>Sternula antillarum</i>	FE					No water depletions proposed.
Mexican spotted owl	<i>Strix occidentalis lucida</i>	FT					No suitable habitat present.
Piping plover▲	<i>Charadrius melodus</i>	FT					No water depletions proposed.
Whooping crane▲	<i>Grus americana</i>	FE, SE					No water depletions proposed.
Fish							
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	FT, ST					No protected populations or critical habitat.
Pallid sturgeon▲	<i>Scaphirhynchus albus</i>	FE					No water depletions proposed.
STATE LISTED SPECIES							
Amphibians							
Boreal toad	<i>Bufo boreas boreas</i>	SE					No suitable habitat present.
Wood frog	<i>Rana sylvatica</i>	SC					Out of species range.
Birds							
American peregrine falcon ¹	<i>Falco peregrinus anatum</i>	SC	X	X	X	X	Carried to analysis
Bald eagle	<i>Haliaeetus leucocephalus</i>	ST	X	X	X		Carried to analysis
Ferruginous hawk	<i>Buteo regalis</i>	SC					No suitable habitat present.
Greater sandhill crane	<i>Grus canadensis tabida</i>	SC					Out of species range.
Long-billed curlew	<i>Numenius americanus</i>	SC					No suitable habitat present.
Mountain plover	<i>Charadrius montanus</i>	SC					Out of species range.
Mammals							
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	SC					No suitable habitat present.
Swift fox	<i>Vulpes velox</i>	SC					Out of species range.
Townsend's big-eared bat	<i>Corynorhinus townsendii pallascens</i>	SC					No suitable habitat present.
Wolverine	<i>Gulo gulo</i>	SE					No suitable habitat present.

KEY

¹Although the American Peregrine Falcon is not listed in the CNHP occurrence database for Larimer County it is known to occur within the project area and is therefore included in the table.

Federal Status: The Federal legal status of the species as assigned by the U.S. Fish and Wildlife Service under the Endangered Species Act (ESA).

▲ Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches in other states.

© There is designated critical habitat for the species within the county.

FT Threatened

FE Endangered

FP Proposed

State Protection Status: The state legal status of vertebrate or invertebrate species as assigned by the Colorado Division of Wildlife.

SE State endangered; native wildlife whose prospects for survival or recruitment within this state are in jeopardy

ST State threatened; is not in immediate jeopardy of extinction, but is vulnerable due to small numbers, restricted throughout its range, or experiencing low recruitment or survival

SC Special concern

Sources: USFWS 2007, CNHP 2007, Species Profiles (various), CDOW website. Gruver, J.C. and D.A. Keinath 2006.

3.4 Lake Estes

3.4.1 Hydrology and Water Quality

a) Affected Environment

Lake Estes is a 160-acre reservoir with a maximum storage capacity of 3,070 acre-feet. The basin above the lake drains approximately 158 square miles. The Big Thompson River, which has its headwaters at the Continental Divide in RMNP, is the major source of native flow to the lake. Stream flow from Fish Creek also drains into the lake. Flows from the C-BT transmountain diversion enter Lake Estes at the Estes Power Plant. Maximum inflow into the Estes Power Plant is 1,300 cubic feet per second (cfs).

Water levels in Lake Estes fluctuate daily in response to the operation of the Estes Power Plant. The power plant is designed to provide power during peak demand, which typically occurs during the daytime. During the day, Marys Lake is drawn down to provide water to Lake Estes. At night, water levels in Marys Lake increase from transmountain diversions and the Lake Estes water level drops. Water in Lake Estes is released to the Big Thompson River and to a tunnel to Pinewood Reservoir, another facility of the C-BT project. To enhance recreational use of the lake during the summer, Reclamation tries to maintain water levels in Lake Estes between elevations of 7,474 and 7,471 feet. Water levels usually fluctuate between 7,474 and 7,469 feet during the remainder of the year.

The loads of nutrients and total organic carbon (TOC), which are brought into the upper Big Thompson basin from the Colorado River Basin via the Alva B. Adams Tunnel, are comparable in magnitude to the loads that originate east of the Continental Divide above Lake Estes.

However, a statistically significant increasing trend in TOC concentrations between the Alva B. Adams Tunnel outlet and Lake Estes is a result of the transmountain diversions (Big Thompson Watershed Forum [BTWF] 2007).

Other sources of reservoir pollution include stormwater runoff from urban, residential, and agricultural sources in the Estes Valley. Contaminants from activities and ongoing development upstream are likely to include nitrogen, phosphorus, sediments, and fecal and coliform bacteria.

b) Environmental Consequences

No Action (Alternative A)

ADA improvements would include modifications to existing facilities and structures, but would not result in new development footprints; therefore, ADA improvements would have no additional impact on local surface hydrology because the localized erosion of open soils would be minimized through the use of the Environmental Commitments (Section 2.7).

Although the No Action Alternative would not result in any new development footprints, some additional areas would be disturbed by anticipated visitation increases and ongoing informal (undesignated) shoreline access and use areas. Ongoing or increased informal use would be expected to result in a minor increase in sediment reaching the lake or river in the long term, causing an overall negligible adverse impact to water quality of Lake Estes and the Big Thompson River

Increased use and ongoing informal use would not result in any modifications to the watershed; therefore, there would be no impact on local hydrology as a result of the anticipated visitation increases.

The No Action Alternative does not propose any changes to C-BT Project operations, including water conveyance, storage, or release operations. As a result no impacts to the hydrology of Lake Estes or the Big Thompson River are expected with this alternative. Similarly, the No Action Alternative would have no impact on TOC levels in Lake Estes.

Overall, the No Action Alternative would have no impact on local hydrology at Lake Estes. However, the No Action Alternative would have adverse, long-term and short-term, negligible impacts on water quality at Lake Estes Park.

Proposed Action (Alternative B)

Dredging (excavation) activities would occur when the reservoir is drawn-down. Dredging activities would temporarily increase sedimentation and potentially expose any pollutants that have settled in the lake over the years.

Once the dredging is complete and the lake fills, natural lake circulation would move loosened sediment and recontour the bottom consistent with natural flows, thereby temporarily increasing sedimentation until it reaches the natural level of repose.

Sediment and other materials removed from the excavation area would be handled in a manner that avoids redeposition in the reservoir or other water bodies.

Best Management Practices, including silt fence barriers, out-of-lake equipment staging, and watering the excavated area when completed to maximize settling and development of a crust, would be implemented during dredging to minimize potential impacts. However, since the dredging activities would occur so close to the water's edge it is expected that some

erosion into the lake would occur. The sediment could potentially carry any pollutants that have settled in the lake over the years.

The Proposed Action Alternative would not change the marina or boat carrying capacity at Lake Estes. Therefore, there would be no change to water quality as a result of boat fuel pollutants or other on-water activities.

Resurfacing parking lots and access roads with asphalt at Cherokee Draw and Wapiti Meadows would diminish existing sedimentation impacts from gravel and soil erosion in these areas. However, new impermeable surface area (approx. 2.3 acres) would increase the amount and rate of runoff, including runoff contaminated with hydrocarbons, leaking fluids, or road chemicals. As explained in the Environmental Commitments (see Section 2.7) the appropriate erosion control structures would be used to control water movement.

As a result, overall water quality impacts at Lake Estes and the Big Thompson River due to increased impermeable surfaces adjacent to Lake Estes are expected to be adverse, long-term, and negligible.

The Proposed Action Alternative would result in a small net increase in wetland habitat (approx. 3 acres). UTSD effluent discharged into the new wetlands would be required to meet state water quality division standards.

In addition to Larimer County grading permits, the constructed wetland would likely require a section 404 permit of the Clean Water Act regulated by the USACE, as well as National Pollution Discharge Elimination System (NPDES) and Storm Water Management Plan (SWMP)

requirements regulated by the CDPHE. Any necessary mitigation requirements would be identified during the final wetland design and permitting process and implemented as part of construction.

The installation of new irrigation systems at the Estes Park 9-hole golf course and the multi-purpose sports fields would not result in any modifications to the watershed. Also the use of Environmental Commitments would limit erosion during installation. Therefore there would be no impact on surface hydrology and a negligible adverse short-term impact on the water quality at Lake Estes.

The Proposed Action Alternative does not propose any changes to water conveyance or storage facilities. The use of Environmental Commitments would limit erosion; therefore there would be no impact on reservoir or C-BT project operations. Similarly, the Proposed Action Alternative would have no impact on TOC levels in Lake Estes and a negligible adverse short-term impact on the water quality at Lake Estes. .

Overall, the Proposed Action Alternative would result in no impacts to local hydrology. This alternative would be expected to have negligible adverse short-term and negligible adverse long-term impacts on the water quality at Lake Estes Park.

c) Cumulative Effects

The cumulative effects analysis for Water Quality and Hydrology and Soils, Geology, and Topography are combined because of the similar and related nature of their disturbance mechanisms (e.g., erosion, impervious surfaces) and impacts.

As described in Sections 3.4.1(b) and 3.4.2(b), the water quality, hydrology, soils, geology, and topography resource impacts of this project are for the most part, when incurred, anticipated to be long-term impacts, ongoing for the 10-year life of this RMP. Therefore, this analysis will consider the incremental contribution of project impacts to cumulative effects over the 10-year planning period.

As stated in Sections 3.4.1(b) and 3.4.2(b), the No Action and Proposed Action alternatives would have no impact on local hydrology or geology, or site topography. As such, there would be no cumulative effects to these resources as a result of either alternative.

The water quality and soil impacts are anticipated to be negligible and site-specific; for example, shoreline erosion at a popular fishing spot or temporary water quality impacts as a result construction activity adjacent to drainage pathways. Therefore, consistent with Section 3.2.1, the spatial boundaries for this cumulative effects analysis is defined as Lake Estes and the immediate park area. However, given the hydrologic connectivity to streams, tunnels, rivers, and other water bodies throughout the Estes Valley, the spatial boundaries for this analysis have been expanded to consider major actions or natural phenomena affecting tributaries to Lake Estes.

In addition to this RMP update, the impacts of other past, present, or reasonably foreseeable future actions or natural phenomena within the analysis area include:

- Past and ongoing residential and commercial development within the watershed would result in the removal of mature vegetation and an increase in impermeable surface area (e.g., new

roads, driveways, buildings, sidewalks). This combination would directly disturb soil resources and make soils throughout the watershed more susceptible to erosion and mass wasting events. Increased sedimentation potential and water quality risks would affect tributaries to Lake Estes.

- The current MPB epidemic in east and west slope forests has resulted in the widespread loss of vegetative cover. Without root structures stabilizing soil resources, forests will be more susceptible to erosion and severe erosion events. Ultimately, the MPB epidemic's effects on forests will present severe erosion and sedimentation risks to local water bodies and water courses on both the east and west slopes. East slope impacts may be evident in the C-BT project's east slope reservoirs or tributaries to these, including Lake Estes. West slope impacts are discussed in the following bullet.
- The water quality of CB-T transmountain diversions from the west slope may be diminished by 1) the effects of MPB devastation in west slope forests, and/or 2) the effects of ongoing residential and commercial development in Colorado River headwaters watersheds. Diminished quality of west slope imports ultimately affects water quality at East Portal Reservoir, Marys Lake, and Lake Estes.

Sedimentation and water quality impacts, as a result of ongoing shoreline erosion under the No Action Alternative, would be localized to those areas of the lake immediately adjacent to high traffic or informal use areas. Similarly, the incremental effect of increased impermeable surface area under the Proposed Action Alternative would, as previously stated, be minimized by the implementation of

Standard Environmental Commitments. The incremental contributions of these localized sedimentation and runoff occurrences under both alternatives would not contribute to any overall changes in water quality trends when combined with the effects of past, present, or reasonably foreseeable actions. It is not possible to judge the intensity of the previously mentioned past, present or reasonably foreseeable future actions; however, the alternatives are not expected to incrementally contribute more than a negligible adverse effect.

3.4.2 Soils, Geology, and Topography

a) Affected Environment

Lake Estes is located in the Big Thompson River basin at an approximate elevation of 7,475 feet (see Maps 1 and 6). Slopes on Reclamation property are generally less than 10%, but may be as much as 40% on adjacent land. Terrain around the south and west sides of the lake are gently sloping, open areas with occasional rock outcrops. The east end of the lake below the dam is a flat alluvial meadow modified extensively during dam construction. The north side of the lake is characterized by gentle slopes near the Lake Estes Marina and Golf Course, with steeper slopes and cliffs bordering the central portion of the lake.

The Lake Estes area is underlain by igneous and metamorphic material such as granite, gneiss, pegmatite, and schist. Areas along the Big Thompson River include unconsolidated gravely alluvial deposits. Soils are typically composed of well drained sandy loam material that is shallow to moderately deep (20-40 inches).

Larimer County Geologic Hazards data assesses all areas within Larimer County as low, moderate, or severe geologic hazard potential. Geologic hazards include

susceptibility to severe erosion, mass wasting, or slide events. Overall, erosion hazard at Lake Estes is moderate, but can be severe on steep slopes. The north side of Wapiti Meadows and the southernmost cove of the Fish Creek Arm have been identified as areas of severe geologic hazard (Larimer County GIS: Geologic Hazards, Date Unknown).

Isolated areas of coarse textured spoil material from construction of the Estes Power Plant, Prospect Mountain Tunnel, and Olympus Dam are found near each of these facilities.

b) Environmental Consequences

No Action (Alternative A)

ADA improvements would include modifications to existing facilities and structures but would not result in new development footprints; therefore, ADA improvements would have no additional impact on local geology.

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would result in temporary disturbances to native soils in small, isolated areas.

Overall, the localized erosion of open soils would be minimized through the use of the Environmental Commitments (Section 2.7).

Minimal regrading of access paths, parking spaces, and other use areas would be necessary to improve ADA accessibility. Regrading would be confined to areas of existing development and surfaces would not exceed 2% grade.

Soil resources would be impacted by ongoing erosion of social trails and informal

shoreline access, traffic, and parking patterns.

Overall, the No Action Alternative would have no impact on local geology or park topography. The implementation of ADA improvements would have negligible adverse short-term and long-term impact to soil resources.

Proposed Action (Alternative B)

Where new development or improvements would occur, Standard Environmental Commitments (Section 2.7) would be implemented to minimize impacts. New facilities, structures, trails, or other improvements would result in temporary and permanent disturbances to existing soil resources during construction and as a result of new facility footprints.

The existing topography in the new sports field area is relatively flat; minimal grading and leveling activities would be necessary to even and/or smooth the playing surface (e.g., filling in small holes). The extent of grading activities would be determined at the time of final site design. Flattening or smoothing the Cherokee Draw sports field playing surface, combined with ongoing, high-traffic use, would result in adverse, long-term, negligible impacts to soil resources because of soil compaction.

Overall, the Proposed Action Alternative would have no impact on local geology, geologic features, the geologic hazard rating for Lake Estes Park, or topography. Construction activities and improvements would likely result in adverse, short-term, minor increases in erosion and soil resource impacts. In the long term, the Proposed Action Alternative would be expected to result in beneficial, negligible impacts to soil resources by prohibiting or discouraging the two primary mechanisms of existing soil

disturbance: informal vehicular shoreline access, and social trails or informal use areas.

c) Cumulative Effects

Soils, geology, and topography resource cumulative impacts have been incorporated into the Hydrology and Water Quality cumulative effects discussion, see Section 3.4.1(c).

3.4.3 Vegetation and Wetlands

a) Affected Environment

Lake Estes and the surrounding lands are located in an open mountain park characterized by grass meadows with scattered clusters of trees (see Map 6). This area was historically used for grazing and hay meadow production. Development has removed some of the native vegetation from the site, and in other areas has replaced the native vegetation with nonnative species, such as the golf course on the northwest side of the lake or in areas of high use or heavy activity. Some disturbed areas have been seeded with smooth brome (*Bromus inermis*), crested wheatgrass, and intermediate wheatgrass (*Agropyron intermedium*).

Grasslands at Cherokee Draw are dominated by mountain fescue (*Festuca saximontana*), crested wheatgrass (*Agropyron cristatum*), blue grama (*Bouteloua gracilis*), and fringed sage (*Artemisia frigida*).

Vegetation at Wapiti Meadows includes blue grama, mountain fescue, mountain muhly (*Muhlenbergia montana*), needle-and-thread grass (*Hesperostipa comata*), prairie sage (*Artemisia ludoviciana*), cinquefoil (*Potentilla sp.*), and arctic rush (*Juncus arcticus*). A wetland of Nebraska

sedge (*Carex nebrascensis*) is found at the southeast end of Wapiti Meadows.

Riparian and wetland vegetation along the Big Thompson River, above and below the reservoir, contains a mix of narrowleaf cottonwood (*Populus angustifolia*), various willow species (*Salix spp.*), thinleaf alder (*Alnus incana*), aspen (*Populus tremuloides*), birch (*Betula sp.*), and blue spruce (*Picea pungens*). Understory riparian vegetation includes bluegrass (*Poa sp.*), timothy (*Phleum pretense*), and a mixture of sedges and rushes. There are several wetland areas along the lake shore, in riparian areas on the Big Thompson River, and around a small pond at Wapiti Meadows on the east side of the lake. Approximately 2 acres of wetlands are found at Wapiti Meadows below Lake Estes.

Ponderosa pines (*Pinus ponderosa*) are scattered throughout the property, with the greatest concentration on the west end of the lake. A tree planting program on the property introduced hackberry (*Celtis sp.*), Russian olive (*Elaeagnus angustifolia*), green ash (*Fraxinus pennsylvanica*), crabapple (*Malus sp.*), juniper (*Juniperus sp.*), and bristlecone (*Pinus aristata*), limber (*Pinus flexilis*), Scot's (*Pinus sylvestris*), and Mugo pines (*Pinus mugo*). Introduced shrubs include Siberian peashrub (*Caragana arborescens*), Peking cotoneaster (*Cotoneaster acutifolius*), redosier dogwood (*Cornus sericea*), honeysuckle (*Lonicera sp.*), ninebark (*Physocarpus sp.*), sumac (*Rhus sp.*), and wayfaring viburnum (*Viburnum sp.*).

MPB (*Dendroctonus ponderosae*) is native to the forests of western North America. Periodic outbreaks of the insect can result in losses of millions of trees. Outbreaks develop irrespective of property lines, being equally evident in wilderness areas,

mountain subdivisions, and private back yards. MPB epidemics develop in pine stands, particularly ponderosa, lodgepole, Scotch and limber pine. During early stages of an outbreak, trees that are not growing vigorously because of old age, crowding, poor growing conditions, drought, fire or mechanical damage, root disease, and other causes are most likely to be attacked. However, as beetle populations increase, MPB attacks may involve most large trees in the outbreak area (Leatherman et.al. 2007).

Colorado's northern pine forests are currently experiencing an MPB epidemic that was triggered by drought in 1997. The infestation has occurred on 755,000 acres in northern Colorado and southeastern Wyoming. More than 1.5 million acres of lodgepole pine in northern Colorado and southeastern Wyoming could be affected by the time the epidemic ends.

The USFS *Bark Beetle Incident Implementation Plan 2007 – 2011* proposes integrated vegetation treatments to address the impacts of the bark beetle epidemic. The plan provides a strategy with a detailed multi-year implementation schedule of projects to enable the USFS to efficiently and effectively mitigate the impacts of the bark beetle epidemic. The projects planned in the implementation schedule reduce hazardous fuels and wildfire risk to the forest, homes, communities, and critical watersheds, and reduce hazards to recreation and public infrastructure. Bark Beetle Incident Implementation Plan projects are focused on western slope and Wyoming forests; there are no implementation plan projects proposed in the vicinity of Lake Estes (USFS 2007).

USFS beetle infestation mapping (updated 2007) indicates that there are isolated areas of MPB attacks throughout the Estes Valley,

including in the vicinity of Lake Estes; the largest infestation areas are located within RMNP north and west of Lake Estes (USFS 2007b and USFS 2007c).

Larimer County Wildfire Hazard data has assigned a range of wildfire hazard ratings to all areas within the county. The ratings are representative of the departure from the historic fire regime and the condition of vegetative cover. Wildfire hazard categories include five ratings, ranging from "lowest" to "very high." Overall, wildfire hazard in the Lake Estes project area is rated in the lowest category (Larimer County GIS: Wildfire Hazards, Date Unknown). However, there are some areas of moderate hazard in the northwest portion of the project area. and at the east end of the project area, adjacent large contiguous areas are rated as very high hazard.

Research conducted in RMNP indicates that the Rocky Mountain National Park / Estes Valley elk population is larger, less migratory, and more concentrated than it would be under natural conditions and has created numerous problems throughout the Estes Valley area [see also Section 3.4.4(a)]. The most prominent problem is the alteration of plant communities in the core winter range, and the potential for substantial biodiversity declines within aspen and montane riparian willow communities (NPS 2007). Elk overgrazing in willow and aspen communities (the preferred forage for elk) in the Lake Estes area have resulted in stands that no longer regenerate as effectively.

Special Status Species

There are no Federally listed or state listed rare plant species at Lake Estes.

Canada thistle (*Cirsium arvense*), cheatgrass (*Bromus tectorum*), and other weeds are

established in scattered locations throughout the property, although they are most common on the southwest side of the lake. Canada thistle is listed on Part B, I of the Colorado State Noxious Weed List and on Larimer County's Noxious Weed List. Cheatgrass is listed on Part C of the Colorado State Noxious Weed List (see tables in Appendix E).

b) Environmental Consequences

Impacts to existing vegetation within developed areas (as defined in Section 2.6) were not quantified, even if some vegetation would be removed, because these areas are considered as already disturbed or not natural. Furthermore, the exact amount of vegetation impact (e.g., acres) cannot be determined until the final design and construction documents are completed. Standard Environmental Commitments (Section 2.7) require that all areas without permanent infrastructure in the designated developed areas be restored with native vegetation.

No Action (Alternative A)

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would result in temporary and permanent disturbances to vegetation and wetland resources. Upland and wetland vegetation adjacent to ADA improvement sites (e.g., next to an ADA accessible picnic site or ADA accessible path) would be temporarily disturbed and/or trampled during construction activities. As such, these improvements would be expected to have adverse, short-term, minor impacts on vegetation and wetlands.

Overgrazing of the Matthews-Reeser Bird Sanctuary, undesignated parking and access, and informal use across all areas is expected to continue, worsening the condition of the vegetation in the area compared to current conditions.

Overall, impacts to native vegetation communities as a result of the No Action Alternative would be adverse and long-term, ranging from minor throughout the Lake Estes Park area to up to major at the Matthews-Reeser Bird Sanctuary.

Special Status Species

Weed management and the control of noxious weeds is a standard Environmental Commitment of Reclamation and EVRPD. See Section 2.7 for a detailed description of noxious weed and pest management efforts. Ongoing disturbance in informal use areas would result in site-specific increases in susceptibility to noxious weed establishment. In this case, the impact of the No Action Alternative would be adverse, long-term, and minor.

Proposed Action (Alternative B)

Existing vegetation (primarily native) at the new Cherokee Draw sports field site would be permanently removed and replaced with nonnative turf grass. Similarly, the reconfiguration and resurfacing of parking areas and access roads at both Wapiti Meadows and Cherokee Draw would permanently disturb up to 2.3 acres of existing vegetation (both native and nonnative).

By formalizing parking areas and preventing cross-country vehicle travel or vehicle access to the shoreline, shoreline and native vegetation communities that have been disturbed by vehicle trampling would be allowed to reestablish.

Specific impacts associated with the constructed wetland at Wapiti Meadows would be determined at the time of final design and by development of protective practices. The addition of the proposed wetland site would result in the conversion of upland species to wetland species. Although less wetland vegetation would result due to the open water of the new proposed wetland, wetland vegetation is generally believed to be a more desirable vegetation type in natural settings. However, construction would be likely to directly affect jurisdictional wetlands and upland habitats adjacent to the proposed wetland site. Impacts to jurisdictional waters of the U.S. would be minimized by conducting a formal wetland delineation prior to siting and design of the constructed wetland.

The installation of fencing at the Matthews-Reeser Bird Sanctuary would prevent elk grazing of shoreline vegetation at this site, and would allow the plant communities in this area to recover from overgrazing. However, the displacement of elk would cause increased trampling and grazing on adjacent areas within Lake Estes Park that may not have been previously grazed at that level.

Preventative MPB spraying would reduce the probability of beetle infestation and tree mortality at Lake Estes. Temporary wildfire hazard increases are associated with the immediate period following mortality, after trees turn brown (dead) but before they drop their needles, cones, or small limbs; and are removed from the area. Preventative spraying of trees at the park may prevent localized, temporary wildfire hazard increases by preventing tree mortality, however, preventative spraying would not affect the overall wildfire hazard rating for the Lake Estes area. The action would use only approved treatments and chemicals and

follow industry standard practices. People and pets would be kept away during applications. Chemicals will have a temporary residual effect in the area.

Overall, the permanent removal of vegetation at Cherokee Draw and Wapiti Meadows and redistribution of elk onto unfenced areas would be slightly more than offset by the recovery of vegetation throughout these areas, resulting in up to a negligible long-term beneficial impact to the native vegetation communities in these areas. The preclusion of elk out of the Matthew-Reeser Bird Sanctuary would be expected to result in up to a moderate long-term beneficial impact, while the redistribution of the elk onto areas not mentioned above could result in up to moderate adverse long-term impacts to vegetation. The loss of upland vegetation at the proposed wetland at Wapiti Meadows is expected to be slightly more than offset by the additional wetland vegetation, resulting in up to a negligible long-term beneficial impact to native vegetation communities. The Preventative MPB spraying would protect more trees from mortality where treated, resulting in an expected moderate long-term beneficial impact to the trees in the developed areas throughout the Lake Estes Park area.

Special Status Species

Weed management and the control of noxious weeds is a standard Environmental Commitment of Reclamation and EVRPD. See Section 2.7 for a detailed description of noxious weed and pest management efforts. Improvements and day use area reconfigurations would temporarily increase susceptibility to weed establishment in the immediate vicinity of the construction footprint by disturbing native vegetation.

Construction related foot traffic and vehicular traffic would further increase probability of weed introduction into the project site. However, with the implementation of management practices identified in Section 2.7, such as vehicle cleanup, use of weed-free hay and seed mixes, and pre- and post-construction weed eradication techniques, these adverse impacts are expected to be short term and minor.

The formal designation of parking and use areas would diminish susceptibility to noxious weed infestation as it would reduce disturbance (vegetation trampling by vehicles and foot traffic) to native vegetation.

Overall, the Proposed Action Alternative could have up to a moderate short-term adverse impact due to the increased noxious weed establishment following disturbances. However, the prevention of weed establishment throughout Lake Estes Parks due to better planning is expected to result in minor long-term beneficial impacts to native vegetation.

c) Cumulative Effects

The cumulative effects to vegetation, wetlands, fish and wildlife will be considered together in this section. As described in Sections 3.4.3(b) and 3.4.4, the vegetation, wetlands, and wildlife resource impacts of this project are anticipated to be long term, ongoing for the 10-year life of this RMP. Therefore, this analysis will consider project effects over a 10-year period, beginning with project implementation.

Given the range and spread of the MPB epidemic, the migratory nature of elk in Estes Valley, and the ongoing conversion of

native plant communities and habitats to nonnative lawns or impermeable surfaces such as building or travelways, the cumulative effects analysis will evaluate all projects occurring within the Town of Estes Park.

In addition to this RMP update, the impacts of other past, present, or reasonably foreseeable future actions or natural phenomena within the analysis area include:

- Past and ongoing residential and commercial development within the watershed would result in the removal of mature native vegetation, increased susceptibility to noxious weeds because of disturbance, loss of habitat, and habitat fragmentation.
- The current MPB epidemic in east and west slope forests has resulted in the widespread loss of mature, native vegetative cover. In extreme cases, severe erosion events, such as landslides or other mass wasting events (see Section 3.3), can create conditions unsuitable for the long-term reestablishment of native vegetation. Furthermore, after large mortality events, such as forest-wide MPB mortality, vegetation communities are “set back” or returned to an earlier successional stage, meaning that the species composition and forest structure resembles less mature communities. Forest-wide MPB mortality can affect wildlife habitat and use patterns by modifying available forage or browse species or reducing cover.
- Vegetation impacts, particularly riparian and wetland vegetation impacts as a result of overgrazing by elk, are persistent problems in the Estes Valley. RMNP’s vegetation-elk management plan is not intended to address impacts to vegetation-elk problems outside of

park boundaries. It should be assumed that in the long term, elk grazing will continue to have detrimental effects on vegetation in areas located outside of RMNP.

Elk management in the greater Estes Valley (including RMNP) has become a highly controversial issue, driven by a number of factors ranging from ecosystem health to local economics. RMNP resource managers, in cooperation with the Town of Estes Park, EVRPD, CDOW, Grand and Larimer counties, Town of Grand Lake, USFS, and Reclamation have developed an elk and vegetation management plan to address this issue. The goal of the plan is to reduce the impact of elk on vegetation; reduce conflicts between people and elk; and to the extent possible, restore the natural range of variability in both the elk population and affected plant communities within RMNP (NPS 2007, NPS 2006). RMNP's elk and vegetation management plan is not intended to solve elk related problems outside of park boundaries; however, some indirect benefits of the plan would be realized over time as overall elk population numbers are reduced.

Vegetation, wetlands, and wildlife impacts, as a result of either alternative, would be site-specific, occurring only in construction activity areas or as a result of new facility footprints or improvements, such as fencing. The incremental contributions of these localized impacts, both beneficial and adverse and under either alternative, would not contribute to any overall changes in vegetative or wetland cover, composition or structural trends, or overall wildlife habitat quality or availability when combined with the effects of past, present, or reasonably foreseeable actions. With two exceptions, elk displacement and shoreline or bird habitat restoration, the cumulative effect on

vegetation, wetland, and wildlife resources as a result of the No Action and Proposed Action alternatives is anticipated to be negligible. The incremental contribution of the loss of nearly 7 acres of valuable elk calving and winter habitat under the Proposed Action Alternative, when combined with the ongoing loss of habitat as a result of the other past, present, or reasonably foreseeable future actions, would result in adverse, long-term, and moderate cumulative effects to wildlife resources at Lake Estes.

The incremental contribution of restoring or protecting a minimum of 4 acres of shoreline and bird habitat under the Proposed Action Alternative, when juxtaposed with the ongoing loss of habitat and habitat fragmentation as a result of the other past, present, or reasonably foreseeable future actions, would result in beneficial, long-term, minor cumulative effects to wildlife resources at Lake Estes.

3.4.4 Fish and Wildlife

a) Affected Environment

The Lake Estes area supports a variety of wildlife, including elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), coyote (*Canis latrans ssp.*), squirrel (*Sciurus sp.*), chipmunk (*Tamias sp.*), cottontail rabbit (*Sylvilagus sp.*), striped skunk (*Mephitis mephitis*), and shrew (*Sorex sp.*).

Periodic closures (e.g., seasonal) are enforced on the Lake Estes trail to protect elk and other wildlife species during critical breeding seasons and to prevent human-wildlife conflicts during these critical times (see Chapter 2.0 for more information on closures).

Elk are the most noticeable animals in the area and commonly graze throughout the Lake Estes property, including calving at the 9-hole golf course, Wapiti Meadows, and Cherokee Draw. Elk populations in the Estes Park area have been increasing due to the proximity of large, protected habitat areas in RMNP, suitable forage, and limited hunting. Conflicts between elk and humans are likely to be greatest during the spring and summer months, during calving season, and when available forage is abundant throughout the Estes Park region.

The local elk population is comprised of three sub-herds: two that winter within RMNP boundaries and a third that winters in the Town of Estes Park. Elk population studies conducted in the mid- to late-1990s showed that generally about 1,000 elk wintered in low-elevation areas inside park boundaries on the east side of RMNP, and another 2,000 elk wintered outside park boundaries in the Town of Estes Park and on adjacent private and USFS lands (Lubow et al. 2002 in NPS 2007).

Research indicates that overall, the herd is larger, less migratory, and more concentrated than it would be under natural, presettlement conditions. Recent surveys indicate that 10 to 15% of the elk population in the RMNP area spends the summer on the primary winter range (NPS 2007). During summer, at least 100 to 200 animals stay on the primary winter range in the park and as many as 550 animals stay on the primary winter range areas in town (NPS 2007). Under natural conditions, all of the elk would migrate from the primary winter range to the primary summer range.

Lake Estes also provides important habitat for a variety of bird species. Many of the birds are spring and fall migrants, while others use the area year-round. Over 280

bird species have been identified in the Lake Estes vicinity (Estes Park Bird Club 2007) and numerous species are known to have nested near the lake. The total number of species reported in all of Colorado is 480; the Lake Estes area supports an impressive number of species for such a small area in the mountains (Estes Park Bird Club 2007).

Common species include western tanager (*Piranga ludoviciana*), belted kingfisher (*Ceryle alcyon*), Steller's jay (*Cyanocitta stelleri*), American dipper (*Cinclus mexicanus*), mountain bluebird (*Sialia currucoides*), housefinch (*Carpodacus mexicanus*), and common grackle (*Quiscalus quiscula*). Waterfowl using the lake includes northern pintail (*Anas acuta*), Canada goose (*Branta canadensis*), mallards (*Anas platyrhynchos*), bluewinged teal (*Anas discors*), cinnamon teal (*Anas cyanoptera*), and American wigeon (*Anas americana*).

Lake Estes supports a fishery population that includes rainbow (*Salmo gairdneri*) and brown (*Salmo trutta*) trout, white sucker (*Catostomus commersoni*), carp (*Cyprinus carpio*), yellow perch (*Perca flavescens*), walleye (*Stizostedion vitreum*), kokanee salmon (*Oncorhynchus nerka*), and longnose sucker (*Catostomus catostomus*) (CDOW 2007). The sport fishery in the lake is dependent on annual CDOW fish stocking. There is limited natural reproduction of trout species in the lake. Recent (2007) shocking data at Lake Estes indicate that brown and rainbow trout represent the majority (58%) of fish biomass in the lake (data show that these two species comprised 58% of fish shocked).

Amphibians and reptiles potentially found in the wetland and riparian habitat surrounding the lake include wandering garter snake (*Thamnophis sirtalis*), bull/gopher snake

(*Pituophis catenifer*), western chorus frog (*Pseudacris triseriata*), and tiger salamander (*Ambystoma tigrinum*) (Reclamation 1996).

Although the Fish Creek Arm, Fisherman's Nook, and Cherokee Draw Day Use Areas are heavily used by humans, offer only sparse understory and cover, and are located near busy traffic corridors (U.S. 36 and Fish Creek Road), these areas provide valuable habitat for bird populations and elk (Estes Park Bird Club 2007).

Special Status Species (Wildlife)

Sensitive species that have potential to occur at Lake Estes include peregrine falcon and bald eagle.

Peregrine falcons (*Falco peregrinus*), a species of state concern, prefer nesting in cliffs in mountainous regions near rivers and lakes where avian prey is common. In the Rocky Mountain region, most nesting pairs are found in ponderosa pine, piñon-juniper, or riparian plant communities. Nesting above 8,500 feet in elevation is rare. The falcon's primary diet consists of medium-size birds such as jays, doves, flickers, shorebirds, and songbirds. Peregrine falcons are spring, summer, and fall residents with active aeries in the cliffs around Estes Park (Reclamation 1996). Because there are no cliffs present at this property, there is no suitable nesting habitat at Lake Estes. However, peregrine falcons have a fairly large hunting area and may occasionally forage at the lake. The abundant riparian vegetation on the lake and along the Big Thompson River provides excellent habitat for songbird populations, the preferred prey of peregrine falcons.

Bald eagles (*Haliaeetus leucocephalus*), a state threatened species, are known to winter (October to March) throughout Colorado,

with stable wintering populations of approximately 800 eagles. Improvements in bald eagle populations in Colorado and nationally have resulted in recent delisting of the bald eagle (2007). The species, although still considered sensitive by state and local agencies, is no longer listed as a threatened, endangered, or candidate species. This species also nests throughout Colorado and the number of nest sites has steadily increased over the past two decades (Species Profile: Bald eagle 2007). However, no known nesting sites occur near Lake Estes. The mating season in the mountain west is typically defined as January through March.

Wintering bald eagles prefer large trees near open water and/or riparian habitat for establishing diurnal perches near feeding areas. Perches are generally established away from human disturbance. Feeding in the winter may include fish, where open water is available, or prairie dogs and small mammals (Species Profile: Bald eagle 2007). Bald eagles are known to occasionally use the open water habitat at the west end of Lake Estes during winter months. Open water below the Estes Power Plant provides foraging habitat for fish, and ponderosa pine trees along the shore provide roost sites. Bald eagle use of the Lake Estes area occurs only during the winter months.

b) Environmental Consequences

No Action (Alternative A)

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would temporarily disturb or displace wildlife species in the immediate vicinity of the improvement as a result of increased human activity, noise, or ground vibrations. The proposed ADA improvements could have up to a minor adverse short-term impact on wildlife.

Potential water quality concerns are described in Section 3.4.1(b) *Hydrology and Water Quality*. As described, short-term and long-term adverse water quality impacts are expected to be isolated (not experienced lake-wide) and negligible. Long-term water quality impacts as a result of ongoing sedimentation would be negligible and would not occur at a level such that fish and other aquatic species would be stressed. Furthermore, ongoing and increased visitation may increase fishing pressure of some stocked fish species. Therefore, it is possible that aquatic species would experience minor short-term and long-term adverse impacts. Using a conservative estimate up to similar levels of impact could be experienced by aquatic species.

While no habitat would be removed, continued informal use of the shoreline for recreational purposes would result in increased habitat degradation and a minor adverse long-term impact to wildlife. A decline in vegetation condition due to overgrazing is likely to worsen at the Matthews-Reeser Bird Sanctuary, resulting in up to moderate long-term adverse impacts to birds and small mammals in that area.

Despite periodic area closures, with growing visitation wildlife-human conflicts would likely increase and occur during periods of high visitation or critical times, such as the elk calving season.

Overall, the No Action Alternative is expected to result in negligible short-term adverse impacts to terrestrial wildlife species. Minor long-term adverse impacts would be expected to occur to terrestrial and aquatic wildlife throughout the Lake Estes Park. Moderate long-term adverse impacts would be expected at Matthews-Reeser Bird Sanctuary.

Special Status Species

MPB infestations that are not controlled are expected to cause tree mortality; however, Ponderosa pines are not always as susceptible as Lodgepole pines. Therefore, die-offs to the same degree that have been experienced on the western slope may not occur on the eastern slope. As individual trees suitable for roosting trees are lost, individual wintering bald eagles in the area would have to select other trees to use; however, no impact (“no effect”) to the eagle population is expected to occur.

Ongoing disturbance to shoreline vegetation as a result of poorly defined parking, informal visitor access, and social trails would continue to slowly degrade habitat for songbird populations, the preferred prey of peregrine falcons. Songbird habitat degradation could result in adverse, long-term, and negligible impacts to the peregrine falcon.

Proposed Action (Alternative B)

The majority of improvements would occur in areas that have been previously disturbed or that consist of low habitat value. Construction activities would temporarily disturb or displace wildlife species in the immediate vicinity of the improvement as a result of increased human activity, noise, or ground vibrations. The proposed improvements could have up to a moderate adverse short-term impact on wildlife.

Approximately 4 acres of habitat would be permanently closed to elk at the Matthews-Reeser Bird Sanctuary. Elk that have habitually used the Matthews-Reeser Bird Sanctuary area for winter forage and elk calving would be displaced into other areas. Additionally, calving use of the Cherokee

Draw area may be displaced as a result of parking lot resurfacing and reconfiguration. The new irrigation system at the 9-hole golf course would result in a decrease in the amount of irrigated turf, which would be replaced with native vegetation. This would represent a decrease in the quality of grazing vegetation. These disturbances to elk are expected to result in a minor adverse long-term impact.

New educational kiosks, signage, and interpretive opportunities would help to educate visitors and reduce human-wildlife conflicts from the current and anticipated levels. Bear-proof trash and recycling containers would further reduce the potential for human-wildlife conflicts in the day use areas. These educational, interpretive, and protective improvements are expected to have a beneficial, long-term, minor effect on wildlife populations and habitat at Lake Estes.

Formalizing parking areas, preventing vehicle access to shoreline areas, and revegetating shoreline habitat at Cherokee Draw and below Olympus Dam would improve cover, forage, and shoreline habitat for waterfowl, small mammals, and songbird populations.

The installation of fencing at the Matthews-Reeser Bird Sanctuary would prevent overgrazing and trampling of vegetation, particularly willow impacts by elk. The fencing would result in beneficial, long-term, moderate effects to bird and small mammal habitat at the sanctuary. This is expected to result in a minor long-term beneficial impact to wildlife.

The installation of nesting platforms would provide new habitat for osprey and possibly other raptor species; the new habitat and hunting opportunities for the species would

be a beneficial, long-term, minor impact. Indirect impacts to the favored osprey prey populations (e.g., fish or small mammal populations that could be hunted from the platform) would be adverse, long-term, and negligible. No known raptors, nests, or roost sites would be impacted by any of the improvements.

In the long-term, wetland enhancement at Wapiti Meadows would provide 3 acres of additional habitat for numerous species, primarily bird and amphibian species. This new habitat would be a beneficial, long-term, minor impact for wildlife species at Wapiti Meadows.

Because excavation activities at the marina would occur during drawdown periods when the dock areas are not under water, there would be no impact to fish habitat as a result of excavation activities. The placement of boulders in strategic areas near the shoreline would likely slightly more than offset the short-term effects of post-dredging sedimentation and improve aquatic habitat by providing additional structure and cover in the new boulder repository areas. Therefore, this marina improvements could have a negligible long-term beneficial impact to aquatic wildlife.

As described in Section 3.4.3 (b), MPB spraying would protect key trees which serve important habitat for many species. The action would use only approved treatments and chemicals and follow industry standard practices.

Overall, the short-term disturbances to wildlife due to implementation of the Proposed Action Alternative are expected to cause up to moderate short-term adverse impacts to wildlife. In the long-term, however, the educational, interpretive, and protective measures and formalization of use

areas are expected to cause a minor long-term beneficial impact to most wildlife species throughout Lake Estes Park. The disturbances to elk would only partially be offset by those benefits, resulting in a negligible adverse long-term impact. Bird and small animals are expected to experience long-term beneficial impacts ranging from moderate at Matthews-Reeser Bird Sanctuary to minor at Wapiti Meadows. Osprey and other species are expected to experience up to a long-term minor benefit, while songbirds at the area could experience a negligible long-term adverse impact due to increased predation. This alternative could cause up to a negligible long-term beneficial impact to aquatic wildlife.

Special Status Species

Alternative B would have no direct effects on bald eagle populations or wintering habitat at Lake Estes. However, preventative MPB spraying would prevent some infestation and mortality of suitable eagle roosting trees. Additionally, shoreline revegetation efforts and fencing at the bird sanctuary would enhance bald eagle prey habitat and, presumably, prey populations in the project area. As such, Alternative B would have a beneficial, long-term, negligible effect on bald eagle populations and habitat at Lake Estes Park.

Similarly, songbird habitat enhancements, such as at Cherokee Draw, Wapiti Meadows, and Matthews-Reeser Bird Sanctuary, could result in a more abundant prey source for peregrine falcons. This could result in negligible beneficial long-term impacts to the peregrine falcon.

c) Cumulative Effects

Fish and wildlife resource cumulative impacts have been incorporated into the Vegetation and Wetlands cumulative effects discussion, see Section 3.4.3(c).

3.4.5 Recreation

a) Affected Environment

The Lake Estes area includes 160 acres of water surface and 145 acres of land surrounding the reservoir. Lake Estes Park is comprised of the following areas: Lake Estes Marina, Golf Course, Cherokee Draw, Fish Creek Arm, Fisherman's Nook, and Wapiti Meadows. EVRPD's administrative offices are also located next to the pro shop at the golf course. A 10-foot-wide, 5.5-mile multi-use concrete trail also encircles the lake, linking the day use areas. The trail is open to nonmotorized recreation; popular uses include walking, jogging, biking, and skating among others. Currently, Lake Estes can accommodate 365 vehicles at any particular time (parking spaces). Table 3-2 provides a summary of current visitation, staffing and law enforcement patrol, and dates/seasons for public use.

Because of its size, location, and the number of facilities at Lake Estes, this park receives the greatest amount of use, by far, of the four properties addressed in this RMP. The lake's attractive setting enhances the recreational experiences provided. All of the facilities at Lake Estes are operated and maintained by EVRPD. During the peak summer use season, EVRPD staff routinely patrol the day use areas. Regularly scheduled maintenance duties include restroom cleaning, trash collection, and fee collection. To help accomplish this during the summer season, EVRPD employs a small seasonal workforce.

Table 3-2. Management and Use of Developed Areas at Lake Estes

	Lake Estes Marina	Fishermans Nook	Cherokee Draw	Fish Creek Arm	Wapiti Meadows	Lake Estes Golf Course
Dates Open for Use	May thru Sept	All year	All year	All year	All year	Jan 1 thru April 15, May 13 thru Sept 25, Nov 1 thru Dec 31
High Use Periods (months or dates)	June thru Sept	May thru Sept	May thru Sept	June thru Sept	May thru Sept	June thru Sept
Percent of Capacity Used during High Use Periods	75%	75%	75%	65%	75%	80%
Staffed By (EVRPD, Concessionaire)	EVRPD	EVRPD	EVRPD	EVRPD	EVRPD	EVRPD
Patrolled By (EVRPD, County, Town, Other)	County Sheriff	County Sheriff	County Sheriff	County Sheriff	County Sheriff	Estes Park PD

Source: Developed by EVRPD Staff

With the exception of Fisherman’s Nook, all day use areas and the marina are subject to daily or annual user fees. Fees for marina rentals or other purchases, such as fishing licenses, tackle, or incidentals, are separate from the daily/annual use fees.

The increasing elk population numbers and habituation to humans raise public safety concerns in Estes Park, as elk increasingly use parks, golf courses, roadways, and yards and gardens in close proximity to residents and visitors (NPS 2007).

Brief descriptions of the existing recreation facilities at Lake Estes are provided below (see also Table 2-2):

The Lake Estes Marina and Day Use Area are located on the north shore, in a cove near the northern end of the dam. The marina and day use parking area are accessed directly from U.S. 34.

The marina includes a single-lane boat ramp, 44 boat slips, 19 moorings, and the marina office and store. The marina and store are operated by EVRPD and serve as

the operations center for the lake. The store offers bait, tackle, fishing licenses, snacks, and clothing. Boat rentals are also available, as well as daily and annual use permits. Fuel is available for sale to boaters. There is also land storage for 15 boats for rental near the marina. The Lake Estes marina is open to public use April through October (weather permitting).

All boats on the water are required to have an EVRPD permit and can operate during daylight hours only. A no-wake restriction applies to power boating on Lake Estes at all times, except on Tuesday and Thursday evenings from 5:00 p.m. until dusk, May through September, when waterskiing is permitted. Due to the shallow nature of the lake bed, water skiing and motorboating are only permitted on the east side of the lake.

The Lake Estes Marina Day Use Area has several facilities, including a half-court basketball court; 2 picnic shelters; several unsheltered picnic tables; a horseshoe pitching area; small playground; group shelter; restroom; and a small, mowed, nonirrigated meadow. Seventy-eight parking

spaces are available in an unpaved and unstructured parking area for both the marina and day use area. The Lake Estes Marina Day Use Area is open year-round.

The Wapiti Meadows Day Use Area is located on the south bank of the Big Thompson River below the Olympus Dam. Access to the area is via Mall Road, which connects U.S. 34 and U.S. 36. Wapiti Meadows is a fee area with a self-serve pay station. The area provides a fishing access point and an unstructured day use area with 4 picnic shelters; one restroom; and a mowed, nonirrigated picnic area. Fishing is popular along the river immediately downstream of the dam. Access to the Big Thompson River is via a gravel road. There is parking for approximately 20 vehicles adjacent to the stream; however, it is unstructured. A pedestrian footbridge crosses the Big Thompson River below the dam outlet. Shoreline access is available from the Lake Estes trail. Wildlife viewing is popular in Wapiti Meadows. Elk watching is a very important activity to park visitors and local residents, particularly in the fall during the mating season (Johnson and Monello 2001). The Wapiti Meadows Day Use Area is open year-round.

The Fish Creek Arm of Lake Estes is separated from the lake's main body by the U.S. 36 causeway. Access is provided via Fish Creek Road, the adjacent Estes Park High School grounds, and Stanley Park. The primary use of this day use area is shoreline fishing and picnicking. Although no formal viewing areas have been established, the Fish Creek Arm area provides excellent opportunities for birding. On-water access to Fish Creek Arm is prohibited. The area is not irrigated or mowed, is not directly served by trails, and there are no developed facilities or structured parking in this area. The Fish

Creek Arm trail is located on the west side of the Fish Creek Arm inlet. The trail does not provide direct shoreline access. The trail is located entirely outside of Reclamation property. The area is open and accessible year-round.

The Fisherman's Nook Day Use Area (nonfee area) is a shoreline fishing access point on the north shore of the lake and is adjacent to the east end of the golf course. It is located approximately 0.4 mile from U.S. 34 with access via Lakefront Street. Fisherman's Nook is separated from U.S. 34 by residential and commercial development located on a bluff overlooking the lake. The area can accommodate about 50 cars in an informal, unstructured, unpaved parking area. There is one picnic shelter at the area. The area is linked with other north shore facilities via the paved Lake Estes trail along the north shore of the lake. To the west, the trail parallels the lake shore where wetland areas provide excellent wildlife habitat. Fisherman's Nook is open to the public year-round.

The Cherokee Draw Day Use Area is on the south shore of Lake Estes, near the power plant at the western end of the lake. There are two direct access points from U.S. 36, and there is an extensive unpaved and informal parking area that can accommodate approximately 150 vehicles. Cherokee Draw provides excellent access for shoreline fishing, picnicking, wildlife viewing (particularly elk and birds), and general day use. Existing facilities include one group picnic shelter (4 tables), 9 individual picnic shelters (one table each), 3 restrooms, a concession stand, and approximately 18 acres of mowed, nonirrigated open meadow. The existing Lake Estes trail meanders through the center of the day use area. Cherokee Draw is open to public use on a year-round basis; it is a fee area with a self-

service fee collection station located at the site.

The Lake Estes golf course is located at the west end of Lake Estes' north shore. The golf course and EVRPD offices are accessed via U.S. 34. The golf course is a 9-hole facility with a modest clubhouse; the facility also shares space with EVRPD offices. Facilities include a small clubhouse and vending machines. The course does not have a driving range. The golf course area, near where the Big Thompson River enters Lake Estes, provides good wildlife habitat and is regularly used by elk, particularly in the winter. Although no specific facility is provided for this activity, wildlife watching (particularly birds and elk) is very popular in the riparian habitat adjacent to the Big Thompson River and south of the golf course (Reclamation 1997). The golf course is open 9-10 months per year, as weather conditions permit.

b) Environmental Consequences

No Action (Alternative A)

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would temporarily disturb or displace recreationists in the immediate vicinity of the improvement as a result of increased human activity, noise, area closures, or ground vibrations.

The proposed ADA improvements would provide safe and equal access for visitors with ADA needs. The proposed ADA improvements would enhance recreational opportunities for this user group at Lake Estes.

With the exception of ADA improvements and maintenance activities, the existing use areas would remain essentially unchanged under the No Action Alternative.

The No Action Alternative would not impact the current visitor capacity of the parks. However, visitation is expected to increase commensurate with regional population growth and recreational demand. As demand for recreation facilities and services increases, facility shortages (such as lack of parking or picnic tables) and facility and resource deterioration would worsen. An increase in user conflicts would be expected with growing user demands and increasingly limited facilities.

Overall, the No Action Alternative would have an adverse short- and long-term, minor impact on visitor recreational experience and opportunities at Lake Estes Park. However, users with ADA needs could experience up to a moderate long-term benefit in their recreational experience and opportunities.

Proposed Action (Alternative B)

Construction activities necessary to modify picnic sites, parking areas, and access paths would temporarily disturb or displace recreationists in the immediate vicinity of the improvement as a result of increased human activity, noise, area closures, or ground vibrations. The disturbances would be to a larger degree than in the No Action Alternative due to the larger extent of activities to be undertaken.

Parkwide and general day use area impacts are discussed below.

Improvements along the Lakes Estes trail, such as new information kiosks and new benches, would enhance visitor experiences along the trail.

ADA accessibility improvements would enhance the recreational experience for users with ADA needs at all day use areas.

Bear-proof trash and recycling containers would reduce the potential for human-wildlife conflicts in the day use areas; this would improve the visitor safety and, ultimately, the recreational experience.

Area-specific impacts are discussed below.

Excavation of approximately 5,000 sq ft. at the marina docks would allow boats to operate at lower water levels, which would slightly extend the boating season.

The new 3-acre wetland and associated viewing blinds and trails for bird watching at Wapiti Meadows would create new, passive recreational opportunities.

New fish habitat boulders along the Cherokee Draw shoreline would not present a safety hazard to boaters, but would provide enhanced recreational fishing opportunities and experiences.

The Proposed Action Alternative would result in a net increase of 4 parking spaces at Lake Estes. As such, visitor capacity would be slightly expanded under this alternative. Approximately 6 parking spaces would be removed from Cherokee Draw and 10 parking spaces would be added to the Wapiti Meadows Day Use Area. Overall, however, the change in parking capacity is anticipated to be negligible and not perceptible by other park users.

The reconfiguration of the Cherokee Draw parking lot would greatly improve pedestrian shoreline access and shoreline recreational opportunities, such as birding or fishing. The new picnic shelters would expand the existing recreational capacity. The new multipurpose / open play sports field would introduce organized and pick-up team sports and other field sports recreational opportunities to Lake Estes Park

and Reclamation properties in the Estes Valley overall.

Fencing at the sanctuary would improve bird habitat and would likely attract additional birds or additional species to the area. Recreational enjoyment, particularly birding and wildlife viewing activities, would be enhanced.

The new irrigation system at the golf course would improve the quality of the course and ultimately, the golfing experience.

Overall, the short-term disturbances to visitors due to implementation of the Proposed Action Alternative are expected to cause up to moderate short-term adverse impacts to recreation. However, over the long-term a moderate beneficial impact is expected to recreation at Lake Estes Park due to the proposed improvements.

c) Cumulative Effects

The cumulative effects of both Recreation and Socioeconomic (Section 3.4.8) resources are discussed in this section. Since the temporal and spatial boundaries for the Recreation and Socioeconomic analyses are the same for all Reclamation properties, the cumulative effects analysis for all properties will be considered together in this section.

As described in Sections 3.4.5(b) and 3.4.8(b), the recreation and socioeconomic resource impacts of this project are anticipated to be long term, ongoing for the 10-year life of this RMP. Therefore, this analysis will consider project effects over a 10-year period, beginning with project implementation.

Reclamation properties in the Estes Valley serve local residents, both permanent and seasonal, and a larger, out-of-town

population, including visitors from throughout Colorado and other states. Recreational use in the Estes Valley is not limited to the Reclamation parks. Many, if not most, visitors incorporate multiple activities or areas, such as the neighboring Roosevelt National Forest, RMNP, or private recreational entities, into a single visit. This cumulative effects analysis will evaluate all notable projects occurring within the Town of Estes Park and on adjacent public lands offering recreational opportunities.

In addition to this RMP update, the impacts of other past, present, or reasonably foreseeable future actions within the analysis area include:

- The Town of Estes Park will continue to improve trail connectivity and expand the existing trail system, including a new Prospect Mountain Trail.
- RMNP is among the top tourist destinations in Colorado and among the more popular park facilities in the National Park system. A recent study indicates that RMNP is the sixth most visited national park in the National Park system (Staff and News Services 2008). Annual visitation to the park topped 2.9 million visitors in 2006, down slightly from 3.1 million a decade earlier. However, visitation for 2007 once again exceeded 3 million, for a total of 3,090,875 visitors (NPS 2008). Seventy-five percent (75%) of the annual total occurs in the four-month period from June through September.
- RMNP and the USFS have partnered to develop recreation improvement plans for destinations along State Highway (SH) 7. Specific improvements would include additional parking spaces, relocation of trailheads, solutions to address noise and pedestrian safety, and

other recreation or visitor experience improvements.

- Larimer County Parks and Open Lands have recently acquired a new property at Hermit Park. The master plan for Hermit Park includes tent and RV camping, trails, and other nonmotorized recreational opportunities.

The availability of additional recreational opportunities would help to accommodate the growing demand in the future. Therefore, the incremental contribution of adverse impacts to recreation as a result of the No Action Alternative, when combined with the anticipated effects of other actions in the region would be expected to result in negligible long-term adverse impacts to recreation.

The incremental contribution of the beneficial recreation impacts of the Proposed Action Alternative and the beneficial socioeconomic impacts of both alternatives, when combined with the increasing regional recreation trends and new or improved facilities in the study area, would be expected to result in beneficial, long-term, and moderate cumulative effects to recreation and socioeconomic resources in the Estes Valley.

Although it is impossible to quantify, it is likely that the cumulative effects of the Proposed Action and the other past, present, and reasonably foreseeable future actions would increase use/visitation levels, generate additional visitor revenue and/or average tourist expenditures, improve the overall recreational experience, attract a wider user base, and ultimately, enhance the natural resource-based tourism revenue in the Estes Valley.

3.4.6 *Scenic and Aesthetic Resources*

a) Affected Environment

Introduction to Scenic and Aesthetic Resources

Scenic and aesthetic quality is typically defined as a harmonious relationship between physical, biological, and cultural attributes that, when viewed or experienced by people, elicit positive psychological and physiological benefits.

All of the Reclamation properties assessed in this plan are visited by highly sensitive users, primarily recreationists, whose recreation experience, purpose of visit, and use of the parks are highly dependent on scenic quality and aesthetic integrity. User sensitivity to change is determined by evaluating factors such as visibility of the site, proximity to sensitive land uses, the number and type of potential viewers, and the purpose of their visit to the area. Visitors are cognizant of the infrastructure and facility requirements of Reclamation properties, which exist foremost for water development and conveyance purposes. With some exceptions, these facilities are, therefore, generally accepted as a neutral element of the landscape character, whereas visual intrusions and/or man-made artifices in more natural recreational settings (such as national parks, open lands, and wilderness areas) are typically correlated with diminished recreation or visitor experiences (USDA 1995).

Visual absorption capacity refers to the relative ability of a landscape to accept contrasting human modifications without a loss in character. Throughout the parks, certain use areas are more sensitive to scenic change because their visual absorption

capacities are generally considered low or small.

Existing landscape character refers to the park's current scenic attributes (landform, water, cultural elements, and vegetation) combined with the cultural values that people assign to landscapes. Landscape character descriptions define a park's "sense of place" or scenic expression, as well as provide a written baseline condition from which to monitor change in scenic resources in the future.

Consistency with Local Policies and Goals

Currently, there are no Larimer County, Reclamation, or EVRPD policies to protect or enhance visual quality within park boundaries. However, all of the park areas addressed in this RMP are subject to policies and guidelines provided in the 1996 Estes Valley Comprehensive Plan (EV Plan). The EV Plan advocates limited development in visually sensitive areas and areas that serve as defining landmarks of the Estes Valley.

The EV Plan has established standards by which to review the visual effects of development in special areas. Although the policies are primarily intended for new residential, commercial, or other urban development types, there are some guidelines that are pertinent to the management of Reclamation and EVRPD parks. These include:

- Maintain the quality of Estes Valley's scenic and natural resources; these resources are the keystone of the community's economic strength and quality of life.
- Protect the scenic character and visual quality of the open space and gateway experience to the valley and RMNP.

- Protect and enhance Lake Estes as an entry to the Town of Estes Park.
- Protect the natural beauty of the valley, acquire key parcels of land, and create an open space network through land acquisition, development agreements, and conservation easements for preservation of open space.
- Improve the overall image and character of developed areas within the valley that detract from the visual quality of the valley.
- Ensure that new development minimizes the impacts to visual and environmental quality within the valley.

Lake Estes Character. Active uses, including both recreation and adjacent urban uses, define the character of Lake Estes as a highly developed and programmed setting. In the fore- and middleground viewshed, the character of the built environment dominates. With the exception of spectacular Rocky Mountain views directed outward from the park, visual experience of the natural landscape is subordinate. Traffic and major roads are both visible and audible from all use areas at the lake. Overall, Lake Estes is visually and aesthetically characterized as developed.

Lake Estes Scenic Quality. The Fish Creek Arm area and Wapiti Meadows offer a high quality scenic and aesthetic experience with the park. These areas, because of their nondeveloped or natural character, have a low visual absorption capacity and are the most sensitive to change of all the use areas at Lake Estes.

Recreation facilities and structures at Lake Estes are generally compatible with the desired recreation experience and are appropriate for the setting. However, some recreation facility design, view screening, and materials are inconsistently used

throughout the park. The most notable incompatibility is the unscreened view of the Estes Power Plant and substation from several key viewpoints on the lake.

Overall, scenic quality at Lake Estes is considered moderate; urban development surrounding the lake ultimately detracts from the expansive mountain views and lake setting. However, Lake Estes is increasingly recognized as an important visual gateway to Estes Park and a visual amenity for the valley.

b) Environmental Consequences

No Action (Alternative A)

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would temporarily disturb scenic and aesthetic resources in the vicinity of the improvement as a result of increased human activity, noise, construction equipment and materials, construction fencing, or ground vibrations; these impacts would be adverse, short term, and minor.

The ADA improvements would result in the introduction of new, unnatural lines and features into the landscape; for example, striping on pavement, uniformly graded surfaces, or new signs and signposts. As such, the proposed ADA improvements would have an adverse, long-term, minor impact on scenic and aesthetic resources at Lake Estes.

Under the No Action Alternative, no new recreation facilities would be developed. However, no additional efforts would be made to preserve the existing visual character and aesthetic values of Lake Estes. Without Reclamation or EVRPD scenic quality management objectives, scenery and visual experiences at the park would degrade

over time as a result of informal access, parking on the shoreline, and social trails.

The No Action Alternative, although not in direct conflict with the Estes Valley Comprehensive Plan guidelines, would not advance the goals and standards outlined in the plan and, ultimately, may detract from achieving some of the standards.

The No Action Alternative would result in adverse short- and long-term, minor impacts to the existing character and scenic quality of the Lake Estes viewshed and aesthetic resources.

Proposed Action (Alternative B)

Construction activities necessary to modify picnic sites, parking areas, and access paths would temporarily disturb scenic and aesthetic resources in the vicinity of the improvement as a result of increased human activity, noise, construction equipment and materials, construction fencing, or ground vibrations; these impacts would be adverse, short term, and moderate.

Short-term, adverse visual and aesthetic impacts as a result of excavation at the Lake Estes marina would occur during periods of low water. Typically, low-water periods are also periods of low visitation. As such, individual visitor experiences may be temporarily (short term) adversely affected by the excavation, but there would be no long-term impact to scenic and aesthetic resources after the reservoir returned to a normal water level.

By defining parking areas and preventing vehicle access to the shoreline at Cherokee Draw, the scenic quality and aesthetic experience adjacent to the water's edge would be enhanced. Visitors engaging in shoreline activities would no longer be

directly subjected to vehicle exhaust, noise, or glare off vehicle surfaces.

The new viewing blinds at Wapiti Meadows would provide a new viewing experience and opportunity to experience natural systems, wildlife, and native vegetation. Construction of the new viewing blinds and associated facilities would cause adverse, short-term, minor impacts to scenic and aesthetic resources as a result of increased human activity, noise, construction equipment and materials, construction fencing, or ground vibrations. Although the blind structures and walkways would themselves create a permanent visual deviation and/or inconsistency within the foreground viewscape, the overall effect of the improvements on visual and aesthetic resources at Wapiti Meadows would be beneficial, long-term, and moderate.

Structural and facility improvements, such as new picnic shelters or new signs and the new multipurpose playing field, would contribute to the overall sense of development and programming at Lake Estes. Although these improvements would benefit the recreation experience, the introduction of new forms, lines, and textures into the setting would have adverse, long-term, minor impacts on scenic quality and aesthetic integrity at the Cherokee Draw Day Use Area and Wapiti Meadows.

The Proposed Action would directly advance the Estes Valley Comprehensive Plan guidelines, which stipulate that the Lake Estes gateway be protected and enhanced, by improving the overall image and character of developed areas and by ensuring that new development would minimize impacts to the visual and environmental quality of surrounding areas.

Overall, Alternative B would result in up to moderate short-term adverse impacts, but beneficial, long-term, minor effects on visual quality at Lake Estes.

c) Cumulative Effects

As described in Section 3.4.6(b), the Scenic and Aesthetic resources impacts of this project are anticipated to be long term, ongoing for the 10-year life of this RMP. Therefore, this analysis will consider project effects over a 10-year period, beginning with project implementation.

Lake Estes serves as an iconic gateway to the Town of Estes Park. Views of the lake are most prominent when traveling west on U.S. 34, west on U.S. 36, and north on SH 7. This cumulative effects analysis will evaluate all actions occurring within the fore- and middleground views from Lake Estes, including northward views to U.S. 34, eastward views to the Big Thompson River canyon, westward views to downtown Estes Park, and southward views to Stanley Park Fairgrounds and Estes Park High School.

In addition to this RMP update, the impacts of other past, present, or reasonably foreseeable future actions or natural phenomena within the analysis area include:

- Past and ongoing residential and commercial development within the fore- and middleground viewshed would result in the removal of mature vegetation; additional reflective surfaces (glare); introduction of new lines, forms, and textures; and potentially more traffic and traffic-related noises. Continued development near the park, especially in areas adjacent to park boundaries such as the U.S. 34, U.S. 36, and SH 7 corridors, would result in further alteration and impairment of the Lake Estes setting.

The scenic and aesthetic resources on the boundaries outside of Lake Estes Park are expected to decline through the life of this plan. As a result, the incremental contribution of adverse impacts to scenic and aesthetic resources as a result of No Action Alternative, when combined with the anticipated effects of past and ongoing development in the immediate viewshed, would be expected to result in moderate long-term adverse impacts to scenic and aesthetic resources at Lake Estes Park. The direct benefits of the Proposed Action Alternative would likely be decreased resulting in an overall negligible long-term beneficial impact.

3.4.7 Land Use

a) Affected Environment

There are several existing land uses within the Federal boundaries of Lake Estes (see Map 6). Principal land uses include industrial (powerhouse, substation and powerlines), developed recreation facilities (the 9-hole golf course, EVRPD offices, and the Lake Estes marina), access roads, municipal services (UTSD and Dannels Fire Station), and other minor improvements in a number of defined activity areas.

The lake is nearly completely surrounded by urban and rural influences. These include the lake's location between two major highways, the region's natural scenic resources, substantial private land holdings located between the Federal lands and the highway right-of-way on the lake's north shore, and the development of local government and public facilities just south of the lake. Adjacent land uses along the north shore are primarily commercial lodging and residential development. Historically, most of this development was concentrated along the U.S. 34 highway

corridor, leaving a buffer of undeveloped area between the development and Lake Estes. However, recent residential construction, drawn in part by the amenity and view corridors created by the lake itself, has filled most of this area.

Adjacent land use below the dam and north of the outlet channel includes commercial, manufacturing, and amusement facilities. A few residences are located to the south, overlooking Wapiti Meadows. Developed parks and open space, a public high school, and the Stanley Park Fairgrounds adjoin the Fish Creek Arm of Lake Estes to the south. A combination of commercial lodging and retail establishments, residences, and other public uses are clustered around the highway intersection of U.S. 36 and SH 7 near the southwest corner of the lake.

b) Environmental Consequences

No Action (Alternative A)

The proposed ADA improvements would have no impact on land use at the parks or land uses adjacent to the parks.

Under the No Action Alternative, no new use areas would be developed. Informal use areas and social trails would increase in response to the growth in visitation. The No Action Alternative would have no new effects on adjacent private or public lands. No restrictions would be imposed on the types of activities allowed or where certain recreational activities could occur.

The issuance of land use instruments would be guided by an outdated plan without defined management zone criteria. The lack of formal definition and guidance on routine actions and land use decisions could result in site-specific impacts that range from negligible to moderate. The No Action Alternative would not directly impact the

number or types of requests for rights-of-use.

Overall, the lack of formal definition and guidance on routine actions and land use decisions could indirectly result in adverse, long-term, impacts ranging in intensity from negligible to moderate, depending on the situation.

Proposed Action (Alternative B)

The Proposed Action would result in minor land use changes within the park boundary, including the new sports/soccer playing field and formalized wildlife viewing and interpretive opportunities (see also Section 2.8.1). These changes are compatible with existing uses within the park as well as adjacent uses on private lands. With the exception of the Fish Creek Arm, the areas within the park and immediately adjacent to Lake Estes are already highly developed.

Requests for rights-of-use of Reclamation lands would be guided by the RMP (Reclamation 2002b, 43 CFR 429 2007). Alternative B would not directly impact the number or types of requests for rights-of-use. The issuance of land use instruments would be guided by a current plan with defined management zone criteria as discussed in Section 2.4. These management zones would provide guidance on the most appropriate locations for park activities as well as for other non-recreational use.

Overall, the Proposed Action would be expected to result in up to moderate long-term beneficial impacts to land use within the park.

c) Cumulative Effects

There are no other known requests for the use of these properties that were not already

considered as part of the alternative and as such that have not already been included in the direct and indirect impact analysis. Therefore, the No Action and Proposed Action Alternatives would not result in any cumulative effects of land use at or adjacent to the Lake Estes Park.

3.4.8 Socioeconomics

a) Affected Environment

Lake Estes, the nearby Town of Estes Park, and the surrounding Estes Valley are located in western Larimer County, Colorado. Estes Park is the only incorporated municipality in the valley.

The year-round population in Estes Park has grown substantially in recent years. From 1990 to 2006, the population of the Town of Estes Park nearly doubled from 3,184 to 5,921, respectively (Coley/Forrest 2008). Over the last 15 years (1990 through 2006), the town's population has grown at an average annual rate of 3.9%, which is considered high relative to the state average annual rate of 2.4%. During the last ten years, the annual rate of growth has slowed to 2.6%; this is also higher than the statewide average of 2.1%. Since 1990, the town has experienced only one year (2002) where the population declined slightly (-0.1%). Within the Estes Valley, approximately 55% of the population resides in the Town of Estes Park, 44% resides in unincorporated Larimer County, and 1% resides in unincorporated Boulder County (Coley/Forrest 2008). These percentages have remained relatively constant since 2000 (Coley/Forrest 2008).

The area's popularity for both permanent and seasonal residents has precipitated substantial residential development throughout the valley. Between 2000 and

2005, approximately 717 new residential units were built in Estes Park (Town of Estes Park 2008). In 2006 alone, approximately 328 new residential building permits were issued. Year-round resident population in the Town of Estes Park and surrounding area is expected to approach 10,800 by the year 2010 if recent growth trends continue (Town of Estes Park 2008).

Several factors have contributed to the region's growth. The favorable quality of life has attracted many retirees to the area, while access to economic opportunities in the local economy and along the Front Range has attracted many working households (Estes Valley Comprehensive Plan 1996). These factors are apparent in demographic and economic characteristics of the local population. In 2000, over 20.7% of the town's population was 65 years of age or older compared to 9.6% of the county's population. The segment of the population under 18 years of age was 17.6% in the town versus 23.7% in the county. The median household income in the town was \$43,262 in 2000, compared to \$49,655 for Larimer County (CSDO 2008).

Tourism and outdoor recreational opportunities have traditionally been the foundation of the local economy. Nearby RMNP is among the top tourist destinations in Colorado and among the more popular park facilities in the National Park system. Annual visitation to the park topped 2.9 million visitors in 2006, down slightly from 3.1 million a decade earlier. However, visitation for 2007 once again exceeded 3 million, for a total of 3,090,875 visitors (NPS 2008). Seventy-five percent (75%) of the annual total occurs in the four-month period from June through September. The large numbers of tourists and seasonal residents increase the population of the valley served by the Lake Estes Recreation

and Park District and the facilities at Lake Estes. Consequently, lodging, food and beverage establishments, and associated retail trade sectors dominate the local economy. Lodging and camping establishments in the Estes Park area offer a total of 2,600 rooms, 7 private campgrounds, 5 campgrounds in RMNP and 2 campgrounds in Roosevelt National Forest to accommodate short-term visitors. Additionally, the YMCA of the Rockies provides 219 cabins with 476 rooms to accommodate visitors (Estes Park 2008).

The EVRPD is the primary provider of local public parks and outdoor recreational opportunities in the Estes Park area. The local school district, the Town of Estes Park, and Larimer County cooperate in meeting local recreation needs. The USFS, National Park Service, and Reclamation also play key roles in the provision of outdoor recreation opportunities. EVRPD seeks to operate on a self-sustaining fiscal basis, with 75% of the District's revenue derived from charges for services. Property taxes, user fees, proceeds from the Colorado Lottery, and interest earnings provide the remaining funds (Coley/Forrest 2008).

Recent growth is also contributing to changing social dynamics in the community. For example, the growing number of retirees, combined with an increasing number of households with economic dependencies outside the local economy raises concerns about pressures on the Estes Park wildlife, habitat, and other resources. The growing number of year-round residents and the changing age composition of the population are also giving rise to changing priorities and demand on municipal and other public service providers, again shifting the emphasis more toward addressing needs and desires of residents as well as tourists.

b) Environmental Consequences

No Action (Alternative A)

An increase in visitation commensurate with population growth and increasing recreational demands would likely benefit local businesses and park revenues. The No Action Alternative would be expected to have a beneficial, long-term, negligible effect on the local and regional economies.

Proposed Action (Alternative B)

Direct socioeconomic effects of the Proposed Action Alternative include the cost of implementing the Proposed Action and the additional revenue anticipated as a result of the improvements.

The cost analysis and current available revenue suggest that construction phasing would occur over the life of the RMP and as funding becomes available. Cost estimates for the proposed action (improvements at all four properties) would be approximately \$18 million. As described in Section 2.10, projects for all properties would be phased by priority level to match anticipated levels of funding and implementation timing based on grants, fees, and other general funds. Projects that require a separate dedicated funding source, such as grants or donations, are also highlighted (i.e., Special Projects).

EVRPD's cost could be offset by using volunteer work forces, applying for additional grant monies, and creating partnerships to support activities related to the Proposed Action.

The majority of visitors to Estes Park are from within the State of Colorado; however, an increasing number of visitors are coming from out of state. As characteristics of the user population continue to change (e.g., more out-of-state users, increasing

household income) and the variety of recreational opportunities provided expand, the average length of visits may increase and shoulder season/off-peak season length may decrease. Longer visits, increased use in the off-season, and additional user fees would result in increased revenue for EVPRD.

The Proposed Action Alternative focuses on the provision of amenities and enhanced facilities that would improve the recreational experience of users. For some, these improvements would influence their choice of recreation destinations. However, no specific increases in visitation can be attributed to implementation of this alternative because the increase in visitor capacity (measured by available parking spaces) is negligible (net increase of 4 parking spaces at Lake Estes day use areas).

The ability to better meet recreational demands and improve the quality of the visitor experience may also benefit local concessionaires, guide services, lodging, local stores, and other visitor services entities.

Parking, day use, and campground facilities (Marys Lake and East Portal only) would be improved throughout the overall park system. This may result in an increase in revenues from user fees and permits, as more visitors decide to visit and/or increase the frequency of their visits.

Overall, the Proposed Action Alternative would have a beneficial, long-term, minor effect on the social and economic environments at all parks.

c) Cumulative Effects

Socioeconomic resource cumulative impacts have been incorporated into the Recreation

cumulative effects discussion, see Section 3.4.5(c).

3.4.9 Cultural and Heritage Resources

a) Affected Environment

All C-BT facilities and infrastructure on Reclamation land at Lake Estes have the potential to be listed on the NRHP.

Historic sites at Lake Estes, including NRHP eligibility determinations, when available, are as follows:

- Estes Power Plant
- Olympus Siphon
- Olympus Dam – NRHP eligible
- Estes to Lyon Tap Powerline – NRHP eligible
- Estes to Pole Hill Transmission Line – NRHP eligible
- Memorial marker – Further evaluation necessary to determine NRHP eligibility
- Prehistoric site – Further evaluation necessary to determine NRHP eligibility
- Two isolated finds – Not eligible
- U.S. 36 Causeway on Lake Estes – NRHP eligible

Additionally, the reservoir pool area was not surveyed prior to construction or the 1982 Lawn Lake Flood, therefore, the number of actual sites cannot be known.

b) Environmental Consequences

No Action (Alternative A)

No disturbance of the known cultural resources would result from the No Action Alternative.

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would result in temporary disturbances to native soils in small, isolated areas, and may ultimately result in disturbances to unrecorded surface and subsurface cultural resources.

Prior to any construction, the activity would be reviewed by the Reclamation archaeologist to determine if a survey is needed or whether NHPA Section 106 consultation is required. Construction near known sites would be monitored by an archaeologist.

As stated in Section 2.7, all contracts would include a “stop work” clause if evidence of cultural resources is found during construction. If cultural resources are encountered, further disturbance will be avoided and there would ultimately be no direct impacts to cultural resources. If avoidance is not possible, Reclamation would enter into consultations with the SHPO regarding the eligibility of the subject sites for inclusion in the NRHP. If cultural resources are determined to be present and avoidance is not possible, the impacts would be adverse and long-term. The intensity of the impact would depend on the historical significance of the artifacts disturbed.

Proposed Action (Alternative B)

The impacts of the Proposed Action Alternative would be the same as described for the No Action Alternative.

c) Cumulative Effects

In addition to this RMP update, the impacts of other past, present, or reasonably foreseeable future actions or natural phenomena within the analysis area include:

- Increased visitation as a result of population growth and growing recreation demands.

The increase in visitation may present increased risk of both inadvertent and criminal disturbance to cultural sites due to trampling, increased erosion, and higher instances of vandalism.

It is not possible to judge the intensity of the increased visitation. However, the alternatives would not directly impact known cultural and heritage resources at any of the parks; therefore, no cumulative impact is expected for these resources. It is not possible to determine the cumulative impact to unrecorded resources because neither the effect of increased visitation nor the impact to the unrecorded resource can be quantified.

3.5 Marys Lake

3.5.1 Hydrology and Water Quality

a) Affected Environment

Marys Lake is located in a natural drainage basin with a watershed of approximately 252 acres. The natural lake was enlarged with construction of the C-BT project. The 42-acre lake has a storage capacity of 927 acre-feet (Reclamation 1984). There are no perennial streams draining into Marys Lake and there is little natural runoff into the small watershed. Water for the reservoir is provided by transmountain diversions through the Alva B. Adams and Ram's Horn Tunnels. Operation of the reservoir to meet water and power generation demands results in large daily water level fluctuations.

b) Environmental Consequences

No Action (Alternative A)

Hydrology and water quality impacts at Marys Lake would be the same as described for the No Action Alternative as Lake Estes, see Section 3.4.1(b).

Proposed Action (Alternative B)

The resurfacing of parking areas, driveways, and campground roads and C-BT operations at Mary's Lake would have the same impacts as discussed in the Proposed Action Alternative for Lake Estes, Hydrology and Water Quality Section, 3.4.1.(b).

The Proposed Action Alternative would result in no impact to local hydrology. Overall, the Proposed Action Alternative would result in adverse, long-term, negligible impacts to water quality at Marys Lake.

c) Cumulative Effects

Cumulative effects as a result of project implementation at Marys Lake would be the same as described for Hydrology and Water Quality at Lake Estes, see Section 3.4.1(c).

3.5.2 Soils, Geology, and Topography

a) Affected Environment

Marys Lake is located three miles south of the Town of Estes Park at an elevation of about 8,000 feet (see Maps 1 and 7). The 42-acre Marys Lake Reservoir is surrounded by 138 acres of land consisting of the Marys Lake Campground and day use areas. Terrain includes the steeper northeast facing slopes of Ram's Horn Mountain and rolling gentle slopes around the remainder of the lake. Soils in the region are derived from weathered metamorphic and igneous parent

material. Soils on the steeper, timbered slopes are typically rocky and coarse textured. Grass meadow soils are generally deeper and darker in color. Moist dark soils have developed in several wetland locations adjacent to the lake below the dam, in the campground, and at the west end of the lake. Scattered granitic rock outcrops are located throughout the property. Spoil material from construction of the Ram's Horn Tunnel is present on the southwest slope above the lake.

Larimer County Geologic Hazards data indicate that the northeast slopes of Ram's Horn Mountain (southwest corner of Marys Lake property) is an area of severe geologic hazard (Larimer County GIS: Geologic Hazards, Date Unknown). Currently, isolated areas of severe erosion occur on the campground loop road because of social trails (footpaths) leading to day use areas and campground facilities. Poor drainage on the east side of the campground has resulted in severe rutting, gulying, and even collapsed (filled-in) culverts and drains.

b) Environmental Consequences

No Action (Alternative A)

Soils, geology, and topography impacts at Marys Lake would be the same as described for the No Action Alternative as Lake Estes, see Section 3.4.2(b), with the following exceptions:

Overall, the No Action Alternative would have no impact on local geology, geologic features, or topography. Given the deteriorated condition of soils and drainage in the campground (e.g., collapsed culverts, gullies) as a result of ongoing erosion or poor drainage patterns, the No Action Alternative would result in adverse, long-term, minor impacts to soil resources in the campground and adverse, long-term and

short-term, negligible impacts on soils in other isolated areas of high use or informal, undesignated activity, such as along the lake shoreline or in day use areas.

Proposed Action (Alternative B)

Where new development or improvements would occur, Standard Environmental Commitments and best management practices (Section 2.7) would be implemented to minimize impacts. New facilities, structures, trails, or other improvements would result in temporary and permanent disturbances to existing soil resources during construction and as a result of new facility footprints, such as the new campground lodge. Impacts to soil resources as a result of Proposed Action construction activities and improvements would be adverse, short and long term, and minor.

Redesigned and resurfaced footpaths and roads would resolve many of the erosion problems present throughout the campground. Resurfacing the roads would prevent ongoing gully and rutting.

Improvements at the East Side Day Use Area (new bouldering day use area) would not impact the geologic features that make this site attractive to visitors. Overall, the Proposed Action Alternative would have no impact on local geology, geologic features, or topography.

Overall, the Proposed Action Alternative would result in beneficial, long-term, moderate impacts to soil resources by resolving erosion problems and formalizing campsite boundaries, footpaths, and parking areas. Construction activities and improvements would likely result in adverse, short-term, minor increases in erosion and soil resource impacts.

c) Cumulative Effects

Cumulative Effects as a result of project implementation at Marys Lake would be the same as described for Hydrology and Water Quality at Lake Estes, see Section 3.4.1(c). Soils, geology, and topography resource impacts have been incorporated into that section.

3.5.3 Vegetation and Wetlands

a) Affected Environment

The area surrounding Marys Lake has historically been used for timber production, hay meadows, and grazing (Reclamation 1984). Currently, the area provides habitat for wildlife and supports recreational use.

The steep slope on the southwest side of the lake is forested with a mixed stand of lodgepole pine (*Pinus contorta*), Douglas-fir (*Pseudotsuga menziesii*), and ponderosa pine (see Map 7). Understory vegetation on the timbered slope includes common juniper (*Juniperus communis*), big sagebrush (*Artemisia tridentata*), fringed sage, wild buckwheat (*Eriogonum sp.*), mountain muhly, and meadow-rue (*Thalictrum sp.*). The flatter terrain surrounding the remainder of Marys Lake is dominated by mixed grassland and forb species, such as smooth brome, crested wheatgrass, intermediate wheatgrass, cheatgrass, pussytoes (*Antennaria sp.*), fringed sage, wild tarragon (*Artemisia dracuncululus*), wild iris (*Iris sp.*), and aster (*Aster sp.*). Ponderosa pine is scattered throughout the grassland areas. The southwest corner of the lake supports a small stand of aspen and chokecherry (*Prunus virginiana*) in a moist drainage. Several small wetland areas have developed on and around the property, including sites on the northwest shore of the lake, below the south dam, surrounding the small retention

pond east of Marys Lake across the county road, and below the channeled springs emerging from an area east of the trailer parking lots in the Marys Lake Campground. Plants found in the vicinity of the campground wetlands include rush species, fringed willowherb (*Epilobium ciliatum*), golden currant (*Ribes sp.*), crested wheatgrass, Indiangrass (*Sorghastrum nutans*), wild proso millet (*Panicum miliaceum*), blue grama and other grasses, peachleaf and sandbar willow (*Salix amygdaloides* and *Salix interior*, respectively), water birch, and numerous weedy species, including Canada thistle.

See Section 3.4.3 for more information on the current MPB epidemic in Colorado. USFS beetle infestation mapping (updated 2007) indicates that there are isolated areas of MPB attacks throughout the Estes Valley, including in the vicinity of Marys Lake. The 2007 mapping does not indicate that there are any large infestations in the immediate Marys Lake area; the largest infestation areas are located within RMNP north and west of Marys Lake (USFS 2007b and USFS 2007c).

Wildfire hazard in the Marys Lake project area is rated moderate to very high (Larimer County GIS: Wildfire Hazards, Date Unknown). Areas rated as very high are located on the slopes of Ram's Horn Mountain, southwest of the lake. The campground and day use areas are rated as moderate (refer to Section 3.4.3 for more information on wildfire hazard ratings).

Special Status Species

Impacts related to noxious weed establishment from the improvements and reconfigurations at the day use and campground areas would be the same as

described for the Alternative at Lake Estes Park, see Section 3.4.3.(b).

b) Environmental Consequences

No Action (Alternative A)

Vegetation and wetland impacts at Marys Lake would be the same as described for the No Action Alternative as Lake Estes, see Section 3.4.3(b).

Proposed Action (Alternative B)

Native vegetation screening, restoration of informal parking areas, and construction of designated trails and footpaths would help alleviate vegetation trampling, particularly along the shoreline and in the campground interior. These improvements would result in beneficial, long-term, moderate impacts to local plant communities.

Additional native trees would be planted in the campground to improve vegetation cover and structural diversity. Small natural areas would be protected at the campground so that campsites could be located closer to pockets of native vegetation.

The installation of fencing around wetland areas in the campground would prevent wildlife grazing of wetland species, vegetation trampling by campers and pedestrians, and would allow the wetland communities to regenerate more effectively.

As described in Section 3.4.3 (b) preventative MPB spraying would reduce the probability of MPB infestation and tree mortality at Marys Lake.

Overall, the Proposed Action Alternative would have a beneficial, long-term, moderate effect on vegetation and wetland resources at Marys Lake.

Special Status Species

Weed management and the control of noxious weeds is a standard Environmental Commitment of Reclamation and EVRPD. See Section 2.7 for a detailed description of noxious weed and pest management efforts.

Improvements and campground reconfigurations would temporarily increase susceptibility to weed establishment in the immediate vicinity of the construction footprint by disturbing native vegetation. Additional construction related foot traffic and vehicular traffic would further increase the probability of weed introduction into the project site. However, with the implementation of management practices identified in Section 2.7, such as vehicle cleanup, use of weed-free hay and seed mixes, and pre- and post-construction weed eradication techniques, these impacts are expected to be short term and minor.

The formal designation of parking and use areas would diminish long-term susceptibility to noxious weed infestation as it would reduce disturbance (vegetation trampling by vehicles and foot traffic) to native vegetation.

Overall, the Proposed Action Alternative would have a beneficial, long-term, minor impact on weed and noxious weed establishment at Marys Lake.

c) Cumulative Effects

The spatial boundary for the cumulative effects analysis for vegetation and wetland impacts includes the local Fish Creek valley floor and its park-like vegetation communities. Specific geographic boundaries are as follows: Kruger Rock represents the east boundary, Gianttrack Mountain represents the west boundary,

Prospect Mountain represents the north boundary, and Cheley Camp represents the south boundary.

With the exception of elk grazing impacts, the cumulative effects as a result of project implementation at Marys Lake would be the same as described for Vegetation and Wetlands at Lake Estes, see Section 3.4.3(c).

3.5.4 Fish and Wildlife

a) Affected Environment

A variety of wildlife species use the habitat provided at Marys Lake. Elk and mule deer are probably the most visible wildlife using the site. There are possibly some resident elk in the area, but most are migratory. See Section 3.4.4(a) for a detailed discussion of elk in the Estes Valley, including recent developments in elk management activities, ongoing public and land management concerns, and the importance of elk to the area.

The grassland meadows around the lake provide valuable winter habitat for elk and deer. Other mammals likely to use the site include coyotes, cottontail rabbits, squirrels, skunks, deer mice (*Peromyscus maniculatus*), voles (*Microtus sp.*), and chipmunks. The variety of habitat available at the lake attracts a number of birds, including Stellar's jay, mountain chickadee (*Parus gambeli*), black-billed magpie (*Pica pica*), mountain bluebird, meadowlark (*Sturnella neglecta*) and a variety of other songbirds. It is likely that raptors such as red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), bald eagle, peregrine falcon, osprey and Swainson's hawk (*Buteo swainsoni*) are occasional visitors in the area. Marys Lake provides habitat for waterfowl, including Canadian geese, blue-winged teal, northern pintail,

and mallard ducks. The lake supports a put-and-take rainbow trout fishery. Brook trout and west slope sculpin (*Cottus bairdi*) are often transported through the Ram's Horn Tunnel. Longnose and white suckers (*Catostomus catostomus* and *Catostomus commersoni*, respectively) are also found periodically.

Special Status Species

Bald eagles are occasional transient visitors, but do not nest or winter at Marys Lake. They are known to forage during the winter at Lake Estes, three miles to the north. Bald eagles occasionally hunt at Marys Lake for fish or small mammals and birds on surrounding lands.

Peregrine falcons are summer residents in the region and have several active aeries in the cliffs near Estes Park (Reclamation 1996). Peregrine falcons may occasionally forage near Marys Lake, but there is no suitable peregrine nesting habitat in the vicinity of the lake. Birds and waterfowl in the area may provide prey for occasional peregrine hunting near the lake.

b) Environmental Consequences

No Action (Alternative A)

Fish and wildlife impacts at Marys Lake would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.4(b).

Special Status Species

Because of the limited use of Marys Lake by bald eagles, this alternative would have no effect on this species' population or habitat at Marys Lake. No known raptors nests or roost sites would be impacted by any of the improvements. Similarly, no impacts to peregrine falcons are expected.

Proposed Action (Alternative B)

The discussion and analysis for the No Action Alternative at Lake Estes [see Section 3.4.4(b)] related to construction disturbances; new educational, interpretive, and protective measures; formalized parking areas; and fishing pressure would also apply to Mary's Lake.

There would be no direct impacts to elk at Marys Lake. Impacts to elk habitat would consist of the loss of grazing habitat for the construction of new day use facilities or campground improvements. This loss would be partially offset by the restoration of existing parking areas to native vegetation. The net impacts to elk habitat would be negligible.

Overall, the improvements proposed at Marys Lake would result in beneficial, long-term minor effects on wildlife populations and habitat, particularly bird and small mammal populations.

Special Status Species

Bald eagle and peregrine falcon impacts at Marys Lake would be the same as described for the No Action.

c) Cumulative Effects

Fish and wildlife resource cumulative impacts are the same as described for Lake Estes and have been incorporated into the Vegetation and Wetlands cumulative effects discussion, see Section 3.4.3(c).

3.5.5 Recreation

a) Affected Environment

Major use areas at Mary's Lake include the Marys Lake Campground (managed by a private concessionaire) and day use areas

around Marys Lake; all day use areas at Marys Lake are non-fee areas. Recreation activities include camping at the campground, picnicking, shoreline fishing, hiking, bouldering, wildlife viewing, and general day use. Boating is not permitted on Marys Lake due to the release plume from the Ram's Horn Tunnel, diurnal fluctuations, and strong undercurrents that create whirlpools at the outlet structure. Use at Marys Lake, with the exception of the campground, occurs year-round. Table 3-3 provides a summary of current visitation, staffing and law enforcement patrol, and dates/seasons for public use.

Although there are no formal hiking trails, hiking does occur on the wooded terrain southwest of the lake, and walking occurs around the lake. The steep, rip-rapped shoreline along most of the lake makes walking on the shoreline difficult. Some bouldering also occurs on large rock outcrops across Marys Lake Road near the northeast corner of the lake. Bow hunting occurs, by permit, in the backcountry area west of the lake.

Brief descriptions of existing Marys Lake recreation facilities are provided below.

Marys Lake Campground is operated by a private concessionaire as a fee site. Marys Lake Campground provides a total of 80 campsites for tents and RVs. Sixty of the sites are basic, with fire grates/rings. Twenty of the sites provide hookups for water and electricity. The campground also offers two shower houses, a heated swimming pool, a children's playground, cable TV, a basketball court, and a horseshoe pitching area. The concessionaire operates a store with a laundromat, RV dump station, propane service, food, fishing licenses, and bait and tackle. The campground is open seasonally, from mid-May to the end of September; the campground is full for the majority of the summer use season.

The West Side Day Use Area is located on the shoreline of the lake and is used primarily for fishing access. Unstructured, unpaved parking is available for approximately 14 cars. Currently, the parking area is in disrepair with deep potholes, ruts, and a disintegrating asphalt slab on a steeply pitched turn-in. A vault toilet is also located here.

Table 3-3. Management and Use of Developed Areas at Marys Lake

	Marys Lake Campground	Central Day Area	West Side Day Use Area	South Side Day Use Area
Dates Open for Use	May 3 to Sept 15	All year	All year	All year
High Use Periods (months or dates)	July, Aug	May thru Sept	May thru Sept	May thru Sept
Percent of Capacity Used during High Use Periods	60%	65%	70%	70%
Staffed By (EVRPD, Concessionaire)	Concessionaire	EVRPD	EVRPD	EVRPD
Patrolled By (EVRPD, County, Town, Other)	County Sheriff	County Sheriff	County Sheriff	County Sheriff

Source: Developed by EVRPD Staff

The Central Day Use Area is located along Marys Lake Road on a bluff above the shoreline. It is located immediately across Marys Lake Road from the campground and is used primarily for picnicking, shoreline fishing, and scenic viewing. Unstructured, unpaved parking is available for approximately 27 cars. A vault toilet is also located here.

The South Side Day Use Area is used primarily as a parking area for fishing, hiking, and bouldering on the east side of the lake. Unstructured, unpaved parking is available for approximately 6 cars.

There is also informal parking and access along the east shoreline of the lake (proposed East Side Day Use Area). This area, to the east of Marys Lake Road, is heavily used as an informal day use area, primarily for bouldering and fishing activities. As it is not formalized, there are several issues associated with user impacts, such as human waste and pedestrian safety due to a lack of a formal road crossing and poorly defined parking area.

b) Environmental Consequences

No Action (Alternative A)

Recreation impacts at Marys Lake would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.5(b).

Additionally, issues associated with informal use at the proposed East Side Day Use Area would likely continue and/or worsen.

Overall, the No Action Alternative would have an adverse short- and long-term, minor impact on visitor recreational experience and opportunities at Marys Lake.

Proposed Action (Alternative B)

Parkwide and general day use area impacts are discussed below.

Construction of a soft-surface trail around Marys Lake would be a benefit to visitors, as it would provide the opportunity to safely access all day use areas and the campground without using the primary roadway. The new 6-foot asphalt trail connecting to the Estes Park trail network would provide additional recreational opportunities for both valley residents and visitors (staying in other local accommodations) with safe access to the Marys Lake area.

ADA accessibility improvements would enhance the recreational experience for users with ADA needs at all day use areas.

Bear-proof trash and recycling containers would reduce the potential for human-wildlife conflicts in the day use and campground areas; this would improve the visitor safety and, ultimately, the recreational experience.

The Proposed Action Alternative would result in a net increase of 4 parking spaces at Marys Lake. As such, visitor capacity would be slightly expanded under this alternative. Overall, however, the change in parking capacity is anticipated to be negligible and not perceptible by other park users.

Area-specific impacts are discussed below.

Marys Lake Campground

The reconfiguration of the Marys Lake Campground would maintain a similar number of campsites as currently exist. All reconfigured RV sites would have full hook-ups, which, in some cases, would result in an improved camping experience. Nine new

camper cabins with adjacent tent pads would provide a recreational opportunity that does not currently exist within the EVRPD system. The opportunity for small family or group reservations would provide an opportunity for a camping experience that is currently limited in the EVRPD system.

The reconfiguration of the campground layout, facility layout, and campsite setbacks would increase privacy and seclusion from other campsites, adjacent private property, and communal facilities such as the bath houses and new campground lodge. The installation or construction of ADA accessible structures or facilities would result in beneficial effects for visitors and campers with ADA needs. ADA accessibility may result in increased visitation by recreationists with disabilities; these facilities would ultimately provide camping for a type of user that is not currently accommodated in the EVRPD system.

Protection and buffering of the existing wetlands would enhance the natural setting and, subsequently, the visitor experience within that setting.

The reconstruction and development of the campground lodge (office) would improve the existing services offered to campers, and would provide new services and opportunities such as a group fire pit and gathering area. The new gathering associated with the lodge would provide a new recreational opportunity.

The proposed improvements at Marys Lake Campground, reducing campsite densities, improving vegetation screening, enhancing natural features, providing new services, and ensuring ADA accessibility would have a beneficial, long-term, moderate impact on recreation and the visitor experience.

Day Use Areas (including the new East Side Day Use Area)

Improved access and traffic flow into the redesigned parking area at West Side Day Use Area would result in minor beneficial effects to the visitor experience and vehicle safety. By removing vehicle access to the shoreline, shoreline recreational experiences and user safety would be improved.

A new pedestrian crosswalk crossing Marys Lake Road at Central and East Side day use areas would greatly improve safety for visitors moving between the campground and day use areas.

The installation of new picnic tables and a new toilet would enable and encourage longer periods of use for day use area visitors. ADA accessible facilities would provide a recreational opportunity for a new user group at this site.

Formalized shoreline and trail access and information or interpretive kiosks would encourage additional recreation uses of this site.

Establishing the bouldering site as a formal day use area would result in beneficial, long-term, minor effects to recreation and the visitor experience.

The new parking area and vault toilet would limit pedestrian safety hazards, human waste, and littering at this site, and would result in an improved visitor experience.

Overall, the Proposed Action would result in beneficial, long-term, moderate impacts to recreation and the experience of both overnight and day use only visitors at Marys Lake. Short-term impacts to recreation as a result of construction activities and improvements could be moderate.

c) Cumulative Effects

Temporal and spatial boundaries and cumulative effects of the No Action and Proposed Action alternatives are the same for all recreation resources at all Reclamation properties analyzed in this plan. See the Cumulative Effects discussion for Recreation under the Lake Estes analysis, see Section 3.4.5(c).

3.5.6 Scenic and Aesthetic Resources

a) Affected Environment

See Section 3.4.6 for background information on scenic and aesthetic resources and local comprehensive planning policies. The following Affected Environment and Environmental Consequences discussion tiers to terminology and concepts introduced in that section.

Marys Lake Character

Marys Lake is comprised of two distinct visual settings: the lakeshore day use areas and the campground. Both settings exhibit human development, scenic deviations, inconsistencies, and high levels of programming or human activities.

The lakeshore/day use areas are characterized by interesting geology, mature vegetation, and an overall sense of a semi-natural environment. The shoreline and immediate surrounding areas are regarded as the primary attractions at Marys Lake park.

The campground area is characterized as highly disturbed, barren of or lacking mature vegetation, and highly modified. The campground does not contain any notable, interesting geologic or topographic features or unifying visual elements. The foreground

views create a sense of crowding and clutter. The middleground views create a sense of being surrounded by development and land uses that are not conducive to recreational uses.

Marys Lake Scenic Quality

Scenic quality along the shoreline and at day use areas is generally high. Dispersed recreation and overuse have contributed to shoreline erosion and the removal of vegetation. In these isolated areas, the visual experience is compromised; however, the overall lakeshore and day use area scenic and aesthetic experience is not affected. Vehicles parking on the shoreline and overhead transmission lines, crossing the waterbody and campground, detract from the scenic quality of the setting.

Scenic quality in the campground is considered low. Facilities and structures are in disrepair, are not consistently themed, and, in some case, are inappropriately located. The concrete bunkers, which prevent access within 100 feet of the dam, are out of character for a recreational use site. The degradation of natural resources, such as erosion problems, areas devoid of vegetation, and weed infestations all detract from the scenic quality and aesthetic experience within the campground. Other artifices that detract from the scenic integrity of the campground include the maintenance yard and propane tank, which are unscreened from view, and overhead transmission lines.

Residential development and heavily used roads surrounding the lake and campground ultimately detract from the views of the mountains, foothills, and valley.

b) Environmental Consequences

No Action (Alternative A)

Scenic and aesthetic resource impacts at Marys Lake would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.6(b). However, because of the higher intensity of construction and improvement activities, the intensity of the impacts would be moderate.

Additionally, implementation of the No Action Alternative at Marys Lake would directly conflict with the Estes Valley Comprehensive Plan guidelines, stipulating the need to “...Improve the overall image and character of developed areas within the valley that detract from the visual quality of the valley.” Indirectly, the No Action Alternative would not advance the other goals and standards outlined in the plan and, ultimately, may detract from achieving some of the standards; therefore, the No Action Alternative would both directly and indirectly conflict with plan guidelines.

Overall, the No Action Alternative would result in adverse long-term moderate impacts on scenic quality and aesthetic resources at Marys Lake.

Proposed Action (Alternative B)

By defining parking areas and preventing vehicle access to the shoreline, the scenic quality and aesthetic experience adjacent to the water’s edge would be enhanced. Visitors engaging in shoreline activities would no longer be directly subjected to vehicle exhaust, noise, or glare off vehicle surfaces.

Structural and facility improvements, such as new picnic shelters or new signs, would contribute to the overall sense of development and programming at Marys

Lake. Although these improvements would benefit the recreational experience, the introduction of new forms, lines, and textures into the setting would have minor impacts on scenic quality and aesthetic integrity throughout the park.

The existing campground setting consists of a highly modified environment. The reconfiguration of the campground would result in moderate beneficial improvements to the visual environment and aesthetics of Marys Lake park by reducing the sense of crowding and clutter in the foreground through the use of vegetative screening and/or fencing. The implementation of campsite setbacks from private property would improve the sense of privacy and seclusion for both campers and adjacent residents. Resurfacing roads and some footpaths with asphalt or similarly hard surfaces would eliminate dust pollution and major erosion features. The impression of clutter and crowding within the campground would be alleviated by reorganizing campsites, improving vegetative screening, and fencing the maintenance yard and associated equipment. Consistent theming at the campground lodge and redesigned entrance would create unifying elements within the campground. The visual impacts of the new campground lodge (a large building) at this site would be negated by the benefits of providing a central element of visual interest.

The most notable effect of improvements at the Marys Lake Campground would be the result of vegetative screening and native vegetation restoration efforts. As plantings mature (long term), vegetative structure and diversity would provide visual interest and complexity to the campground landscape.

The adverse visual impact of 9 small camper cabins would be minor, but long term. The

cabins are proposed to be installed along the campground boundary adjacent to Peak View Road. Visual experience and aesthetic quality of campers in the cabins may be compromised by sights and sounds of traffic nearby. Overall, however, the camper cabins would provide a buffer between the central portions of the campground and Peak View Road.

The Proposed Action Alternative would advance the goals and guidelines identified in the Estes Valley Comprehensive Plan. Specifically, improvements to the Marys Lake campground, vegetative screening, and restoration efforts at day use areas would "...Improve the overall image and character of developed areas within the valley that detract from the visual quality of the valley;" would "...Ensure that new development minimizes the impacts to visual and environmental quality within the valley;" would "...Maintain the quality of Estes Valley's scenic and natural resources; these resources are the keystone of the community's economic strength and quality of life;" and would enhance "...the scenic character and visual quality of the open space and gateway experience to the valley and Rocky Mountain National Park."

Construction, improvement, and restoration activities would result in adverse, short-term, moderate impacts. Overall, however, the Proposed Action would result in beneficial, long-term, moderate impacts on scenic quality and aesthetic resources at Marys Lake.

c) Cumulative Effects

As described in Section 3.5.6(b), the scenic and aesthetic resource impacts of this project are anticipated to be long term, ongoing for the 10-year life of this RMP. Therefore, this analysis will consider project effects over a

10-year period, beginning with project implementation.

The spatial boundary for this cumulative effects analysis includes the fore- and middleground viewsheds of the campground and lake. Specific geographic boundaries are as follows: Kruger Rock represents the east boundary, Giantrack Mountain represents the west boundary, Prospect Mountain represents the north boundary, and Cheley Camp represents the south boundary.

In addition to this RMP update, the impacts of other past, present, or reasonably foreseeable future actions within the analysis area include:

- Past and ongoing residential development within the fore- and middleground viewshed would result in the removal of mature vegetation; additional reflective surfaces (glare); introduction of new lines, forms, and textures; and potentially more traffic and traffic-related noises. Continued development near the park would result in further alteration and impairment of the Marys Lake setting.

The incremental contribution of the beneficial impacts of the Proposed Action Alternative, when combined with the anticipated effects of past and ongoing development in the immediate viewshed, would result in minor beneficial cumulative effects to scenic and aesthetic resources in the area. The Proposed Action would enhance the facilities, structures, and theming throughout the park; provide additional privacy to both campers and neighboring residents; restore disturbed areas with vegetation; and reduce crowding and clutter at the campground. Ultimately, these beneficial impacts would improve scenic and aesthetic quality throughout the

study area for both residents and recreationists. Effective use of vegetative screening, improved campground configuration, and strategically located campsites set back from private property would diminish the impacts to recreationists of adjacent residential development and, vice versa, would diminish the concerns of private neighbors. Overall, the incremental contribution of the Proposed Action would result in minor cumulative effects on increasing scenic and aesthetic quality trends within this area.

3.5.7 Land Use

a) Affected Environment

Marys Lake is surrounded by privately owned land (see Map 7). Current land use surrounding the property includes the paved Marys Lake and Peak View roads around the eastern and northern shores, Arapaho Estates residential subdivision development, and larger acreage residential parcels. Lands to the west are either currently developed or are proposed for single-family residential development in the near future. Historically, the lack of utility service to the area limited residential development in the immediate proximity of Marys Lake and the campground. However, service has been extended to recent developments adjacent to Federal lands. Private residences have been located immediately adjacent to existing campsites. Conflicts between residents and campers are ongoing; complaints primarily relate to noise, light pollution, and litter. On numerous occasions, residents have expressed concern about increased wildfire risk as a result of escaped campfires in the campground. Conflicts between campers and residents occur most frequently during the peak use summer season.

Reclamation manages lands to the southwest of the lake for water and power conveyance; the area includes a powerhouse, pipeline, substation, transmission lines, and the Ram's Horn Tunnel inlet.

b) Environmental Consequences

No Action (Alternative A)

Land use impacts at Marys Lake would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.7(b).

Additionally, ongoing conflicts such as light and noise pollution, nuisance complaints, and litter would continue.

No restrictions would be imposed on the types of activities allowed or where certain recreational activities could occur.

Overall, the No Action Alternative would result in adverse, long-term, negligible to moderate impacts to land use within and adjacent to the park.

Proposed Action (Alternative B)

The installation of directional lighting would reduce nighttime light pollution in neighboring residential areas or other light-sensitive land uses.

Replacing informal rock and portable fire rings with permanent, smaller, buried campfire rings would reduce the risk of escaped or unnatural wildland fire impacts to adjacent land uses.

Redesigned facilities and consistent theming and architecture throughout the campground would improve the overall appearance of the site from neighboring subdivisions and roadways.

Vegetation screening throughout the campground would reduce visibility and noise of residential areas from campsites, and vice versa.

Reconfigured campsites would be set back from adjacent residential areas to enhance the sense of privacy and solitude for both campers and neighboring residents.

Requests for rights-of-use of Reclamation lands would be authorized according to Reclamation Manual LND 08-01 and 43 CFR Part 429 (Reclamation 2002b, 43 CFR 429 2007). The Proposed Action Alternative would not directly impact the number or types of requests for rights-of-use.

Overall, the Proposed Action Alternative would result in beneficial, long-term, minor impacts to land use in and adjacent to the park.

c) Cumulative Effects

Impacts of the No Action and Proposed Action alternatives would not incrementally contribute to cumulative effects on Land Use at Marys Lake or in areas adjacent to Marys Lake.

3.5.8 Socioeconomics

a) Affected Environment

Social and economic status of the EVRPD service area is discussed on a regional (Estes Valley) scale and not by individual park. See the Affected Environment discussion in Section 3.4.8(a).

b) Environmental Consequences

Socioeconomic impacts were assessed at a regional scale and not by individual park.

See the Environmental Consequences discussion in Section 3.4.8(b).

c) Cumulative Effects

Socioeconomic resource cumulative impacts have been incorporated into the Recreation and Socioeconomic cumulative effects discussion for Lake Estes, see Section 3.4.5(c).

3.5.9 Cultural and Heritage Resources

a) Affected Environment

All C-BT facilities and infrastructure on Reclamation land at Marys Lake have the potential to be listed on the NRHP.

Historic sites at Marys Lake, including NRHP eligibility determinations, when available, are as follows:

- Marys Lake Dikes No. 1 & No. 2
- Marys Lake Power Plant
- Ram's Horn Tunnel
- Prospect Mountain Pressure Conduit and Tunnel
- Estes-Granby Pumping Plant Transmission Line – NRHP eligible

Other cultural or heritage resources include:

- Prehistoric tepee rings – Not eligible
- Two historic sites – Probably not eligible

The reservoir was not surveyed prior to construction, so the number of actual sites cannot be known. The prehistoric teepee rings site was originally recorded as a large site; it may have subsurface components.

b) Environmental Consequences

No Action (Alternative A)

Cultural and heritage resource impacts at Marys Lake would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.9(b).

Proposed Action (Alternative B)

Cultural and heritage resource impacts at Marys Lake would be the same as described for the Proposed Action Alternative at Lake Estes, see Section 3.4.9(b).

c) Cumulative Effects

Temporal and spatial boundaries and cumulative effects of the No Action and Proposed Action alternatives are the same for all cultural and heritage resources at all Reclamation properties analyzed in this plan. See the Cumulative Effects discussion for Cultural and Heritage Resources under the Lake Estes analysis, see Section 3.4.9(c).

3.6 East Portal

3.6.1 Hydrology and Water Quality

a) Affected Environment

The 2-acre East Portal Reservoir is located in the Wind River basin, a tributary to the Big Thompson River. The Wind River is a small stream with headwaters in RMNP and a drainage area of approximately 4.5 square miles. East Portal Reservoir was constructed as an impoundment on the Wind River; a diversion and conduit is used to bypass native flows downstream below the reservoir. East Portal Reservoir receives water supplies from the Alva B. Adams Tunnel and is the first point of regulation for C-BT water on the east slope. The reservoir inflow is typically continuous, with releases

made as necessary for downstream water demands and hydropower production at Marys Lake.

b) Environmental Consequences

No Action (Alternative A)

ADA improvements would include modifications to existing facilities and structures and would not result in new development footprints; as such, ADA improvements would have no additional impact on local surface hydrology because the localized erosion of open soils would be minimized through the use of the Environmental Commitments (Section 2.7).

Implementation of ADA improvements would have adverse, long-term and short-term, negligible impacts on water quality.

Deteriorating trail conditions and social trails on the north side of the reservoir would result in an adverse, long-term, minor increase in the amount of sediment reaching the East Portal Reservoir; however, the impacts of sedimentation would be negligible.

Erosion problems would continue, and likely worsen, on trails north of the reservoir and on campground roads, particularly during heavy precipitation events and following winters with above average snowpacks.

The No Action Alternative does not propose any changes to C-BT Project operations, including water conveyance, storage, or release operations. As a result no impacts to the hydrology of East Portal or the Big Thompson River are expected with this alternative.

This alternative would be expected to have minor adverse short-term and negligible

adverse long-term impacts on the water quality at East Portal Reservoir

Proposed Action (Alternative B)

Resurfacing parking lots and access roads with asphalt would diminish any existing sedimentation impacts from gravel and soil erosion, particularly in problem areas. However, the increase in impermeable surface area would increase the amount and rate of runoff, including runoff contaminated with hydrocarbons, leaking fluids, and road chemicals. As explained in the Environmental Commitments (see Section 2.7) the appropriate erosion control structures would be used to control water movement. As a result, overall water quality impacts due to increased impermeable surfaces adjacent to East Portal Reservoir would be adverse, long-term, and negligible.

The Proposed Action Alternative does not propose any changes to water conveyance or storage facilities. The use of Environmental Commitments would limit erosion; therefore, there would be no impact on reservoir or C-BT project operations.

The Proposed Action Alternative would have no impact on local hydrology at East Portal. Overall, the Proposed Action Alternative would have adverse, long-term, negligible impacts on water quality at East Portal Reservoir.

c) Cumulative Effects

With the exception of the discussion of ongoing residential and commercial development in the watershed, cumulative effects as a result of project implementation at East Portal would be the same as described for Hydrology and Water Quality at Lake Estes, see Section 3.4.1(c). There is

no residential or commercial development upstream of the East Portal Reservoir.

3.6.2 Soils, Geology, and Topography

a) Affected Environment

East Portal is located at an elevation of 8,265 feet, with surrounding Reclamation property ranging from 8,200 to 8,400 feet (see Maps 1 and 8). Terrain is flat to gently sloping below the dam and at the base of the campground, but is steep on the slopes surrounding the reservoir and along the drainage.

Soils in the East Portal area developed from geologic material composed of schist, gneiss, and quartzite. Soils are typically coarse textured and well drained with an abundance of coarse fragments. The erosion hazard is moderate to severe depending on the slope. The area below the dam is composed of spoil material from construction of the Alva B. Adams Tunnel.

Larimer County geologic hazards data indicate there are isolated areas on the southeast boundary of the East Portal property with areas of severe geologic hazard (Larimer County GIS: Geologic Hazards, Date Unknown). Currently, isolated areas of severe erosion occur throughout the campground, on the Powerline Road, and because of social trails (footpaths) at the reservoir and to campground facilities. Poor drainage or vegetation trampling on the east side of the campground has resulted in severe rutting, gullying, and even collapsed (filled-in) culverts and drains.

b) Environmental Consequences

No Action (Alternative A)

The impacts on local geology, park topography and soil resources would generally be the same as those discussed in the Lake Estes No Action Alternative, see Section 3.4.2. In addition, impacts to soil resources would be the result of ongoing erosion on social trails on the north shore of the reservoir, informal shoreline access, poor road drainage, collapsed drains and culverts, and traffic and parking patterns. The impacts to soil resources would be adverse, long term, and negligible.

Proposed Action (Alternative B)

Where improvements or construction would occur, Standard Environmental Commitments and best management practices (Section 2.7) would be implemented to minimize impacts. New facilities, structures, trails, or other improvements would result in both temporary and permanent disturbances to existing soil resources during construction, and as a result of new facility footprints, such as the new campground lodge.

The construction of walk-in campsites on the west side of the campground would require the permanent removal of a limited number of mature trees and vegetative ground cover, and would increase the area's susceptibility to erosion.

Redesigned and resurfaced campground footpaths and roads would resolve many of the severe erosion problems. Resurfacing the roads would prevent ongoing gullying and rutting. The installation of new drains, pipes, and culverts would channel water into natural drainages and eliminate sheet flows and gullying.

The reconstruction and redirection of existing system trails and the restoration of social trails in the area north of the reservoir would help alleviate erosion issues and trail braiding. Trail system improvements would, in the long term, result in less erosion in the area north of the reservoir. This would be a minor beneficial effect.

Overall, the Proposed Action Alternative would have no impact on local geology or site topography. Construction activities and improvements would result in adverse, short-term, minor increases in erosion and soil resource impacts. In the long term, the Proposed Action Alternative would result in beneficial, minor impacts to soil resources by resolving major erosional gullies, replacing culverts, discouraging social trail use, and providing better site drainage.

c) Cumulative Effects

With the exception of the discussion of ongoing residential and commercial development in the watershed, cumulative effects as a result of project implementation at East Portal would be the same as described for Hydrology and Water Quality at Lake Estes, see Section 3.4.1(c). Soils, geology, and topography resource impacts have been incorporated into that section. There are no residential or commercial developments upstream of the East Portal property.

3.6.3 Vegetation and Wetlands

a) Affected Environment

Lodgepole pine dominates forested north-facing slopes at East Portal (see Map 8). Mature lodgepole stands in the East Portal area have very little understory or downed/dead woody material. Ponderosa pines are scattered throughout the

campground and occur in clumps on the south-facing slopes north of the reservoir. As of September 2007, the MPB had infested several ponderosa pine trees throughout the campground; several infested trees were removed in the spring and summer of 2007.

The south-facing slope next to the reservoir is composed of mixed grasses, shrubs, and scattered ponderosa pine. Common species include big sagebrush, common juniper, antelope bitterbrush (*Purshia tridentata*), fescues, smooth brome, mountain muhly, western wheatgrass, and a variety of forbs. This area has been impacted by social trails, erosion, and denuding of vegetation. Ongoing erosion may partially prevent the establishment of more robust shrub communities on this slope. The open meadow below the dam is seeded with a mixture of native and non-native grasses.

Riparian plant communities consisting of willow and aspen are found along the Wind River and in pockets throughout the campground. Riparian wetland plant communities are present in several locations along the Wind River, both above and below the reservoir.

Overall, wildfire hazard in the East Portal project area is rated as high (Larimer County GIS: Wildfire Hazards, Date Unknown). There are some areas of moderate hazard located north of the reservoir (refer to Section 3.4.3 for more information on wildfire hazard ratings).

See Section 3.4.3(a) for more information on the current MPB epidemic in Colorado. USFS beetle infestation mapping (updated 2007) indicates that there are isolated areas of MPB attacks throughout the Estes Valley, including in the vicinity of East Portal. The 2007 mapping does not indicate that there

are any large infestations in the immediate East Portal area; the largest infestation areas are located within RMNP north and west of East Portal (USFS 2007b and USFS 2007c).

Special Status Species

There are no Federally listed or state listed rare plant species at East Portal.

Neighbors have noted infestations of Canada thistle and musk thistle on the East Portal property, as well as nearby occurrences of yellow toadflax and previous infestations of diffuse knapweed. Several weedy species occur along the dam, including yellow sweetclover (*Melilotus officinalis*), pineappleweed (*Matricaria matricarioides*), and the state C-list species, common mullein.

Weed management and the control of noxious weeds is a standard Environmental Commitment of Reclamation and EVRPD. See Section 2.7 for a detailed description of noxious weed and pest management efforts.

b) Environmental Consequences

No Action (Alternative A)

Vegetation and wetland resource impacts at East Portal would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.3(b).

Proposed Action (Alternative B)

Redeveloped campsites and roads would be configured to avoid pockets of riparian vegetation; therefore, there would be no impact to riparian vegetation within the campground.

The new walk-in tent sites would be situated within approximately 2 acres of mature forest vegetation (lodgepole pine

community). Some lodgepole pines would be permanently removed to accommodate campsite and road development. (Exact number of trees to be removed would be determined at the time of final campsite design.)

Native vegetation communities on the south-facing slope on the north side of the reservoir are expected to reestablish after social trails are closed and existing system trails are reconstructed.

The discussion and impact analysis related to MPB and wildfire for East Portal would be the same as described for the No Action Alternative at Mary's Lake, see Section 3.5.3(b).

Overall, the Proposed Action would result in beneficial, long-term, minor effects to vegetation resources at East Portal.

Special Status Species

Impacts to special status species would be negligible, for the reasons previously described. See the discussion on Lake Estes (Section 3.4.4.b).

c) Cumulative Effects

With the exception of elk grazing impacts, the cumulative effects as a result of project implementation at East Portal would be the same as described for Vegetation and Wetlands at Lake Estes, see Section 3.4.3(c).

3.6.4 Fish and Wildlife

a) Affected Environment

The East Portal area provides habitat for a variety of wildlife species. The proximity of the site to RMNP ensures an abundance of wildlife migration through the area.

Common mammals include elk, mule deer, coyotes, long-tailed weasel (*Mustela frenata*), porcupine (*Erethizon dorsatum*), squirrels, chipmunks, and deer mice. Elk commonly graze in the meadow located between SH 66 and the campground office road. Birds in the area include blue-gray gnatcatcher (*Poliophtila caerulea*), Bewick's wren (*Thryomanes bewickii*), Steller's jay, gray jay (*Perisoreus canadensis*), American dipper (*Cinclus mexicanus*), and a variety of raptors. Ducks, geese, gulls, and shorebirds use East Portal Reservoir for forage or resting. CDOW has not stocked East Portal Reservoir since 1994. Species that may be present naturally include longnose and white suckers and possibly cutthroat and brook trout imported through the Alva B. Adams Tunnel.

Special Status Species

USFWS data indicate that the Canada lynx (*Lynx canadensis*) is the only threatened or endangered species with potential to occur in the vicinity of East Portal.

The lynx is listed as a Federally threatened and state endangered species. Approximately one-third of the East Portal property has been identified as potential lynx habitat. Potential habitat is defined as those areas having the highest potential of lynx occurrences in the state. These areas usually contain positive, probable, or possible reports (Species Profile: Canada lynx 2007, USFWS Canada lynx website 2007). The lynx is known to occur in Larimer County; however, lynx typically avoid areas of human activity and are unlikely to use the East Portal vicinity for any purposes other than migration or occasional forage.

Lynx generally occur in boreal and montane regions dominated by coniferous or mixed

forest with thick undergrowth, but also sometimes enter open forest, rocky areas, and tundra to forage for prey. The preferred habitat for lynx typically consists of spruce/fir, Douglas-fir, and lodgepole cover types, which support foraging, denning, and the rearing of young. Lynx prefer early successional forests that contain high numbers of prey (especially snowshoe hares, which comprise up to 80% of their diet) for foraging and late-successional forests that contain cover for young (Koehler and Britnell 1990). Approximately 0.55 acre of CDOW identified potential lynx habitat overlaps with the existing developed areas at East Portal.

“Linkage areas” are important to the management of lynx. Linkage areas are broad areas of habitat where animals can find food, shelter and security, and movement opportunities. Linkage areas can be maintained or lost by management activities or developments. The East Portal site is not located in a lynx linkage area (Ellwood 2007). Recent reports suggest that in Colorado, lynx are now restricted to extremely isolated areas of the central mountains (Species Profile: Canada lynx 2007, NDIS 2007). However, RMNP wildlife biologists have confirmed occurrences along the Bear Lake Road corridor, in Kawuneechee Valley, and in the Never Summer Mountains within RMNP (Connor 2008). RMNP wildlife biologists do not have record of lynx occurrences near East Portal.

Peregrine falcons are summer residents in the Estes Park vicinity. There are no active or potential nest sites at East Portal. They may occasionally forage near the reservoir or along the Wind River.

Expert local birders have not observed bald eagles nesting or winter roosting at East

Portal Reservoir (Matthews 2008). They may, however, occasionally forage at the reservoir for fish or other prey.

b) Environmental Consequences

No Action (Alternative A)

Fish and wildlife impacts at East Portal would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.4(b).

Special Status Species

Ongoing human activity would continue to discourage lynx occurrences at or adjacent to the East Portal recreation areas. Furthermore, there are no disturbances outside the developed sites in this area. Therefore, this alternative is expected to cause no impact to lynx or lynx habitat. For the purposes of ESA consideration, **the analysis of Alternative A results in a determination of “no effect” to the Canada lynx or its habitat.**

Because bald eagle and peregrine falcon use of the East Portal area is only considered to be occasional, no impacts to these species are expected as a result of the No Action Alternative.

Proposed Action (Alternative B)

The discussion and analysis at Lake Estes [see Section 3.4.4(b)] related to construction disturbances; new educational, interpretive, and protective measures; formalized parking areas; and fishing pressure would also apply to East Portal.

Special Status Species

Biologists considered the following factors to determine the potential of impacts to lynx: known occurrences, present

recreational use levels, season of use, degrees of ground disturbance, habitat type, and landscape linkages. Colorado Lynx Project Decision Screen criteria were also consulted as part of the evaluation (USFWS, 2004).

RMNP wildlife biologists do not have record of lynx occurrences in the immediate area. Lynx typically avoid areas of human activity and are not believed to use the area due to the high amount of human activity. The new walk-in tent area would result in approximately 0.3 acre of permanent new disturbance to the area mapped as potential lynx habitat. The walk-in tent area does not provide suitable habitat for denning or winter forage and is not located within a lynx landscape linkage area (Ellwood 2007).

Recent reports suggest that in Colorado, lynx are now restricted to extremely isolated areas of the central mountains, usually at elevations higher than the areas under consideration. The preferred habitat for lynx, consisting of spruce/fir, Douglas-fir, and lodgepole cover types that support foraging, denning, rearing of young, and high numbers of snowshoe hare is not present.

The high recreational use, no suitable habitat, lack of known occurrences, no linkage areas, and small amount of ground disturbance all result in no impact to lynx. For the purposes of ESA consideration, **the analysis of Alternative B results in a determination of “no effect” to the Canada lynx or its habitat.**

Because bald eagle and peregrine falcon use of the East Portal area is only considered to be occasional, no impacts to these species are expected as a result of the Proposed Action Alternative. No known raptors nests or roost sites would be impacted by any of the improvements.

c) Cumulative Effects

Fish and wildlife resource cumulative impacts are the same as described for Lake Estes and have been incorporated into the Vegetation and Wetlands cumulative effects discussion, see Section 3.4.3(c).

3.6.5 Recreation

a) Affected Environment

Recreation facilities at the 72-acre East Portal property include a reservoir, a non-fee day use area, trailhead, interpretive plaque, and a fee campground operated by a concessionaire under lease agreement with EVRPD. Recreation activities include camping, picnicking, general day use, hiking, horseback riding, nature study, trailhead access into RMNP, and fishing. All East Portal facilities are open year-round, except for the campground. Table 3-4 provides a summary of current visitation, staffing and law enforcement patrol, and dates/seasons for public use.

Brief descriptions of the existing recreation facilities at East Portal are described below.

The Estes Park Campground has 68 campsites. Thirty-nine of the campsites are basic tent sites, equipped with picnic tables and campfire rings/grates. Twenty-nine of the sites have electrical hookups and water.

Several of the sites will accommodate small RVs up to 32 feet in length, while the remaining sites accommodate tents and small camper trailers. Seven of the sites with electric and water are currently ADA accessible. There are 2 shower houses at the campground, as well as a modest children's playground. The concessionaire operates a small office and store at an on-site portable building. The campground operates from

Table 3-4. Management and Use of Developed Areas at East Portal

	Estes Park Campground	East Portal Day Use Area	East Portal Reservoir Area
Dates Open for Use	May 3 to Sept 31	All year	All year
High Use Periods (months or dates)	July & August	May thru Sept	May thru Sept
Percent of Capacity Used during High Use Periods	60%	75%	75%
Staffed By (EVRPD, Concessionaire)	Concessionaire	EVRPD	EVRPD
Patrolled By (EVRPD, County, Town, Other)	County Sheriff	County Sheriff	County Sheriff

Source: Developed by EVRPD Staff

Memorial Day weekend to mid-September. The campground is typically full during the high-use summer season.

The East Portal Day Use Area has unstructured, unpaved parking for 5-10 cars, with scattered picnic tables. The day use area also serves as a parking and trailhead area for the East Portal Trail leading into RMNP. An interpretive sign explaining the features of the C-BT project is located near the dam and the parking area. The day use area receives consistent use and is infrequently maintained by EVRPD staff.

Fishing at East Portal Reservoir is limited to shoreline fishing only. Access for fishing is provided by crossing the dam. Parking is provided at the day use area. A Reclamation service road on the north side of the reservoir is also used for fishing access. An unimproved foot trail provides access to RMNP. There is no specific information or numbers on angler use at the reservoir or the East Portal trailhead; however, general observations by EVRPD staff indicate that visitation levels are light.

b) Environmental Consequences

No Action (Alternative A)

Recreation impacts at East Portal would be the same as described for the No Action Alternative at Lake Estes, see Section 3.3.4.5.

Proposed Action (Alternative B)

Parkwide and general day use area impacts are discussed below.

ADA accessibility improvements would enhance the recreational experience for users with ADA needs at all day use areas.

Bear-proof trash and recycling containers would reduce the potential for human-wildlife conflicts in the day use and campground areas; this would improve the visitor safety and, ultimately, the recreation experience.

The Proposed Action Alternative would result in a net loss of one parking space at East Portal Day Use Area. The change in parking capacity would be imperceptible overall and, as such, would result in a negligible long-term adverse impact to recreation or park use.

Area-specific impacts are discussed below.

The discussion and impact analysis related to ADA accessibility and campground lodge would be the same as described for the No Action Alternative at Marys Lake, see Section 3.5.5b.

The reconfiguration of the Estes Park Campground layout, facility layout, and campsite setbacks would increase privacy and seclusion from other campsites, adjacent private property, and communal facilities such as the bath houses and new campground lodge.

The installation of smaller, buried campfire rings would reduce the risk of escaped or unnatural wildland fire impacts to adjacent land uses.

The proposed campground expansion would provide additional camping opportunities for walk-in tent use. These additional facilities would help alleviate the feeling of overcrowding that may occur as a result of increased user populations and demand. Impacts to the visitor experience as a result of the new walk-in tent area would be minor.

The proposed improvements at Estes Park Campground, reducing campsite densities, improving vegetation screening, enhancing natural features, providing new services, and ensuring ADA accessibility would have a beneficial, long-term, moderate impact on recreation and the visitor experience.

Improvements to the East Portal trailhead day use area are expected to result in minor beneficial effects to the recreation experience.

Overall, the Proposed Action would result in beneficial, long-term, moderate impacts to

recreation and the experience of both overnight and day use only visitors at East Portal. Short-term impacts to recreation as a result of construction activities and improvements would be minor.

c) Cumulative Effects

Temporal and spatial boundaries and cumulative effects of the No Action and Proposed Action alternatives are the same for all recreation resources at all Reclamation properties analyzed in this plan. See the Cumulative Effects discussion for Recreation under the Lake Estes analysis, see Section 3.4.5(c).

3.6.6 Scenic and Aesthetic Resources

See Section 3.4.6 for background information on scenic and aesthetic resources and local comprehensive planning policies. The following Affected Environment and Environmental Consequences discussion tiers to terminology and concepts introduced that section.

a) Affected Environment

East Portal Character

The East Portal area is characterized by a sense of destination, as the campground is located at the end of the only road nearby, and by a sense of remoteness and removal from urbanization. The natural landscape is dominant in the foreground and middleground, and where available, in distant views. Generally, views do not extend beyond the fore- and middleground. Dense mature, forest vegetation and topography focus the viewer to elements of visual interest within the campground, with the exception of some mountain views to the north near the campground office.

Residential development and man-made artifices are generally well-screened with several exceptions. Overall, the “sense of place” at East Portal is characterized by passive (less programmed) uses.

East Portal Scenic Quality

As a perennial stream, the Wind River provides year-round interest and an important sensory experience. Locations on the dam looking east, along the shoreline of the reservoir, and in the lower portions of the campground (near the entrance) are considered especially sensitive viewpoints where scenic quality is highest.

The powerline originating at the Alva B. Adams Tunnel outlet is generally well screened from most campground views. The routing of the line does not affect highly sensitive views described above, with the exception of north-looking views from the lower campground area (near the campground office). The cleared powerline right-of-way does present a visual deviation by interrupting the forest canopy.

Social trails and shoreline erosion have resulted in the removal of vegetation on the north side of the reservoir. In these isolated areas, the visual experience is compromised; however, the overall shoreline scenic and aesthetic experience is not affected. Some campground facilities and campsites are in disrepair or are not consistently themed. The degradation of natural resources, such as erosion problems, detracts from the scenic quality and aesthetic experience within the campground.

Since the completion of the 1996 RMP/EA, a MPB epidemic has devastated forests west of the Continental Divide. The epidemic is slowly beginning to affect pine forests in Larimer County. The browning of trees and

forests are likely to influence visitor impressions and visual experiences. Ultimately, dead trees are removed either naturally or mechanically. As trees and forests are affected by the epidemic, visual conditions, character, and scenic quality will change, at least initially, for the worse. Pine beetle infestation causes trees to turn brown (after mortality). Several brown (dead) ponderosa pines were removed from the Estes Park Campground in the spring of 2007. To date, the beetle epidemic has not caused noticeable scenic quality impacts within the campground.

Overall, scenic quality at East Portal is considered high.

b) Environmental Consequences

No Action (Alternative A)

Scenic and aesthetic resource impacts at East Portal would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.6 (b). However, the intensity of the impacts would be negligible.

Unlike the other parks in the EVRPD system, East Portal has the unique advantage of being located adjacent to RMNP. The viewshed to the south and west of East Portal would remain unchanged under the No Action Alternative (assuming that RMNP continues current scenery and visual management practices in this area.). However, continued residential development to the east of the East Portal area would result in further alteration and impairment of the scenic and aesthetic experience approaching the day use and campground areas. Without scenic quality management objectives, scenery and visual experience at the park would degrade over time. Long-term impacts to the East Portal viewshed and aesthetic resources as a result of the No Action Alternative would be negligible.

The No Action Alternative would not advance the goals and standards outlined in the plan; therefore, the No Action Alternative would indirectly conflict with plan guidelines.

Proposed Action (Alternative B)

Structural and facility improvements, such as new picnic shelters or new signs, would contribute to the overall sense of development and programming at East Portal. Although these improvements would benefit the recreational experience, the introduction of new forms, lines, and textures into the setting would have minor impacts on scenic quality and aesthetic integrity throughout the park.

The implementation of campsite setbacks from private property would improve the sense of privacy and seclusion for both campers and adjacent residents.

Resurfacing roads and some footpaths with asphalt or similarly hard surfaces would eliminate dust pollution and major erosion features.

Consistent theming at the campground lodge and a redesigned entrance would create unifying elements within the campground.

Forest management practices, including preventative beetle spraying of mature pines and culling of infected pines, would prevent major mortality events in the immediate campground area, and subsequently prevent negative visual impacts.

The removal of mature vegetation in the new walk-in tent area would result in minor short-term impacts as fresh stumps would be highly visible to visitors. Impacts would be negligible in the long term.

The Proposed Action Alternative would result in a minor advancement of Estes Valley Comprehensive Plan guidelines, particularly with respect to maintaining “the quality of Estes Valley’s scenic and natural resources; these resources are the keystone of the community’s economic strength and quality of life;” protecting “the scenic character and visual quality of the open space and gateway experience to the valley and Rocky Mountain National Park;” and improving “the overall image and character of developed areas within the valley that detract from the visual quality of the valley.”

Overall, Alternative B would result in beneficial, long-term, minor impacts on scenic quality and aesthetic resources at East Portal.

c) Cumulative Effects

There are relatively few past, present, or reasonably foreseeable future actions or mechanisms for impacting scenic and aesthetic resources in the vicinity of East Portal. Most views from within the campground or at the reservoir are directed towards areas located within RMNP and are, therefore, considered stable viewsheds, with no anticipated development or major visual changes. Future residential development is likely to occur in areas near the East Portal use areas; but because of forest vegetation and topography, there are few direct lines of sight between the neighborhoods and the use areas. Impacts of the No Action and Proposed Action alternatives would not incrementally contribute to cumulative effects to scenic and aesthetic resources at East Portal.

3.6.7 Land Use

a) Affected Environment

The principal Reclamation land uses at East Portal consist of industrial facilities (powerlines, water impoundment, dam and pipeline), Estes Park Campground, day use area, and an unpaved access road and parking. Current land use surrounding East Portal includes RMNP, which is adjacent to property on the south and west and the Thunder Mountain residential subdivision developments on the southeast boundary. Historically, the lack of utility service to the area limited residential development in the immediate proximity of East Portal (see Map 8).

Private residences have been located immediately adjacent to existing campsites on the southeast side of the campground. Conflicts between residents and campers are ongoing; complaints primarily relate to noise and light pollution and litter. On numerous occasions, Thunder Mountain residents have expressed concern about increased wildfire risk as a result of escaped campfires in the campground.

East Portal is located at the end of SH 66, known locally as the "Spur" or "Tunnel Road." The road connects to U.S. 36 midway between downtown Estes Park and the Beaver Meadows entrance to RMNP. In addition to providing access to the East Portal and the nearby residential development, it also serves the Young Men's Christian Association (YMCA) Camp of the Rockies and other residential and commercial development.

b) Environmental Consequences

No Action (Alternative A)

Land use impacts at East Portal would be the same as described for the No Action Alternative at Marys Lake, see Section 3.4.7(b).

Proposed Action (Alternative B)

Land use impacts at East Portal would be the same as described for the Proposed Action Alternative at Marys Lake, see Section 3.4.7(b). A difference between Marys Lake and the East Portal area is the net change in campsites, which can affect traffic. Traffic use on roads near Marys Lake Park should not be affected due to changes in camping levels, since there is a net decrease in campsites overall. However, at Estes Park Campground there is an increase of eight campground sites, which is expected to have a negligible long-term impact on traffic levels during peak camping periods. During other periods, impacts are not anticipated.

c) Cumulative Effects

Cumulative impacts of the No Action and Proposed Action alternatives would be the same as described for Marys Lake, Section 3.5.7(c). The East Portal alternatives would not incrementally contribute to cumulative effects on Land Use at East Portal or in areas adjacent to East Portal.

3.6.8 Socioeconomics

a) Affected Environment

Social and economic status of the EVRPD service area is discussed on a regional (Estes Valley) scale and not by individual park. See the Affected Environment discussion in Section 3.4.8(a).

b) Environmental Consequences

Socioeconomic impacts were also assessed at a regional scale and not by individual park. See the Environmental Consequences discussion in Section 3.4.8(b).

c) Cumulative Effects

Socioeconomic resource cumulative impacts have been incorporated into the Recreation and Socioeconomic cumulative effects discussion for Lake Estes, see Section 3.4.5(c).

3.6.9 Cultural and Heritage Resources

a) Affected Environment

All C-BT facilities and infrastructure on Reclamation land at East Portal have the potential to be listed on the NRHP

Historic sites at East Portal, including NRHP eligibility determinations, when available, are as follows:

- East Portal Dam – Alva B. Adams Tunnel
- 1940s C-BT construction camp
- Aspen Creek Siphon
- Estes-Granby Pumping Plant Transmission Line – NRHP eligible

Other cultural or heritage resources include:

- Historic trash dump – Not eligible

b) Environmental Consequences

No Action (Alternative A)

Cultural and heritage resource impacts at East Portal would be the same as described for the No Action Alternative at Lake Estes, see Section 3.4.9(b).

Proposed Action (Alternative B)

Cultural and heritage resource impacts at East Portal would be the same as described for the Proposed Action Alternative at Lake Estes, see Section 3.4.9(b).

c) Cumulative Effects

Temporal and spatial boundaries and cumulative effects of the No Action and Proposed Action alternatives are the same for all cultural and heritage resources at all Reclamation properties analyzed in this plan. See the Cumulative Effects discussion for Cultural and Heritage Resources under the Lake Estes analysis, Section 3.4.9(c).

3.7 Common Point

3.7.1 Hydrology and Water Quality

a) Affected Environment

The Common Point property is centered on Noels Draw, a tributary to the Big Thompson River; the confluence with the river is located approximately one mile downstream from the project area. Noels Draw is an intermittent stream that flows primarily in response to precipitation events and snowmelt. Water quality is generally good due to the largely undeveloped upstream watershed. However, the potential for water quality impacts as a result of hazardous contamination from lead shot and other projectile material is an ongoing concern.

Reclamation Manual Directives and Standards ENV 02-07 (Management of Shooting Ranges on Reclamation Lands) states in Section 1.C.(5)(b) that:

No range shall be located within 1,000 feet up gradient of any water body, including, but not limited to, oceans,

lakes, wetlands, and flowing watercourses.

However, on December 16, 2006 Reclamation's Eastern Area Colorado Office received approval for a waiver of Section 1.C. (5)(b) from the Office of Program and Policy Services (OPPS). It was determined that if the gun club would follow their lead mitigation plan, lead would not migrate into the stream or affect water quality. OPPS is conducting a full review of ENV 02-07 and reconsidering the validity of inclusion of Section 1.C. (5)(b).

The Estes Park Gun and Archery Club has a current (2004) lead mitigation plan for contamination management at Common Point. The mitigation plan includes a four-step process to improve shot containment techniques and prevent water quality impacts to the Noels Draw creek. The four steps include: identify and implement bullet and shot containment techniques; prevent the migration of lead into surface and subsurface water bodies; remove spent lead from the range; and document activities and keep records of site clean-up efforts (Estes Park Gun and Archery Club 2004). The gun club is responsible for cleanup and implementation of the lead management plan.

The Estes Park Gun Club has implemented a series of cleanup days throughout the summer; in 2007 there were 9 cleanup days with 213 attendees and 614 cleanup hours total. Approximately 28 pounds of cartridges and 103 pounds of lead were recycled.

b) Environmental Consequences

No Action (Alternative A)

No new recreation facilities would be developed under the No Action Alternative.

ADA improvements would include modifications to existing facilities and structures and would not result in new development footprints. As such, ADA improvements would have no additional impact on local surface hydrology because the localized erosion of open soils would be minimized through the use of the Environmental Commitments (Section 2.7).

Current range cleanup efforts and site maintenance would continue and would ultimately result in beneficial, long-term, negligible impacts to water quality.

The construction of a lead trap would directly impact jurisdictional waters of the U.S. An NWP regulated by the USACE and a SWMP regulated by CDPHE would be required for any construction occurring within the ordinary high water mark of Noels Draw Creek. The NWPs are intended to protect the aquatic environment and the public interest, while effectively authorizing activities that have minimal individual and cumulative adverse effects on the aquatic environment.

The lead trap installed in Noels Draw would capture lead and other shooting range projectiles and prevent these materials from entering the Big Thompson River. The containment of lead shot and projectiles would result in a lower risk to water quality and would result in beneficial, long-term, minor impacts to Noels Draw water quality.

The lead trap would be designed to function during average and maximum flow volumes and velocities specific to the Noels Draw watershed. The lead trap would divert flows from the natural drainage course, so that the more dense lead material could settle out while allowing natural sediment and gravel to flow back into the watercourse. The lead

trap would likely include the construction of a detention basin to allow settling to occur. The construction would involve equipment in the streambed, which would temporarily interfere with natural flow paths. The design of the lead trap may also result in diverting stream flows from the natural drainage course to a new flow path. Therefore, the construction of a lead trap would be expected to result in minor short and long-term adverse impacts to Noels Draw.

The No Action Alternative would not affect C-BT project operations.

Overall, the No Action Alternative would have adverse, short and long-term, minor impacts on local hydrology in Noels Draw. However, overall impacts to water quality as a result of the No Action Alternative would be beneficial, long term, and minor.

Proposed Action (Alternative B)

Hydrology and water quality impacts as a result of the Proposed Action Alternative would be the same as described for the No Action Alternative, see Section 3.7.1(a).

c) Cumulative Effects

Cumulative effects as a result of project implementation would be the same as described for the effects of the MPB epidemic (second bullet) on Hydrology and Water Quality at Lake Estes, Section 3.4.1(c).

3.7.2 Soils, Geology, and Topography

a) Affected Environment

The Common Point property is located in the narrow valley of Noels Draw. Property elevations range from 7,300 to more than 8,000 feet (see Maps 1 and 9). Topography on either side of the draw rises steeply.

Slopes along the valley bottom are generally 2-3%, while side slopes range from 50-80%.

Soils in the region are derived from granitic parent material. Rock outcrops are common on the steep-faced side slopes. Soils on mountain side slopes are typically coarse textured and shallow. Soils along the valley, excluding the stream course, are primarily composed of spoil material from construction of the Olympus and Pole Hill Tunnels. This material is coarse textured and well drained. All of the existing development is located on spoil material that was leveled to support the existing shooting range.

Larimer County Geologic Hazards data indicate that the west facing slopes on the east side of Noels Draw are areas of severe geologic hazard (Larimer County GIS: Geologic Hazards, Date Unknown).

b) Environmental Consequences

No Action (Alternative A)

The impacts on local geology, park topography and soil resources would be the same as those discussed in the Lake Estes No Action Alternative, see Section 3.4.2, with the following additions. Regularly scheduled site cleanup and lead removal, in addition to specialized backstops (to capture bullets), would reduce the overall hazardous material soil contamination, and would help to remediate leaching of hazardous chemicals or materials into soil or groundwater resources (leaching may occur as lead shot and projectile materials disintegrate or decompose).

The new stream channel created as a result of the lead trap installation would divert natural flows into a new flowpath (discussed in Section 3.7.1(b)). The installation of the on-stream lead trap would have adverse,

short-term, minor impacts on stream bed and stream channel soil, geology, and topography. Impacts would subside as the diverted flows established a new stable stream channel.

Overall, the No Action Alternative would have adverse, long-term, minor effects on geology and topography (because of stream channel diversion) in Noels Draw. The No Action Alternative would result in negligible adverse, short-term and long-term, impacts to soil resources in isolated areas of high use, or informal, undesignated activity along the stream banks immediately downstream of the new lead trap.

Proposed Action (Alternative B)

Soil, geology, and topography impacts as a result of the Proposed Action Alternative would be the same as described for the No Action Alternative, see Section 3.7.2(a).

c) Cumulative Effects

Cumulative effects as a result of project implementation at East Portal would be the same as described for the effects of the MPB epidemic (second bullet) on Hydrology and Water Quality at Lake Estes, see Section 3.4.1(c). Soils, geology, and topography resource impacts have been incorporated into that section.

3.7.3 Vegetation and Wetlands

a) Affected Environment

Forested slopes on the Common Point property are dominated by ponderosa pine with an understory of shrubs and herbaceous plants (see Map 9). The valley area is vegetated with mixed grasses and forbs. Noels Draw supports a narrow riparian corridor of willows and other wetland plants. In areas where water in Noels Draw

pools due to topography, flow, or channel structures, small wetlands form, which support wetland and riparian plants as well as introduced weed species.

There are no known Federally listed plant or sensitive plant species in the project area. The Common Point area is situated well above (7,300 feet elev.) the normal elevation range for Ute ladies'-tresses orchid (*Spiranthes diluvialis*) populations in Colorado (max. elevation is 6,240 feet).

The entire Common Point project area is rated as very high wildfire hazard (Larimer County GIS: Wildfire Hazards, Date Unknown).

See Section 3.4.3(a) for more information on the current MPB epidemic in Colorado. USFS beetle infestation mapping (updated 2007) indicates that there are isolated areas of MPB attacks throughout the Estes Valley, including in scattered infestation areas in the vicinity of Common Point. The 2007 mapping indicates that there are numerous, small infestations in the immediate Common Point Area (USFS 2007b and USFS 2007c).

Special Status Species

There are no Federally listed or state listed rare plant species at Common Point.

Weed species are primarily confined to parking areas, fill side slopes, and along the stream corridor at the main parking area. In areas of severe disturbance, weedy and noxious weed species have readily established, including: Larimer County listed and state B-List, Part I species such as Canada thistle and Dalmatian toadflax; Larimer County listed and state B-List, Part II species such as knapweed and butter and eggs; and state C-list weed species including

field bindweed, common mullein, and cheatgrass.

Weed management and the control of noxious weeds is a standard Environmental Commitment of Reclamation and EVRPD. See Section 2.7 for a detailed description of noxious weed and pest management efforts.

b) Environmental Consequences

No Action (Alternative A)

Under the No Action Alternative, the existing vegetation and plant communities, including sensitive species, would remain unchanged. No additional use areas would be developed, although some existing development footprints would be modified to accommodate ADA improvements.

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would result in temporary and permanent disturbances to vegetation and wetland resources. Vegetation and wetlands adjacent to ADA improvements (e.g., next to an ADA accessible picnic site or ADA accessible path) would be temporarily disturbed and/or trampled during construction activities. As such, these improvements would be expected to have adverse, short-term, minor impacts on vegetation and wetlands. Paving or the construction of new structures or facilities to improve ADA accessibility would result in the permanent loss of vegetation within the respective footprint. Impacts of these ADA improvements would be adverse and long-term; however, since the footprints of these improvements are relatively small (e.g., picnic site, parking space), the impacts are expected to be negligible.

Overall, impacts to vegetation as a result of the No Action Alternative would be adverse, short term, and minor.

Special Status Species

Impacts related to noxious weed establishment from the improvements and reconfigurations would be the same as described for the Alternative at Lake Estes Park, see Section 3.4.3.(b).

Proposed Action (Alternative B)

The impacts of the Proposed Action Alternative would be the same as described for the No Action Alternative, see Section 3.7.3(b). Impacts associated with MPB management are the same as described in Section 3.4.3(b).

c) Cumulative Effects

The incremental contribution of the No Action and Proposed Action Alternative impacts to vegetation and wetland communities is anticipated to be short term and negligible overall. Due to the isolated nature of the site, removed from ongoing development in the valley and other direct vegetation disturbance mechanisms, there would be no cumulative effects to vegetation and wetland resources as a result of either alternative.

3.7.4 Fish and Wildlife

a) Affected Environment

The Common Point area provides habitat for a variety of wildlife species. Due to shooting range activity, noise, vehicle traffic, and ground vibrations, wildlife activity at Common Point is likely limited to times when the range is not in use (e.g., nighttime hours and off-peak season).

Mammals common to the area include mule deer, coyotes, squirrels, deer mice, and occasionally elk and black bear. The riparian habitat along Noels Draw as well as the adjacent forest vegetation is likely to support American robin (*Turdus migratorius*), mountain bluebird, dark-eyed junco (*Junco hyemalis*), Steller's jay, American crow (*Corvus brachyrhynchos*), numerous sparrows, and possibly raptors. Noels Draw only flows seasonally or in response to precipitation events and is unlikely to support abundant aquatic organisms, with the exception of small populations in seasonal pools.

Special Status Species

The peregrine falcon is a sensitive species that, although not protected under the ESA, is of concern to USFWS or CDOW and has the potential to occur at Common Point.

Rock outcroppings and cliff bands on the west side of Noels Draw are of suitable steepness and size for nesting habitat for the peregrine falcon. However, there are not enough periods of inactivity from shooting that would cause peregrine falcons to choose to nest or hunt in this area.

b) Environmental Consequences

No Action (Alternative A)

Construction activities necessary to modify picnic sites, parking areas, and access paths to be ADA accessible would temporarily disturb wildlife species, including the peregrine falcon, in the immediate vicinity of the improvement as a result of increased human activity, noise, or ground vibrations. The proposed ADA improvements could have up to a minor adverse short-term impact on wildlife.

The proposed lead trap would have adverse, long-term, minor impacts on invertebrate and other aquatic species' movement during intermittent flows. Safeguards for fish passage would be incorporated into the final design of the trap to help mitigate this impact.

Overall, impacts to wildlife as a result of the No Action Alternative would be short term, adverse, and minor.

Special Status Species

No impacts to peregrine falcons are expected due to current avoidance of the area.

Proposed Action (Alternative B)

The impacts of the Proposed Action Alternative would be the same as described for the No Action Alternative, Section 3.7.4(b).

Special Status Species

No impacts to peregrine falcons are expected due to current avoidance of the area.

c) Cumulative Effects

Due to the isolated nature of the site, removed from ongoing development in the valley and other direct vegetation disturbance mechanisms, there would be no cumulative effect to vegetation and wetland resources as a result of either alternative.

3.7.5 Recreation

a) Affected Environment

The Common Point area is used only as a shooting and archery range. Access to Common Point is available to all members of the public. Estes Park Gun and Archery Club members pay an annual membership

fee and may invite guests to the range. The general public can access the range through payment of a day use fee and when the club holds special events. The club has an open membership enrollment.

The Common Point facilities consist of 100- and 200-yard rifle ranges, a pistol range, a trap range (currently closed to use), and stationary and walk-through archery ranges.

Unstructured, unpaved parking is available for approximately 20 vehicles. Beyond the structures associated with the shooting ranges – several scattered picnic tables and one portable toilet – there are no other developed recreation facilities at Common Point. All facilities at Common Point are open for use year-round.

Table 3-5 provides a summary of current visitation, staffing and law enforcement patrol, and dates/seasons for public use.

Table 3-5. Management and Use of Developed Areas at Common Point

	Common Point
Dates Open for Use	All year
High Use Periods (months or dates)	May thru Sept
Percent of Capacity Used during High Use Periods	75%
Staffed By (EVRPD, Concessionaire)	Gun Club
Patrolled By (EVRPD, County, Town, Other)	Sheriff

Source: Developed by EVRPD Staff

b) Environmental Consequences

No Action (Alternative A)

The impacts on recreation would be the same as those discussed in the Lake Estes No Action Alternative, see Section 3.4.5.b, with the following additions. The trap range would remain closed under the No Action Alternative. In the absence of expanded or

improved facilities, implementation of the No Action Alternative would have adverse, long-term, minor impacts on the visitor recreational experience and recreational opportunities.

Opening the ranges to the general public (regardless of club membership status) at select, regular times throughout the year would provide a beneficial new recreational opportunity to residents and visitors in the Estes Valley.

The installation of a lead trap on Noels Draw would have no impact on recreational opportunities or experiences.

The No Action Alternative would have no effect on parking capacity at Common Point.

Overall, impacts to recreational opportunities and experiences at Common Point would be adverse, long term, and minor.

Proposed Action (Alternative B)

The impacts of the Proposed Action Alternative would be the same as described for the No Action Alternative, Section 3.7.5(b).

c) Cumulative Effects

The recreation cumulative effects of the No Action and Proposed Action alternatives are the same for all Reclamation properties analyzed in this plan. See the Cumulative Effects discussion for Recreation under the Lake Estes analysis, Section 3.4.5(c).

3.7.6 Scenic and Aesthetic Resources

See Section 3.4.6 for background information on scenic and aesthetic resources and local comprehensive planning policies. The following Affected

Environment and Environmental Consequences discussion tiers to terminology and concepts introduced in Section 3.4.6.

a) Affected Environment

Common Point Character

The Common Point area is located in Noels Draw, a forested, steep-sided mountain valley, and is characterized by a sense of remoteness, removed from human development and urbanization. The natural landscape is dominant in the foreground and middleground, and where available, in distant views. Generally, views do not extend beyond the middleground due to mature forest vegetation. Mature vegetation and canyon topography focus the viewer to foreground elements of visual interest, such as rock outcroppings above the rifle range or the creek that bisects the property; some mountain views to the northwest are available from points along the access road. No man-made artifices are visible within the property viewshed, with the exception of water conveyance infrastructure and limited shooting range amenities.

Common Point Scenic Quality

Overall, scenic quality at Common Point is considered to be moderate to high, which is atypical for most shooting ranges. The natural landscape, canyon topography, rock outcroppings, mature vegetation, and lack of human development all contribute to high, natural scenic value and aesthetic integrity, which is increasingly rare in the Estes Valley.

Spoil and stockpile areas from construction of the two tunnels are still evident at the site today. Exposed spoil material contrasts with the natural soil and rock colors and textures.

Grading and fill slopes, constructed to accommodate access and recreation shooting uses, have created unnatural lines and forms in the landscape. Although these areas have all been revegetated, the sites still appear to be modified, resulting in localized areas with low to moderate scenic quality.

b) Environmental Consequences

No Action (Alternative A)

Under the No Action Alternative, no additional recreation facilities would be developed. However, no additional efforts would be made to preserve the existing visual character and aesthetic values of Common Point. Access to private lands surrounding the Common Point property is difficult. Development potential of the adjacent private properties and nearby national forest lands is low. Without scenic quality management objectives, scenery and visual experience at the park would degrade over time. Long-term impacts to the Common Point viewshed and aesthetic resources as a result of the No Action Alternative would be minor.

The No Action Alternative, although not in direct conflict with the Estes Valley Comprehensive Plan guidelines, would not further advance the goals and standards outlined in the plan. Ultimately, Alternative A is not anticipated to detract from the possibility of achieving some of the standards. Therefore, the No Action Alternative would only indirectly conflict with plan guidelines.

Construction activities necessary to install the lead trap and modify picnic sites, parking areas, and access paths to be ADA accessible would temporarily disturb scenic and aesthetic resources in the vicinity of the improvements as a result of increased human activity, noise, construction

equipment and materials, construction fencing, or ground vibrations. These impacts would be adverse, short term, and negligible.

The lead trap and ADA improvements would result in the introduction of new unnatural lines and features into the landscape, for example, uniformly graded surfaces, new signs and signposts, or infrastructure. As such, the proposed lead trap and ADA improvements would have an adverse, long-term, minor impact on scenic and aesthetic resources at Common Point.

Proposed Action (Alternative B)

The impacts of the Proposed Action Alternative would be the same as described for the No Action Alternative, Section 3.7.6(b).

c) Cumulative Effects

Due to the isolated nature of the site, removed from ongoing development in the valley and other direct scenic and/or aesthetic disturbance mechanisms, there would be no cumulative effect to scenic and aesthetic resources as a result of either alternative.

3.7.7 Land Use

a) Affected Environment

Common Point is surrounded by private and Roosevelt National Forest lands. The principal land uses at and adjacent to Common Point consist of undeveloped forest uses, such as private hunting, firewood gathering, private recreation, or habitat management (see Map 9). Land ownership patterns and the mountainous terrain have precluded development in proximity to Common Point. The nearest residential development is located

approximately one mile north of the site on the south bank of the Big Thompson River. U.S. 34 is a major east-west arterial linking Estes Park with the Fort Collins/Loveland metropolitan areas, and is a major tourism route during the summer. There is no public entry to Common Point; access from U.S. 34 is provided via an unimproved dirt road. There is one private property that is occasionally accessed by way of the Common Point gate and road.

b) Environmental Consequences

No Action (Alternative A)

Under the No Action Alternative, the existing use of Common Point and the surrounding lands would remain unchanged. No additional use areas would be developed.

The No Action Alternative would have no new impacts on adjacent private or public lands. No restrictions would be imposed on the types of activities allowed or where certain recreational activities could occur. There would be no direct impacts to land use or daily land use activities as a result of the No Action Alternative. Requests for rights-of-use of Reclamation lands would be authorized according to Reclamation Manual LND 08-01 and 43 CFR Part 429 (Reclamation 2002b, 43 CFR 429 2007). The No Action Alternative would not directly impact the number or types of requests for rights-of-use.

The proposed ADA improvements and lead trap installation would have no impact on land use at Common Point or land uses adjacent to the park.

Proposed Action (Alternative B)

The impacts of the Proposed Action Alternative would be the same as described

for the No Action Alternative, see Section 3.7.7(b).

c) Cumulative Effects

There would be no direct or indirect impacts to land use at or adjacent to Common Point. Therefore, there is no incremental contribution to cumulative effects. The No Action and Proposed Action alternatives would not result in any cumulative effects to land use at or adjacent to the Common Point property.

3.7.8 Socioeconomics

a) Affected Environment

Social and economic status of the EVRPD service area is discussed on a regional (Estes Valley) scale and not by individual park. See the Affected Environment discussion in Section 3.4.8(a).

b) Environmental Consequences

Socioeconomic impacts were also assessed at a regional scale and not by individual park. See the Environmental Consequences discussion in Section 3.4.8(b).

c) Cumulative Effects

Cumulative effects as a result of project implementation at Common Point would be the same as described for the effects of Socioeconomics at Lake Estes, see Section 3.4.5(c).

3.7.9 Cultural and Heritage Resources

a) Affected Environment

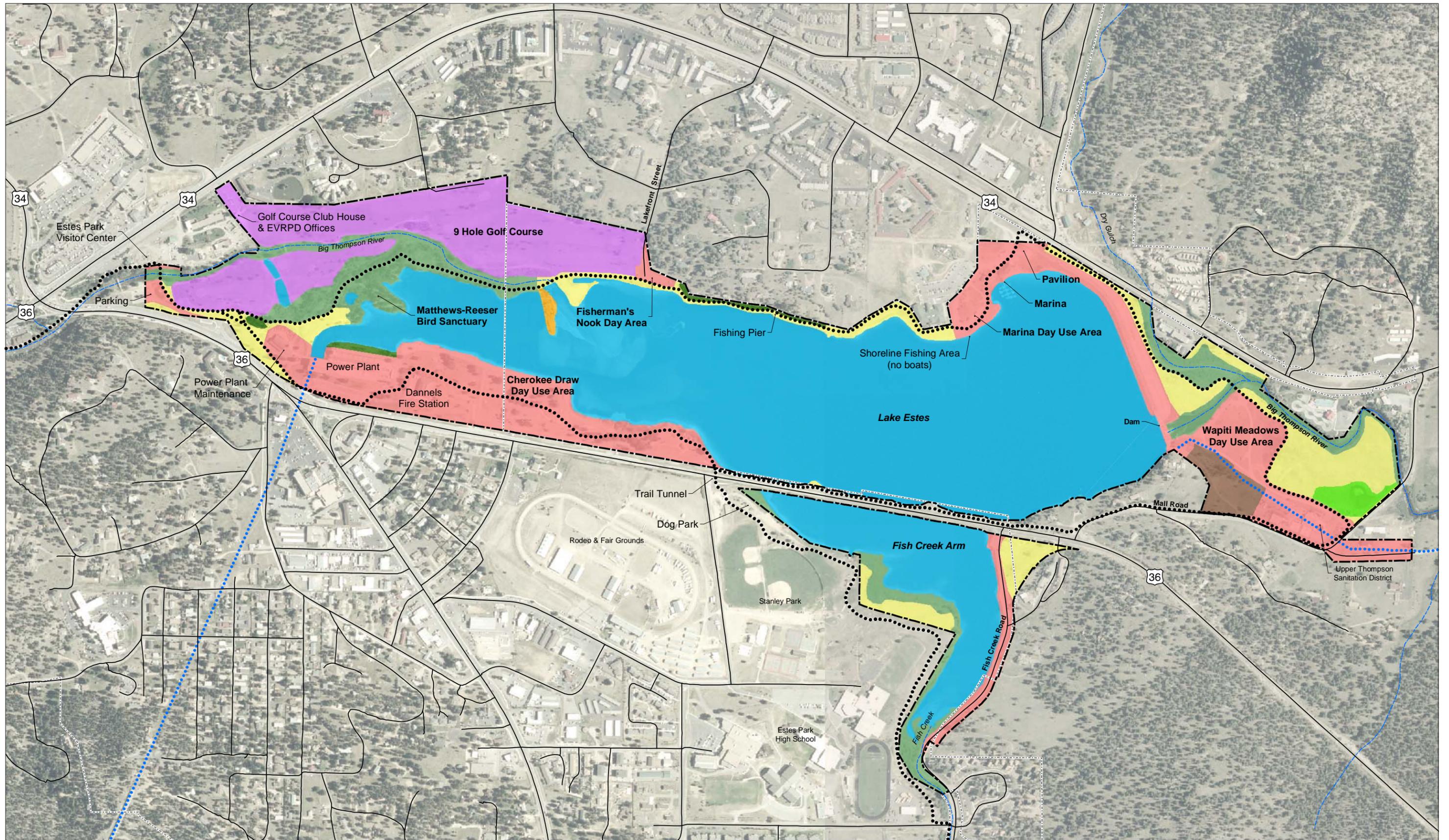
There are two known cultural resource inventory records at Common Point: the Pole Hill Tunnel and the Olympus Tunnel sites (Burton 2008).

b) Environmental Consequences

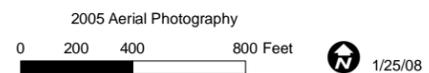
Cultural and heritage resource impacts at Common Point would be the same as described for the No Action and Proposed Action Alternatives at Lake Estes, see Section 3.4.9(b).

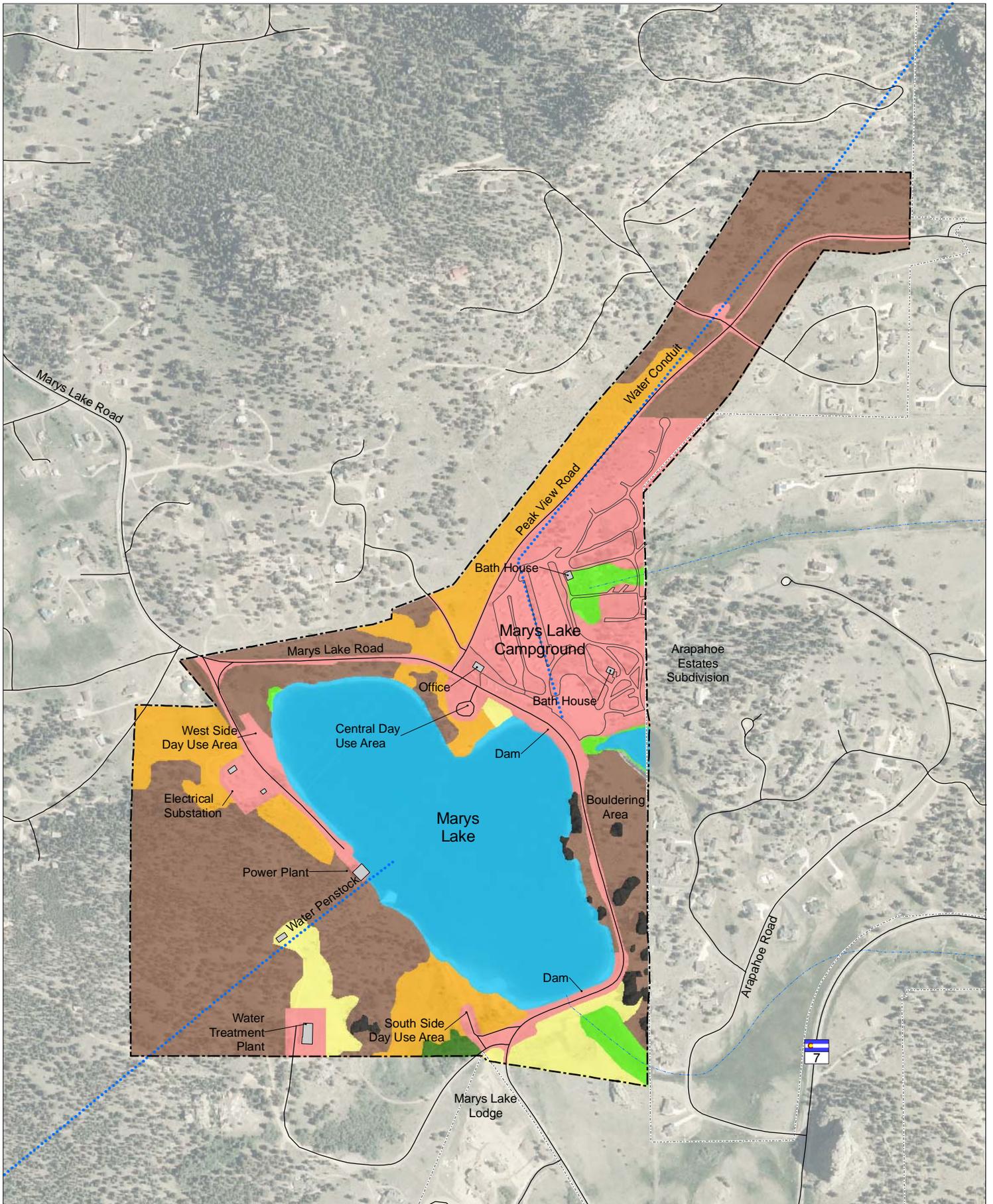
c) Cumulative Effects

The cultural and heritage resource cumulative effects of the No Action and Proposed Action alternatives are the same for all Reclamation properties analyzed in this plan. See the Cumulative Effects discussion for Cultural and Heritage Resources under the Lake Estes analysis, see Section 3.4.9(c).



- Land Use & Land Cover**
- Grassland (24 acres)
 - Forest (1 acre)
 - Water (159 acres)
 - Plan Boundary
 - Trails
 - Developed Area (56 acres)
 - Shrubland (1 acre)
 - Riparian (25 acres)
 - Estes Park City Limits
 - CBT Tunnels - Siphons - Conduits
 - Golf Course (35 acres)
 - Mixed Shrubland and Forest (4 acres)
 - Wetland (2 acres)





Land Use & Land Cover

- Developed Area (37 acres)
- Grassland (7 acres)
- Shrubland (21 acres)
- Mixed Shrubland and Forest (67 acres)

- Forest (1 acre)
- Wetland (4 acres)
- Water (43 acres)
- Rock Outcrop (2 acres)

2005 Color Aerial Photograph

- CBT Tunnels - Siphons - Conduits
- Estes Park City Limits
- Plan Boundary

0 250 500 Feet

1/25/08

Map 7

Marys Lake Existing Conditions

Estes Valley Recreation and Park District
 Bureau of Reclamation
 EDAAW Inc.

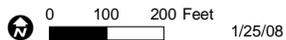


Land Use & Land Cover

- Developed Area (12 acres)
- Grassland (6 acres)
- Mixed Shrubland and Forest (16 acres)

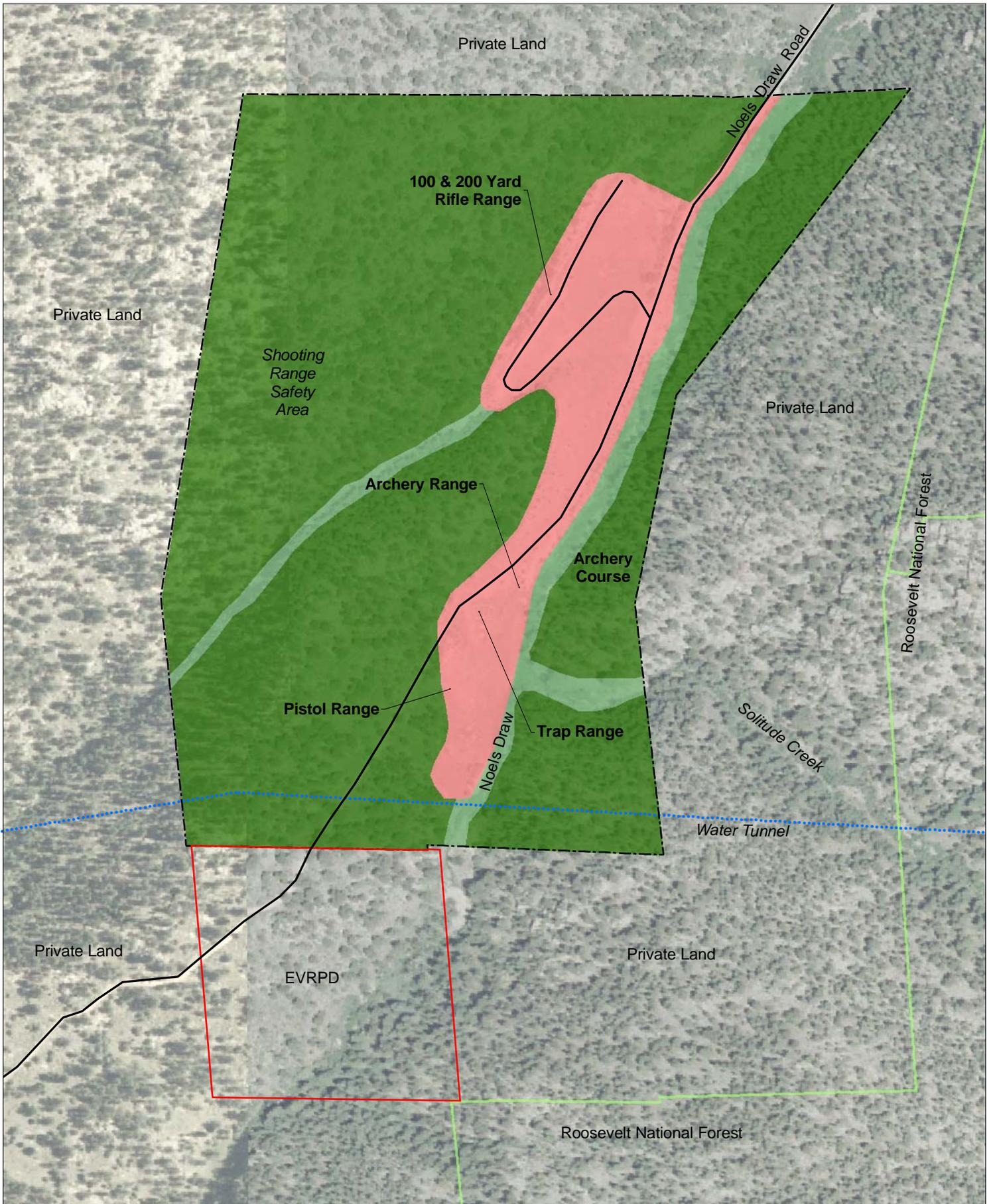
- Forest (35 acres)
- Riparian (3 acres)
- Water (2 acres)
- Plan Boundary
- CBT Tunnels - Siphons - Conduits

2005 Color Aerial Photograph



Map 8
East Portal Existing Conditions

Estes Valley Recreation and Park District
Bureau of Reclamation
EDAW Inc.



Land Use & Land Cover

- Forest (49 acres)
- EVRPD Land
- Developed Area (9 acres)
- Riparian (4 acres)
- Plan Boundary

0 100 200 400 Feet 1/25/08

⋯ CBT Tunnels - Siphons - Conduits
2005 Color Aerial Photograph

Map 9
Common Point Existing Conditions

Estes Valley Recreation and Park District
Bureau of Reclamation
EDAW Inc.

4.0 CONSULTATION AND COORDINATION

In addition to an extensive public involvement program, the following groups, agency representatives, and persons were involved with the development of the RMP/EA. The public involvement process and planning group meetings are discussed in Chapters 1 and 2. A summary of the issues and opportunities that were gathered throughout the planning process can be seen in Appendix C. All written public comments of the Draft RMP/EA that were received, along with responses to these comments, can be seen in Appendix F.

4.1 Public Involvement

Stakeholder Interviews in Estes Park	July 24 & 25, 2007
Public Open House and Comment	Tuesday, August 28, 2007
Public Workshop and Comment	Thursday, December 06, 2007
Public Review and Comment of the Draft Plan (14 days)	June, 2008

4.2 Parks Planning Team

Stan Gengler, Director/ Co-Project Manager, Estes Valley Recreation & Park District
Steve Wilson, Board Member, Estes Valley Recreation & Park District
Dale Stapleton, Administrative Assistant, Estes Valley Recreation & Park District
Carlie Ronca, Natural Resource Specialist/ Co-Project Manager,
Bureau of Reclamation, Eastern Colorado Area Office
Kara Lamb, Public Affairs, Bureau of Reclamation, Eastern Colorado Area Office
Gary Buffington, Director, Larimer County Parks and Open Lands
Tom Keith, Principal in Charge, EDAW Inc
Bruce Meighen, Co-Project Manager, EDAW Inc
Drew Stoll, Assistant Project Manager, EDAW Inc
Phil Hendricks, Senior Landscape Architect, EDAW Inc
Greg Oakes, Landscape Architect, EDAW Inc
Jean Townsend, Financial, Coley/Forrest, Inc.

4.3 Advisory Work Group

Gary Matthews, Volunteer, EVRPD Trails Committee
Amy Plummer, Volunteer, EVRPD Trails Committee
Rick Odell, Facilities Management, Estes Valley Recreation & Park District
Annie Hanson, Marina Manager, Estes Valley Recreation & Park District
Greg Farmer, Recreation Manager, Estes Valley Recreation & Park District
Bob Joseph, Land Use Planning, Town of Estes Park
Dave Shirk, Land Use Planning, Estes Valley Community Development
Jeff Maugans, Interpretive Specialist, Rocky Mountain National Park
Kevin Cannon, Recreation Forester, US Forest Service
Rick Spowart, District Wildlife Manager, Colorado Division of Wildlife
Tom Pickering, Executive Director, Estes Park Convention and Visitors Bureau

Lois Smith, Board President, Chamber of Commerce
Mike Lewelling, Fire Management Specialist, Rocky Mountain National Park

4.4 Agency Consultation and Coordination

- Colorado Field Office, Region 6, U.S. Fish and Wildlife Service
- Omaha District, U.S. Army Corps of Engineers
- Tribes

4.5 Federal, State, and Local Agencies

Harry Crocket, Conservation, CDOW - Fisheries
Tom Pickering, Local Group, Estes Park Convention and Visitors Bureau
Lowell Richardson, Security, Estes Park Police
John Baudek, Local Group, Estes Park Town Council
Will Smith, Community, Estes Park Urban Renewal Association
Wendell Amos, Conservation, Estes Valley Land Trust
Scott Dorman, Security, Fire Department
Kathay Rennels, Board of Commissioners, Larimer County
Gary Buffington, Recreation Provider, Larimer County Parks and Open Lands
Tim Sullivan, Security, Larimer County Sherriff
Jim Duell, Water, Estes Park Sanitation District
Jeff Hodge, Water, Upper Thompson Sanitation District
Bryan Mitchner, Community, Estes Valley Improvement Association

4.6 Others Persons or Parties

Steve Anderson, Bureau of Reclamation, Great Plains Regional Office
Jaci Gould, Bureau of Reclamation, Eastern Colorado Area Office
Jerry Jacobs, Bureau of Reclamation, Great Plains Regional Office
Carlos Lora, Water, Bureau of Reclamation, Eastern Colorado Area Office
Bob Burton, Staff Archeologist/ GIS, Bureau of Reclamation, Eastern Colorado Area Office
Board of Directors, Estes Valley Recreation & Park District
Tom Keith, Principal in Charge, EDAW Inc
Molly Cobbs-Lozon, NEPA Specialist, EDAW Inc
Chad Schneckenburger, Recreation & Parks, EDAW Inc
John Ko, Biologist, EDAW Inc
Kimberly Karish, Biologist, EDAW Inc
Jeremy Call, Visual Resource Specialist, EDAW Inc
Linda Spangler, Technical Editor, EDAW Inc

4.7 Stakeholder Groups Contacted for Participation

- Arapaho Estates Homeowners Association
- Arapaho Meadows Homeowners Association

- Cherokee Meadows Homeowners Association
- Shinning Mountain Homeowners Association
- Thunder Mountain Homeowners Association
- Wind Cliff Homeowners Association
- Common Point Neighbors
- East Portal Neighbors
- Estes Park Gun and Archery Club
- Marys Lake Campground Concessioner
- Estes Park Campground Concessioner
- Colorado Bow Hunting Association
- Estes Park Bird Club
- Men's & Women's Golf Clubs
- Summer Residents Association
- Trail Trekkers
- Trout Unlimited

APPENDIX A: REFERENCES

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APPENDIX B: GLOSSARY

Accelerated Erosion - Erosion in excess of what is considered natural rates, often a result of human influence or activities.

Acre-foot - A measure of quantity consisting of one acre of water one foot deep; equals 43,560 cubic feet or 325,851 gallons.

Administrative Actions - The day-to-day actions necessary to serve the public and to provide for the management and use of the land and resources.

Annual Plant - A plant that lasts one growing season completes its life cycle from seed to seed in one year.

Aquatic - Living or growing in or on body of water.

Authorized Activity or Use - An activity or use of the reservoir area allowed or permitted pursuant to valid existing rights or pursuant to a right-of-use document issued by Reclamation or another agency within its jurisdiction.

Benefit/cost Ratio - A comparison of the beneficial value of an action to its cost of implementation. The higher the benefit to cost ratio, the more economically sound an action is considered.

Best Management Practices (BMPs) - Programs, practices, policies and procedures, and structures or activities which have been shown to be effective in management and protection of a given resource. This term is most often used in regard to water quality and soil protection.

Biological Pest Control - Use of organisms to control undesired plants and animals.

Control organisms may include insects, predators, fungi, pheromone traps, release of sterilized populations, neutering, etc.

Carrying Capacity - Estimated amount of use or population that a given area can support without inducing unacceptable levels of damage to the area or its associated resources.

Chemical Pest Control - Use of chemicals to control undesired plants and animals. Chemicals include toxicants (e.g., pesticides, insecticides, herbicides), repellants, and fumigants.

Community - A group of plants and animals living in a specific region under relatively similar conditions.

Component - A part of a larger system or complex.

Concession - A non-Federal commercial business that supports public recreational uses and provides facilities, goods, or services for which revenues are collected. A concession generally involves use of the Federal estate and may involve the use or development of improvements.

Cover (soil) - Material covering soil and providing protection from or resistance to, impact of rain drops, expressed in percentage of area covered. Soil cover is composed of vegetation, litter, erosion pavement, and rock.

Cover (wildlife) - Vegetation or other materials serving to conceal wildlife from predators and/or protect wildlife from heat, cold, precipitation, and other weather conditions.

Critical Habitat - An area occupied by a threatened or endangered species "on which

are found those physical and biological features (1) essential to the conservation of the species, and (2) which may require special management consideration or protection” (16 USC 1532 [5] [A] [I] 1988).

Crucial Habitat - Habitat on which a species depends for survival.

Cubic Feet per Second (CFS) - A measurement of water or stream flow. One cubic foot is 7.48 gallons; a flow of 1 cfs produces 448.8 gallons per minute.

Cultural Pest Control - Use of cultural practices to control pests. Cultural practices may include controlled burns, changes in grazing or irrigation practices, flooding, good housekeeping, removal of food sources, habitat modification, exclusion, etc.

Cultural Resources Management Plan (CRMP) - A written plan which identifies cultural resources related objectives, management actions, priorities for implementing those actions, and monitoring of the resources within a specific geographic area.

Cultural Resources - Those remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and natural features that were of importance in human events. These consist of (1) physical remains, (2) areas where significant human events occurred, even though evidence of the event no longer remains, and (3) the environment immediately surrounding the resources.

Degradation - 1) A process of transition from a higher to a lower quality; also, 2) The state or condition of being degraded.

Directives and Standards - A component of the Bureau of Reclamation Manual which provides the basic instructions and requirements for an action or process.

Diverse - Having variety. See also Diversity.

Diversity - Relative degree of abundance of wildlife species, plant species, ecological communities, habitats, or habit features per unit of area.

Earth Modifying Activities - Planned activities which change the form or character of the earth’s surface. These include such activities as plowing, leveling, excavation, and structure or facility construction.

Easement - An interest in land that gives the owner of the easement the right to use another person’s real property for a specific purpose.

Ecosystem - A community which includes all component organisms and associated environmental factors, and which forms an interacting system.

Egress - Act or right of coming out or leaving.

Emergent Vegetation - Vegetation that is rooted below the water surface and which extends above the water surface.

Endangered Species - Species that are in danger of extinction in all or a significant portion of their range. The Secretary of Interior makes the determination for federal listing.

Enhancement - The act of increasing or making greater, as in value or quality.

Erosion - The wearing away of the land surface by running water, wind, ice or other geologic agents, or resulting from human or animal activities.

Fire Management Plan - A site-specific plan for managing fire on a property. The plan should include risk assessment, suppression guidelines, partnerships, control measures, controlled burn guidelines, fuel management, and other fire management actions.

Geographic Information System (GIS) - A data management system with computer hardware and software functions for the input, storage, analysis, and output of mappable data and associated information.

Grassland - An area of grass or grass-like vegetation, such as a prairie or meadow.

Groundwater - Subsurface waters in a zone of saturation which are or can be brought to the surface of the ground or to surface waters through wells, springs, seeps, or other discharge areas. (from CDPHE Regulation #41)

Habitat - 1) Specific set of physical conditions that surround single species, groups of species, or a large community; 2) Place or type of site in which an animal or plant naturally or normally occurs.

Heritage Resources - Property, plant, and equipment of historical, natural, educational, artistic, or architectural significance.

Historic Property - Cultural resources which are eligible to the National Register of Historic Property.

Hydrographic - Of or pertaining to the physical conditions, boundaries, flow and

related characteristics of oceans, lakes, rivers, and other surface waters.

Hydrographic Regime - The systematic increases and decreases in the flow of surface water in an area, as affected by environmental factors.

Ingress - Act or right of going in or entering.

Integrated Management - The planning and implementation of a coordinated program utilizing a variety of methods for managing an area or resource to meet the objectives for that area or resource.

Integrated Pest Management - A coordinated program utilizing a broad range of methods to manage undesired animals and pests within an area. Methods may include education, preventive measures, good stewardship, and biological, cultural, chemical, and mechanical control.

Interagency Agreement - An agreement between two agencies which outlines the roles and responsibilities of the agencies in a collaborative action.

Jurisdictional Wetlands - A wetland area that meets the definitional requirements for wetlands as determined by the U.S. Army Corps of Engineers (Corps). Wetlands, commonly recognized as bogs, swamps, and marshes, are often areas of transition between terrestrial and aquatic environments. Forested wetlands can contain both terrestrial and aquatic environments. Wetlands are generally distinguished by the seasonal or year-round presence of water, saturated soil types, and vegetation adapted to wet conditions. Therefore, these three characteristics must be recognized when determining whether an area is specified a jurisdictional wetland.

The three criteria (hydrology, soils, and vegetation) for wetlands were initially established in 1977 by the Corps and later incorporated into the Corps' 1987 wetlands delineation manual. The burden of proof that an area is a jurisdictional wetland in need of regulation must rest with the Federal Government, based on a preponderance of evidence that a site meets all three wetlands criteria.

Land Use - Activities undertaken on a particular tract or parcel of land. Uses may include recreation, agriculture, livestock grazing, wildlife management, open space, rights-of-way, mining.

Leasable Minerals - Minerals such as coal, oil, and gas, and all other minerals which may be leased by the United States under the authority of the various Federal leasable mineral acts.

Locatable Minerals - 1) Minerals that may be acquired under the Mining Law of 1872, as amended; also, 2) In general, minerals that normally occur in veins, such as gold, lead, silver, molybdenum, etc.

Managerial Attributes (setting) - Managerial attributes are the features or characteristics of a recreation setting that may define and distinguish the recreation experience. Management attributes may include facilities (e.g., ranging from water markers to full service marinas and campgrounds), rules, regulations, water operations, educational programs, fees and charges, interpretation, signage, law enforcement, design, lighting, concessions, and special use permittees.

Managing Entity or Partner - 1) A person, company, or agency which manages Reclamation lands and/or projects pursuant

to a contract or agreement with Reclamation.

Mechanical Pest Control - Use of mechanical practices to control unwanted plants and animals. Mechanical practices include trapping (live and lethal), shooting, pulling, tilling, cracker shells, propane cannons, etc.

Mineral Materials - Common varieties of minerals such as sand, gravel, soil; also, sometimes referred to as "saleable minerals."

Mineral Right - 1) An interest in minerals in land, with or without ownership of the surface of the land; also, 2) A right to take minerals or a right to receive royalties.

Mitigation - 1) Avoiding or reducing possible adverse impacts to a resource by limiting the timing, location, or magnitude of an action and its implementation; 2) rectifying possible adverse impact by repairing, rehabilitating or restoring the affected environment or resource; 3) reducing or eliminating adverse impacts by preservation and maintenance operations during the life of an action.

Mitigation Measure - A measure or action taken to reduce the adverse impacts to the environment from implementation of a project or another action. Such measures may include avoidance, replacement, restoration, relocation, timing of operations, etc.

Noise Sensitive Area (NSA) - An area that, because of its use by humans or special status wildlife species and the importance of reduced noise levels to such use, is designated for management which limits the noise level from long-term and/or continuous noise producing sources.

Noxious Weed - An alien plant that is invasive and undesirable and declared a noxious weed by the State or County and which generally meets one or more of the following criteria: a) aggressively invades or is physically damaging to economic crops or native plant communities; b) is detrimental to the environmentally sound management of natural or agricultural ecosystems; c) is poisonous to livestock; d) is a carrier of detrimental insects, diseases, or parasites.

Official Use Vehicle - Means a vehicle used by an employee, agent, or designated representative of the Federal government, with permission from the Bureau of Reclamation, for official purposes. This term includes employees of Reclamation's managing entities.

Overstory - The trees or shrubs which make up the canopy of a vegetative type.

Physical attributes (setting) - Physical attributes are features or characteristics of a recreation setting that may help to define and distinguish the recreation experience. Physical attributes can be divided into natural features or built structures of a more permanent or fixed nature. Examples of natural resource attributes include water quality, aquatic and terrestrial vegetation, topography, shoreline curvature, fish and wildlife habitat, soil, natural soundscape, and air quality. Examples of built structures include all those municipal, commercial, industrial, residential, agricultural, and major recreation buildings and infrastructure common to any city or community (e.g., dams, water and power conveyances, water control structures, residential subdivisions, industrial complexes, commercial centers, air and ground transportation systems, developed resorts and marinas, theme parks, and shipping and cargo facilities).

Pioneers (plants) - Plants that are among the first to appear in an area that has been devoid of vegetation (e.g., the first plants to appear after a fire or on the newly exposed shore after the level of a reservoir drops). Many of these plants are often considered weeds.

Plan Adjustment - Changes to this plan to ensure that the plan is current, and covers the necessary resources and issues. Such changes may be minimal or substantial. Minimal changes would be made through plan maintenance, while substantial changes would be made through plan modifications.

Plan Amendment - A plan modification based on changes in circumstances or conditions affecting the scope, terms, or conditions of this plan, particularly for a proposed action which does not conform to this plan, but which warrants further consideration prior to a scheduled revision. Generally an amendment only involves one or two issues.

Plan Maintenance - Activities taken to maintain and update this plan without changing its scope or intent or affecting the basic decisions, terms and conditions, use levels, or restrictions contained therein. Such activities may include posting new information, refining analyses, and making minor changes in management actions.

Plan Modification - Activities taken to maintain and update this plan which would change its scope or intent; or affect the basic decisions, terms and conditions, use levels, or restrictions contained therein.

Plan Monitoring - A system or process of reviews to ensure implementation of the plan, to track the effectiveness of planned management actions and standards and

guidelines, to provide additional information, and to track the long-term management of the area.

Plan Revision - A plan modification based on this plan becoming outdated or otherwise obsolete and which involves the completion of a new RMP.

Prescribed Burn - A planned vegetative manipulation using fire to meet certain resource management objectives. The fire is ignited and managed so as to control its intensity and spread.

Primary Jurisdiction Area (PJA) - The area surrounding the dam, outlet works and distribution works, wherein the Reclamation retains primary jurisdiction for the protection, operation, and maintenance of said project facilities.

Private Exclusive Use - Exclusive use is any use which excludes other appropriate public recreational use or users for extended periods of time, including concessionaire-permitted sites on which dwellings or improvements are privately owned, such as a cabin, trailer, or mobile home. Exclusive use occurs when there is not: (1) An established process that frequently rotates users of sites (2) A process which accommodates changes in use, including a process for determining and accommodating other desired uses and resource values

Project Facilities - The water diversion, collection, storage, and carriage facilities, and appurtenant ancillary facilities built by Reclamation or its managing entity under the project authorizing act(s) to fulfill the primary purposes of those acts.

Project Lands - Lands and interests in land acquired, withdrawn or otherwise reserved for Reclamation project purposes, and

administered for such purposes by Reclamation.

Project Purposes - Those purposes for which a Reclamation project was authorized, as specified in the applicable Reclamation law or laws.

Public Land - 1) Vacant, unappropriated and unreserved lands which have never left Federal ownership (e.g., public domain); also, 2) Federal lands administered by BLM, also, 3) all lands under the custody and control of the Secretary of Interior and the Secretary of Agriculture, except Indian lands (from EO #11644- Use of off-road vehicles on the public lands), also 3) (in broadest sense) lands owned by the Federal, State, or local governments, as opposed to private ownership.

Real Property - 1) Land and generally whatever is erected or growing upon, or affixed to land; also, 2) Rights issuing out of, annexed to, and exercisable within or about land. These include the land and interests in land, such as, mineral rights, water rights, right-of-way, permits, structures, and buildings.

Reclamation - 1) The process of converting disturbed land to its former use or other productive uses (from FFO 2003 PRMP/FEIS); 2) the Bureau of Reclamation

Reclamation Lands - Lands and land interests under the custody and control of the Commissioner, US Bureau of Reclamation.

Recreation Activity - Recreation activity is a leisure-time pursuit that a person participates in voluntarily to secure a pleasurable experience.

Recreation Benefits- Recreation benefits are the positive gains or improvements made by people participating in recreation opportunities. The gains may include benefits for the individual, community, economy, or environment.

Recreation Diversity - Recreation diversity is the type, variety, distribution, quality, and abundance of outdoor recreation opportunities. Diversity is accommodated through management of a spectrum of recreation opportunity classes, zones, or units named in WROS as urban, suburban, rural developed, rural natural, semi-primitive, and primitive.

Recreation Experience - Recreation experience is the psychological and physiological response to participating in a particular recreation activity in a specific recreation setting. Recreationists consume a recreation experience (activity + setting = experience).

Recreation Facilities - Those facilities constructed or installed for public recreational use or for support of such use. These facilities may include, but are not limited to, buildings and other structures (such as park headquarters, visitor centers, maintenance shops, shelters, kiosks, etc.) campgrounds, picnic grounds, boat docks and ramps, electrical lines, water systems, roads, parking areas, sewer systems, signs, trash facilities, boundary and interior fencing, etc.

Recreation Opportunity - Recreation opportunity is the opportunity for a person to participate in a particular activity in a specific setting to realize a particular type of experience and subsequent benefits.

Recreation Setting - Recreation setting is a geographic location composed of physical,

social, and managerial attributes where a person participates in a particular activity to have a specific type of recreation experience. Managers manage the recreation setting.

Reservoir Area - In general, those lands and land interests underlying and surrounding a reservoir basin which were withdrawn or acquired by Reclamation for project purposes and which are retained under Reclamation's jurisdiction.

Reservoir Basin - That portion of the reservoir area contained below the normal high water line of a reservoir.

Resource Management Plan (RMP) - A written document that addresses the existing resources of an area and provides future objectives, goals, and management direction.

Right-of-Way - 1) The right to pass over property owned by another party; also, 2) The strip of land over which facilities, such as highways, railroads, power lines, etc. are built.

Rights-of-Use - Land or resource uses issued or granted, according to law, by the appropriate entity on, over, across a given parcel. Such uses may be authorized by permit, grant, permit, license or other documents.

Riparian Area or Zone - Land areas adjacent to streams, lakes, or other bodies of water where the vegetation present is dependent on the water table of that water body.

Riparian Habitat - Habitat associated with a riparian zone. Includes both terrestrial (land based) and aquatic (water based) habitat.

Road - A vehicle route which has been improved and maintained by mechanical means to insure relatively regular and continuous use.

Saleable Minerals - 1) Common forms of minerals such as sand, gravel, soil, etc., which may be sold under the various authorities of the United States; also sometimes referred to as “mineral materials.”

Seasonal Closure - A seasonal restriction stipulation that prohibits surface use during specified time periods to protect identified resource values.

Sedimentation - The act or process of depositing soil particles which are suspended in water.

Sensitive Species - A plant or animal species, subspecies, or variety for which a Federal or State agency has determined there is a concern for the species viability, as evidenced by a significant current or predicted downward trend in the population or habitat.

Setbacks - The distance activities that pose a potential threat to the environment must be separated from the feature they threaten (e.g., the proper linear distance that an oil well must be from a flowing stream).

Shrubland - An area of vegetation where shrubs or bushes are the dominate plants present.

Small Game - Those wildlife species defined as small game by the respective State fish and wildlife agencies. They include small game birds, small game mammals, and other small game.

Social Attributes (setting) - Social attributes are the features or characteristics of a recreation setting that may define and distinguish the recreation experience. Social attributes may include such features as (1) recreation use and users (e.g., the type, amount, time, location, distribution, origin, behaviors, and quality), (2) non-recreation use and users (e.g., business people, educational groups, agency personnel, scientists, farmers and ranchers, and local residents), and (3) special values associated with the cultural, historical, and spiritual or religious significance.

Sociodemographics - Descriptive statistics (means, medians, modes, ranges, etc.) relating the characteristics of a particular population. Population characteristics may focus on a wide range of measures but often include population size, employment by density, unemployment rates, average income and percent of population below poverty level, education, racial background, average age, percent by gender, etc.

Special Management Area (SMA) - An area that has special resource values and where some uses may be restricted in order to protect those resources.

Species of Concern - Taxa for which further biological research and field study are needed to resolve their conservation status (USFWS).

Standards and Guides - Written instructions prepared by Federal and State agencies outlining how work is to be accomplished and actions that need to be taken.

Suitable Recreation Acres - Suitable recreation acres are those acres within a project or planning area that can or will accommodate some type and level of

recreation use. Unsuitable recreation acres may be those acres that include security closures, pose public safety hazards, contain sensitive wildlife habitat or heritage sites, have incompatible industrial activity, or are inaccessible because of topography or private land.

Surface Water - Water, whether flowing or standing, which is present at the ground's surface (as opposed to ground water).

Threatened Species - A plant or animal species, subspecies or variety that is not currently in danger of extinction, but is likely to be in the foreseeable future. The Secretary of Interior makes this determination for federal listing.

Unauthorized Use - Use of land or associated resources which is not permitted or otherwise allowed by virtue of applicable grants, conveyances, deeds, reservations, licenses, and/or permits etc.

Understory - Plants growing beneath a canopy of other plants; usually refers to grasses, forbs, and low shrubs under a tree or brush canopy.

Useful Life - The expected or actual life, whichever is shorter, of a capital improvement consistent with proper maintenance, or the primary term of the existing permit on the property on which the improvement was constructed, whichever period of time is shorter. (Colorado definition from CDOW/CDPOR MOU, 1976)

Valid Existing Right (VER) - A documented, legal right or interest in the land which allows a person or entity to use said land for a specific purpose. Such rights include fee title ownership, mineral rights, rights-of-way, easements, permits, licenses,

etc. Such rights may have been reserved, acquired, leased, granted, permitted, or otherwise authorized over time.

Valid Existing Use - A use of land based on a valid existing right.

Vegetative Community - 1) Plant association with immediately distinguishable characteristics based upon and named after apparent dominant plant species (e.g. grassland, shrubland, woodland, forest, etc.); also, 2) Vegetative type.

Vegetative Composition - The various species of plants present in an area, their age, and their relative arrangement within a vegetative community.

Vegetative Condition - The particular state of being of a plant, a plant population, or a plant community. This includes such elements as vigor, general abundance, amount of use, etc.

Visitor (recreation) Capacity - Visitor capacity is the supply, or prescribed number, of recreation opportunities that can be accommodated in a particular area.

Water Resources - Water resources is the term used in this guidebook to refer to the types of water resources to which WROS can be applied, including lakes, reservoirs, wetlands, bays, estuaries, rivers, coastal zones, and marine protected areas.

Water Right - A legal right to use available water for general or specific purposes, such as irrigation, mining, power, or domestic use, either to its full capacity or to a measured extent or during a defined portion of time.

Waterfowl - Swimming birds often associated with freshwater. This term includes all species of ducks, mergansers, geese, and brant.

Wetland - An area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. See also Jurisdictional Wetland.

Wildlife - Animals living in a natural, undomesticated state.

Wildlife Habitat - 1) The arrangement of food, water, cover, and space needed for the survival of wildlife. (CDOW)

Winter Range - Area occupied by animal species during winter.

Woodland - Land having a cover of trees and shrubs of such nature that the woody vegetation is not generally valuable for timber.

APPENDIX C: SUMMARY OF ISSUES AND OPPORTUNITIES

The following table presents a summary of issues and opportunities identified throughout the planning process.

Note: These issues and opportunities were identified by all planning process participants.

Issue/Opportunity Identified	Addressed in the RMP/EA (yes /dismissed)	Description/Notes
Hydrology and Water Quality		
Maintaining suitable water quality while allowing limited motorized boating and other water-based recreation (Lake Estes only) are critical to supplying and satisfying water customers and supporting healthy fish populations and aquatic habitat.	Yes	
Remove sediment from Lake Estes, but keep some shallow areas for shore birds.	Yes	
Contain lead, shot, shells and other materials from shooting ranges at Common Point to limit contamination.	Yes	
Cover Noels Draw Creek to limit lead and other materials falling into it.	Dismissed	This is an unacceptable impact to natural drainage for recreation purposes.
Soils and Geology		
Much of the study area landscape is characterized by steep, rocky slopes. These areas present challenges to recreational use and development.	Yes	
Construction activities and increased use may cause soil compaction, increased erosion, and sedimentation into water bodies.	Yes	
Vegetation		
Noxious weeds are a continuous threat to native vegetation.	Yes	
Pine bark beetle causes tree death and wildfire risks.	Yes	
Risk of wildfires.	Yes	
Fire management.	Yes	
Native vegetation is important to conserve as wildlife habitat.	Yes	
Vegetation is trampled in high use areas and on social trails.	Yes	
Forestry management is needed.	Yes	
Do not use chemicals to spray weeds.	Dismissed	Chemicals approved by EPA and Reclamation along with best management practices will be used to control weeds.

Issue/Opportunity Identified	Addressed in the RMP/EA (yes /dismissed)	Description/Notes
Fish and Wildlife		
The parks contain potential habitat for sensitive wildlife species, including migratory birds, raptors, and possibly Canada lynx.	Yes	
The parks provide valuable habitat and refuge for many different wildlife species.	Yes	
Riparian bird habitat is threatened from overgrazing by elk.	Yes	
Expand and improve fishing.	Yes	
Conserve or improve some shallow water areas at Lake Estes as wading bird habitat.	Yes	
Potential risk to humans from bear, elk, and mountain lion attacks.	Yes	
Provide bear-proof waste containers to limit bear activity in developed areas.	Yes	
Continue to allow limited hunting in appropriate areas.	Yes	
Recreation		
Recreational opportunities and access are an increasingly important determinant of “quality of life” for many Estes Valley residents and out-of-town visitors. The EVRPD is challenged with fulfilling current and future recreation demands and providing new and appropriate recreational opportunities and experiences.	Yes	
Facilities need to be compliant with the Americans with Disabilities Act (ADA).	Yes	
Portions of the Big Thompson River going through the 9-hole golf course have to be closed to fishing due to the risk of fisherman being hit by golf balls.	Yes	
Control the speed of bicycles on trails.	Dismissed	This is a policy issue that would be addressed in the “rules and regulations for use of EVRPD properties.”
Expand swimming and improve the beach.	Dismissed	It was determined that cold water makes Lake Estes mostly unsuitable for swimming purposes. There is little demand for swimming due to cold water conditions that prevail. The existing wading area will continue to be open during the summer.
Expand group facilities.	Yes	
Provide interpretation to improve visitor experience.	Yes	
Provide more year-round recreational opportunities for families.	Yes	
Some day use areas are underdeveloped.	Yes	

Issue/Opportunity Identified	Addressed in the RMP/EA (yes /dismissed)	Description/Notes
Keep the public informed about hunting activities in the parks.	Yes	
Campgrounds should have emergency evacuation plans.	Dismissed	This is a policy issue that would be addressed in the management agreement for the campgrounds that is approved by Reclamation.
Need to better inform visitors about dangerous undercurrents in reservoirs.	Yes	
Develop trail from Marys Lake to Prospect Mountain.	Yes	
Bouldering area at Marys Lake needs to be improved to accommodate heavy visitation.	Yes	
Provide additional toilets and trash cans at heavily used sites.	Yes	
Some campground facilities are worn and out of date, opportunity to improve campsite furnishings and utilities; improve vehicle circulation and parking.	Yes	
Campsites need more living space.	Yes	
Keep RVs at west edge of Marys Lake campground.	Yes	
Keep some tent campsites in campgrounds.	Yes	
Campgrounds should remain rustic and affordable.	Yes	
Trash from campgrounds and day use areas.	Yes	
Provide facilities for group camping.	Yes	
Provide covered shelter in campgrounds for groups and events.	Yes	
A larger swimming pool should be provided at Marys Lake campground.	Dismissed	The existing swimming pool will not change. Swimming pools are a large expense that has limited use due to local weather conditions. The patio area around the pool would be improved.
Campgrounds need new and improved offices and stores.	Yes	
Provide more interpretive programs in the campgrounds.	Yes	
Flammable materials need to be safely stored in campgrounds.	Yes	
Provide more vegetation in campgrounds to make them more attractive and to buffer them from neighboring private property.	Yes	
Visitors should only be allowed to camp in designated campsites.	Yes	

Issue/Opportunity Identified	Addressed in the RMP/EA (yes /dismissed)	Description/Notes
It's important to maintain campgrounds for the benefit of visitors and the local economy.	Yes	
Marys Lake campground should be closed to eliminate impacts on neighboring private property.	Dismissed	The campground provides valuable recreational opportunities and the campground does not conflict with the management of infrastructure related to Reclamation activities.
Improve and expand trails.	Yes	
Better manage and evaluate concessioners.	Dismissed	This is a policy issue that would be addressed in the concession management agreement for the campgrounds.
Limit the size of RVs at Estes Park campground.	Yes	
Do not develop the meadow in front of Estes Park campground.	Yes	
There's an opportunity to expand Estes Park campground and a limited manner.	Yes	
Safety needs to be improved on the shooting ranges at Common Point.	Yes	
Establish safety rules for Common Point shooting ranges.	Yes	
Expand range opportunities at Common Point, including an archery range, skeet range, and improved trap range.	Yes	Federal water quality laws do not allow shot or clays to fall into natural drainages. For this reason, skeet and trap ranges cannot be accommodated at Common Point.
Expand public use of Common Point.	Yes	
Lake depth is too shallow under the marina boat docks	Yes	
A safer pedestrian area is needed along Lake Estes shoreline at Cherokee Draw.	Yes	
There is need for flexible open lawn play areas at Lake Estes.	Yes	
Opportunity to provide small cabins in campgrounds.	Yes	
Control where dogs are allowed - they should be kept away from bird breeding areas.	Yes	
Visual and Aesthetic Resources		
The scenic landscapes (including the reservoirs) of the parks have been identified by park visitors and the local community as an important attraction .	Yes	
Be sensitive to visual impacts from facility development	Yes	

Issue/Opportunity Identified	Addressed in the RMP/EA (yes /dismissed)	Description/Notes
Equipment should not to stored where it is visible (during the closed season) to neighbors of the campgrounds.	Yes	
Infrastructure and Transportation		
Increasing use and additional opportunities at the parks will require additional maintenance and improved facilities to safely and effectively serve park visitors.	Yes	
Visitors need to be kept out of secure and risk areas.	Yes	
Need to provide better information about areas that are closed to the public.	Yes	
The access road to Common Point should be improved for low-clearance and ADA vehicles. The access should be ADA compliant	Yes	
The fire department needs access to lake shorelines for training and emergency access.	Yes	
The 9-hole golf course needs a new and more efficient irrigation system.	Yes	
Shuttle buses that travel to Estes Park campground cause traffic, noise, and pollution.	Dismissed	This is an issue that is beyond the scope of this plan and would need to be addressed by local government.
Campgrounds create congestion on local roads.	Yes	
Socioeconomics		
User populations are likely to diversify over the life of this RMP/EA. Park operations should serve all populations that could visit.	Yes	
Some commercial fishing guides do not pay concession fees.	Dismissed	This is a policy issue that would be addressed in the “rules and regulations for use of EVRPD managed properties.”
Cultural Resources		
Historic sites and cultural artifacts have been found at each of the parks and record a spectrum of historical events important to the overall history of the northern Front Range.	Yes	
Land Use		
Improve fencing to protect private property and limit trespassing.	Yes	
Some campsites are too close to private property.	Yes	
Noise from campgrounds at times.	Dismissed	This is a policy issue that would be addressed in the management agreement for the campgrounds

Issue/Opportunity Identified	Addressed in the RMP/EA (yes /dismissed)	Description/Notes
Smoke and wildfire risk from campground campfires.	Yes	
Campfires should be eliminated from campgrounds.	Dismissed	Campfires are an important part of the camping experience. There are no local laws that prohibit campfires. Campfires use is only prohibited during high wildfire risk periods per Estes Park Fire Department regulations.
Light pollution from campgrounds.	Yes	
Storm water from Marys Lake campground impacts a neighbor's property.	Yes	
Common Point shooting range boundaries should be posted with signs to warn of risks entering the area.	Yes	
Organizations and individuals request easements for utilities and private property access.	Yes	Reclamation policies and regulations specify how these requests are managed.
Sand and gravel are sometimes extracted from Lake Estes.	Yes	
How impacts to and from neighbors should be addressed.	Yes	Neighbors have been involved in the RMP process and impacts have been analyzed. Future issues or concerns should be addressed to EVRPD, who is responsible to respond to public comment related to management of Reclamation lands in Estes Valley.
Facility upgrades require a Larimer County "location and extent" process.	Yes	

APPENDIX D: APPLICABLE LAWS & REGULATIONS

- The 1968 Architectural Barriers Act (Public Law [P.L.] 90-480)
- Section 504 of the 1973 Rehabilitation Act (P.L. 93-112)
- The 1990 Americans with Disabilities Act (P.L. 101-336)
- The Federal Water Project Recreation Act of 1965 (P.L. 89-72, as amended by Title 28 of P.L. 102-575)
- American Indian Religious Freedom Act of 1978
- Archeological Resources Protection Act of 1979, as amended
- Archeological and Historic Preservation Act of 1974
- Clean Water Act of 1974, as amended
- Clean Air Act of 1970, as amended
- Department of Defense American Indian and Alaska Native Policy, October 20, 1998
- Endangered Species Act of 1973, as amended
- Executive Order 12875, Enhancing the Intergovernmental Partnership, October 26, 1983
- Executive Order 12898, February 11, 1994, Environmental Justice
- Executive Order 11990, 1977, Protection of Wetlands
- Executive Order 13007, Indian Sacred Sites, May 24, 1996
- Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, May 14, 1998
- Fish and Wildlife Coordination Act of 1958, as amended
- Indian Trust Assets Policy, July 1993
- Migratory Bird Treaty Act of 1918, as amended
- National Environmental Policy Act of 1969
- National Historic Preservation Act of 1966, as amended
- Native American Graves Protection and Repatriation Act of 1990
- Presidential Memorandum: Government-to-Government Relations with Native American Tribal Governments, April 29, 1994
- Applicable Reclamation Policies, Manuals, and Directives and Standards, including but not limited to:
 - Land Use Authorizations, LND 08-01
 - Management of Shooting Ranges on Reclamation Lands, ENV 02-07 (and Appendix A)
 - Concessions Management by Reclamation, LND 04-01
 - Land Disposal, LND 08-02
 - Concessions Management, LND P02
 - Recreation Management, LND P04
 - National Environmental Policy Act, ENV P03

APPENDIX E: NOXIOUS WEED LISTS

Table E-1. Colorado State Noxious Weed Lists.

List A*	List B (Part I)	List B (Part II)	List C
African rue (<i>Peganum harmala</i>)	Absinth wormwood (<i>Artemisia absinthium</i>)	Mayweed chamomile (<i>Anthemis cotula</i>)	Chicory (<i>Cichorium intybus</i>)
Camelthorn (<i>Alhagi pseudalhagi</i>)	Black henbane (<i>Hyoscyamus niger</i>)	Moth mullein (<i>Verbascum blattaria</i>)	Common burdock (<i>Arctium minus</i>)
Common crupina (<i>Crupina vulgaris</i>)	Bouncingbet (<i>Saponaria officinalis</i>)	Musk thistle (i)	Common mullein (<i>Verbascum thapsus</i>)
Cypress spurge (<i>Euphorbia cyparissias</i>)	Bull thistle (<i>Cirsium vulgare</i>)	Oxeye daisy (<i>Chrysanthemum leucanthemum</i>)	Common St. Johnswort (<i>Hypericum perforatum</i>)
Dyer's woad (<i>Isatis tinctoria</i>)	Canada thistle (<i>Cirsium arvense</i>)	Perennial pepperweed (<i>Lepidium latifolium</i>)	Downy brome (<i>Bromus tectorum</i>)
Giant salvinia (<i>Salvinia molesta</i>)	Chinese clematis (<i>Clematis orientalis</i>)	Plumeless thistle (<i>Carduus acanthoides</i>)	Field bindweed (<i>Convolvulus arvensis</i>)
Hydrilla (<i>Hydrilla verticillata</i>)	Common tansy (<i>Tanacetum vulgare</i>)	Quackgrass (<i>Elytrigia repens</i>)	Halogeton (<i>Halogeton glomeratus</i>)
Meadow knapweed (<i>Centaurea pratensis</i>)	Common teasel (<i>Dipsacus fullonum</i>)	Redstem filaree (<i>Erodium cicutarium</i>)	Johnsongrass (<i>Sorghum halepense</i>)
Mediterranean sage (<i>Salvia aethiopsis</i>)	Corn chamomile (<i>Anthemis arvensis</i>)	Russian knapweed (<i>Acroptilon repens</i>)	Jointed goatgrass (<i>Aegilops cylindrica</i>)
Medusahead (<i>Taeniatherum caput-medusae</i>)	Cutleaf teasel (<i>Dipsacus laciniatus</i>)	Russian-olive (<i>Elaeagnus angustifolia</i>)	Perennial sowthistle (<i>Sonchus arvensis</i>)
Myrtle spurge (<i>Euphorbia myrsinites</i>)	Dalmatian toadflax, broad-leaved (<i>Linaria dalmatica</i>)	Salt cedar (<i>Tamarix chinensis</i> , <i>T. parviflora</i> , and <i>T. ramosissima</i>)	Poison hemlock (<i>Conium maculatum</i>)
Orange hawkweed (<i>Hieracium aurantiacum</i>)	Dalmatian toadflax, narrow-leaved (<i>Linaria genistifolia</i>)	Scentless chamomile (<i>Matricaria perforata</i>)	Puncturevine (<i>Tribulus terrestris</i>)
Purple loosestrife (<i>Lythrum salicaria</i>)	Dame's rocket (<i>Hesperis matronalis</i>)	Scotch thistle (<i>Onopordum acanthium</i>)	Velvetleaf (<i>Abitilon theophrasti</i>)
Rush skeletonweed (<i>Chondrilla juncea</i>)	Diffuse knapweed (<i>Centaurea diffusa</i>)	Scotch thistle (<i>Onopordum tauricum</i>)	Wild proso millet (<i>Panicum miliaceum</i>)
Sericea lespedeza (<i>Lespedeza cuneata</i>)	Eurasian watermilfoil (<i>Myriophyllum spicatum</i>)	Spotted knapweed (<i>Centaurea maculosa</i>)	
Squarrose knapweed (<i>Centaurea virgata</i>)	Hoary cress (<i>Cardaria draba</i>)	Spurred anoda (<i>Anoda cristata</i>)	
Tansy ragwort (<i>Senecio jacobaea</i>)	Houndstongue (<i>Cynoglossum officinale</i>)	Sulfur cinquefoil (<i>Potentilla recta</i>)	
Yellow starthistle (<i>Centaurea solstitialis</i>)	Leafy spurge (<i>Euphorbia esula</i>)	Venice mallow (<i>Hibiscus trionum</i>)	
		Wild caraway (<i>Carum carvi</i>)	
		Yellow nutsedge (<i>Cyperus esculentus</i>)	
		Yellow toadflax (<i>Linaria vulgaris</i>)	

***List A species:** All populations of these species in Colorado are designated by the Commissioner for eradication. It is a violation of the rules to allow any plant of any population of any List A species to produce seed or develop other reproductive propagules.

List B (Part I) species: These noxious weed species are the ones for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed

management plans designed to stop the continued spread of these species. These species must be managed in accordance with all the provisions of the rules, including any applicable state noxious weed management plans. Until a plan for a particular species is developed and implemented by rule, all persons are recommended to manage that species.

List B (Park II) species: These noxious weed species are the ones for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species. These species must be managed in accordance with all the provisions of the rules, including any applicable state noxious weed management plans. Until a plan for a particular species is developed and implemented by rule, all persons are recommended to manage that species.

List C species: These noxious weed species are the ones for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of these species.

Table E-2. Larimer County Noxious Weed List.

Larimer County Noxious Weed List	Colorado State Noxious Weed List Correlation
Canada Thistle (<i>Cirsium arvense</i>)	B-List (Park I)
Dalmatian Toadflax (<i>Linaria genistifolia</i>)	B-List (Park I)
Diffuse Knapweed (<i>Centaurea diffusa</i>)	B-List (Park I)
Leafy Spurge (<i>Euphorbia esula</i>)	B-List (Park I)
Musk Thistle (<i>Carduus nutans</i>)	B-List (Park II)
Russian Knapweed (<i>Acroptilon repens</i>)	B-List (Park II)
Spotted Knapweed (<i>Centaurea maculosa</i>)	B-List (Park II)
Tamarisk spp. (<i>Tamarix ramosissima, parviflora</i>)	B-List (Park II)
Yellow Toadflax (<i>Linaria vulgaris</i>)	B-List (Park II)
Hoary Cress (<i>Cardaria draba</i> **)	B-List (Park I)
Perennial Pepperweed or Tall Whitetop (<i>Lepidium latifolium</i> **)	B-List (Park II)

**These weeds have not been declared noxious, but are considered troublesome and are on the Larimer County “Watch List”.

Sources: Larimer County Weed Control District 2008 and 2008b, CWMA 2008 and 2008b

APPENDIX F: PUBLIC COMMENT & RESPONSE

Comments	Response
Susan T. Pinkham – Lake Estes	
<p>The Bureau of Reclamation has open land directly east of the Upper Thompson Sanitation District new office building on Mall Road outside of Estes Park that the League of Women Voters (LWV) would like to use for a valley wide, community recycling center. This recycling center would be open to all residents of the Estes Valley. The LWV has worked alongside of other community organizations to determine what the recycling needs are in the Estes Valley and to find adequate facilities. We have realized that there is no existing building with adequate parking or truck turn around space in the area that would meet the needs of a recycling center. The Bureau of Reclamation land east of the Upper Thompson Sanitation District’s new office building is a perfect location. I am including copies of the physical requirements and operations of the recycling facility.</p>	<p>Reclamation will not be able to fully consider this proposal until the Town of Estes Park develops and adopts a Recycling Plan. This will allow for an open public process with in-depth consideration of an appropriate location, identification of the types of materials to be accepted, staffing needs, etc. Once a more complete proposal is received, Reclamation will comply with its policies, directives, and standards discussed in Section 2.2.5 in consideration of the proposal.</p>
Dennis and Maxine Kelly – East Portal and Estes Park Campground	
<p>I don't see any upside to the plans other than financial benefit for the campground owners. The blight on this area will be extensive including disruption to wildlife, increased fire risk, air pollution, noise pollution, and increased traffic just to name a few. Having the campground as it is, is bad enough -- please don't do anything to cause further negative impact!</p>	<p>The proposed improvements are intended to deal with impacts to the neighbors and environmental resources currently occurring in the area, while enhancing the quality of the recreational experience for campground users. These enhancements were designed to minimize impacts to the neighbors and environmental resources. Please refer to the impact analysis starting in Section 3.6. Additional comments related to traffic have been added in the Land Use Section 3.6.7. While there are some adverse impacts to environmental resources, these are not expected to be more than minor. Further, most are expected to be short term in duration and outweighed by the beneficial impacts.</p>

Comments	Response
John and Ann Vernon – East Portal and Estes Park Campground	
<p>The final plan for the Estes Park Campground contains some new elements that we find somewhat disturbing. A 3,300 sq. foot lodge is a fairly substantial structure; is it really necessary? Particularly, is a game room really necessary? A campground should encourage people (especially young people) to be outdoors, not indoors.</p>	<p>The proposed improvements were designed in consultation with the recreational users, campground concessionaire, and the manager, EVRPD. It was found that the existing store is inadequate as it does not meet ADA accessibility requirements; does not have an office space, a restroom in the reception area, or a maintenance space; and does not have enough store space. The lodge centralizes campground facilities and provides a number of amenities desired and needed by users. The implementation of the majority of these actions would be phased over the next 10 or more years. Funding levels and potential sources are described in Chapter 2.</p>
<p>We also object to the concessionaire being allowed to rent the facilities. Showers, store, etc. should be for guests only. These additions appear to be ways for the concessionaire to make more money, but perhaps that could be adjusted via the contract for the concession</p>	<p>While the proposed lodge would primarily serve Estes Park Campground customers, to a limited extent there may be opportunities when the services would be provided to people who visit East Portal day use area. It is not expected that people not already in the East Portal area would drive to the area specifically to receive such services.</p>
<p>We also don't like the idea of paved roads there, which contribute to global warming and to runoff.</p>	<p>As discussed in Sections 3.6.1 and 3.6.2, increased runoff is expected; however, the reduction in soil erosion problems and maintenance is believed to be a greater benefit. This is particularly important for campgrounds such as this where campers grind the soft surface when making tight turns and when roads have slopes over 2% grade. Standard Environmental Commitments related to drainage are outlined in Section 2.7.</p>

Comments	Response
Carol Beidleman – East Portal and Estes Park Campground	
<p>I was surprised and dismayed to see incorporated a feature which we had not heard about in previous discussions of potential improvements for the EPCG. I find the concept of building a 3,300-square-foot lodge there, at a price tag of nearly \$1,000,000, absurd. You can't possibly expect to get grants, contributions or, especially, voter approved bonds, to pay for such an unwarranted facility! Indeed, the overall price tag for the East Portal improvements, of over \$3,700,000 is staggering and indefensible.</p>	<p>See the responses above.</p>
<p>The expense and lack of need for this lodge at EPCG, with deli and coffee shop (why is this necessary?), laundry, game room (ditto), vending services, and showers, is made even more objectionable by the sentence, sneakily included, that: "The campground concessionaire would have the option to rent services to campers from outside the Estes Park Campground." It is not the role of the Bureau of Reclamation to supplement and/or compete with the restaurant or shower facilities that the Town of Estes Park already has, especially with public money, by allowing a concessionaire to offer these amenities to those not staying at the EPCG! WE DO NOT WANT MORE TRAFFIC UP THIS ROAD, for those not staying at the campground but seeking a shower or cup of coffee! The EPCG is already responsible for a high volume of unwanted heavy traffic up this otherwise quiet dead-end road, and it is unconscionable for not only this luxury facility to be included in a government plan but also for its services to be offered to people not staying there, like a commercial venture. The lodge should be scaled down to the basics, and no amenities included should be allowed to be used by those not staying at EPCG.</p>	<p>See the responses above.</p>

Comments	Response
<p>Regarding the 20 new walk-in sites, at a pretty hefty price tag themselves, I am wondering if these kinds of additional sites are really in demand enough to warrant this new construction, including destroying a 2 acre area and creating a parking lot for 28 spaces. Also, walk in sites in this area will, by definition, be placed in the forest, and because of fire danger in these locations, should only be allowed for tenters with stoves, not as sites supplied with fire grates. I have seen fires in grates in EPCG which had flames more than 6 feet high, with tree branches overhead.</p>	<p>Most public campgrounds in Colorado are adding walk-in campsites due to their popularity. The current campground concessionaire has advised us that these types of campsites are in high demand. The addition of walk-in sites will set this campground apart from others in the area, such as at RMNP where walk-in sites are not within a campground setting, or in the town campgrounds where such sites do not exist. The walk-in tenting area does not have rare or sensitive plant or animal species; however, the adverse effects of construction and removing select trees to accommodate the sites are discussed in Section 3.6. As with other campsites in the campground, these would be designed and managed to reduce the risk of wild fires.</p>
<p>In my opinion, there are other ways to reduce the erosion from the road system and to better manage the driving through the EPCG so that the campground roads do not need to be paved. This is a huge expense, and pavement in this most natural of all campgrounds in the Estes Valley (outside the national park) is incongruent with the area and will be an eyesore. Runoff and contamination are a further concern.</p>	<p>See the response above.</p>

Comments	Response
<p>The plan states that there are "no notable noxious weed infestations are present at East Portal". This is not true. As a biologist with experience in weed management, and one who regularly patrols the entire upper Spur 66 area with my husband up to the campground to look for and hand pull noxious weeds, I can tell you that there are definitely infestations of Canada Thistle and Musk Thistle (both county listed noxious weeds) on the East Portal property, as well as nearby occurrences of Yellow Toadflax (county listed) and previous infestations of Diffuse Knapweed (county listed). It has been our experience over the last many years that the EPCG personnel do not actively patrol for or manage their weed infestations, causing the campground to become a seed source for all of the properties down hill from runoff, wind, and vehicle tires.</p>	<p>Clarification has been added to Section 3.6.3. Noxious weed management is outlined in the Standard Environmental Commitments presented in Section 2.7.2 Enforcement of existing regulations and commitments is managed through Reclamation, the EVRPD, and the Larimer County Weed Control District. Infestations or infractions should be reported to these agencies.</p>
<p>The East Portal plan mentions that "birds in the area include" Blue-gray Gnatcatcher and Bewick's Wren. As an ornithologist who has documented over 100 bird species in the Upper Spur over the last 20 years, I have never seen either of these two species in this area. In fact, such sightings would constitute a reportable record, not only for the Estes Valley but for Rocky Mountain National Park. I say this only to point out that whatever source of information was used to report on the wildlife of the East Portal is questionable, and that it raises doubt about the level of expertise involved in putting the plan together, especially given that the Town of Estes has just contracted with EDAW to do a wildlife habitat study of the Estes Valley.</p>	<p>This information was published in the 1993 RMP/EA and was carried over to this plan. These species references have been removed from the plan.</p>

Comments	Response
<p>Regarding the complaints by private residents living near the EPCG, you neglected to include the most obvious and far-reaching one affecting all of us daily, since we are all down-wind. This is the air pollution from campfires in the campground, which is so acrid that we must retreat into our houses most summer mornings and evenings due to the health-impacting smoke (I have asthma; another neighbor has chemical sensitivities). None of the improvements related to fire containment will ensure that escaped campfires do not occur and cause a wildfire. I would like to see campfires eliminated, a stoves only policy.</p>	<p>Campfires are an important part of the camping experience. Campsites will be improved with smaller fire rings and gravel pads to reduce the size of fires and the smoke they emit, and greatly reduce the risk of fire escape. Campfires will be limited by the local fire department during designated wildfire risk periods. There is a reduction of campground sites at Marys Lake Campground and a net increase in campsites at Lake Estes (8 additional sites). The smaller fire rings in combination with the small net increase in campsites should have no additional impact on air quality. Clarification has been added to Section 2.2 regarding the consideration of air quality.</p>
<p>You have also neglected to mention the increased road traffic the campground's presence creates, including with adding new sites. Much of this traffic could be eliminated if the campground was required to put up a "full" sign at the entrance to Spur 66 (Beaver Point) so that numerous cars, and noisy trucks and RVs/campers did not make the trip up this dead end road and right back down again after finding the campground full! Last year this traffic was increased due to the EPCG's inclusion in the Town's Shopper Shuttle, which roared by our houses 28 times a day.</p>	<p>The Town of Estes Park decides where shuttle routes are located and whether or not to add a campground full sign; this determination is out of the jurisdiction of EVRPD and Reclamation and, therefore, not addressed in this plan. See other responses above for traffic.</p>
<p>Visual blight is another aspect of the campground which is undesirable.</p>	<p>The scenic and aesthetic resources analysis is addressed in Section 3.6.6 and outlines an overall beneficial impact as a result of the proposed alternative.</p>
<p>The plan mentions that there will be "preventative MPB spraying". Please be advised that one of the closest neighbors (private residence) to the EPCG and East Portal Day Use Area is chemically sensitive, and will need to be notified prior to any spraying.</p>	<p>Clarification has been added to the Standard Environmental Commitments (Section 2.7.3) that signs will be posted in advance of spraying.</p>

Comments	Response
Overall, while I appreciate the effort which has been made to address many of the problems related to the BOR facilities at the Estes Park Campground and East Portal Day Use Area, I think the plan and facilities are overdeveloped, especially the EPCG.	The campground is being redeveloped to meet USBR design standards, add buffers, address key issues, and improve the recreational experience. See the responses above for additional information.