RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Poison Creek Replacement Campground Project

U.S. Department of the Interior
Bureau of Reclamation

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Acronyms and Abbreviations

ADA	Americans with Disabilities Act, as amended
ARPA	Archaeological Resources Protection Act
BMP	Best Management Practice
C/OS	Conservation/Open Space
CDC	Conservation Data Center
CRMP	Cultural Resources Management Plan
DPS	Distinct population segment
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDPR	Idaho Department of Parks and Recreation
IPM	Integrated Pest Management
ITAs	Indian Trust Assets
LAU	Lynx analysis unit
NAGPRA	Native American Graves Protection and Repatriation Act
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
ORV	Off-road vehicle
Reclamation	U.S. Bureau of Reclamation
RFP	Request for Proposals

RMP	Resource Management Plan
RR	Rural Residential
RV	Recreational Vehicle
SH-55	State Highway 55
SHPO	State Historic Preservation Act
SISCRA	Southwest Idaho Senior Citizen's Recreation Association
SWPPP	Storm Water Pollution Prevention Plan
TCP	Traditional cultural property
TMDL	Total Maximum Daily Load
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WMA	Wildlife Management Area

1 Purpose and Need for Action

1.1 Introduction

The Bureau of Reclamation (Reclamation) is proposing to allow Idaho Department of Parks and Recreation (IDPR) to convert Poison Creek Campground at Lake Cascade to a day use facility and develop a new campground to replace campsites lost at Poison Creek (Figure 1, *Regional Location Map*). This Environmental Assessment (EA) evaluates the proposed development of the replacement campground and conversion of the Poison Creek campground to day use. Facility changes and construction work would be needed at Poison Creek to accommodate day use. However, specific facility plans for the Poison Creek campground conversion to day use have not been developed at this time. Therefore, future changes to Poison Creek campground facilities are not evaluated in this EA.

The National Environmental Policy Act (NEPA) of 1969 requires Reclamation to explore a range of possible alternative management approaches and the environmental effects of these actions. Two alternatives are evaluated and compared in this document, including a No Action Alternative and a Proposed Action. The impacts of each alternative were evaluated for the affected resource areas, including water quality, vegetation, wildlife, threatened and endangered species, aquatic biology, recreation, socioeconomics and environmental justice, Indian Trust Assets (ITAs), and cultural resources. Air quality, topography, transportation and access, soils, water resources and hydrology, visual resources, land use, and geology were also evaluated, but are not included in this document because no impacts would occur to these resources.

The purpose of this EA is to assist Reclamation in finalizing a decision regarding conversion of the Poison Creek Campground at Lake Cascade to a day use facility and development of a new campground to replace campsites lost at Poison Creek. Through the EA process, Reclamation will determine whether to issue a Finding of No Significant Impact (FONSI) or a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS). An environmental analysis is required by NEPA for any Federal action that may have a significant impact on the environment.

1.2 Authority

Both the Poison Creek Campground and the proposed replacement campground sites are located on Reclamation-owned land; therefore, the related actions are Federal actions and their impacts must be analyzed in an EA or EIS. Reclamation has determined that an EA is the appropriate document to prepare at this point. Reclamation does not anticipate an EIS will be required.

1.3 Proposed Federal Action

The proposed Federal action would be for Reclamation to allow IDPR to convert all or part of the Poison Creek Campground at Lake Cascade to a day use facility and develop a new campground to replace campsites lost at Poison Creek. IDPR currently operates recreation sites on Reclamation lands at Lake Cascade as part of Lake Cascade State Park under a lease agreement with Reclamation.

1.4 Purpose and Need

Poison Creek Campground is located on the northwest shore of Lake Cascade. The main entrance to Tamarack Resort is located immediately to the west of Poison Creek and major development associated with the resort is occurring adjacent to the campground. IDPR prepared a report in 1999, titled, *Potential Impacts of the Westrock Development on Recreation and Recreational Facilities in the Lake Cascade Area* (Westrock is now known as the Tamarack Resort). The report indicated that development of Tamarack Resort would have detrimental impacts on visitors using the Poison Creek Campground. Impacts currently result from the large increase of motor vehicle traffic on West Mountain Road, especially heavy construction trucks. As Tamarack residences are constructed, a large influx of pedestrian traffic from the resort is anticipated and would continue to increase as development associated with the resort grows. The project is needed because these two factors were identified as degrading the camping experience at Poison Creek.

Reclamation's 2002 Lake Cascade Resource Management Plan (RMP) recognized an ever-increasing demand for camping facilities at Lake Cascade. One objective of the RMP was to provide additional capacity for recreational vehicle (RV) camping and to upgrade existing campgrounds to serve modern RV's. The proposed replacement campground would increase the number of RV and tent camping sites. The RMP also identified the West Mountain–Poison Creek Campground area as proposed marina. Conversion of part of the Poison Creek campground to day use would better accommodate future development of a marina at that site.

Relocating the camping facilities from Poison Creek and creating a day use park would have a number of benefits. The camping facilities would be removed from the impacts of the increased motor vehicle traffic and the large number of pedestrian traffic that is associated with the development adjacent to Poison Creek. The replacement camping facilities would have sufficient accessible facilities to meet all Americans with Disabilities Act (ADA) standards. The current facilities at Poison Creek do not meet ADA standards. The conversion of Poison Creek would also accommodate the day use traffic from Tamarack Resort and the new adjacent property owners.

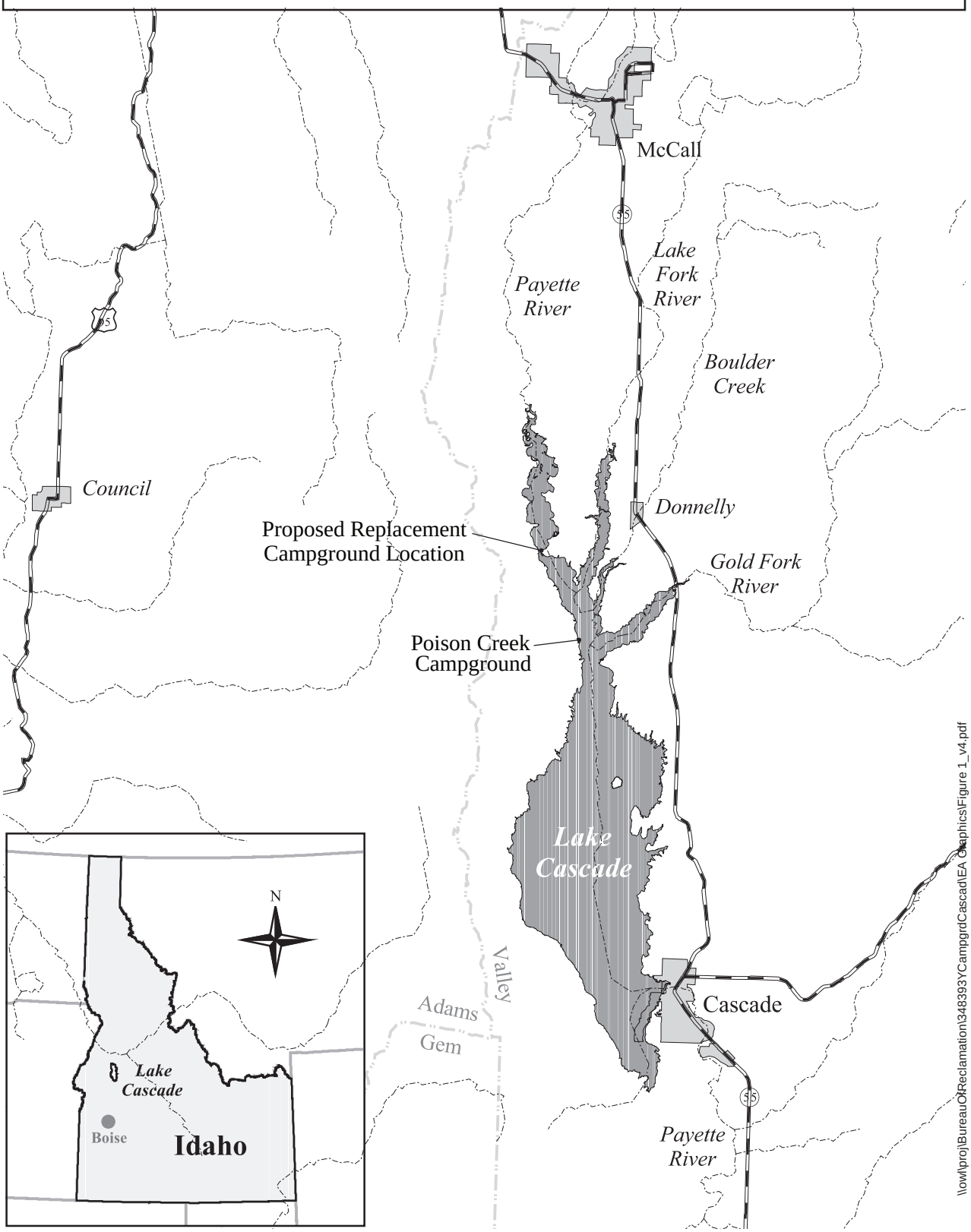
1.5 Related Activities

Ongoing activities around Lake Cascade have cumulative effects on resources near the Poison Creek Replacement Campground site. These effects are addressed in Chapter 3, *Affected Environment and Environmental Consequences*, in both the Affected Environment and the Cumulative Effects sections.

1.5.1 Private Residential Development

Residential development is occurring at many locations within a few miles of the proposed replacement campground. Two of these developments were considered to be near enough to the project area to be addressed as cumulative impacts: the Hawks Bay subdivision immediately to the northeast of the proposed campground site; and the proposed Crane Shores subdivision, also located along the lake shoreline north of the Hawks Bay project.

Figure 1
U.S. Bureau of Reclamation
Poison Creek Replacement Campground
Environmental Assessment



1.5.2 Marina

Reclamation's 2002 RMP, and the 1991 RMP before that, proposed that a small marina be constructed in the area of West Mountain Campground, which was thought at that time to be closest to the proposed Westrock development entrance. The marina was designated as secondary to a marina at Van Wyck near the city of Cascade. Planning studies for the Van Wyck site are ongoing. However, because the Van Wyck marina will likely require an expensive breakwater, funding and schedule for implementation are uncertain.

For these reasons, IDPR and Reclamation have begun to move forward with the secondary marina at Poison Creek. Current plans call for marina to be designed, constructed, and operated by a concessionaire. In November 2006, IDPR issued a request for proposals (RFP) for a marina from potential concessionaires. A proposal from Tamarack Resort was the only proposal received in response to the RFP, and negotiations to formulate a proposed development plan are ongoing. Once a proposed plan for the marina is developed, a separate NEPA document will be prepared to address construction and operation of the marina as well as other day use facilities to be constructed at the former Poison Creek campground. The marina is scheduled to open as early as 2009.

1.5.3 Tamarack Resort

The four-season Tamarack Resort is located immediately west of Lake Cascade and the Poison Creek campground on private and State of Idaho land. Construction on Phases 1, 2, and 3 is ongoing and many homes and other facilities are complete. Phases 1, 2, and 3 will include 336 single family homes, chalets, and townhouses, as well as about 450 hotel rooms and condominium units. Construction of the sewer, power, and roadway infrastructure for Phases 4, 5, and 6, called Heritage, will begin in 2007 and is to be completed in three years. Heritage is planned to include 556 single family homes, chalets, townhouses, and condominium units and a ski village with 12 hotel rooms. Build out of these facilities will occur over several years beyond 2010. A total of 2,043 dwelling units and 5,068 parking spaces are planned when the project is complete (Tamarack 2002).

1.5.4 Van Wyck Campground Improvements

Van Wyck is currently a primitive campground that is used for tents and RVs. Campground improvements at Van Wyck were proposed in both the 1991 and 2002 RMP's. Construction of improvements are now scheduled for fall of 2007. Improvements to the park would include enhancing the day use area, paving pedestrian trail, and building a dump station, shower restroom building, restroom building, and approximately 26 RV sites. Each of the RV sites would have water and power. It is yet to be determined if sewer will be at each site.

1.6 Location and Background

Lake Cascade is located in the west central mountains of Idaho at the western edge of Long Valley in Valley County. The lake is on the North Fork of the Payette River where the river flows along the base of a mountain ridge and across a broad valley floor. The Poison Creek campground is located along the northwest shore of Lake Cascade in the northern third of the lake. The proposed replacement campground site is located near the northern end of the lake on the North Fork Payette River arm east of Tamarack Falls Bridge (Figure 2, *Detailed Location Map*).

Figure 2
U.S. Bureau of Reclamation
Poison Creek Replacement Campground
Environmental Assessment

Detailed Location Map and Reclamation Management Designations

North Fork Payette River
North Fork Payette WMA
Lake Fork River
Boulder Creek
Lake Fork WMA
Donnelly
Donnelly City Park
4-H
Willow Creek
Proposed Replacement Campground Location
Tamarack Falls (USFS)
Rainbow Point (USFS)
Amanita (USFS)
Huckleberry
Curlew
Buttercup
West Mountain
Poison Creek
Tamarack Resort (Approximate Boundary)
Driftwood Point
SISCRA
Gold Fork WMA
Informal Boat Launch
Gold Fork River
Boulder Creek
No Wake Marked by Buoys
Arrowhead Point
Mallard Bay
Hot Springs WMA
Osprey Point
West Mountain Rd
Duck Creek WMA
Sugarloaf Island
Pelican Bay
Lake Cascade
Ambush Rock Historic Site
Cascade Dam
Van Wyck Extension
Van Wyck
North Fork Payette River
Cascade

Legend

Reclamation Lands
No Wake Zone
Road
Railroad
Stream, Lake, Pond - Perennial

RMP Management Designation
Non-Motorized Boating
No Wake Zone
O & M Zone
Rural Residential Area
Conservation Open Space
Proposed Recreation Site
Recreation Site (Managing Agency)
Wildlife Management Area

Status of Surface Management
Open Water
Private
State of Idaho
USFS

The information displayed here is based on the best available data at the time of publication. Neither the authors, Reclamation, or any other party here warrant or represent that the information is in every respect complete and accurate, and are not held responsible for errors or omissions.

Source: Map 2-2 from Reclamation (2001).

N

1 0 1 2 Miles

\\owlproj\BureauOfReclamation\348393YCampgrdCascade\EA Graphics\Map2-2c_v3.pdf

The Poison Creek campground is located about 3 miles to the south of the proposed site.

Lake Cascade is located approximately 80 miles north of the Boise metropolitan area by State Highway 55 (SH-55). The City of Cascade is near the south end of the lake and the City of Donnelly is near the north end. Both cities lie to the east of the lake. Reclamation administers a narrow strip of land of irregular width around most of the lake. Generally, the lands west of the lake away from the immediate shoreline are administered by the Boise National Forest. The remaining surrounding land is privately owned, except for isolated parcels of state and Federal lands.

Information on lake system operations is provided as background information only. The proposed federal action does not address lake operations because these operations are governed by other requirements. When the lake is full, 86 miles of shoreline extend into the narrow arms of the North Fork of the Payette River, Gold Fork River, and Boulder and Lake Fork Creeks at the north end. Including the North Fork (Payette River) arm, the lake is approximately 21 miles long.

There are 28,300 surface water acres at normal full pool. The lake is shallow; the average depth is only 26.5 feet. Beginning in the early 1980s, the average annual drawdown has been 12 feet to maintain higher water quality and protect the lake fishery from the most severe drawdowns. This has maintained recreational access later into the summer season and fall. The lowest water levels are typically reached in the month of October; the highest in June or July. Adhering to this minimum pool depends on adequate water supplies to meet irrigation water delivery contracts.

1.7 Scoping and Issue Summary

1.7.1 Scoping

Reclamation began the public involvement process for the Poison Creek Replacement Campground project in August 2006 by initiating public scoping. A scoping letter describing the proposed project was posted on Reclamation's Pacific Northwest Region website and sent to those on the mailing list. In addition, a news release was issued announcing the scoping process. The news release briefly described the proposed project and announced that a public open house providing information about the proposal would be held in Cascade, Idaho, on August 29, 2006. Both the Idaho Statesman and Long Valley Advocate published short articles announcing the scoping process and meeting, and the issues raised are described in the next section. The purpose of this scoping process was to identify issues related to the project that needed to be considered or included in the alternatives and addressed in this Draft EA. The public involvement process is more fully described in Chapter 4, *Consultation and Coordination*.

1.7.2 Summary of Issues

This EA addresses activities occurring on Reclamation lands associated with conversion of the Poison Creek campground to day use, and development of a new campground on Reclamation lands at Lake Cascade. Reclamation identified several issues that need to be addressed by the EA. Additional issues were identified during the public scoping process. A summary list of issues identified during scoping is presented in Table 1-1.

TABLE 1-1
Issues Identified During Public Scoping

Category	Issue	Response in this EA
Public Access to Existing Facilities	• Maintain public access to all of the facilities at Poison Creek	Changes and access to existing facilities are addressed in Chapter 2, Section 2.2.3, *Common Features of Both Alternatives,* and in Section 3.2, *Recreation.*
Campground Preference	• Favor the current Poison Creek campground site over the proposed site for camping	Changes in the area around the Poison Creek campground that are degrading that facility resulting in this proposed replacement campground are discussed in Section 1.4, *Purpose and Need, Section 2.2.2, Alternative B–Preferred Alternative,* and in Section 3.2, *Recreation.*
Cultural and Historic Resources	• Integrity of the cultural site at the proposed campground is being lost to erosion • More human use will increase collection and destruction of the cultural site • Shoshone-Bannock Tribe requested participation in mitigation planning • Government to Government consultation may raise additional issues	Cultural and historic resources are discussed in Section 2.2.3, *Common Features of Both Alternatives,* Sections 3.3, *Cultural Resources,* and in Section 4.3, *Tribal Consultation and Coordination.*
Facilities at Proposed Campground	• Need a group site • Need at least three day use shelters close to campsites, and more restrooms • Tent sites are too concentrated • Consider camper privacy in trail development • Facilities need to be handicap accessible • Too many pull through sites–wastes space • The proposed site should have a boat ramp	Facilities considered for inclusion in the proposed campground are discussed in Section 2.3, *Alternative Elements Eliminated from Consideration.*
Wildlife	• Recommend comprehensive look at current and future recreational use at Lake Cascade and identify and protect key habitat areas. • Increased human use may further aggravate disturbance to Poison Creek and Buttercup bald eagle territories • Evaluate impacts on the northern Idaho ground squirrel • Refer to the RMP Fish and Wildlife Coordination Act report for other recommendations	These topics are discussed in Sections 3.8, *Wildlife*, and 3.9, *Threatened and Endangered Species*.

2 Alternatives

2.1 Introduction

This chapter presents the alternatives being considered for implementation for the Poison Creek Replacement Campground project. It describes the No Action Alternative and one action alternative in detail.

2.1.1 Alternatives Development

NEPA requires federal agencies to evaluate a range of reasonable alternatives to a proposed federal action that meet the purpose and need of the proposed action. The NEPA alternatives development process allows Reclamation to work with interested agencies, Tribes, the public, and other stakeholders to develop alternative courses of action that respond to identified issues.

RMP Management Designations and Direction Regarding Site Selection

Reclamation initially developed an RMP in 1991 to manage resources, facilities, and access on their lands and waters around Lake Cascade (Reclamation 1991). The 1991 RMP covered the period from 1991 through 2001. It was updated in 2002 (Reclamation 2002) and is being used as the basis for directing activities on Reclamation lands and the water surface in a way that maximizes and balances overall public and resource benefits. The current RMP provides guidance for managing the area during the 10-year period from 2002 through 2012. The RMP identifies goals and objectives for resource management, specifies desired land and resource use patterns through land management designations, and explains the policies and actions that would be implemented or allowed during the 10-year life of the plan to achieve these goals and objectives.

The 1991 and 2002 RMPs for Lake Cascade designated that Reclamation lands be managed for four general purposes (Figure 2):

- Wildlife Management Area (WMA)
- Rural Residential (RR)
- Conservation/Open Space (C/OS)
- Recreation

Each of these RMP management designations and compatibility with the proposed campground development is briefly discussed.

Wildlife Management Areas (WMA)

Protecting wildlife and enhancing habitat at Lake Cascade is a particularly crucial function and an important mandate for Reclamation because the lake provides habitat for several species (Reclamation 2002). The RMP reaffirmed that preserving wildlife values in the face of increasing recreation use, residential use, and commercial development near the lake is the primary function of the WMAs. Therefore, development of a campground within one of the WMAs is not compatible with the intent of this designation or the RMP.

Rural Residential (RR)

Areas designated as RR occur exclusively in the northeast part of the lake and apply to narrow Reclamation ownership located between the high water line and adjacent, subdivided private land. Reclamation ownership along most of the shore in this area is less than 100 feet wide; much of it is less than 50 feet. The RR lands are too narrow for potential campground development and the location of these lands adjacent to private subdivisions is not suitable for use as a campground.

Conservation/Open Space (C/OS)

Lands in this category are managed to

preserve open space, maintain buffers between public or private land uses including public recreation areas and WMAs, and maintain and enhance wildlife habitat and water quality values through restoration, erosion control, and revegetation of over-used areas. Public use of C/OS land is permitted, but restricted to passive, low-intensity activities such as hiking, dispersed picnicking, swimming, fishing, and nature study. No overnight uses are permitted and vehicular access is limited to reduce resource damage. The values associated with C/OS designation are not compatible with a campground and the C/OS designation does not allow campground development.

Recreation
Sites designated as recreation areas in the RMP are intended to be used by the public for a variety of recreation activities. The proposed replacement campground site was designated for recreation development under a lease with the YMCA in the 2002 RMP (Reclamation 2002). The YMCA has since abandoned plans for this site. However, it is still designated as a recreation area in the RMP and is therefore available for recreation development. Other RMP-designated recreation sites are either already developed or are generally linear in their configuration and not suitable for a campground. The proposed site of the replacement campground is the only RMP-designated recreation site that is large enough for the proposed campground.

RMP Support for Site Selection
For the following reasons, the former YMCA site is the only feasible location to construct and operate the Poison Creek replacement campground:

- Constraints and management direction for WMA, RR, and C/OS land use designations regarding development and operation of a campground are all outside of the project area
- The RMP Goals and Objectives support appropriate recreation development at this site
- A certain land area and configuration are needed for campground development; these areas are limited and the proposed site is the only designated recreation area that meets this need

Given these constraints, only one action alternative has been identified. Minor potential variations to the specific campground configuration were not considered to be substantial enough to warrant development of a second action alternative.

Public Scoping Comments
Reclamation and IDPR jointly developed the proposed action based on issues identified during the public involvement process, and refined this alternative during discussions with IDPR staff. No recommendations for alternate sites for the replacement campground were received during scoping. The purpose of this scoping process was to identify issues related to the project that needed to be considered or included in the alternatives and addressed in this Draft EA. Scoping notices and public meetings were described in Chapter 1, *Purpose and Need for Action*, Section 1.7, and the public involvement process is more fully described in Chapter 4, *Consultation and Coordination*.

2.2 Alternatives

This EA evaluates one action alternative that prescribes natural, cultural, and recreation resource management actions

associated with development of the Poison Creek Replacement Campground. The No Action Alternative, as required by NEPA, is also analyzed. Each alternative assumes a different future condition at both the existing Poison Creek Campground and at the Poison Creek Replacement Campground site. The impacts of each alternative are described in Chapter 3, *Affected Environment and Environmental Consequences.*

2.2.1 Alternative A—No Action Alternative

Under the No Action Alternative, the former YMCA camp site would not be developed as a replacement campground. In accordance with the Lake Cascade RMP, this site would retain its recreation designation with potential for leasing or other future recreational development of some kind in the future. A small marina and associated parking would be developed in the West Mountain/Poison Creek area as described in the RMP. It is likely that six campsites directly impacted by constructing a marina would be removed at Poison Creek and the remainder would be retained. The existing boat ramp at Poison Creek would remain unchanged.

2.2.2 Alternative B—Preferred Alternative

Reclamation is proposing to allow IDPR to convert all or part of the Poison Creek Campground at Lake Cascade to a day use facility and develop a new campground to replace campsites lost at Poison Creek (see Figure 2, provided in Chapter 1). IDPR operates recreation sites on Reclamation lands at Lake Cascade as part of Lake Cascade State Park under a lease agreement with Reclamation. IDPR (1999) found that construction of Tamarack Resort would have detrimental impacts on visitors using the Poison Creek Campground. Noise has become an issue for campers, and conversion of the Poison Creek site to a day use park would replace camping, which is which is less compatible with the noise, to day use. Day use would better complement the recreation needs and use of visitors and residents of adjacent Tamarack Resort and the general public. Noise resulting from the ongoing construction of the Tamarack Resort would continue.

Facility changes and construction work would be needed at Poison Creek to accommodate day use. This alternative would also involve construction and operation of a marina and parking at Poison Creek. Specific facility plans for the Poison Creek campground conversion to day use have not been developed at this time. They will be evaluated as part of the separate NEPA document to be prepared for marina construction and operation. Therefore, future changes to Poison Creek campground facilities are not evaluated in this EA.

IDPR has proposed to relocate the Poison Creek Campground to a 44-acre site 3 miles northeast of the current site. This site was designated for recreation development under a lease with the YMCA in Reclamation's 2002 Lake Cascade Resource Management Plan update (Reclamation 2002). The YMCA has since abandoned plans for this site, so it is now available to IDPR for recreation development. The proposal calls for construction of about 50 sites to accommodate RV and tent camping at the former YMCA site. This would be an increase in camping options from the Poison Creek Campground, which has about 18 primitive sites and an informal group camping area that is used as an overflow area when needed (Burrows, pers. comm. 2007b). The current conceptual design of the campground is shown in

Figure 3, *Poison Creek Replacement*. It includes 44 RV sites, two tent camping areas, two day-use shelters, four future cabins, restrooms with showers, and two vault restrooms. Each of the tent camping areas would have a parking area and graveled paths and tent sites. The new campground would have sufficient accessible facilities to meet all (Americans with Disabilities Act (ADA) standards. The RV sites would have electrical and sewer hookups to accommodate the most modern RVs. An RV dump station may be provided if sewer hookups are not provided at each site. The shower and restroom would also be hooked up to existing sewer lines. The site layout may change slightly as the design is completed. The final design will avoid impacts to all wetlands and waters of the United States.

Construction would occur during one or portions of two construction seasons, depending on when the project begins. The construction season typically extends from May through the end of November.

Construction practices and disposal of all waste material and sewage from construction activities or project-related features are described in Chapter 5, *Environmental Commitments.* The construction contractors will be required to adhere to the provisions of a Storm Water Pollution Prevention Plan (SWPPP). Site design, construction, and operation will also follow all applicable provisions of the Cascade Reservoir Watershed Management Plan Total Maximum Daily Load (TMDL) process. Details regarding permits and control and disposal of materials are described in Chapter 5, *Environmental Commitments.*

Clearing of vegetation for roads and RV pads would be limited to within 6 feet of the finished surface area. Water and sewer lines would be buried within or adjacent to the planned roadways. Excess spoils materials, if any, would be disposed on a previously disturbed upland site within the project area. Spoil areas and areas disturbed during construction would be revegetated as described in Chapter 5, *Environmental Commitments*. Tree-clearing would be limited to the minimum area needed for construction. Trees greater than 12 inches in diameter, as well as less common species including western larch (*Larix occidentalis*), Engelmann spruce (*Picea engelmannii*), and aspen (*Populus tremuloides*) would be preserved as much as possible.

2.2.3 Common Features of Both Alternatives

Although the alternatives differ in some ways, the following features are common to both alternatives:

- Continue to designate lands at the proposed replacement campground site as a Recreation site in accordance with the existing RMP (Reclamation 1991 and 2002).
- Allow development of a marina at the current site of the Poison Creek campground.
- Continue operation of the Poison Creek boat ramp.
- Coordinate with law enforcement entities regarding Public Law 107-69, which authorizes Reclamation to enter agreements with State, Tribal, and local law enforcement agencies to carry out law enforcement on Reclamation land.
- Comply with current accessibility regulations and standards required at all new facilities and on retrofits of existing facilities.
- Protect wetland and riparian areas.


U.S. Bureau of Reclamation
Poison Creek Replacement Campground
Environmental Assessment
Figure 3
Poison Creek Replacement
U.S. Bureau of Reclamation
PFO = Forested Wetland
PSS = Palustrine Scrub-Shrub Wetland
PEM = Palustrine Emergent Wetland
Property Line
High Water
Boardwalk
Camp Pads
Paths
Roads
Tent Camping
Restrooms, showers
day use shelter & cabins
Feet
0
125
250
N

- Coordinate with Tribes and appropriate agencies regarding cultural resources.
- Continue to inform the public of management decisions and issues as needed through standard media outlets.

Rare and Sensitive Species

Continue to comply with the federal Endangered Species Act (ESA) regarding all pertinent activities. In addition to complying with the ESA, as outlined in Alternative A, Reclamation would specifically protect state species of special concern. Such species would include Idaho Conservation Data Center (CDC) category S2 and S3 plants and plant communities.

Pest Management

Reclamation would continue to cooperate with Valley County on implementation of the Valley County Integrated Pest Management (IPM) Plan. This plan would include invasive terrestrial and aquatic species, and may include cultural, biological, mechanical, and chemical control methods.

Water Quality, Erosion and Sediment Control

Both alternatives would follow the same best management practices to avoid and minimize water quality degradation during land clearing and construction. To protect water quality, Reclamation would continue to provide adequate sanitation and waste management facilities at developed recreation sites, such as restrooms and trash containers. Chemical fertilizers, herbicides, and pesticides on Reclamation lands, including those leased for agricultural purposes, would continue to be used in a manner that does not adversely affect water quality. Motorized vehicular use on the shoreline (outside of boat ramps) and within the drawdown zone area of the lake would continue to be prohibited.

Cultural and Historic Resources

Reclamation would continue to comply with Sections 106 and 110 of the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act (ARPA), and the Native American Graves Protection and Repatriation Act (NAGPRA). As defined in 36 CFR 800, Reclamation would use a consultative process involving the Idaho State Historic Preservation Office (SHPO) and interested Tribes to determine if sites are eligible to the National Register of Historic Places (National Register), to assess the effects of an undertaking on eligible properties, and to identify preservation or mitigation actions. If human remains are discovered that are of Indian origin, Reclamation would apply the processes defined in 45 CFR 10. Any new undertakings on federal land would comply with Executive Order 13007 (Indian Sacred Sites). If future undertakings generate archaeological collections, Reclamation would direct curation of those collections using processes consistent with 36 CFR 79 and 411 DM, which define federal requirements.

Access

Access to Reclamation lands would be allowed according to current policies and regulations. These regulations prohibit off-road vehicle (ORV) use on all Reclamation land unless specifically opened. Also, the safety and security of the dam and the area surrounding the dam has priority over public access to this area. For safety and security reasons, this area will remain closed to public access.

Visual Resources

To enhance scenic values, any new or renovated facilities, structures, roads, trails, and erosion control structures would be located and designed to be compatible and integrate with the open, rural environment of the lake and surrounding area. These facilities and structures would be required to comply with applicable design standards, guidelines, and best management practices (BMPs).

Public Information

Using Reclamation's sign manual as appropriate, clear, consistent signage would be built to guide public access to and use of Reclamation lands and park facilities. Also, informative and concise public information materials would be provided on a continuing basis through local merchants, chambers of commerce, government offices, Reclamation, and the IDPR web sites, fee stations, recreation areas, and road-side pullouts.

2.3 Alternative Elements Eliminated from Consideration

The YMCA site was considered as the site of the replacement campground because it is currently designated for Recreation in the Lake Cascade RMP. There are no other sites in the vicinity of Poison Creek with the same designation that are not already developed for recreation.

There were a few comments from the public with suggestions for specific campground features at the replacement campground site. These were considered and several were incorporated in the proposed design. The reasons that others were rejected follow below.

- **Add a group camp—**The current design maximizes the developable acreage and provides for the most economical construction for utilities. Adding a group area on this location would make the campground economically infeasible to construct and operate.
- **Add more than one restroom—**One shower restroom building and two additional smaller restrooms are proposed. There currently isn't a budget to allow for more restrooms. Restrooms could be added in the future if there is a need.
- **Add more day use shelters—**The project budget does not allow for the two group shelters shown. The proposed shelters will be built in the future if funded.
- **Provide an emergency exit—**The plan has a second entry/exit into the park for park employees. This exit will be designated for an emergency exit.
- **The proposed site should have a boat ramp—**The shallow slope of the lake bottom makes a boat ramp at the site infeasible. A boat ramp would result in substantial loss of wetlands and expensive mitigation, for which funds are not available. Inclusion of a boat ramp would result in a loss of campsites. The Poison Creek boat ramp would not be eliminated.

2.4 Summary of Impacts

The impact analysis is presented in Chapter 3, *Affected Environment and Environmental Consequences*. A summary of these impacts is provided in Table 2-1.

TABLE 2-1
Summary of Impacts

Resource Area	Alternative A—No Action Alternative	Alternative B—Preferred Alternative
Recreation	Not developing the replacement campground would have no effect on use of existing or planned recreation facilities in the area.	Construction of the replacement campground would add to the existing camping and recreation opportunities along Lake Cascade. When Poison Creek Campground is converted to a day use facility, this replacement campground would then offset the loss of camping that occurred at the Poison Creek Campground prior to its use conversion and add capacity to serve more campers. This alternative would provide a benefit to recreationists who prefer developed RV and camping facilities.
Cultural Resources	The No Action Alternative would not result in direct impacts to cultural resources. Currently, site 10VY348 may be subjected to erosion from rising and falling lake levels; the No Action Alternative would have no effect on this existing process.	The Preferred Alternative would not result in direct (that is, ground-disturbing) impacts to the nearby archaeological site 10VY348. However, the site would likely experience indirect impacts as a result of increased human activity in the area.
Indian Trust Assets	The No Action Alternative would have no impact on traditional rights to hunt and fish, or rights to water.	The Preferred Alternative would have no impact on traditional rights to hunt and fish, or rights to water.
Socioeconomics and Environmental Justice	Not developing the replacement campground would have no effect on the expected population growth in either the city or county. The development would not affect job opportunities, per capita or household income levels, the demand for existing housing, and it would not have a disproportionate effect on minority or low-income populations.	Development of the replacement campground at Lake Cascade is not expected to increase the population of either the city or county. The Preferred Alternative is not expected to change existing per capita or household income levels, nor would it change the demand for housing. In addition, this alternative would not result in a disproportionate effect on minority or low-income populations.
Water Quality	Under the No Action Alternative, nonpoint sources would remain the primary concern for the adverse impacts to the lake. Construction of the small marina would result in some soil disturbance and the potential for short-term minor degradation of water quality in the vicinity of the site. Long-term impacts related to water quality would be related to use of the marina. Impacts to water quality include light levels of fuel leakage from outboard motors, an increased potential of a fuel spill, and an increase in local shoreline erosion because of a bit more boating activity.	Soil disturbances and vegetative removal during construction of the replacement campground have a low potential to degrade water quality in the lake immediately adjacent to the replacement campground site, particularly when construction occurs relatively near shoreline habitats or during wet conditions. These actions, combined with the assumption of the implementation of the protective measures for non-project related impacts, should move Lake Cascade towards meeting its targets described within the TMDL.

TABLE 2-1
Summary of Impacts

Resource Area	Alternative A—No Action Alternative	Alternative B—Preferred Alternative
Vegetation	Under the No Action Alternative, no known impacts would occur to rare plants.	Development of the replacement campground would require clearing vegetation from 16 acres of the 44-acre project site, including about 12 acres conifer forest and 4 acres of upland grassland/meadow. Soil disturbances and vegetative removal during construction would increase the possibility that invasive species and noxious weeds may become established on the site. However, creating developed camping areas and directing recreation use may reduce vegetation trampling along parts of the nearby shoreline. Less than 0.1 acre of emergent wetlands would be temporarily impacted by development of a 250-foot-long boardwalk. The location of a short section of road that crosses a wetland would either be revised to avoid this impact or the wetland would be spanned with a bridge to avoid placement of fill into the wetland. No known impacts would occur to rare plants.
Wildlife	No known impacts would occur to wildlife or rare or sensitive species.	Direct habitat loss would result from removal of mixed conifer forest vegetation for the construction of campground facilities. The presence of campground users from May through October will further degrade remaining habitat value by displacing additional species during the breeding season. The boardwalk will concentrate human access into this shoreline area and reduce randomly created trails; however, the presence of more people may disturb or displace some species of wildlife during the breeding season.
Threatened and Endangered Species	None of the listed, proposed, or candidate species would be affected in any way under the No Action Alternative.	The effects determinations for the yellow-billed cuckoo and bull trout are *no effect*. The effects determination for the gray wolf, Canada lynx, and bald eagle is *may affect, not likely to adversely affect*. No effects determination can be made for the northern Idaho ground squirrel until surveys are conducted, although the species is not likely present on the proposed campground or other the sites.
Aquatic Biology	Impacts to shoreline fish habitats from existing uses of the campground site are expected to be immeasurable, because of the limited, infrequent use of the site. Given the anticipated increases in angler use span across the lake, it is unlikely that the impacts to the fishery, or their habitats, from a new marina would have a measurable adverse effect to the fishery within Lake Cascade.	Short-term very minor water quality-related impacts might result from construction-related activities as described within the Water Quality section. Increased angler use associated with additional campground sites at the replacement campground may occur. However, it is unlikely that a small potential increase in angler use associated with more camping sites would have adverse measurable impacts on the lake fishery.

3 Affected Environment and Environmental Consequences

3.1 Introduction

Chapter 3 is organized by resource area. Resource areas addressed in this EA include water quality, vegetation, wildlife, threatened and endangered species, aquatic biology, recreation, socioeconomics and environmental justice, Indian Trust Assets (ITAs), and cultural resources. Climate, air quality, geology and soils, visual resources, water resources and hydrology, land use, topography, and transportation and access are not discussed because no impacts were identified. Two topics are covered for each of the resource areas discussed: the affected environment and environmental consequences.

The **Affected Environment** describes the current conditions for each resource that would be affected by the Preferred Alternative. This is not a comprehensive discussion of every resource within the project area, but rather focuses on those aspects of the environment that were identified as issues during scoping or would be affected by the alternatives.

The area around Lake Cascade has experienced a high level of growth in recent years. This includes development of Tamarack Resort and many private residential developments both as part of the resort and on other private lands near the lake. The general effects of these developments on the current condition of resources in the project vicinity are also described in the affected environment sections. Only those resources that are discussed for the Poison Creek Replacement Campground project are addressed.

The effects of the alternatives are described in the **Environmental Consequences** section for each of the resource areas. Only impacts that cannot be fully avoided through the application of mitigation measures including BMPs, listed in Chapter 5, *Environmental Commitments*, are described.

In the environmental consequences section, the depth of analysis of the alternatives corresponds to the scope and magnitude of the potential environmental impact. This chapter compares the effects of the two alternatives described in Chapter 2, *Alternatives*:

- Alternative A—No Action Alternative
- Alternative B, Preferred Alternative—Development of the Poison Creek Replacement Campground

Mitigation measures, as well as residual impacts remaining after implementation of mitigation measures, are described for the Preferred Alternative. A summary of impacts for each alternative is provided at the end of Chapter 2 in Table 2.1.

3.1.1 Cumulative Impacts

According to NEPA regulations, cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions taking place, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions over a period of time. Reasonably foreseeable cumulative impacts were identified for two nearby private residential developments, a marina

at the Poison Creek Campground, Tamarack Resort, and development of the Van Wyck campground. Each of these related actions is described in Chapter 1, *Purpose and Need for Action*, in Chapter 1, Section 1.5, *Related Activities*. The cumulative impacts discussion for the Preferred Alternative focuses on how the activities affect the resources discussed for the Poison Creek Replacement Campground project.

3.2 Recreation

3.2.1 Affected Environment

This section describes the existing recreation resources around and in the vicinity of Lake Cascade. The description of these facilities covers a larger area than the immediate vicinity of the proposed replacement campground because the Preferred Alternative would create a different recreation resource for the area.

Recreation use at Lake Cascade includes land-, water-, and snow-based activities. These activities involve both day and overnight use at developed recreation facilities, as well as undeveloped dispersed sites or use areas.

Reclamation, U.S. Forest Service (USFS), IDPR, IDFG, City of Cascade, City of Donnelly, 4-H Club, various church camps, the Southwest Idaho Senior Citizens Recreation Association (SISCRA), and many private sector enterprises currently provide recreation facilities and opportunities in the Lake Cascade area. For those facilities managed by IDPR, the Reclamation/IDPR management agreement requires IDPR to comply with Reclamation's Lake Cascade RMP (Reclamation 1991), or any subsequent updates to this plan.

According to the EA completed for the Lake Cascade RMP in 2001, the most common visitor activities at Lake Cascade are resting and relaxing (79 percent of visitors), RV camping (67 percent), tent camping (44 percent), observing wildlife (44 percent), fishing from a boat (43 percent), swimming (42 percent), and fishing from shore (41 percent). These activities are provided at many campgrounds, day use areas, and public boat ramps at the lake. Also popular is the undeveloped or dispersed recreation experience that occurs on and adjacent to the lake, including undeveloped day use areas. In addition, motorized and non-motorized boating occurs on the lake, and non-motorized trail activities occur along the old railroad grade in the Crown Point Extension area (Reclamation 2001). These activities continue today.

An estimated 312,000 people visited the 13 units of Lake Cascade State Park during 2006 for day use activities; approximately 22,240 people camped there in 2006. Use trends include the following (Perry, IDPR, pers. comm. 2007):

- Mid-May through mid-September—Day use areas and campgrounds at Lake Cascade are at 50 percent capacity on weekdays, and are at 75 percent capacity on weekends.
- July through mid-August—This is considered the peak use period for all areas at the lake.
- Mid-August through mid-September—Camping use declines, but day use remains steady, and then it also declines in October.

The number of camping visitors from late April through early October 2006 at the various Lake Cascade campgrounds, based on traffic counts, is as follows (Perry, IDPR, pers. comm. 2007):

- Big Sage: 23,069
- Poison Creek: 10,208
- Blue Heron: 2,912
- Snow Bank: 4,725
- Buttercup: 18,495
- Sugarloaf: 10,643
- Crown Point: 24,869
- Van Wyck North: 3,503
- Curlew: 2,722
- Van Wyck Central: 3,001
- Huckleberry: 16,164

- Van Wyck Main: 2,889
- West Mountain: 7,629
- Osprey Point Group Yurt Camping Area: recreation use numbers not available

In general, visitor use of IDPR recreation facilities at Lake Cascade follows this pattern. From mid-May through mid-September, campgrounds are generally at half of capacity during mid-week and three-quarter of capacity to full on weekends. July through mid-August is the peak use period for all areas. The number of campers declines from mid-August until mid-September, but day-use remains steady through September. Annual variation depends on a variety of factors such as weather, area fires, and fishing success.

Day use at Poison Creek Campground during May, June, and July 2006 totaled 17,360 persons. The total number of campers at Poison Creek Campground during that period totaled 3,473 (Brashier, IDPR, pers. comm. 2006). The Poison Creek campground had 186 day-use visitors in January, 2007 and 92 day-use visitors and 2 campers during January, 2007.

Group use is also popular at Lake Cascade because many other recreation areas in the region cannot accommodate large parties. Groups range in size from 20 to 300 individuals, although groups of 100 to 200 are most common.

The greatest concentration of recreation use occurs at the southern and northern ends of the lake where most IDPR and USFS campgrounds and day use areas and the Donnelly City Park are located.

Based on a survey that was administered in summer 1999, most campers feel slightly to moderately crowded while visiting the area, and boaters do not perceive substantial crowding while on the lake. Most campers indicated that the current number of boat ramps and campgrounds at the lake was adequate. Area boaters indicated a strong need for a new public boat marina(s) at the lake (Reclamation 2001).

Based on the Ada County Community Planning Association projection in 2000 that, by 2010, the Boise area population would increase by 20 percent, it is estimated that visitation at Lake Cascade would also increase by 20 percent, to approximately 396,000 annual visitors by 2010 (Reclamation 2001).

Public access to the water is provided via public and group boat launches and docks. Approximately 150 floating docks or dock segments and 30 boat ramp lanes are located on the lake.

Public picnicking facilities are provided at eight locations: Donnelly City Park, Tamarack Falls, Blue Heron, Snow Bank, Cabarton, Poison Creek, Boulder Creek, and Sugarloaf recreation areas. These sites typically have picnic tables, grills, toilets, and water. Poison Creek and Donnelly City Park have group picnic day use shelters, which are used extensively (Reclamation 2001).

Campgrounds at Lake Cascade provide a wide range of camping opportunities including group reservation sites, cabins, yurts, RV campgrounds, and more rustic tent-only camping with gravel access roads. Campgrounds are dispersed around the lake; there are a total of 564 individual campsites at 16 locations around the lake, with ownership and operation as follows:

- 11 are owned by Reclamation and operated by IDPR
- One is owned by Reclamation and operated by SISCRA

- One is owned by Reclamation and operated by the City of Donnelly
- Three are owned and operated by USFS

Poison Creek, West Mountain, Buttercup, Curlew, and Huckleberry Campgrounds are located in the vicinity of the proposed replacement campground (Figure 2). Because these sites are also near Tamarack resort, increased tourist and heavy truck traffic has substantially degraded the camping experience, as described in the Purpose and Need statement in Chapter 1. Currently, Poison Creek Campground provides 18 primitive campsites, an informal group camping area that is used as an overflow area when needed, a vault toilet, a central water system, and a two-lane boat launch (Burrows pers. comm. 2007b). West Mountain Campground provides 31 campsites, a vault toilet, a central water system, and a recreational vehicle dump station. Buttercup Campground offers 28 campsites, a vault toilet, and a central water system. Curlew Campground offers one group and 10 tent campsites and two vault toilets. Huckleberry Campground offers 33 campsites, a vault toilet, and a central water system.

Wildlife viewing opportunities are available throughout the area, but particularly at the large Duck Creek WMA. Mallard Bay, south of Poison Creek Campground, is managed as C/OS with a vehicular fishing access.

A nine-hole public golf course with clubhouse, restaurant, and bar is located in the City of Cascade, and is leased to the City by Reclamation. The facility, operated by a concessionaire, is located along the southeastern shore south of Van Wyck.

No formal hiking or mountain biking trails or designated areas for off-road vehicles are provided on Reclamation lands at Lake Cascade. Minor trails exist within established recreation sites, but no continuous shoreline trail exists. Use of an abandoned railroad right-of-way in the proposed Crown Point Extension has been gradually increasing in the past several years.

Other Activities that Influence Project Vicinity Resource Conditions

The Lake Cascade area has experienced unprecedented growth during the past 3 to 4 years. While the focus of much of this growth has been on Tamarack Resort, many other residential developments are either being built or are proposed. Local residential and recreational development, combined with high rates of growth in Ada and Canyon Counties 75 miles to the south, are expected to result in increased levels of day-use and camping at existing recreation facilities. This may degrade the quality of user experiences. The complexion of the recreation experience at Lake Cascade would change from a relatively isolated experience to a more highly developed and structured experience. Facility changes would be necessary to handle the anticipated crowds while minimizing resource damage.

Development of Tamarack resort has provided additional lodging, dining, and recreation facilities and opportunities near Lake Cascade. Facilities that are provided or are planned include a golf course, hiking/biking trails, boat and kayak rentals, ski/snowboard facilities, equestrian center, ice skating arenas, a fitness center, and spa facilities. Recreation opportunities that would be offered to the public for a fee include golfing, hiking, biking, wakeboarding, sailing, kayaking, fishing, waterskiing,

swimming, beach volleyball, kids' camps, and skiing/snowboarding (Tamarack Resort 2002).

The primary impacts to the camping experience at the existing Poison Creek, West Mountain, Buttercup Campground, and Huckleberry campgrounds currently result from high levels of construction traffic and travel to the amenities at Tamarack. The increased number of year-round or seasonal residents has changed the nature of this area and this trend is expected to accelerate in the future. In anticipation of these changes, IDPR (1999) recommended the conversion of Poison Creek and West Mountain campgrounds to day use areas, resulting in the loss of 75 campsites and changing the type of recreation opportunities are offered. There are no plans to convert the West Mountain campground to day use. Camping opportunities could continue to be provided at Buttercup and Huckleberry campgrounds with IDPR's recommended noise and visual resources mitigation, but the camping experience would differ from existing conditions (IDPR 1999). None of the IDPR's recommended mitigation measures, such as berms or vegetation, have been implemented to date (Burrows, IDPR pers. comm. 2007a).

3.2.2 Environmental Consequences

For purposes of this assessment, the alternatives would have an impact on recreation if they:

- Resulted in an adverse impact on existing or planned recreation facilities.
- Created a demand for recreation facilities such that the construction and operation of additional recreation facilities would be required.

Alternative A—No Action Alternative

If the No Action Alternative is selected, the replacement campground would not be developed. The proposed replacement campground site would continue to be designated for recreation use by Reclamation. No other use is planned at this time and the site would continue in its present condition for the foreseeable future. Not developing the replacement campground would have no effect on existing or planned recreation facilities in the area, and also would not create a demand for recreation facilities.

Implementation of this alternative would also result in a small marina and associated parking being developed in the Poison Creek area. Development of these facilities would provide additional recreation opportunities and facilities at Lake Cascade, which would be considered a benefit to the public. Development of these facilities would not create additional demand for such facilities and would partially meet demand for a marina. However, six campsites at the Poison Creek Campground would be removed to accommodate the marina, resulting in a small loss of camping opportunity at that location.

Alternative B—Preferred Alternative

Converting all or part of the existing Poison Creek Campground to a day use facility depends on the final decision regarding the plans for the Poison Creek Campground, which is a separate NEPA process. Conversion of all or part of the existing Poison Creek Campground to a day use facility to accommodate a marina may result in a minor net loss of some campsites and would result in the loss of campsites with easy boat access at Lake Cascade. This would result in slightly more crowded conditions at remaining campsites and fewer opportunities for

boat-access camping. It would also result in the addition of a new day use area at that location, creating a different type of recreation opportunity. During construction of the day use area, it is expected that construction vehicles, equipment, and personnel would be onsite and traveling on the local roads that provide access to the site, but would not create disturbance beyond that currently experienced as a result of construction at Tamarack. Construction activities would occur for several summer and fall months during a 1- or 2-year period. This would, therefore, result in a short-term impact to users of the campground.

The development of a replacement campground at Lake Cascade would provide 44 RV campsites, two tent camping areas, two day use shelters, four future cabins, restrooms with showers, and two vault restrooms. An RV dump station may be added if it is found that sewer hookups cannot be added at each site. Current land use at the site is undeveloped open space; therefore, recreation facilities would be provided in a location where none currently exist, providing a benefit to recreationists who prefer developed RV and camping facilities. The RV sites would have electrical hookups to accommodate most modern RVs, and an RV dump station would be provided if sewer hookups are not provided at each site. Each of the tent camping areas would have a parking area and graveled paths and tent sites. A boardwalk would be provided for developed access to the shore. Accessible facilities meeting ADA standards would be included in the development. This campground would add to the existing camping and recreation opportunities along Lake Cascade. When Poison Creek Campground is converted to a day use facility, this replacement campground would then offset the loss of camping that occurred at the Poison Creek Campground prior to its use conversion and add capacity to serve more campers. However, boat access camping opportunities would be lost.

During construction of the replacement campground, it is expected that construction vehicles, equipment, and personnel would be onsite and traveling on the local roads that provide access to the site. Construction activities would occur for several summer and fall months during a 1- to 2-year period.

Mitigation

No mitigation is warranted or recommended beyond the BMPs described in Chapter 5 regarding providing a range of recreational opportunities that would appeal to a wide variety of visitors.

Residual Impacts

The loss of boat in campsites would be an unmitigated residual impact. No other residual adverse impacts to recreation are expected as a result of implementing this alternative and the BMPs described in Chapter 5.

Cumulative Impacts

Nearby Private Residential Development and Regional Population Growth

As described in Section 3.2.1, *Affected Environment*, development of the proposed Hawks Bay and Crane Shores subdivisions would result in an increase in the population around the lake on a year-round basis. Local residential and recreational development, combined with high rates of growth in Ada and Canyon Counties 75 miles to the south, are expected to result in increased levels of day-use and camping at existing recreation facilities. This may degrade the quality of user experiences. Combined, these sources of increased demand would likely result in substantial changes to the existing recreation experience.

Marina
Development of a marina would provide additional recreation opportunities and facilities at Lake Cascade, which is considered a benefit to the segment of the public that enjoys power-boating. Boater use may increase slightly because of the marina and would be more concentrated in the Poison Creek area, which would degrade the camping experience for non-boaters. The loss of six campsites at the Poison Creek Campground would be mostly offset by construction of the replacement campground under the Preferred Alternative.

Tamarack Resort
As described in Section 3.2.1, *Affected Environment*, development of this resort has provided additional lodging, dining, and recreation facilities and opportunities near Lake Cascade. The majority of residences have not yet been constructed at Tamarack. As a result of growth associated with this development, the complexion of the recreation experience at Lake Cascade would change from a relatively isolated experience to a more highly developed and structured experience, which would be necessary to handle the anticipated crowds while minimizing resource damage.

Additionally, the Tamarack Resort development is located adjacent to public lands managed by the USFS and IDPR. These lands also have recreational camping facilities that could be adversely affected by the increase in traffic noise related to Tamarack Resort.

Van Wyck Park Campground Improvements
The improvements to the Van Wyck campground would change the type of recreational opportunity provided at that location. This project would not, however, result in an adverse impact on existing or planned recreation facilities including the Poison Creek Campground Replacement project.

Replacement Campground Cumulative Effects
The preferred alternative would result in loss of a few boat-in campsites, but a net gain overall. The incremental effect of this net gain in campsites when added to the effects of other past, present and reasonably foreseeable actions would not have any dramatic cumulative effect on the recreation experience or facilities at Lake Cascade beyond the effects of the action itself.

3.3 Cultural Resources

3.3.1 Affected Environment

The proposed Poison Creek Replacement Campground lies on lands traditionally inhabited by the Shoshone-Bannock, Shoshone-Paiute, and Nez Perce Tribes. In general, the Payette River valley region is rich in both terrestrial and aquatic floral, faunal, and geological resources that have traditionally been used by indigenous peoples for many thousands of years. These resources are well-described in the 2001 Cascade RMP (Reclamation 2002), within the recent cultural resources site investigation report (RNI 2007), and within this EA, and will not be recounted here. However, it is important to note that the project area and surrounding vicinity along Lake Cascade, as well as the North Fork of the Payette River, are considered "high probability" for both prehistoric and historic archaeological and cultural resources based on their proximity to naturally occurring water resources and other resources traditionally used by indigenous and western cultural groups.

Archaeological Resources

Archaeological site 10VY348 is located near the proposed replacement campground. This site, first documented in 1983 by Reclamation, appears to be a long-term recurring-use prehistoric campsite. In late September/early October 2006, archaeological site 10VY348 underwent extensive archaeological testing by Renewable Technologies, Inc. to determine the boundaries of the site, the nature of its subsurface deposits, and its National Register eligibility status. The results of the subsurface testing indicate that the site does not enter the replacement campground, but is located entirely outside of it (Leicht 2007a; RNI 2007). In addition, the impoundment of the Payette River to form Lake Cascade resulted in partial submergence of site 10VY348. Since the creation of the lake, the site has been continually impacted by erosion from Lake Cascade's fluctuating water levels.

Based on the late 2006 subsurface testing, most of the archaeological site lies along the beach/bank area within intact subsurface deposits (Leicht 2007a, RNI 2007). Because the site is easily accessible from the road and parking area, it has been looted and surface collected over the years by fishermen and other recreational users. Despite the ongoing looting and data loss, site 10VY348 appears to be eligible for listing on the National Register under Criterion D because it has the potential to yield information relevant to current research questions important in local, state, and national history (RNI 2007). The site appears to have been continuously or episodically used and dates to between 700 and 2870 before present (BP). The archaeological site contains artifacts associated with the Humboldt and Elko typologies and the Late Archaic and Late Prehistoric periods.

Traditional Cultural Properties (TCPs) and Sacred Sites

In July and August 2006, the Shoshone-Bannock and Shoshone-Paiute Tribes, respectively, visited the site of the proposed replacement campground. No sacred sites or TCPs were indicated for the replacement campground area (Leicht 2007c). Further, a Tribal consultation letter from the Shoshone-Bannock to Reclamation dated August 2006 mentioned no TCPs or sacred sites in or immediately around the replacement campground, although the Tribe did express concern about the aforementioned archaeological site 10VY348 (Leicht 2007c).

Historic Cultural Resources

Lake Cascade and Valley County have a long, documented history of use by Euro-American settlers, government agencies, recreationists, and other cultural groups. Within the replacement campground, evidence of historic logging is present in the form of old growth "springboard stumps." Logging and the timber industry are important historic themes in this region. Although the large stumps present in the project area are considered remnant "isolates," they have retained their integrity of setting, feeling, and association, and provide an observer with a prominent example of a bygone logging practice. Because of their integrity, the grouping of stumps may be eligible for listing on the National Register. No other historic resources (historic structures or historic archaeological sites) are present in the immediate project vicinity.

Other Activities that Influence Project Vicinity Resource Conditions

Residential development in the vicinity of Lake Cascade has and is expected to continue to bring more recreationists to the area, as described in Section 3.2, *Recreation*. More visitation of recreation sites and more general use of the lake area increases risk of looting and vandalism of cultural resources.

Completed and planned construction at Tamarack resort would result in ground disturbance and clearing of about 900 acres for ski runs, roads, housing, and other facilities (Tamarack 2002). This area varies widely in archaeological probability according to slope, proximity to water, and other factors. It is possible that cultural sites (including Indian burials and sacred places, among other types of sites) exist in this area and have been or would be affected by this development. However, specific cultural resources in the privately owned resort area have not been studied.

3.3.2 Environmental Consequences

Alternative A—No Action

The replacement campground would not be developed under the No Action alternative. The proposed replacement campground site would continue to be designated for recreation use by Reclamation, and the site would continue in its present condition for the foreseeable future. Thus, the No Action Alternative would not result in direct impacts to site 10VY348. Currently, the site may be subjected to erosion from rising and falling lake levels; the No Action Alternative would have no effect on this existing process.

Alternative B—Preferred Alternative

Development of the replacement campground would require clearing and ground disturbance in about 16 acres of the 44-acre project site to accommodate construction of roads, paths, camping and RV pads, and campground facilities.

The Preferred Alternative would not result in direct (that is, ground-disturbing) impacts to the nearby archaeological site 10VY348. This site lies outside of the 44-acre replacement campground. However, the site would likely experience indirect impacts as a result of increased human activity in the area. Such indirect impacts may include trampling and compaction of intact subsurface deposits on the site from increased area foot traffic, an elevated rate of water and wave-action erosion to the intact site deposits because of swimming and offshore boating activity, and heightened occurrences of vandalism, looting, or artifact collecting of intact archaeological deposits because of increased human activity and presence on

the site. No direct impacts are expected to occur to the remnant isolate stumps from campground construction; however, indirectly, use of the campground could result in vandalism to these features.

Chapter 5, *Environmental Commitments*, lists the activities to be implemented if the Preferred Alternative is carried out. Such commitments should address the indirect impacts that may affect the site.

Mitigation
According to the environmental commitments listed in Chapter 5, and in compliance with federal laws, Reclamation will take steps necessary to protect cultural resources on lands that it manages from damage resulting from natural or human-caused processes. Thus, Reclamation will take steps to mitigate potential or ongoing threats to the integrity of site 10VY348, regardless of which alternative is selected.

As stated previously, archaeological site 10VY348 has been and may continue to be impacted by annual lake level fluctuations, wave action, gravitational forces, and occasional recreational activity in the area. The Tribes have expressed concern over this loss of their cultural heritage. Measures to curb this loss, and to mitigate any indirect impacts as a result of implementation of the Preferred Alternative would include input from Shoshone-Bannock, the Shoshone-Paiute, the Idaho SHPO, Reclamation, and IDPR.

A meeting of the aforementioned parties to discuss possible mitigation measures was held March 7, 2007, in Boise, Idaho. Mitigation measures discussed at this meeting included the following:

- Routine visitation and inspection by Tribal members and Reclamation to monitor the impacts of the Preferred Alternative on site 10VY348
- Construction of access paths and routes, and placement of signage, diverting foot traffic away from sensitive archaeological areas.
- Archaeological monitoring of campground construction activities by qualified archaeologists and Tribal members
- Placement of interpretive signs alerting replacement campground visitors that they are near ~~a~~ cultural sites (Site 10VY348 and the remnant logging stumps) that should be respected and are protected by state and federal laws
- Establish photo points along the eroded bank and examine these points over a period of several years to observe if erosion has stabilized or continues to occur.
- Data recovery (removal) of the archaeological site by qualified archaeologists and Tribal members in the event that routine site monitoring or monitoring established photo points shows increasing loss of the archaeological site.

Implementation of any of these mitigation measures would enhance the BMPs listed in Chapter 5.

Final mitigation will be determined through further consultation with Tribes and Idaho SHPO.

Residual Impacts
Since it may be difficult to completely prevent campground users from accessing the cultural site during lower lake levels, residual indirect impacts from collecting cultural artifacts lying on the surface and from trampling would still occur to some degree.

Residual impacts to site 10VY348 could include large-scale salvage recovery of

archaeological data from portions of or from the entire site, should that level of mitigation be warranted. Such excavations could yield important data on the prehistoric occupation of the site, but would also permanently affect the site's physical integrity, likely rendering site 10VY348 ineligible for the National Register.

No other residual impacts to the site are expected.

Cumulative Impacts

Nearby Private Residential Development
The site of the Hawks Bay subdivision is currently used as a hay field, so any cultural resources that may exist in that area may have already been disturbed as a result of plowing, cultivating, and farming this area. The North Fork WMA lies between the Hawks Bay subdivision and the lake. Some of the area would be disturbed because of increased human presence in the area. Such human presence may have indirect impacts (for example, trampling, erosion, increased visitation, or possible vandalism and looting) to any archaeological sites or other cultural resources that may exist in that area. The proposed Crane Shores subdivision is also located along the lake shoreline and adjacent to the North Fork WMA. Because of its proximity to the lake, the Crane Shores area is a high archaeological probability area. Development of privately owned residential housing in this area may result in direct impacts (such as physical ground disturbance) and indirect impacts (such as increased visitation, erosion, or trampling) to cultural resources that may exist in the area. However, specific cultural resources in the privately owned residential development areas have not been studied.

Marina
The marina would be constructed almost entirely within the previously disturbed Poison Creek Campground. Site 10VY156, a lithic scatter, has been recorded in this area and could be impacted by the construction of the marina.

Tamarack Resort
As described in Section 3.3.1, *Affected Environment*, specific cultural resources in the privately owned resort area have not been studied. This area varies widely in archaeological probability according to slope, proximity to water, and other factors. It is possible that cultural sites (including Indian burials and sacred places, among other types of sites) exist in this area and have been or would be affected by this development.

Van Wyck Campground Improvements
The Van Wyck Campground is currently used as a primitive campground for tents and RVs. Much of the site has been disturbed by this past activity, and no cultural resources have previously been observed in this area. Thus, the development of Van Wyck would have no impact on cultural resources.

Each of the aforementioned development projects has the potential to adversely impact previously reported or yet-to-be identified archaeological resources. While these impacts might be localized, or of a small-scale, or both, the cumulative effect of the development is that much of the archaeological landscape of Long Valley is being compromised, with an irreplaceable loss of knowledge about the prehistoric and historic inhabitants of the valley as manifested through the archaeological sites. The development trend is not abating, so the cumulative impacts will only worsen the situation.

Replacement Campground Cumulative Effects

The past and ongoing development at around Lake Cascade has no doubt resulted in impacts to archeological resources. This is expected to continue to occur on private land. The incremental addition of the indirect effects of the preferred alternative would contribute in a very minor way to the cumulative adverse effects of past, present and reasonably foreseeable future actions in the Lake Cascade area.

3.4 Indian Trust Assets

3.4.1 Affected Environment

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States for Indian Tribes or individuals. The Secretary of the Interior, acting as the trustee, holds many assets in trust for Indian Tribes or Indian individuals. Examples of items that may be trust assets are lands, minerals, hunting and fishing rights, and water rights. While most ITAs are on-reservation they may also be off–reservation.

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes or Indian individuals by Treaties, Statutes and Executive Orders. These are sometimes further interpreted through court decisions and regulations.

By Secretarial Memorandum, from the Office of the Secretary of Interior, Environmental Compliance Memorandum No. ECM97-2 requires that any anticipated impact to Indian trust resources from a proposed project are explicitly addressed in (the agency's) environmental documents. Other Tribal (and minority) interests are discussed in Section 3.3, *Cultural Resources*; and in Section 3.5, *Socioeconomics and Environmental Justice*.

Nez Perce Tribe

The Nez Perce Tribe is a federally recognized Tribe located at the Nez Perce Indian Reservation in northern Idaho. The United States and the Tribe entered into three treaties (Treaty of 1855, Treaty of 1863 and Treaty of 1868) and one agreement (Agreement of 1893). The rights of the Nez Perce Tribes include the right to hunt, gather and graze livestock on open and unclaimed lands and the right to fish in all usual and accustomed places (Nez Perce Tribes, 1995)

The Snake River Water Rights Act of 2004 (Settlement Act) "approved, ratified and confirmed" the settlement of the Nez Perce Tribe's water rights claims. Along with other components of the Agreement, the Tribe's multiple-use water rights will be decreed in the amount of 50,000 acre feet per year primarily from Clearwater River sources. The Tribe's "springs or fountains" water rights claim on federal lands within the 1863 Nez Perce Treaty ceded area will be decreed. The federally reserved water rights identified in the Settlement Act are not associated with the Payette River drainage area of the proposed project.

The lands being discussed in the proposed project area are ceded lands of the Nez Perce Tribes which were judicially established by the Indian Claims Commission (Commission).

Shoshone-Bannock Tribes

The Shoshone-Bannock tribes are a federally recognized Tribe located at the Fort Hall Indian Reservation in southeastern Idaho and have trust assets both on-reservation and off-reservation. The Fort Bridger Treaty was signed and agreed to by the Bannock and Shoshone headman on July 3, 1868. The Treaty states in Article 4 that members of the Shoshone-Bannock Tribe "…shall have the right to hunt on the unoccupied lands of the United States…" (Shoshone-Bannock Tribes 1994).

The Tribes believe their right extends to the right to fish. The Fort Bridger Treaty for the Shoshone-Bannock has been interpreted in the case of State of Idaho vs. Tinno, an off-reservation fishing case in Idaho. The Idaho Supreme Court

determined that the Shoshone word for "hunt" also included to "fish". Under Tinno, the court affirmed that the Tribal Members' right to take fish off-reservation pursuant to the Fort Bridger Treaty (Shoshone-Bannock Tribes 1994). The Tribes believe the right applies to all federal lands (Shoshone-Bannock Tribes 1994).

The 1990 Fort Hall Indian Water Rights Act, Act of November 16, 1990, P.L. 101-102, 104 Stat. 3059) settled claims for the Fort Hall Indian Reservation. The federally reserved water rights associated with the Fort Hall Settlement are rights to water from rivers and tributaries in eastern and central Idaho and are not associated with the Payette River drainage area of the proposed project.

Shoshone-Paiute Tribes

Shoshone-Paiute Tribes are a federally recognized Tribe located at the Duck Valley Reservation in southern Idaho and northern Nevada. The Reservation was established by Executive Orders dating from April 15, 1877, May 4, 1886; and July 1, 1910. The interests of the Tribes are also reflected in the Bruneau, Boise, Ft. Bridger, Box Elder, Ruby Valley and other Treaties and d executive Orders which the Tribes' ancestors agreed to with the United States and which the Tribes have continued to observe in good faith, despite the fact that the Federal Government failed to ratify some of them. Therefore, the Tribes assert they have aboriginal title and rights to these areas. All such Treaties and executive Orders recognized the need for the Tribes to continue having access to off-reservation resources because most of the reservation established were and continue to be incapable of sustaining the Tribal populations. This need continues and has not diminished from the time of the first Treaties and Executive Orders that established the Duck Valley Reservation.

The Shoshone-Paiute Tribes and the U.S. Government are in the process of negotiating their federally reserved water rights for the Duck Valley Reservation with the States of Nevada and Idaho. These claims for water rights are in the vicinity of the Duck Valley Reservation on the Owyhee River. The claims are not associated with the Payette River drainage area of the proposed project.

Burns Paiute Tribe

The Burns Paiute Tribe near Burns, Oregon does not have off-reservation rights outside their Executive Order Reservations. There are no federally reserved water rights on tributaries within the vicinity of the proposed project.

Summary of Reserved Rights of Federally Recognized Tribes

Rights to Hunt and Fish

Since the proposed project is located on ceded lands of the Nez Perce Tribes their right to hunt or fish may be exercised. There is no universally accepted understanding as to the specific treaty rights to hunt and fish in the vicinity of Lake Cascade because there has not been a settlement with the Shoshone-Bannock Tribes as to the extent and nature of their off-reservation hunting and fishing treaty rights that may exist. The Shoshone-Paiute and the Burns Paiute do not have off-reservation rights.

Rights to Water

Lake Cascade is a part of Reclamation's Boise Project, Payette Division. The Payette River and its tributaries are a part of the drainage related to the proposed project. None of the Tribes mentioned above have federally recognized water rights within the Payette River drainage.

3.4.2 Environmental Consequences

Alternative A—No Action Alternative

Alternative A would not deprive any of the Tribes of their rights they may have to hunt or fish. Resources associated with these rights would not be affected under the No Action alternative.

Alternative B—Preferred Alternative

The Preferred Alternative would not deprive any of the Tribes of their rights they may have to hunt or fish. Impacts to resources associated with these rights would be very minor. (See Sections 3.6, 3.7, 3.8, and 3.9 of this EA.)

3.5 Socioeconomics and Environmental Justice

3.5.1 Affected Environment

This section describes the existing demographic characteristics and economic conditions in the project vicinity. In addition, it addresses the potential impacts on regional demographics and economic resources, and discusses the need for mitigation measures.

Population

The 2005 population of Valley County, Idaho was 8,332 (U.S. Census Bureau 2007). The population of the City of Cascade in 2004 was 977 (IC&L 2006).

The population of Valley County is expected to increase to 13,880 by the year 2020 (an increase of approximately 81 percent compared to the 2000 population (Valley County 2006).

Ethnicity

Table 3.5-1 presents ethnicity data for Valley County and the City of Cascade, based on the 2005 county data. As presented, the majority of the population for both the City and County is white, followed by 3.2 percent or less being of Hispanic or Latino origin.

Personal and Household Income

Median household income in Valley County in 2003 was $39,391; per capita income in 1999 was $19,246 (U.S. Census Bureau 2007). In 2003, approximately 90 percent of the population in Valley County was living at or above the poverty level (U.S. Census Bureau 2007). Approximately 8.7 percent of the population living below the poverty level in the county in 2000 was also 65 years of age or older (percentages based on a population of 7,571 for poverty status accounting; U.S. Census Bureau 2000a).

TABLE 3.5-1
Ethnicity in Valley County and the City of Cascade

Ethnic Group	Valley County Population[1]	Percent of Total[1]	City of Cascade Population[2]	Percent of Total[2]
Total	8,332	100	977[2]	100
White alone	8,182	98.2	934	95.6
Black alone	17	0.2	0	0
American Indian and Alaska Native	58	0.7	0	0
Asian	25	0.3	5	0.5
Pacific Islander and Native Hawaiian	0	0	3	0.3
Those reporting two or more races	42	0.5	16	1.6
White persons non- Hispanic or Latino	7,974	95.7	945	96.8
Hispanic or Latino	242	2.9	31	3.2

Source: [1]U.S. Census Bureau 2007; [2]Idaho Commerce & Labor 2006 (Note- 2005 projections on ethnic breakdowns are percentages estimated from 2000 U.S. Census)

Median household income in the City of Cascade in 1999 was $32,411; per capita income in 1999 was $17,330 (U.S. Census Bureau 2000b). In 1999, approximately 88 percent of the population in the City of Cascade was living at or above the poverty level, and approximately 12 percent was living below the poverty level (percentages based on a population of 955 for poverty status). Approximately 13 percent of the population living below the poverty level in the City was also 65 years of age or older (U.S. Census Bureau 2000b).

Employment

In 2000, of the 780 people in the City of Cascade who were 16 years of age or older, 467 people were in the labor force. Of those 467 people, 431 were employed and 36 were unemployed (resulting in a 7.7 percent unemployment rate). Occupations include management/professional; services; sales and office; farming, fishing, and forestry; construction; and production, transportation, and material moving (U.S. Census Bureau 2000c). Industries include agriculture, forestry, fishing/hunting, and mining; construction; manufacturing; wholesale and retail trades; transportation, warehousing, and utilities; finance; professional/scientific, management; administrative; educational, health, and social services; arts/ entertainment, recreation, and accommodation, and food services; other services; and public administration (U.S. Census Bureau 2000d).

Housing

In 2005, there were 9,132 housing units in Valley County (U.S. Census Bureau 2007). In 2000, there were 562 housing units in the City of Cascade, of which 421 were occupied and 141 were vacant (U.S. Census Bureau 2006b). However, recent increases in city and county growth continues to drive up local and valley land values. Land values in Valley County continue to rise with tax assessments in 2006 up 58 percent from 2005. Since 2004, assessed valuation of private lands has gone up over 128 percent (IC&L 2006).

Further, in 2006, 127 certificates of occupancy were issued to Tamarack Resort homeowners, and the resort received 32 certificates of occupancy for operations associated with the hotel (IC&L 2006).

Other Activities that Influence Project Vicinity Resource Conditions

Recent development of many residential subdivisions and Tamarack Resort near Lake Cascade are resulting in an increase in the population around the lake on a year-round basis. These subdivision projects create job opportunities during their construction and demand for employment after they are occupied, which may affect the county unemployment rate and per capita income. Subdivision development is not believed to have directly resulted in a disproportionate effect on minority or low-income populations. However, development of the resort high-end subdivisions may increase property values on a county-wide basis, which may affect low income populations.

Tamarack Resort would include housing for the recreationist residents, and would also provide affordable housing units for its employees. However, the number of affordable employee housing units provided may not be sufficient to accommodate all of the employees, therefore, a demand for affordable housing (whether it be existing or new) may be created. This project would not result in a

direct disproportionate effect on minority or low-income populations.

Development of Tamarack Resort would increase the assessed value of the approximately 2,124 acres upon which it would be constructed (Tamarack 2002). This would result in increased property tax revenue for Valley County. To the extent that high-end residential development at Tamarack increases property values on a county-wide basis, low income populations may be affected.

3.5.2 Environmental Consequences

For purposes of this assessment, the project would have an adverse impact if it:

- Induced unplanned population growth in the City of Cascade or Valley County
- Eliminated jobs in the City or County
- Adversely affected income in the City or County
- Resulted in a disproportionately high and adverse human health or environmental effect on minority or low-income populations (according to Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, 59 Federal Register 32)
- Required substantial numbers of existing housing to be displaced or required replacement housing to be constructed elsewhere
- Resulted in adverse impacts on IDPR revenues
- Resulted in adverse impacts on property values and associated property tax revenue for the County

Alternative A—No Action Alternative

If the No Action Alternative is selected, the replacement campground would not be developed. The proposed replacement campground site would continue to be designated for recreation use by Reclamation. No other use is planned at this time and the site would continue in its present condition for the foreseeable future. Not developing the replacement campground would have no effect on the expected population growth in either the city or county. The development would not affect job opportunities, per capita or household income levels, the demand for existing housing, and it would not have a disproportionate effect on minority or low-income populations.

Implementation of this alternative would also result in a small marina and associated parking being developed in the Poison Creek area. Development of these facilities is not expected to affect the projected City or County population growth. The development would create a few seasonal job opportunities, but would not change the City's unemployment rate, and would not affect per capita or household income levels or the demand for existing housing. In addition, it would not have a disproportionate effect on minority or low-income populations. While six campsites at the Poison Creek Campground would be removed to accommodate the marina, resulting in a minor loss in camping revenue, fees associated with marina use would likely offset any camping revenue loss.

Alternative B—Preferred Alternative

Development of the replacement campground at Lake Cascade is not expected to permanently increase the population of either the city or county. Construction activities associated with the replacement campground would create

short-term job opportunities. After the facilities are constructed and are open to the public, a few seasonal jobs may be created to operate and maintain the facilities, but this would not be expected to change the city's or county's unemployment rate.

Conversion of the Poison Creek Campground into day use areas would result in an estimated annual loss of 26 percent of Lake Cascade State Park camping revenue (approximately $16,400 per year) to IDPR. Fees from the marina operation would more than offset the camping revenue loss for IDPR, as described below under the *Cumulative Impacts* section.

Adding the replacement campground into IDPR's available facilities inventory would result in increased operation and maintenance costs. However, once Poison Creek Campground is converted to a day use area, the additional costs would be offset by the lowered operation and maintenance cost at Poison Creek. Similarly, the replacement campground would generate additional camping revenue for IDPR.

The Preferred Alternative is not expected to change existing per capita or household income levels, nor would it change the demand for housing. In addition, this alternative would not result in a disproportionate effect on minority or low-income populations. User fees should be structured to allow persons of different income levels to use the replacement campground. Development of the replacement campground or the campground conversion would have no effect on property taxes because, although there would be improvements made to the land, the facilities and land upon which the facilities would be located are owned and operated by the government, and are, therefore, tax-exempt.

Mitigation
No mitigation is warranted or recommended.

Residual Impacts
No residual impacts are expected as a result of implementing this alternative.

Cumulative Impacts
Nearby Private Residential Development
Development of the proposed Hawks Bay and Crane Shores subdivisions near the Poison Creek Replacement Campground project would result in an increase in the population around the lake on a year-round basis. These subdivision projects would create job opportunities during construction. Development would increase the assessed value of the property upon which the residences would be constructed, which would result in increased property tax revenue for Valley County. To the extent that high-end subdivision development increases property values on a county-wide basis, low income populations may be affected.

Marina
A marina at the Poison Creek Campground would create a few seasonal job opportunities, but would not substantially change the local unemployment rate, and would not affect per capita or household income levels or the demand for existing housing. In addition, it would not have a disproportionate effect on minority or low-income populations. The marina would be generate revenue for IDPR. Vehicle entry fees and boat ramp parking would be charged, and additional revenue would be generated by the marina concession.

Tamarack Resort
Development of Tamarack Resort would have similar effects on construction

employment, assessed property values, County tax revenues, and low income populations as described above for Nearby Private Residential Development. This project would provide affordable housing units for some its employees. However, the number of affordable employee housing units provided may not be sufficient to accommodate all of the employees, therefore, a demand for affordable housing (whether it be existing or new) may be created.

Van Wyck Campground Improvements
This project would not, however, result in a permanent change in the city or county population. Temporary jobs would be created during construction of the site. IDPR staff levels to maintain and operate this facility may or may not change. None of these jobs would change the city's or county's unemployment rate, existing per capita or household income levels, nor would they change the demand for housing. This project also would not result in a disproportionate effect on minority or low-income populations.

Replacement Campground Cumulative Effects
Economic and social effects from the replacement campground would be both temporary and extremely small compared to the dramatic effects of private residential and Federal recreational development at Lake Cascade and development of Tamarack Resort.

3.6 Water Quality

3.6.1 Affected Environment

Water quality at Lake Cascade has been a subject of public concern since the 1970s, when noxious algal blooms, aquatic weeds, and fish kills began to occur quite frequently (Idaho Department of Environmental Quality [IDEQ] 1996). Because of poor water quality, none of the beneficial uses of the lake were fully supported during 1993 and 1994 (IDEQ 1996). As a result, the TMDL process was initiated to comply with Section 303(d) of the Clean Water Act of 1987 (40 CFR 130.7). The lake was listed in 1996 as water quality limited because of violations of water quality standards for nutrients, dissolved oxygen, temperature, and pH (Reclamation 2002).

Agencies and the community have actively worked toward improving water quality to attain full support of all beneficial uses, and have a goal to meet all water quality standards. The 1991 RMP contained provisions to improve water quality within Reclamation's jurisdiction, which were carried forward to the 2002 RMP. Specifically, the RMP included provisions for improving sanitation at waste management sites, and pledging to follow the recommendations from the Valley County Soil Conservation District's Lake Cascade Watershed Project (Reclamation 2002).

In 1992, a citizen's group formed an interagency task force to address water quality issues throughout the watershed. In 1995, this group became the Cascade Reservoir Coordinating Council, the state-designated Watershed Advisory Group for the TMDL process. This advisory group, which represents nine sectors of the local community, has worked closely with the IDEQ and a Technical Advisory Committee composed of agency, industrial, and municipal scientists and engineers to develop draft TMDL standards. The *Lake Cascade Phase I Watershed Management Plan* was published in January 1996 (IDEQ 1996). In April 1998, the TMDL Phase II Agricultural Source Plan was released (IDEQ 1998b), followed by the Phase II Watershed Management Plan in December 1998 (IDEQ 1998a).

The TMDL Implementation Plan, which was released in early 2000, identifies specific measures needed to achieve a targeted 37 percent reduction of phosphorus loads. The primary sources of pollutants are from point and nonpoint source pollution. The following two point sources were identified in the Phase II Watershed Management Plan (IDEQ 1998a):

- McCall Wastewater Treatment Plant
- Idaho Department of Fish and Game (IDFG) Fish Hatchery in McCall

The major sources of nonpoint pollution include the following (IDEQ 1998a):

- Management practices by forestry, agricultural, and urban and suburban areas
- Internal recycling of nutrients within the lake

A Phase III Watershed Management Plan would be prepared to evaluate progress toward attainment of water quality standards and designated beneficial uses. As of January 2007, this phase of the plan and evaluation is still underway (IDEQ 2007).

Numerous private landowners have implemented conservation projects that have resulted in water quality improvement. These projects include fencing, riparian improvements, grazing

management plans, and streambank stabilization. The public land management agencies around the Lake Cascade have improved roads, implemented seasonal road closures, stabilized streambanks, and initiated other BMPs as a means to improve water quality within the lake (IDEQ 2005). Reclamation has also constructed approximately 68 acres of wetlands to treat water flowing into Lake Cascade from several tributaries that include two on the north end of the lake, three on the east side, three on the southern end, and four on the west side (Reclamation 2002). Although none of these wetlands are within the project vicinity, they were constructed as a means of further enhancing overall lake water quality by accomplishing the following:

- Trapping and removing sediment
- Providing uptake and release of phosphorous
- Providing stream stabilization
- Providing wildlife food, cover, nesting, and resting habitat values

To minimize water quality impacts from construction, IDEQ requires construction permits that involve the development and implementation of stormwater pollution prevention plans (SWPPP's) (IDEQ 2005). While this approach controls the primary point source, nonpoint sources within Lake Cascade remain the primary concern for the adverse impacts to the lake. The TMDL implementation strategy proposes to reduce nonpoint source inputs through its implementation plan (IDEQ 2005).

Other Activities that Influence Project Vicinity Resource Conditions

Some or all of the many recent and ongoing construction projects in the vicinity of Lake Cascade have contributed to current water quality conditions. Tamarack Resort, a new four-season resort located immediately to the west of Lake Cascade and the Poison Creek Campground, began large-scale construction about 4 years ago. The pace of private residential development in the vicinity of Lake Cascade has also accelerated greatly during the last 3 to 4 years. Construction of private housing developments and Tamarack Resort facilities, infrastructure, and housing is expected to continue at many locations around the Lake Cascade (see Section 3.5, *Socioeconomics and Environmental Justice*). All of these construction activities cause soil disturbance and increase the potential of soil erosion, which may lead to water quality degradation in the lake. Vegetation clearing could adversely affect tributary water temperature and increase sediment. Overall, the short-term impacts of these projects on water quality has likely been unfavorable because of the extensive construction and associated land disturbance.

The potential for adverse impacts from these development activities is highly variable and depends on many factors including the following:

- Slope of the site
- Amount of land disturbed at any one time
- Timing of rain and runoff events relative to the amount of exposed bare ground
- Degree of both the implementation and the effectiveness of measures intended to contain site runoff before it enters the lake

The application of fertilizer and pesticides to lawns, ornamental plants, and the

Tamarack golf course may add nutrients and pesticides to the shallow ground water and, ultimately, to the lake.

The TMDL Implementation Plan seeks to avoid adverse impacts from these actions by instituting protective measures, such as those described for Tamarack under their *Vegetation Management and Erosion Control Plan* (Tamarack Resort 2006). In Idaho, point source discharges from construction related impacts are addressed and enforced through the EPA National Pollution Discharge Elimination System (NPDES) program (IDEQ 2005).

3.6.2 Environmental Consequences

Development of the project area would result in temporary, construction-related impacts. Long-term maintenance and use impacts also have the potential to affect water quality, because of the proximity of the project areas to the lake.

Alternative A—No Action Alternative

Under the No Action Alternative, the former proposed YMCA campsite would not be developed as a replacement campground. The site is currently not used for any formal or informal recreation or other activities and there are no impacts to water quality.

A small marina and associated parking would be developed in the West Mountain and Poison Creek area as described in the RMP. Construction of the marina would result in some soil disturbance and the potential for short-term minor degradation of water quality in the vicinity of the site. Long-term impacts related to water quality would be related to use of the boat ramp and marina by recreation users. The expansion of facilities is expected to result in a small increase in boater use of the local area and the northern end of the reservoir. Impacts to water quality include light levels of fuel leakage from two-stroke outboard motors, an increased potential of a fuel spills, and a potential increase in localized shoreline erosion because of more boating activity.

Construction-related activities in the vicinity of Lake Cascade, which may have temporarily degraded water quality in the past, would continue under the No Action Alternative. These activities include the widespread residential construction and the substantial local population growth in the vicinity of Lake Cascade and the ongoing and future construction of Tamarack Resort. The primary sources of water pollution from these activities are sediment-laden runoff water from unvegetated areas and nutrient runoff from fertilizer application to lawns and golf courses.

As growth, development, and associated increases in use occur around the lake, this goal would likely become more challenging because of the difficulty in implementing the program with a larger number of landowners within the watershed. However, if the goals of the TMDL program for Lake Cascade are achieved, the overall result would be a substantial improvement in water quality compared to the past and current conditions.

Alternative B—Preferred Alternative

Development of the replacement campground would require clearing of the vegetation and soil disturbance of approximately 16 acres of the 44-acre project site. This would accommodate construction of roads, paths, camping and RV pads, and campground facilities. Construction would occur over one or parts of two construction seasons, depending on when it begins. Soil disturbances and vegetative removal

during construction have the potential to degrade water quality in the lake immediately adjacent to the replacement campground site, particularly when construction occurs relatively near shoreline habitats or during wet conditions.

This construction project would be required to obtain an NPDES construction stormwater permit, and IDPR would develop and strictly follow the provisions of a SWPPP, as well as TMDL provisions. BMPs intended to minimize the potential for adverse impacts to water quality would be implemented at all phases of construction. All Federal and state laws related to control and abatement of water pollution would be complied with and all waste material and sewage from construction activities or project-related features would be disposed according to federal and state pollution control regulations

Chapter 5, *Environmental Commitments*, describes measures specifically developed to provide long- and short-term protection of adverse impact to water quality. Implementation of BMPs and adherence to permit conditions are expected to reduce potential water quality impacts to very low levels and any impacts would be temporary.

Very minor adverse long-term impacts might occur from the increased use of the project area, beyond existing conditions. It is unlikely that the campground area itself would adversely affect water quality because of the mitigation measures within the design and the distance to the seasonally variable shoreline of the roads and camp pads. However, very minor localized adverse water quality impacts may result from vegetative trampling and associated soil disturbance following campground development because of dispersed recreation activities along the project area shoreline.

As described for the No Action Alternative, construction-related water quality impacts in the vicinity of Lake Cascade, from the development and use of Tamarack Resort and residential areas uses, would continue. Construction and operation of the Poison Creek marina may also cause short-term and long-term localized water quality impacts.

However, assuming that appropriate protective measures for non-project related impacts are implemented, water quality in Lake Cascade should progress towards meeting its targets described within the TMDL.

Mitigation

Potential impacts to water quality are expected to be very minor and of short duration. BMPs, which are considered to be mitigation measures, and that would avoid and reduce potential impacts to water quality are described in Chapter 5, *Environmental Commitments*. Because potential impacts on water quality are very small and no other mitigation measures are required.

Residual Impacts

Residual impacts to water quality may occur from the localized disturbances of vegetation and soils along the shoreline. However, this would be very minor because of the implementation of resource protection measures, especially against the background of seasonal lake shoreline erosion from wave action.

Cumulative Impacts

Nearby Private Residential Development

Development of private residential areas has occurred previously and continues to expand at several locations in the vicinity of Lake Cascade, including two areas near the proposed replacement campground

site. The potential for adverse impacts from the nearby Hawks Bay and Crane Shores developments is highly variable, as described in Section 3.6.1, *Affected Environment*. These two developments would be connected to county sewer lines, eliminating potential water quality problems associated with leaking septic tanks.

Marina
Reclamation's 2002 RMP, and the previous 1991 RMP, proposed that a small marina be constructed in the area of West Mountain Campground, which was thought, at that time, to be closest to the proposed WestRock (now Tamarack) development entrance. A marina at Poison Creek is scheduled to open as early as 2009 after completion of an environmental compliance process. The marina would be constructed on lands currently occupied by the Poison Creek Campground. The marina would include a fueling station designed to meet all applicable state and federal pollution prevention requirements.

Temporary, construction-related ground disturbances would occur on lands previously developed as a campground, which may result in a local increase in sediment runoff into the lake. Adverse impacts to water quality during construction would be minimized and avoided through the implementation of construction-related BMPs described in Chapter 5.

The potential for long-term adverse impacts to water quality result from the following:

- Increased boating activity could adversely affect local shoreline habitat and promote erosion.
- Increased boating activity could increase the potential for outboard motor contaminants locally.
- A fueling station located at the marina near the lake increases the potential of a contaminant spill.

Tamarack Resort
Development of Tamarack Resort has resulted in the construction of numerous homes, lodges, and other associated resort facilities, with plans to continue expanding the resort facilities and housing as described in Section 3.6.1, *Affected Environment* (Tamarack 2002).

Tamarack Resort has developed an Erosion Control/Stormwater Management Plan and proposes management efforts to minimize adverse water quality impacts (Tamarack Resort 2006). The Tamarack development is subject to the provisions of the TMDL program for the lake. The implementation of their erosion control and stormwater management plans and conservation measures (Tamarack 2006) are expected to reduce but not eliminate potential adverse impacts to water quality.

Van Wyck Campground Improvements
Van Wyck is currently a primitive campground that is used for tents and RVs. Improvements to the park are not expected to lead to increased use by recreationists (Burrows, IDPR, pers. comm. 2007a). Development of a formalized campground may result in short-term water quality degradation from runoff during construction and before disturbed areas are re-vegetated. However, longer-term disturbance of vegetation would be reduced compared to current conditions, resulting in fewer runoff problems for water quality.

In summary, considering all of these cumulative actions and assuming that appropriate protective measures for non-project related impacts are implemented, water quality in Lake Cascade should progress towards meeting its targets described within the TMDL.

Replacement Campground Cumulative Effects

Most of the effects of the proposed replacement campground on water quality would be temporary. Long-term impacts on water quality would be extremely small and when added to the ongoing and expected effects of private residential development, Tamarack Resort, and marina development the effects of the preferred alternative would contribute very little toward cumulative adverse effects. Implementation on the TMDL over time would tend to reduce adverse effects reservoir-wide.

3.7 Vegetation

3.7.1 Affected Environment

The project area includes about 44 acres above the full pool line (Figure 3). Most of the site is uplands and there are a few small wetlands within the project area. The site is bordered by wetlands along the lake shore. There are about 26 acres of coniferous forest, 17 acres of grassland/ meadow, and less than one acre of forested and scrub/shrub wetlands within the project area. The vegetated emergent wetlands bordering the lake occupy roughly 8 additional acres that are outside of the project area. These emergent wetlands are submerged when the lake is full. Plant communities within each of these major cover types are discussed below.

Wetlands and Riparian Cover Types

Wetlands and riparian communities perform many important ecological functions, including providing water quality, protection, flood control, shoreline stabilization, contribution to groundwater recharge and stream flows, primary production in the food chain, and wildlife and fish habitat (Sather and Smith 1984). In addition, they also provide social benefits as natural areas for aesthetic, recreational, and educational opportunities.

The replacement campground is proposed for construction on a parcel that borders the North Fork of the Payette River arm of the upper end of Lake Cascade. The 2,800-foot-long property boundary along Lake Cascade was the focus of a wetland delineation conducted in August 2006. Wetlands surrounding upland islands adjacent to the shoreline and extending well beyond the shoreline in many areas were also delineated. The intent of the delineation is to identify the extent of jurisdictional wetlands (those regulated under Section 404 of the Clean water Act) so that the campground development can avoid impacts to jurisdictional wetlands.

Most project area wetlands are located along the lake shoreline of a portion of the North Fork of the Payette River arm of the upper end of Lake Cascade and associated low-lying inland areas (Figure 3). Hydrology for these wetlands appears to be supported primarily by seasonal high water in Lake Cascade (which is artificially controlled by Cascade Dam). Other factors that may affect hydrology on the site include snowmelt, high spring runoff that occurs along the North Fork of the Payette, and in some instances, high underlying water table. Many of the lake shoreline wetlands are under water when the lake is full.

Most areas of shoreline area above and immediately below the lake high-water line support intact and relatively undisturbed palustrine emergent marsh wetlands (Figure 3). Vegetation in these marsh wetlands is dominated by reed canary grass (*Phalaris arundinaceae*), water sedge (*Carex aquatilis*), knot-sheath sedge (*Carex retrorsa*), Crawford sedge (*Carex crawfordii*), and Baltic rush (*Juncus balticus*). Reed canary grass is the dominant species in emergent wetlands in the study area.

Reed canary grass is thought to be a native grass in some areas of Washington and perhaps other parts of the Northwest. However, it was an infrequent component of open wetland habitats prior to European settlement of the Pacific Northwest. With the arrival of European settlers in the Northwest and the land and agricultural development that followed, reed canary grass became a dominant member of

wetland and riparian communities (http://www.ser.org/sernw/rcg_info.asp). Reed canary grass is an aggressive invader that forces out other wetland species, reduces biodiversity, and can quickly form monotypic stands. However, it does provide some protection from shoreline erosion because it forms dense mats of persistent vegetation.

A transition zone between palustrine marsh wetlands and upland coniferous forests occurs along much of the lake shoreline above the normal full pool (Figure 3). In this area, lodgepole pine (*Pinus contorta*) is intermixed with wetland shrub species, particularly willows (*Salix* sp.). The shrub species associated with lodgepole pine in this transition zone primarily include coyote willow (*Salix exigua*), Bebb's willow (*Salix bebbiana*), Douglas hawthorn (*Crateagus douglasii*), and red-osier dogwood (*Cornus stolonifera*). These transition areas, as well as other areas that are solely vegetated with willows, are all designated as palustrine scrub/shrub wetlands. Understory species for palustrine scrub/shrub areas include reed canary grass, common spikerush (*Eleocharis palustris*), false lupine (*Thermopsis montana*), and a few sedges. Palustrine scrub/shrub areas, dominated by willows (*Salix* sp.), border the marsh wetland areas in many places. These shrub areas are also relatively undisturbed.

One area was designated as palustrine forested wetland based on the presence and dominance of black cottonwood (*Populus trichocarpa*). This area also had a large component of willows in the understory. Interior wetlands that connect to shoreline marsh wetlands are intermixed with willow shrub-scrub and are generally intact with extensive ground cover. Vegetation, soils, and hydrology in these wetlands appear to be undisturbed.

Wetland and riparian areas are relatively rare and are restricted to sites with direct access to surface water or shallow ground water.

Wetlands are regulated by Section 404 of the Clean Water Act, which requires that impacts on wetlands be avoided or minimized. If an action will impact wetland function, the loss must be mitigated.

Grassland/Meadow

Grassland/meadow clearings exist as openings within upland coniferous forests consisting of lodgepole pine and Engelmann spruce (*Picea engelmannii*). Uplands have been impacted by higher road density and some debris, such as empty containers apparently associated with former use of the site by the YMCA. Upland understory vegetation includes Idaho fescue (*Festuca idahoensis*), Columbia needlegrass (*Stipa columbiana*), lupine (*Lupinus* sp.), common yarrow (*Achillea millefolium*), arrowleaf balsamroot (*Balsamorhiza sagittata*), and buckwheat (*Eriogonum* sp.). A few big sagebrush (*Artemisia tridentata*) plants are also present in the interior meadow. Some upland areas had been invaded by smooth brome (*Bromus inermis*) and rush skeletonweed (*Chondrilla juncea*), a noxious weed. The upland clearing on the east side of the site is the area that has been most affected by past human activity. Small open meadow areas within conifer forests are common southern and central Idaho, especially on south-facing slopes.

Conifer Forest Cover Type

The proposed replacement campground site is dominated by intermediate-aged second-growth lodgepole pine forest. Most trees range from 4 to 10 inches in diameter. Other tree species occurring with lesser frequency include grand fir

(*Abies grandis*), quaking aspen (*Populus tremuloides*), Englemann spruce, and western larch (*Larix occidentalis*). No old growth trees remain on the site. Many of the grasses and forbs found in the grassland/meadow openings also occur within parts of the forested area where the tree canopy is not very dense. A variety of other shrubs such as serviceberry (*Amelanchier alnifolia*), hawthorn (*Crataegus douglasii*), bitter cherry (*Prunus emarginata*), mountain ash (*Sorbus* spp.), common snowberry (*Symphoricarpos albus*), shinyleaf spyrea (*Spiraea betulifolia*), and syringa (*Philadelphus lewisii*) are widely scattered throughout this community, but none are very common. Forest stands supporting intermediate-age second-growth lodgepole pine are common at middle elevations within central Idaho.

Rare and Sensitive Species

A query of the Idaho CDC database in November 2006 indicated that no known locations within several miles of the project area support rare plants. The nearest known locations supporting rare plants are 6 to 8 miles to the southwest, west, and northwest of the project area on land managed by the Payette National Forest. These include one to four occurrences each of the tall swamp onion (*Allium madidum*), giant helleborine (*Epipactis gigantea*), green keeled cotton-grass (*Eriophorum viridicarinatum*), and bank monkeyflower (*Mimulus clivicola*).

The tall swamp onion generally occurs between 3,000 and 6,500 feet elevation in vernally wet meadows, flats, draws, and gentle slopes along creeks and drainages. Populations occur in meadows and coniferous forest openings that are wet during the spring and dry to the surface by late summer or early fall. The species appears to be restricted to basalt-derived substrates. The CDC database query indicates that the nearest known occurrence of tall swamp onion is approximately 7 miles to the northwest of the project site. This location is in mountainous terrain at a substantially higher elevation than the project site. No tall swamp onions are known or expected to occur on the project site.

The giant helleborine typically grows in moist meadows with scattered willows. It is associated with calcium carbonate soils throughout its range. Within the Rocky Mountains, it requires a constant source of moisture and is usually associated with springs. No springs or other suitable habitat for this species are located on the project site, and the granitic soils would likely not support this plant. Therefore, no giant helleborines are known or expected to occur there.

Green-keeled cotton grass is an obligate wetland species. It typically grows in cold swamps and bogs, with calcium carbonate soils, at moderate or high elevations, in association with sedges (*Carex* spp.) and spikerush (*Eleocharis* spp.). The project site does not include these habitats and no green-keeled cotton grass is known or expected to occur on the project site.

Bank monkeyflowers are found in open shrub and grasslands on steep, south-facing slopes within moist western red cedar and grand fir forests. Bank monkeyflowers are annuals and they require adequate spring moisture and sun to bloom and set seed. The project site is generally too dry for this species and it does not support moist western red cedar or grand fir forests. No bank monkeyflowers are known to occur on the project site and none would be expected because the conditions are unsuitable.

Other Activities that Influence Project Vicinity Resource Conditions

Some or all of the many recent and ongoing construction projects in the vicinity of Lake Cascade have contributed to current vegetation conditions in the project vicinity. However, none have directly affected the project site. In some cases, residential development replaces native vegetation, and construction activities have the potential to introduce weed species that could spread to adjacent areas.

Completed and planned construction of the Tamarack project will ultimately result in clearing of approximately 900 acres of existing vegetation for ski runs, roads, housing, and other facilities (Tamarack 2002). Most of this clearing consists of conifer forest, but grassland/meadow areas have also been affected. About 12 acres of wetlands have or will also be directly impacted. Much of the vegetation removal and wetland impacts have already occurred. Increased human use would further degrade vegetation near trails and recreation facilities. The CDC database query indicates there are several known occurrences of tall swamp onion, giant helleborine, and bank monkeyflower on West Mountain near the Tamarack development, which may be adversely affected by development and operation of the project. CDC data does not provide enough detail regarding the specific locations of element occurrences to determine the exact locations of these plants relative to the location of the Tamarack development.

3.7.2 Environmental Consequences

Alternative A—No Action Alternative

The replacement campground would not be developed under the No Action Alternative. The proposed replacement campground site would continue to be designated for recreation use by Reclamation. No impacts would occur to rare plants because the site does not have conditions suitable for any of these species.

Residential developments on private lands has occurred near Lake Cascade has occurred at a rapid pace in recent years. These land-disturbing activities have resulted in impacts to both soils and native vegetation and have likely increased weed infestations. Recent accelerated rates of residential development in the vicinity of Lake Cascade are expected to continue for several more years (see Section 3.5, *Socioeconomics and Environmental Justice*).

Alternative B—Preferred Alternative

Development of the replacement campground would require clearing vegetation from approximately 16 acres of the 44-acre project site. This would accommodate construction of roads, paths, camping and RV pads, and campground facilities. Roughly 12 acres of the vegetation to be cleared is conifer forest, while the other 4 acres is upland grassland/meadow. Some portions of the remaining vegetation would be degraded as a result of trampling by campers and fire wood collection around campsites. Vegetation removal and disturbance would increase the possibility that invasive species and noxious weeds may become established on the site. However, creating developed camping areas and directing recreation use may reduce vegetation trampling along parts of the nearby shoreline.

Less than 0.1 acre of emergent wetlands would be temporarily impacted by development of a 250-foot-long boardwalk. Construction impacts would occur during hand placement of pilings for

the boardwalk, but application of BMPs would minimize impacts. For example, construction would take place during a low water period when no surface water is present in the shoreline wetland. Excess soils would be removed from the wetland and pre-construction grades would be re-established. This would allow emergent wetland vegetation to recolonize disturbed sites within two growing seasons, resulting in no long-term loss of wetland area. The current campground layout also indicates that a few minor portions of roads would cross wetlands (Figure 3). Either the road layout would be revised to avoid this impact or the wetland would be spanned with a bridge to avoid placement of fill into the wetland. None of the other campground facilities would impact wetlands. No impacts would occur to rare plants.

Mitigation

Weed control measures would be implemented during revegetation efforts and would continue during campground operation under the direction of IDPR. The BMPs listed in Chapter 5, *Environmental Commitments*, would be implemented during construction to protect vegetation not directly impacted and revegetate temporarily impacted areas with native and other plants compatible with a campground setting. Any wetland or riparian vegetation losses would be mitigated on at least a one-to-one basis, replacing both the affected area and loss of habitat value. Efforts would be made to avoid impacts to riparian areas and wetlands as much as possible. This has already been done to a large degree by modifying the proposed campground layout and eliminating some facilities to avoid wetland impacts.

Residual Impacts

Residual impacts include the loss and degradation of vegetation from campground development and use described for this alternative.

Cumulative Impacts

Nearby Private Residential Development

The impact of nearby private residential development on existing vegetation communities varies by location. For example, Hawks Bay would have no direct impacts on native vegetation because the site is currently a hay field. However, the North Fork WMA lies between the Hawks Bay subdivision and Lake Cascade. Short-term runoff from disturbed portions of the site may degrade native vegetation within the WMA. Long-term degradation of native forest and herbaceous vegetation within the WMA would occur because of the substantially increased human presence in the area. By contrast, the proposed Crane Shores subdivision is heavily forested and located along the lake shoreline and adjacent to the North Fork WMA. Development of residential housing would require removal of a substantial area of conifer forest. Short- and long-term impacts to vegetation within the WMA would be the same as described for the Hawks Bay alternative. These activities would not affect the proposed replacement campground site.

Marina

Very few impacts would occur to native vegetation because the marina would be constructed almost entirely within the previously disturbed Poison Creek Campground. However, operation of a marina would result in more boater use of the north end of the lake. An increase in the number of power boats using the northern end of the lake would increase the number of boat wakes, which would probably cause some erosion of wetland and shoreline vegetation within the WMAs and C/OS lands bordering the north end of the lake. The IDFG letter commenting on the WestRock (now Tamarack) project

(ISLB 1999) concurs with this assessment of boating impacts.

Tamarack Resort
A portion, though not all, of the vegetation clearing associated with development and construction at Tamarack has already occurred. Future development plans at the resort would result in the loss of additional native plant communities, adding up to the approximately 900 acres described in Section 3.7.1, *Affected Environment.*

Van Wyck Campground Improvement
Much of the Van Wyck campground site has been disturbed by past dispersed camping activity. Therefore, campground development at Van Wyck would have relatively minor impacts on native vegetation, and may permit recovery of some vegetation on areas that are not developed as camp sites, roads, or other facilities by concentrating visitor use to designated areas.

Replacement Campground Cumulative Effects
The replacement campground and marina would impact a very small area of land compared to the effects of private residential developments and Tamarack Resort. Native plant communities on the site have been impacted by past logging and recreation activity. The vegetation communities that would be impacted are relatively common in the area.

3.8 Wildlife

3.8.1 Affected Environment

IDFG and the U.S. Fish and Wildlife Service (USFWS) assist Reclamation in managing fish and wildlife resources. As described in Section 3.7, *Vegetation*, the proposed replacement campground site includes emergent, scrub/shrub, and forested wetland habitats and upland grassland/meadow and conifer forest habitats. USFWS (1990) indicates that 151 species of birds, as well as 47 mammal, eight amphibian, and five reptile species, are found in the vicinity of Lake Cascade.

Birds

Most of the wetlands at the site of the replacement campground are associated with the shoreline of Lake Cascade. Much of the emergent wetland area is inundated during the summer when the lake is full and the vegetation may or may not extend above the water surface. These wetlands provide habitat for a variety of water-dependent species that use the shoreline wetlands for foraging, cover, and possibly nesting.

The emergent wetlands that border the proposed campground site are dominated by reed canary grass. The sod-forming nature of reed canary grass limits invertebrate food availability to wildlife. (BLM 2006). It provides poor habitat structure for nesting birds, is of limited food value for wildlife (Fassett 1957), and it crowds out more valuable wetland species. In the Malheur National Wildlife Refuge, nesting ducks built 3 percent or fewer of their nests in reed canary grass (depending on duck species), even though this grass dominates much of the refuge wetlands.

In spite of the relatively low quality of reed canarygrass, the wetlands and exposed shoreline are probably used by many species of wildlife such as nesting and foraging waterfowl and shorebirds. The mudflats and sandbars that are exposed as the lake level declines are used as feeding sites by shorebirds and wading birds. Most of these water-oriented birds are sensitive to disturbance during the nesting and rearing season between mid-March and the end of June. Water level fluctuations pose a problem for nesting waterfowl along the lake shoreline. Birds build nests along the waterline that may be flooded out as water levels increase in the late spring.

A few of the many species of water-oriented birds reported inhabiting the Lake Cascade area during the breeding season or during migration are listed in Appendix A, *Wildlife Species Present Near the Poison Creek Replacement Campground Project*. This is not a complete species list but represents the variety of water-oriented birds found at the lake.

In addition to water-oriented birds, numerous neotropical migrants are common in the willow, cottonwood, and conifer forest habitat types present in the proposed replacement campground site. Some of the more common of these species, as well as others that may be present during one or more seasons or that may nest in the area, are also listed in Appendix A.

Preferred habitat is present for many of these species and many may use the project area. However, the relatively small size of the proposed replacement campground site and the generally high levels of human disturbance and noise near of the site limit the value of this area for certain species that require larger, undisturbed habitat patches.

Amphibians and Reptiles

No amphibian or reptile surveys have been conducted in the project area. Literature

sources and habitats present suggest that the species listed in Appendix A may occur in the project area.

Mammals

Small mammals that commonly occur near Lake Cascade and that may occur on the project site are listed in Appendix A. Terrestrial small mammals provide an important food supply for area predators. A bat roost (species unidentified) is located under Tamarack Falls bridge, immediately west of the proposed campground. The proposed replacement campground site may also be used by a variety of furbearers and medium-sized mammals including beaver, river otter, muskrat, mink, raccoon, coyote, striped and spotted skunk, long-tailed weasel, and red fox. Red fox are common throughout the Lake Cascade area. Larger mammals that may be present in the area on a seasonal basis include white-tailed deer (*Odocoileus virginianus)*, which occur in riparian areas mostly in the North Fork river bottom and a few elk *(Cervus elaphus)* may also forage in the lake area (Reclamation 1991). Elk and mule deer (*Odocoileus hemionus)* use the dense timber and wet meadow complexes of West Mountain (immediately west of Lake Cascade and the project area) during the spring and summer. During late November, these species migrate west into the Weiser River drainage for the winter. Use of the replacement campground area by elk and deer is low. Moose (*Alces alces*) are only occasionally observed passing through the area; there is no resident population (USFWS 1990).

Mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), and pine marten (*Martes americana*) occur in the mountains to the west of the lake but rarely occur in the valley, including the proposed replacement campground area. Black bears (*Ursus americanus*) are nomadic with their movements depending largely on berry production of forest shrubs, one of their main sources of food. Black bears generally stay in the forested areas on West Mountain except during dry, poor berry years. The proposed replacement campground site does not provide high- value food sources for bears. Generally high levels of human activity would deter but not eliminate potential use of the project site by these species.

Rare and Sensitive Species

CDC maintains a list of special status vertebrate species in Idaho. This list includes species that are nationally or locally rare and that CDC considers to have the greatest conservation needs. Table 3.8-1 lists all of these species that may occur or have suitable habitat within or near the project site. The table also lists habitat preferences, whether or not suitable habitat is present on the project area, and the likelihood that the species occurs on the site. Species of concern that have been reported within 10 miles of the project area include the boreal owl, flammulated owl, great gray, barred owl, northern pygmy owl, northern goshawk, and North American wolverine (CDC 2007).

TABLE 3.8-1
Valley County, Idaho, Species of Greatest Conservation Concern that have been Reported or May Occur Near the Project Area

Species	Habitat Preference	Presence of Suitable Habitat in the Project Area	Likelihood of Occurrence in or near the Project Area
western grebe *Aechmophorus occidentalis*	Deep open water adjacent to emergent wetlands.	Yes	A few grebes may nest in wetlands bordering the project area (see text for additional discussion)
common loon *Gavia immer*	Deep open water for foraging and emergent wetlands for nesting.	Yes	Probably low because of high levels of human activity on the reservoir, but possible
bufflehead *Bucephala albeola*	Deep open water for foraging and emergent wetlands for nesting.	Possibly	Unlikely to nest in the area because of levels of human activity
northern goshawk *Accipiter gentilis*	Conifer and aspen forest stands with large trees and low levels of human activity.	No suitable nesting habitat; could forage during migration.	Possible incidental occurrence but no nesting because trees are too small and high levels of human activity
boreal owl *Aegolius funerous*	In the Rocky Mountains generally occurs in mature, multi-layered spruce-fir forest; nests in tree hole, natural cavity, old woodpecker hole, or dead broken-topped tree.	No	Not expected; trees present are not preferred and are too small in diameter
northern pygmy-owl *Glaucidium gnoma*	Dense forest or open woodlands in the mountains or foothills and forages in open meadows; nests in abandoned woodpecker holes and natural tree cavities, so requires snags and larger living trees.	Forest and openings may be suitable but large trees are not present.	Not expected; large trees are not present
flammulated owl *Otus flammeolus*	Prefers mature growth ponderosa or Jeffery pine with open canopy; avoids dense young stands. Most often found on ridges and upper slopes.	No	Not expected; site does not include preferred tree species
great gray owl *Strix nebulosa*	Dense coniferous and hardwood forest, especially pine, spruce, paper birch, poplar; also second growth, especially near water, foraging in coniferous forest and meadows in mountains. Nests in top of large broken-off tree trunks (especially in south).	No, site forest stands are too open and large trees are not present.	Not expected; forest is not as preferred
barred owl *Strix varia*	Generally prefers expansive woodland or forested area with large mature and decadent trees that provide cavities suitable for security and nesting. Appears to prefer older stands but uses earlier stages of forest succession if enough large trees or snags are present.	No; site is relatively small and does not include mature and decadent trees.	Not expected; site lacks mature and decadent trees

TABLE 3.8-1
Valley County, Idaho, Species of Greatest Conservation Concern that have been Reported or May Occur Near the Project Area

Species	Habitat Preference	Presence of Suitable Habitat in the Project Area	Likelihood of Occurrence in or near the Project Area
black-backed woodpecker *Picoides arcticus*	Coniferous forests (primarily spruce/fir), especially in windfall and burned areas with standing dead trees. Habitat selection is very restricted and the species is strongly associated with recently burned forests.	No	Not expected; wrong species of trees and lack of standing dead trees
three-toed woodpecker *Picoides dorsalis*	In the west, occurs in dense coniferous forests, associated with subalpine fir and Engelmann spruce at higher elevations; occur mainly in lodgepole pine forests or in mixed-conifer forests with a lodgepole component at lower elevations. Optimal habitat includes areas with 42 to 52 snags per 100 acres for cavity nests.	No	None; site forest is too open and does not include snags
North American wolverine *Gulo gulo luscus*	Mountainous areas unaffected by human disturbance and with adequate year-round food supplies, mostly wilderness type areas.	No	None; too much human activity
fisher *Martes pennanti*	Late-successional conifer forests and especially riparian zones but also reported to prefer young to medium-aged conifer stands in parts of the Rocky Mountains. Douglas-fir is a preferred habitat type.	No	None; forest type is unsuitable
western toad *Bufo boreas*	A wide variety of habitats ranging from desert springs to mountain wetlands including various upland habitats around ponds, lakes, reservoirs, and slow-moving rivers and streams. Digs its own burrow in loose soil or uses those of small mammals, or shelters under logs or rocks. The eggs and larvae develop in shallow areas of ponds, lakes, or reservoirs, or in pools of slow-moving streams. May move more than 1,000 meters across uplands between breeding sites.	Reservoir and adjacent wetlands are likely suitable.	Possible; if it occurs, most likely along and near the reservoir shoreline

Source of habitat information: NatureServe Explorer accessed on January 23, 2007, at: http://www.natureserve.org/explorer

The largest western grebe breeding colony in Idaho occurs on the western side of Lake Cascade in the Mallard Bay area of the Duck Creek WMA. This area is about 1 mile south of the Poison Creek Campground and 3.5 miles south of the proposed replacement campground. The shoreline in this area is designated as C/OS and WMA by Reclamation. More than 1,000 nests were located in this colony in 2004 (D. Mack, IDFG, pers. comm. 2007).

CDC also reported a western grebe breeding colony along the shoreline of Lake Cascade just to the east of the proposed replacement campground site, and another approximately 1 mile to the southeast near Driftwood Point. These colonies were active at least through 1994. IDFG does not have more detailed information about either of these colonies.

D. Mack (IDFG, pers. comm. 2007) reports that most of the western grebes at Lake Cascade nest in the large colony but that other pairs nest outside of the colony. Grebes have been observed during the breeding season just to the east of the proposed replacement campground site (outside of the breeding colony) and in the Lake Fork arm. Mack indicated that while a few western grebes may nest in those areas, the main colony nests near Mallard Bay.

Western grebes have elaborate courtship displays that begin several weeks before nesting starts. The nesting period at Lake Cascade typically begins between June 1 and June 15, depending on the water year, with earlier nest initiation during drier years (D. Mack, IDFG, pers. comm. 2007). Young begin to leave the nest at the end of June in dry years and all chicks have probably left their nests by the end of July during wet years. Time from hatching to flight is 63 to 77 days (Ehrlich et al. 1988). Therefore, western grebes use the northern end of the lake for all of the summer months when human use also peaks.

Western grebes nest in areas of emergent wetland adjacent to deep water. Nests are typically floating platforms of living and dead vegetation anchored to or built up over live vegetation (Ehrlich et al. 1992). The nests are located over or very close to water deep enough to allow the bird to swim to the nest submerged. Shoreline wetland areas along the west and south sides of the proposed replacement campground site support emergent wetland vegetation suitable for nesting western grebes. These wetlands are adjacent to deep water when the lake is full.

The CDC database query indicated that several other special status vertebrate species have been reported within 10 miles of the proposed replacement campground site. These include the boreal owl, flammulated owl, great gray owl, barred owl, northern pygmy owl, northern goshawk, and North American wolverine. The second growth lodgepole pine forest and meadow habitats present at the proposed replacement campground do not provide high-quality habitat for any of these species, which, combined with rising levels of human activity in the general area, suggest that the site does not have habitat capable of supporting any of these species on a long-term basis and any occurrences of these species on the site would probably be transitory.

Other Activities that Influence Project Vicinity Resource Conditions

Ongoing residential development would have no direct impacts on native habitat at the Poison Creek Replacement Campground site. However, in general,

human development displaces wildlife from areas these species have traditionally used. More substantially, the Tamarack Resort has and will continue to result in direct wildlife habitat loss and wildlife disturbance and displacement. A wide variety of forest-dwelling species have been adversely affected by loss of habitat to resort and residential development. Several species of rare plants and wildlife occur in the vicinity of Tamarack Resort and some direct and indirect impacts on these species may have occurred. The increase in permanent residents at both Tamarack and at private residential developments has increased use of Reclamation lands and likely caused some indirect impacts on wildlife and habitat.

3.8.2 Environmental Consequences

This section discusses the expected positive and adverse impacts of the alternatives on wildlife and habitat.

Alternative A—No Action Alternative

The replacement campground would not be developed under the No Action Alternative. The proposed replacement campground site would continue to be designated for recreation use by Reclamation. However, no other use is planned at this time and the site would continue in its present condition for the foreseeable future. No known impacts would occur to wildlife or rare or sensitive species.

Alternative B—Preferred Alternative

Development of the replacement campground would require clearing of the vegetation from about 16 acres of the 44-acre project area. The current value of wildlife habitat at the site of the replacement campground has been reduced from optimal values by past timber harvest and other disturbance and the current levels of human activity in the vicinity of the site. However, the site does provide value for wildlife and those current wildlife habitat values would be substantially reduced by campground development. Direct habitat loss would result from removal of mixed conifer forest vegetation for the construction of campground facilities. Habitat in portions of the area that supports relatively more dense forest would be changed by the creation of generally more open conditions throughout the area. Habitat specialists that prefer closed canopy, relatively undisturbed, second-growth forest would be eliminated in favor of habitat generalists that tolerate or prefer more openings. The presence of campground users from May through October would further degrade remaining habitat value by displacing additional species during the breeding season. A few other species that are relatively tolerant of humans such as American robin (*Turdus migratorius*) or black-capped chickadee (*Parus atricapillus*) might suffer only relatively minor negative impacts because of the reduction in nesting and foraging habitat. A very few species, such as the gray jay (*Perisoreus americanus*), black-billed magpie (*Pica pica*), and a few small mammal species may benefit from the presence of humans because of an increase in food available for scavenging. Any current use of the area by deer or elk or other medium-sized mammals would also be reduced by the direct loss of habitat, reduced amount of cover, and presence of people and their dogs during the late spring, summer, and early fall.

Development of a boardwalk through the shoreline wetland area at the southeast side of the replacement campground site would displace a few species during construction. The area of direct habitat loss would be very small and is expected

to be temporary. The boardwalk would concentrate human access into this shoreline area and reduce randomly created trails; however, the presence of more people may disturb or displace some species of wildlife during the breeding season. One of the species that could be impacted is the western grebe, which may nest along parts of the adjacent lake shoreline in relatively low numbers.

The only other species of conservation concern that might be impacted by the campground is the western toad. It is uncertain if western toads are present, but they occur throughout most of Idaho, including all of Valley County (Groves et al. 1997). While wetland impacts would be very limited, the toad's tendency to migrate through and den in upland areas indicates that some habitat loss could occur. Collection by children staying in the campground could also be a problem if toads are present in the area.

Mitigation

In addition to the BMPs identified in Chapter 5, *Environmental Commitments*, If impacts to wetlands are unavoidable Reclamation would replace the function and value of any wetlands that would be impacted or degraded by implementation of this alternative. Efforts would be made to avoid impacts to riparian areas and wetlands as much as possible. This has already been done to a large degree by modifying the proposed campground layout and eliminating some facilities to avoid wetland impacts.

Residual Impacts

Residual impacts would include the loss of upland habitat and other non-wetland-related direct and indirect impacts discussed previously.

Cumulative Impacts

Nearby Private Residential Development

The impact of nearby private residential development on existing wildlife habitat varies by location. For example, Hawks Bay would have no direct impacts on wildlife habitat for most species because it is currently a hay field. The proposed Crane Shores subdivision site is heavily forested and located along the lake shoreline and adjacent to the North Fork WMA. Development of residential housing at Crane Shores would require removal of a substantial area of conifer forest, resulting in a direct loss of wildlife habitat. The North Fork WMA lies between the both subdivisions and Lake Cascade. Short-term runoff from disturbed portions of the sites may degrade native vegetation and wildlife habitat values within the WMA. The increased human presence in the area would result in some degree of long-term degradation of native wildlife habitat and increase disturbance and displacement of wildlife within the WMA. Disturbance often causes displacement to less favorable habitat and generally results reduced reproductive success for wildlife. These activities would not directly affect the proposed replacement campground site, but the Crane Shores subdivision may displace some wildlife.

Marina

No direct impacts would occur to wildlife because the marina would be constructed within the previously disturbed Poison Creek Campground, which already receives a high level of human use. However, operation of a marina would result in more boater use of the north end of the lake. Habitat values of wetlands and the WMAs and C/OS lands adjacent to the lake would be degraded and more erosion would be expected from boat wakes. The IDFG letter commenting on the WestRock

(now Tamarack) project (ISLB 1999) concurs with this assessment of boating impacts. Any increase in the number of boats using the northern end of the lake would cause additional disturbance of western grebe courtship and nesting activities, possibly resulting in fewer nesting attempts and lower nesting success.

Tamarack Resort
A wide variety of forest-dwelling species would be adversely affected by loss of habitat caused by continued development of the Tamarack resort. Several rare species of wildlife may be adversely affected, including the black-backed woodpecker, boreal owl, flammulated owl, great gray owl, barred owl, northern pygmy owl, and northern goshawk. The resort would also result in a large increase in the local population and a corresponding increase in recreation activity on Reclamation lands and on Lake Cascade. Wildlife disturbance on all Reclamation lands, especially on the west side of the lake, would increase because of the presence of substantially more people recreating on these lands. Increased human use would further degrade vegetation and habitat values and displace wildlife in the vicinity of trails and recreation facilities.

Van Wyck Campground Improvements
Much of the Van Wyck campground site has been disturbed by past dispersed camping activity and does not retain habitat integrity. Development of Van Wyck would have relatively minor impacts on wildlife habitat. Improvements to Van Wyck would help to protect the site by creating campsites, which would reduce the actual number of campsites and concentrate visitor use.

Campground development may allow some recovery of surrounding habitat areas as human use is focused in developed areas. However, the general area around the Van Wyck campground site has a relatively high level of human use, which would severely limit future wildlife use of the area by most species.

Replacement Campground Cumulative Effects
The proposed replacement campground would impact a very small area of wildlife habitat compared to the scale and widespread distribution of habitat loss associated with development of private residential areas and Tamarack Resort. Furthermore, the affected areas have been impacted by past logging and recreation activities associated with use of the replacement campground site by the YMCA.

3.9 Threatened and Endangered Species

3.9.1 Affected Environment

Table 3.9-1 includes the proposed, candidate, and listed threatened and endangered species that occur within portions of Valley County, Idaho as of January 15, 2007 (http://www.fws.gov/idahoes/IdahoCounties.htm). It also indicates whether or not the project area includes suitable habitat for the species and the likelihood that the species occurs within the proposed replacement campground site. Details regarding these species follow Table 3.9-1.

There are no proposed, candidate, or listed threatened or endangered plant species known to occur in Valley County (http://www.fws.gov/idahoes/IdahoCounties.htm and Table 3.9-1).

TABLE 3.9-1
Listed, Proposed, and Candidate Threatened and Endangered Species that Occur in Valley County, Idaho

Listed Species	ESA Status	Habitat in Project Area	Likelihood of Occurrence in Project Area	Preferred Alternative Effects Determination
Gray wolf (*Canis lupus*)	XN – Experimental/ Non-essential population	Seasonal habitat may be present	May occur during summer and fall when big game species are present.	May Effect, Not Likely to Adversely Effect
Canada lynx (*Lynx canadensis*)	LT	No suitable habitat present in the project area. Suitable habitat is likely present in the mountains several miles to the east and west of the project area.	Very unlikely because of the lack of suitable habitat and preferred prey species.	May Effect, Not Likely to Adversely Effect
Northern Idaho ground squirrel (*Spermophilus brunneus brunneus*)	LT	Unlikely but possible. Surveys will be conducted.	Unlikely but possible. Surveys will be conducted.	No determination can be made until surveys are conducted.
Bald eagle (*Haliaeetus leucocephalus*)	LT	Nesting occurs near the project area and foraging occurs in the lake near the project area.	Bald eagles are present in the area from spring through fall.	May Effect, Not Likely to Adversely Effect
Steelhead trout (*Oncorhynchus mykiss*)	LT – NOAA Fisheries Jurisdiction	Access for anadromous fish species is blocked by several dams that do not include fish passage.	Not present the upper Payette River watershed and not discussed in text.	No Effect
Fall chinook salmon (*Oncorhynchus tshawytscha*)	LT – NOAA Fisheries Jurisdiction	Access for anadromous fish species is blocked by several dams that do not include fish passage.	Not present the upper Payette River watershed and not discussed in text.	No Effect
Spring/summer chinook salmon (*Oncorhynchus tshawytscha*)	LT – NOAA Fisheries Jurisdiction	Access for anadromous fish species is blocked by several dams that do not include fish passage.	Not present the upper Payette River watershed and not discussed in text.	No Effect

TABLE 3.9-1
Listed, Proposed, and Candidate Threatened and Endangered Species that Occur in Valley County, Idaho

Listed Species	ESA Status	Habitat in Project Area	Likelihood of Occurrence in Project Area	Preferred Alternative Effects Determination
Bull trout (*Salvelinus confluentus*)	LT	No suitable habitat in the vicinity of the project area.	Not present – see text below for details.	No Effect
Proposed Species				
Steelhead trout	Critical Habitat	No critical habitat present in the project area.	No proposed or designated critical habitat present in the project area.	No Effect
Candidate Species				
Yellow-billed cuckoo *(Coccyzus americanus)*	C	Suitable habitat does not occur within the project area and is very limited in the vicinity.	Very unlikely.	No Effect
Proposed Critical Habitat for Bull Trout	Critical Habitat	No proposed or designated critical habitat present in the project area.	No proposed or designated critical habitat present in the project area.	No Effect

Source: http://www.fws.gov/idahoes/IdahoCounties.htm

Gray Wolf

The gray wolf *(Canis lupus)* is classified as an experimental non-essential population throughout most of Idaho, including the Lake Cascade area (59 FR 60266). Gray wolves reintroduced into central Idaho in the mid-1990s have expanded their range throughout the mountainous parts of Idaho, including forested areas near Lake Cascade. At the end of 2005, there were two documented wolf packs occupying lands within 25 miles of project area, mostly to the northeast and northwest of Lake Cascade (http://fishandgame.idaho.gov/cms/wildlife/wolves/). The proposed replacement campground site may provide temporary limited quality suitable habitat for an occasional dispersing wolf but does not provide year-long or seasonal habitat capable of supporting a wolf pack or individual wolves. The project area does not support the big game populations needed to support wolves and there is too much human activity in the vicinity for the site to be considered to be suitable habitat. The proposed replacement campground site is not suitable for denning or as a rendezvous site for wolves because of the high levels of human activity in the immediate area.

Canada Lynx

The Canada lynx *(Lynx canadensis)* was federally listed as threatened on March 24, 2000. In the contiguous U.S., lynx distribution is associated with the southern boreal forest, consisting of subalpine coniferous forest in the west (Aubry et al. 1999). In Canada and Alaska, lynx habitat is the classic boreal forest ecosystem known as the taiga (McCord and Cardoza 1982; Quinn and Parker 1987; Ruggiero et al. 2000). Within these general forest types, lynx are most likely to persist in

areas that receive deep snow, for which the lynx is highly adapted (Ruggiero et al. 1999).

Lynx habitat quality is believed to be lower in the southern periphery of its range (including Idaho) than in the northern taiga, because landscapes are more heterogeneous in terms of topography, climate, and vegetation (Buskirk et al. 1999). The Idaho GAP analysis project provides more site-specific indication of lynx habitat (University of Idaho 2007). Range maps showing the distribution of lynx in Idaho indicate that the Poison Creek Replacement Campground project area is on the edge of the range of the lynx. The Idaho GAP model predicts that lynx habitat in west-central Idaho extends northward from roughly the project vicinity (University of Idaho 2007).

The *Lynx Conservation Assessment Strategy* (Ruediger et al. 2000) included the following description of lynx habitat. Canada lynx are associated with boreal subalpine fir (*Abies lasiocarpa*) and lodgepole pine with thick undergrowth above 5,000 feet. Mountainous regions supporting variable-aged stands of spruce (*Picea* sp.) and fir (*Abies* sp.), Douglas-fir (*Pseudotsuga menzessii*), and lodgepole pine are generally considered to be suitable lynx habitat (Ruggiero et al. 2000). According to the Buskirk et al. 1999), lynx in the southern extension of their range (including Idaho) require three primary habitat components: 1) foraging habitat (15- to 35-year-old lodgepole pine to support snowshoe hare, the primary food source, and provide hunting cover); 2) denning sites with patches of spruce and fir greater than 200 years old that provide abundant large woody debris; and 3) dispersal and travel cover that is variable in vegetative composition and structure.

Potential denning habitat is located 6 to 7 miles northeast of Lake Cascade in the Sloan Creek and Kennally Creek watersheds, which are tributaries of the Gold Fork River (USDA-Payette National Forest 2000). A query of the CDC database indicates a 1976 lynx sighting in this general area. The Idaho CDC also reported a 1992 lynx sighting about 9 miles south of the project area on West Mountain.

Snowshoe hare distribution is limited by the availability of winter habitat that includes early successional lodgepole pine with trees that exceed the mean snow depths and provide snow interception through interlocking canopy above the snow. Lynx dens are primarily located in mature lodgepole pine and spruce fir forests (Koehler and Brittell 1990).

Lynx are generally secretive and rarely venture into populated areas. However, hare populations are cyclic on a 10- to 11-year cycle. Lynx may move into lower elevation, more populated areas during periods when low hare numbers drop below 0.5 hares per hectare (Ward and Krebs 1985). This movement could result in lynx occasionally traveling through the project area, but this occurrence would probably be very rare.

Potential lynx habitat quality on the project area is marginal at best for several reasons. The lodgepole pine forest on the site does not provide high-quality habitat for showshoe hares because it is too mature and there is little cover for either hares or hunting lynx. There are no patches of spruce and fir greater than 200 years old that provide abundant large woody debris needed for lynx denning. Finally, lands within a few miles of the project area are experiencing rapid development and human activity levels are substantially higher than lynx prefer.

Therefore, it is very unlikely that lynx would use the project area except possibly for movement between mountainous areas to the east and west of the project area. Use of a movement corridor crossing the project area in this manner would require lynx to cross several miles of open non-forest habitat and a major highway.

The *WestRock Resort Wildlife Habitat Conservation Plan* (WestRock 2000) states that lynx are not known to be present in the project area and that the nearest recent lynx records are from about 20 miles to the east of Lake Cascade. WestRock (2000), citing an unpublished USFS report, also states that the availability of prey for lynx in the West Mountain area is considered low when compared to other areas of the Cascade Ranger District of the Boise National Forest.

Northern Idaho Ground Squirrel

The northern Idaho ground squirrel was listed as Threatened on April 5, 2000 (65 Federal Register 17779-17786). On July 28, 2003, USFWS Region 1 approved a Recovery Plan for this species (USFWS 2003). The northern Idaho ground squirrel's population has been greatly reduced from historic levels. In 1985, scientists estimated that more than 5,000 ground squirrels inhabited west-central Idaho. The animals occurred in open meadows and shrub/grasslands among coniferous forests of older Ponderosa pines and Douglas-fir. At high risk of extinction, this animal has suffered a 92 percent decline in population from 1985 to 1999. Fewer than 500 northern Idaho ground squirrels were estimated to be living in 2000 (USFWS 2007). Recent intensified search efforts suggest that the current estimated total population is about 1,300 (R. Vizgirdas, USFWS, pers. comm. 2007), much higher than earlier estimates. Until recently, it was thought that all populations were found within 20 square miles of public and private lands near Council, Idaho, about 15 air miles to the west of the project area. However, a small population was recently discovered in Round Valley about 15 miles south of the project area and another is suspected just east of Cascade, Idaho (R. Vizgirdas, USFWS, pers. comm. 2007).

This ground squirrel occupies dry, rocky, sparsely vegetated meadows surrounded by forests of ponderosa pine or Douglas-fir at elevations of 3,800 to 5,200 feet (Yensen 1991; Dyni and Yensen 1996). Nearly all the meadow sites used by this ground squirrel are on dry, shallow soils with no young tree invasion (Sherman and Yensen 1994). Nest burrows are located in adjacent small patches of well-drained deeper soils (Yensen et al. 1991). Surface features, such as logs or rocks, make a site more attractive to this species. Ponderosa pine-shrub steppe habitat associations on south-facing slopes at less than 30 percent and at elevations below 1,830 meters (6,000 feet) are considered to be potentially suitable habitat (USFWS 2003).

Based on this information, it was thought that the proposed replacement campground site did not provide suitable habitat for the squirrel. However, a discussion with USFWS staff indicates that, based on recent findings, the combination of small grassland/meadows within lodgepole pine forest that occupies the proposed replacement campground site may be suitable for northern Idaho ground squirrels (R. Vizgirdas, USFWS, pers. comm. 2007). He noted that squirrels have been found at higher elevations and in more varied habitat than in the past. No surveys have been conducted at this time, so it is not possible to definitively state whether or not squirrels are present. Field

surveys by a qualified biologist following current survey protocols would be conducted in May or June 2007 to confirm whether squirrels are present or not.

Bald Eagle

The bald eagle continues to be listed as a threatened species in Idaho. The nesting bald eagle population at Lake Cascade has increased dramatically since the first bald eagle nest was discovered in the lake area in 1976. There are 12 bald eagle nesting territories adjacent to and near the lake (Sallabanks 2006). Fish throughout the lake provide the primary prey for the bald eagle. In the spring, ice melts first in the Hot Spring Creek area, about 4 miles to the south southeast of the replacement campground site, exposing live fish to capture. Also, winter-killed fish begin to wash up along the shoreline as the lake thaws. As the lake thaws and the readily available supply of dead fish is depleted, bald eagles switch to live fish again and, to a lesser extent, to shorebirds and waterfowl. In years when there is a late summer fish die-off resulting from warm temperatures and oxygen depletion, dead fish are again available to bald eagles. Suckers (*Catostomidae*) and bullheads (*Ictalurus* sp.) congregating in shallow bays at this time provide a source of live fish.

Bald eagles arrive in the Lake Cascade area in February and early March for courtship and nest building (Krol and Bechard 1989a, b and 1990). Egg laying typically occurs near the end of March and young hatch in late April and early May. Young eagles fledge from mid-June to mid-July but return to the nest at night for about six weeks after fledging (Krol and Bechard 1990). They may remain in the general lake area until fall migration.

The proposed replacement campground is within the Buttercup and possibly the Donnelly bald eagle nesting territories. Whether or not it is within the Donnelly territory is uncertain, as this nest is located about 3 miles north of the replacement campground site. The Donnelly nest is located adjacent to part of Lake Cascade that is designated as non-motorized. Levels of human disturbance near the nest would be relatively lower than in the immediate vicinity of the proposed replacement campground where motorized boats area permitted. Therefore, the Donnelly nest pair may forage nearer to the nest rather than farther south near the replacement campground site.

The Poison Creek Campground is within the Poison Creek bald eagle nesting territory (USFWS 2006). None of these nest trees are within or adjacent to the Poison Creek campground or the proposed replacement campground but that territorial use by eagles occurs along the shorelines and lake for perching and foraging, inclusive of the existing and proposed campgrounds. The Poison Creek pair fledged one eagle in 2004 but produced no young in 2005 or 2006. The Buttercup nest failed to produce offspring in 2004, 2005, and 2006 and the Donnelly nest failed to produce young in 2006 (Perkins and Bechard 2005, Sallabanks 2006). The Buttercup nest was not occupied in 2006. Productivity at nests around Lake Cascade was generally low in 2006 following record high productivity in 2005.

Bald eagles nesting in the vicinity of the lake have until recently been apparently tolerating current levels of human activity. It is uncertain if levels of human use may increase above tolerable levels for some eagle pairs in some areas in the future. There is no way to predict when such a threshold might be crossed as individual

bald eagle response to human activity is highly variable.

Yellow-billed Cuckoo

The USFWS received a petition dated February 2, 1998, to list the yellow-billed cuckoo as a threatened or endangered species. In July 2001, the USFWS announced a 12-month finding for a petition to list the yellow-billed cuckoo as threatened or endangered in the western U.S. They determined that listing the yellow-billed cuckoo was warranted but precluded by higher priority species. The Western Distinct Population Segment (DPS) of the yellow-billed cuckoo was given status as a candidate species by the USFWS.

In the West, cuckoos favor areas with a dense understory of willow (*Salix* spp.) combined with mature cottonwoods (*Populus* spp.) and generally within 325 feet of slow or standing water (Gaines 1974; Gaines 1977; Gaines and Laymon 1984). The yellow-billed cuckoo is also known to use non-riparian, dense vegetation such as wooded parks, cemeteries, farmsteads, tree islands, Great Basin shrub-steppe, and high elevation willow thickets (Finch 1992; DeGraff et al. 1991). Larger patches of suitable riparian habitat are highly preferred with sites greater than 200 acres offering optimal habitat (Laymon and Halterman 1987). Sites less than 38 acres in extent and less than 325 feet wide were unsuitable. There is no suitable habitat for the yellow-billed cuckoo within or near the proposed replacement campground site.

Bull Trout

A review of the IDFG Fisheries Management Plan 2001–2006 (IDFG 2001) and the State of Idaho Bull Trout Conservation Plan (IDFG 1996) indicate that the North Fork of the Payette is not listed as a key watershed for the bull trout (*Salvelinus confluentus*), and surveys have not found them in Lake Cascade (IDFG 1998). The nearest known locations supporting bull trout are the North Fork of the Payette River upstream of Payette Lake and in the Lake Fork Creek drainage above Little Payette Lake from Brown's Pond upstream to the headwaters. Bull trout are also in the Gold Fork River above the impassable irrigation water diversion dam constructed there in the 1930s. Focal (spawning and rearing) habitat which supports a single depressed bull trout population is located in the tributaries of the upper Gold Fork River watershed. No bull trout have been found in the lower reaches of the Gold Fork River below the diversion dam or in Lake Cascade in recent times, with the exception of one caught by a fisherman 3 or 4 years ago according to USFWS staff. In some areas of Idaho, lakes and reservoirs provide important habitat for the species. Conditions in Lake Cascade are likely unsuitable for bull trout because of warm water temperatures and poor water quality (USDA-Payette National Forest 1998. Therefore, no bull trout are expected to occur near the proposed project site. Any bull trout that might occur would be highly irregular in this poor habitat.

Other Activities that Influence Project Vicinity Resource Conditions

Human use of the Lake Cascade area is already relatively high, especially in certain areas. Areas with high levels of human use generally do not provide good quality wolf or lynx habitat. Recent private residential development in the vicinity of Lake Cascade has likely further degraded any potential habitat for these two species.

It is unlikely that the sites where private residential developments have recently

been constructed have been adequately searched for the presence of northern Idaho ground squirrels. While the potential for impacts is relatively low, it is possible that one or more small populations may have been impacted by these recent developments.

No large cottonwood / willow riparian areas have been affected by recent residential or resort developments. Therefore, it is very unlikely that yellow-billed cuckoos have been affected by recent developments.

It is not possible to determine whether construction and operation of Tamarack Resort have impacted gray wolves. There were no known wolf packs immediately to the west of Lake Cascade in 2005 and none would be expected to use this area in the future, considering the levels of construction and human activity in the vicinity of the resort. Likewise, it is not possible to determine whether lynx have been adversely affected by the project. The area is considered to be relatively low-value lynx habitat because of the low hare population. This low-value lynx habitat within the resort footprint has been adversely affected by its construction and operation.

Developments in the vicinity of Lake Cascade have probably resulted in some increase in human use of the lake area compared to what would have occurred in the absence of this development. Any increase in human use of the lake or shoreline in areas used by bald eagles may have adverse impacts on foraging or nesting success.

The WestRock wildlife habitat conservation plan (WestRock 2000) stated that development of the resort (now called Tamarack) would likely impact two bald eagle nests, would not likely have adverse effects on lynx, and would not jeopardize the experimental non-essential population of the gray wolf. USFWS (2001) concurred with these conclusions, stating that impacts on these bald eagles would not jeopardize the continued existence of the regional population. The Poison Creek and Buttercup nests are the two that WestRock (2000) indicated would be impacted by the project. The Buttercup nest failed to produce offspring in 2004, 2005, and 2006; the Poison Creek nest fledged one bird in 2004 but none in 2005 or 2006 (Perkins and Bechard 2005, Sallabanks 2006).

Perkins and Bechard (2005) suggest, based on published literature, that, “Recent expansion of the development and operations (of Tamarack Resort) could be implicated as a cause of these breeding failures.” The report further cites numerous studies that have concluded development near shorelines deters eagles from using acceptable habitat, as the birds often minimize their exposure to human activity by avoiding areas of high activity. The authors also list numerous activities associated with Tamarack Resort that may increase the potential for unfavorable human-eagle interactions and cause behavioral changes in eagles, which may contribute to nest failure: boat and kayak traffic, pedestrian use, automobile traffic, and construction near the shoreline. They also state that while there are few historically documented bald eagle nest failures that were caused exclusively by human disturbance, it is likely that human activity impacts bald eagle nesting behavior. Another factor that has been shown to also affect bald eagle nesting success is the age of the individual eagles. Younger, less-experienced eagles often produce fewer young or have less successful nests. The age of the eagles in the Poison Creek and Buttercup nesting

pairs was not addressed and probably not known by Perkins and Bechard (2005).

3.9.2 Environmental Consequences

Alternative A—No Action

Private residential development and continued development of Tamarack Resort may have a very minor adverse effect on gray wolves and lynx as described in Section 3.9.1, *Affected Environment.* Bald eagles may be impacted by higher levels of human activity near nests and in the northern end of Lake Cascade. Potential effects of residential development on northern Idaho ground squirrels area not known because no surveys have been conducted. There would be no effects on yellow-billed cuckoos. Development of a marina would result in a small increase in boater use of the north end of the lake, which could disturb both nesting and foraging activity for bald eagles at several sites including the Poison Creek, Gold Fork, and Buttercup nests.

Alternative B—Preferred Alternative

The effects determinations for the yellow-billed cuckoo and bull trout are *no effect* because neither these species nor any suitable habitat are present in the vicinity of the proposed replacement campground.

Gray Wolf

It is very unlikely that development and use of the replacement campground would have any adverse effect on gray wolves because human use of the area is already relatively high and the area does not provide good wolf habitat. The effects determination for the gray wolf is *may affect, not likely to adversely affect.*

Canada Lynx

The USFWS biological opinion for the WestRock project (USFWS 2001) concurred with the *may affect, not likely to adversely affect* conclusion regarding Canada lynx for construction and operation of the WestRock project area, which is located a few miles to the south of the proposed replacement campground site. That determination was based on the finding that the West Mountain North Lynx Analysis Unit (LAU) is composed of marginal quality, poorly connected lynx habitat. The proposed replacement campground site has lower habitat quality than the West Mountain North LAU. However, possible transitory use of the project area by lynx cannot be ruled out. Therefore, the effects determination for the Canada lynx is *may affect, not likely to adversely affect.*

Bald Eagle

Additional human use of the northern end of the lake after another campground is open would add to current levels of human activity in the area.

The current levels of human activity are probably contributing to the nest failures at the Poison Creek, Buttercup, and Donnelly nests; although other factors may also be part of the problem. Productivity was low at most of the nests in the vicinity of Lake Cascade in 2006, with only 3 of 12 nests fledging young. This compares to 7 successful nests from 12 nesting attempts in 2005. The low success rate in 2006 included nests located around the southern end of Lake Cascade where development and human use have not increased substantially. Raptors, including bald eagles, are susceptible to nest failure if disturbance causes an increase in the incidence of startled adults trampling eggs or young or increased egg-stage and nestling-stage mortalities because of the absence of nest-attending adults (Fyfe and Olendorff 1976). Development along shorelines and boating activity have also been shown to deter bald eagles from

using otherwise acceptable habitat (Stalmaster and Newman 1978, Fraser *et al.* 1985, McGarigal *et al.* 1991, and Buehler *et al.* 1991). It is not possible to isolate any one or a combination of factors as the cause of the nesting failures.

Use of the campground would begin about the time young eagles are hatching and peak around the time of fledging, when demands for food are high. (See Section 3.2.1, *Recreation, Affected Environment*) for a description of the expected pattern of campground use.) Human activities within the campground would be shielded from bald eagle foraging areas because a buffer of trees would remain between the camp sites and the reservoir (Figure 3).

The main source of potential disturbance is from people fishing along the south and west sides of the campground before the beach area is inundated by the rising water level. After water levels drop to expose the beach in mid-summer, swimming and sun bathing along with fishing would be the primary sources of disturbance along the shore line.

The beach is a shallow-sloped strip of lake bottom that is exposed when the water level drops more than 2 feet below full pool, or below elevation 4826. Above this level the water covers the beach and floods the emergent wetlands that border the campground, rendering the beach area inaccessible to everyone (Figure 3). Therefore, the beach would typically be flooded and inaccessible between late May and mid July in a typical year (http://www.usbr.gov/pn/hydromet/datamenu.html).

Some spring-time fishing already occurs in this area because it is accessible from the Tamarack Falls bridge. This use would continue and may increase. However, early spring is a time when camper and day use is expected to be relatively low compared to peak use periods later in the summer (see Recreation resource area, Section 2.2.2, *Alternative B—Preferred Alternative*). Therefore, fishing use may not change substantially as a result of campground development. Little human use of the campground is expected during the critical early part of the nesting cycle in March and April when temperatures are cold.

The highest use of the beach area would tend to be in mid summer when it is exposed. However eagles have typically fledged by the time human activity peaks and nesting attempts are not as likely to fail because of disturbance at this time.

Overall levels of potential human disturbance of bald eagles during critical nesting periods may not change substantially and the effects determination is that the Preferred Alternative *may affect, but is not likely to adversely affect* the bald eagle.

Conservation Measures
No conservation measures are proposed for bald eagles.

Northern Idaho Ground Squirrel
As noted previously, formal surveys by qualified biologists following established protocols would be conducted for the northern Idaho ground squirrel in May 2007. If ground Northern Idaho ground squirrels are found to be present, the replacement campground design would be changed to avoid all potential impacts if possible. IDPR and Reclamation would also develop an educational display in conjunction with the USFWS to inform and educate the public about the species.
R. Vizgirdas (USFWS, pers. comm. 2007) indicates that even if ground squirrels are found to be present, the campground design could probably be changed to accommodate the species and avoid

impacts. Given these commitments and statements, the effects determination is that the Preferred Alternative *may affect, but is not likely to adversely affect* the northern Idaho ground squirrel.

Cumulative Effects

Private Residential Development
Private residential development may have a very minor adverse effect on gray wolves and lynx as described in Section 3.9.1, *Affected Environment*. Bald eagles from the Donnelly nest, located about 1 mile north of the proposed Crane Shores and Hawks Bay subdivisions, forage in the North Fork arm of the lake. Any increase in human use of the lake or shoreline in areas used by these eagles may have adverse impacts on foraging or nesting success. Potential effects on northern Idaho ground squirrels area not known and there would be no effects on yellow-billed cuckoos.

Marina
Development of a marina would result in additional boater use of the north end of the lake, which could disturb both nesting and foraging activity for bald eagles at several sites including the Poison Creek, Gold Fork, and Buttercup nests. It is highly unlikely that northern Idaho ground squirrels are present at this site, given levels of human disturbance and regular irrigation to maintain a bluegrass lawn. However, no surveys have been conducted. Formal surveys by qualified biologists following established protocols would be conducted for the northern Idaho ground squirrel from May through June 2007, before any development occurs at this site. None of the other listed, proposed, or candidate species would be affected by the marina.

Tamarack Resort
Development of Tamarack Resort has resulted in the construction of numerous homes, lodges, and other associated resort facilities, with plans to continue expanding the resort facilities and housing as described in Section 3.9.1, *Affected Environment*. Although plans for the resort are available, the potential exists for unanticipated and expanded development associated with the resort to occur that may displace additional wildlife. Bald eagle productivity at the nests nearest to Tamarack has declined substantially in the last two years. The exact cause of this decline in productivity is uncertain and it is not possible to isolate one potential cause from another. However, increased levels of human activity associated with development and operation of Tamarack Resort is likely one of the causes of the decline (Perkins and Bechard 2005).

Van Wyck Campground
Development of the Van Wyck campground would probably not affect any of the listed, proposed, or candidate species. However, there is a remote possibility that northern Idaho ground squirrels may occur on the site. Formal surveys by qualified biologists following established protocols would be conducted for the northern Idaho ground squirrel from May through June 2007 to confirm their presence or absence.

Replacement Campground Cumulative Effects
Considering all of the development activity occurring in the vicinity of Lake Cascade, the future for some of the bald eagles nesting in the area is not favorable. The proposed replacement campground is a relatively small component of this equation and only a very short section of shoreline where bald eagles may perch and forage would be affected. All of the activities in the vicinity of the Poison

Creek nest site, including the proposed marina, may result in too much activity for continued success at this site.

3.10 Aquatic Biology

3.10.1 Affected Environment

Lake Cascade is one of three Reclamation impoundments in the Payette River Basin, was formed by damming the North Fork Payette River, and was completed in 1948. The Lake Cascade fishery is managed by IDFG with coordination from Reclamation, IDEQ, and private landowners throughout the basin. The lake provides a mixed fishery (both cold water and warm water species, listed in Appendix A) and is one of the most heavily fished waters in the state of Idaho (IDFG 1996). Associated with the lake are the fisheries resources of its four main tributaries, the North Fork Payette River, Lake Fork River, Gold Fork Creek, and Willow Creek. However, for the purpose of this examination, the lake will be the focus of this analysis because of the location of the proposed replacement campground.

Water quality at Lake Cascade has been a subject of public concern since the 1970s, and a collapse of the very popular yellow perch fishery during the 1990s found that the fishery was adversely affected by a combination of the poor water quality and predation from the northern pikeminnow (IDFG 2007). At present, the water quality conditions within the Reservoir continue to improve because of the coordinated efforts of the agencies and landowners who are participating on the technical advisory committee. The aggressive pikeminnow removal program, conducted by IDFG, appears to be slowly recovering the yellow perch populations toward a viable recreational fishery.

The future fisheries management of Lake Cascade is detailed within the 2007-2012 IDFG Fisheries Management Plan (IDFG 2007). One of the identified management goals applicable to the proposed project includes IDFG support of water quality improvement studies and encouragement of a timely implementation of water quality improvement measures.

Lake Cascade is open to fishing all year. Sport fishing activities focus primarily on rainbow trout during spring and fall. Summer and winter fishing was formerly focused on perch. However, since perch populations have declined, summer fishing is now focused on other warm water species. Winter fishing opportunities on the lake have been reduced since the decline of the perch fishery. However, the perch fishery is improving and is anticipated to continue to improve with the expected better water quality conditions and successful fisheries management actions. Angler surveys find the angler pressure on Lake Cascade continues to remain low, and is likely attributed to the condition of the perch fishery (IDFG 2006). However, increases in angler pressure are anticipated with water quality improvements and the implementation of the goals described for the Lake Cascade fishery (IDFG 2007).

Spawning conditions for warm water game and non-game fish in the lake are generally good. Shoreline gravels, rocks, and vegetation usually remain inundated long enough for spawning, egg development, and fry emergence to occur. The cold water species and some non-game species, such as the northern pikeminnow, primarily use the tributaries for spawning.

Lake Cascade has the potential to provide good rearing habitat for both warm and cold water fish. The lake inundates a broad, flat valley and has relatively flat underwater topography. The existing shallow profile of the lake is exaggerated by periodic drawdowns. Even with annual

fluctuations, the large, shallow shoreline zone is productive for benthic organisms and some aquatic vegetation. However, this high productivity, coupled with the shallow lake profile and watershed-wide nutrient inputs, has resulted in periodic poor water quality conditions in the lake. The primary hazards to fish as a result of the poor water quality are low dissolved oxygen levels during winter and summer months, and elevated water temperatures in the late summer.

Space limitations as a result of the lake drawdowns are also a concern for the lake fishery. Reservoir drawdowns result in a limited area for fish, limiting refuge habitat from extreme conditions. Low lake levels and low late summer flows in the main tributaries can limit fish access to refuge areas in these tributaries, where water is more highly oxygenated and possibly cooler (T. Dombrowski. pers. comm., 1999, as cited in Reclamation 2002; D. Anderson, 1999 pers. comm. as cited in Reclamation 2002). Also, because the average depth of the lake is only about 25 feet at full pool, low lake levels can result in depths of only a few feet throughout much of the lake. This limits the amount of cool water habitat in late summer and can result in areas of stagnant water with low oxygen levels, particularly in the southern portion of the lake (Dombrowski. 1999, pers. comm., as cited in Reclamation 2002).

Other Activities that Influence Project Vicinity Resource Conditions

As described in the *Water Quality* resource area, Section 3.6.1, *Affected Environment*, the many recent and ongoing construction projects near Lake Cascade contribute to water quality conditions, and, in turn, may affect the fishery. The potential for adverse impacts from residential development is highly variable and depends on factors such as slope and the effectiveness of stormwater control measures.

Fertilizer and pesticide application in residential areas and on the Tamarack golf course can also be a factor. Impacts to Lake Cascade fisheries from development and operation of the Tamarack resort would likely be associated with the attractiveness of the resort to anglers who might use the resort as lodging; however, the impact to the fisheries from resort users is likely very minor, given the recent findings of current low levels of angler use across the lake. Although improvements to the fishery are anticipated, any degradation of water quality associated with facilities construction that could affect the fishery are expected to be both temporary and localized.

3.10.2 Environmental Consequences

Alternative A—No Action Alternative

Under the No Action Alternative, the former YMCA campsite would not be developed as a replacement campground. Impacts to shoreline fish habitats from existing uses of the campground site are expected to be immeasurable, given the limited, infrequent use of the site. A small marina and associated expanded parking would be developed in the West Mountain/Poison Creek area as early as 2009, as described in the RMP. Additional parking may be provided at the existing Poison Creek boat ramp, but the impact would not change significantly. Impacts to fisheries habitats would likely continue to be tied to water quality impacts as described within the Water Quality section, and to the anticipated improved fishery from management actions, leading to a gradual increase in use of the boat ramp by anglers. Given the anticipated increases in angler use span across the

lake, it is unlikely that the impacts to the fishery, or their habitats, from a new marina would have a substantial adverse effect to the fishery within Lake Cascade.

Alternative B—Preferred Alternative

Development of the replacement campground would require clearing of the vegetation and soil disturbance of about 16 acres of the 44-acre project site. Construction would occur over one or parts of two construction seasons, depending on when it begins. The construction season typically extends from May through the end of November. Short-term water quality-related impacts might result from construction-related activities as described within the Water Quality section.

Soil disturbances and vegetative removal during construction might result in minor localized degradation of water quality with potential related impacts to the fishery immediately adjacent to the replacement campground site. However, implementation of BMPs and adherence to permit conditions are expected to reduce potential water quality and fishery impacts to very low levels and any impacts would be temporary.

Increased angler use associated with additional campground sites at the replacement campground may occur. However, with the relatively low angler use across Lake Cascade, it is unlikely that a small potential increase in angler use associated with more camping sites would have adverse impacts on the lake fishery.

Mitigation

BMPs, which are considered to be mitigation measures, and that would avoid and reduce potential impacts to water quality are described in Chapter 5, *Environmental Commitments*. Because potential impacts on aquatic resources are short-term and very small and no other mitigation measures are required.

Residual Impacts

No residual impacts to fisheries resources are expected to occur after disturbed areas are revegetated.

Cumulative Impacts

Nearby Private Residential Development

Development of private residential areas has occurred previously and continues to expand at several locations near Lake Cascade. The potential for adverse impacts from these developments is highly variable, as described in Section 3.10.1, *Affected Environment*. It is unlikely that a small increase in angler use from residential development would have adverse impacts on the lake fishery.

Marina

Reclamation's 2002 RMP, and the previous 1991 RMP, proposed that a small marina be constructed in the area of West Mountain Campground. A marina at Poison Creek is scheduled to open as early as 2009 after completion of an environmental compliance process. The potential for impacts to fisheries habitats from the marina activities would come in the form of water quality impacts as described in Section 3.6, *Water Quality*. These impacts are related to fuel contamination and erosion. Other minor impacts to fisheries may result from increases in angler activity from an improved boat launch and a concentration of boat mooring. However, it is unlikely that an increase in angler use of the launch site would have adverse impacts on the lake fishery.

Tamarack Resort

As described in Section 3.10.1, *Affected Environment*, development of Tamarack resort would not likely result in a significant increase in fishing pressure. Impacts to the fishery would more likely

be the result of water quality issues. Minor water quality impacts, which could affect the fishery, may occur throughout the construction period, which would continue for several more years.

Van Wyck Campground Improvements
Van Wyck is currently a primitive campground open for use by tents and RVs. As described in Section 3.6, W*ater Quality*, formal development of campsites should result in better long-term conditions for vegetation, which could reduce stormwater runoff compared to current condition. Impacts to fisheries may come in the form of increases in angler activity from campground improvements. However, it is unlikely that angler use of the site would have adverse impacts on the lake fishery because any increase in fishing pressure would be incrementally small on a lake-wide basis.

Replacement Campground Cumulative Effects
Potential effects of the Preferred Alternative on water quality and aquatic resources would be very minor, mostly short-term in duration, and very small compared to potential effects of ongoing development of private residential areas and Tamarack Resort.

4 Consultation and Coordination

4.1 Public Involvement

Reclamation's approach to preparing the Draft EA has been to involve the public. The goal of the public involvement process is to make sure that all stakeholders have ample opportunity to express their interests, concerns, and viewpoints. By fostering two-way communication, Reclamation was also able to use the talents and perspectives of local interest groups and agencies during the alternatives development and analysis process in the Draft EA. Reclamation's public involvement process has involved the following five key components:

- **Public Scoping**—As described in Chapter 1, *Purpose and Need for Action*, Reclamation issued a scoping letter soliciting issues and concerns from the public before alternatives were selected for analysis in this Draft EA.
- **Public Meetings—**One public meeting was held on August 29, 2006, in Cascade, Idaho. The meeting was advertised through announcements to local media and the scoping letter. The purpose of the meeting was to collect public input on the proposed actions and issues that should be addressed in this EA.
- **Reclamation Web Site**—The public outreach materials for this project are stored on Reclamation's Pacific Northwest site: http://www.usbr.gov/pn/programs/srao_misc/campground/index.html.

4.2 Agency Consultation and Coordination

4.2.1 Endangered Species Act

Reclamation met with staff from USFWS on January 31, 2007, to provide current information on ESA-listed species, and discuss their concerns about the proposal and analysis approach to these species. The evaluation of threatened and endangered species contained in this Draft EA serves as Reclamation's biological assessment as required under section 7 of the ESA. Reclamation has concluded that the project may affect, but is not likely to adversely affect, the bald eagle, gray wolf, and Canada lynx and would have no effect on bull trout. If Reclamation receives concurrence from USFWS with these determinations, this information will be provided in the Final EA for this project.

4.2.2 National Historic Preservation Act

Reclamation has begun the initial steps of Section 106 compliance by conducting shovel testing and test excavations at Archaeological Site 10VY348. The purpose of this investigation is to determine the site boundaries and whether the site is eligible for listing on the National Register. Reclamation has also visited the project area with SHPO and representatives of the Shoshone-Bannock and Shoshone-Paiute Tribes, and held a separate meeting with the SHPO and Shoshone-Bannock Tribes, to discuss the potential impacts from campground construction and possible ways to mitigate those impacts. Coordination with these same parties will also occur in conjunction with public review of the Draft EA. It is understood that specific,

future undertakings in the project area will require consultations with the SHPO and Tribes pursuant to the 36 CFR 800 regulations.

4.3 Tribal Consultation and Coordination

4.3.1 Government-to-Government Consultation with Tribes

The United States government has a unique legal relationship with federally recognized American Indian Tribes, based on recognition of the inherent powers of Tribal sovereignty and self-government. Reclamation will uphold this special relationship and implement its activities in a manner consistent with it.

Reclamation has communicated with Tribes early in the project evaluation process. Reclamation initiated Consultation with the Shoshone-Bannock Tribes, Shoshone-Paiute Tribes, Burns Paiute Tribe, and the Nez Perce Tribe. See Appendix B, *Consultation and Coordination with Tribal Governments,* for a list of Consultation actions. Reclamation received written comments from the Shoshone-Bannock Tribes during public scoping prior to release of this Draft EA.

Reclamation consulted with the Shoshone-Bannock Tribes in a Government to Government meeting on April 12, 2007. It is anticipated that the Shoshone Bannock Tribes will provide their written comments to reclamation during the public review process of the Draft EA.

This Draft EA will be sent to several Tribal representatives identified in Chapter 7, *Distribution List*.

4.3.2 Indian Sacred Sites (Executive Order 13007)

Reclamation has informed the Tribes about the proposed action through field visits and written notification. As part of their review of the Draft EA, Tribes will have an opportunity to provide specific comments about Indian sacred sites that might be located in the project area.

4.3.3 Indian Trust Assets

Indian Trust Assets are discussed in Chapter 3, *Affected Environment and Environmental Consequences,* Section 3.9.

4.3.4 Other Laws and Regulations

The relationship between Federal agencies and sovereign Tribes is defined by several laws and regulations addressing the requirement of Federal agencies to notify or consult with Native American groups or otherwise consider their interests when planning and implementing Federal undertakings. Among these are the following:

- National Environmental Policy Act (NEPA) of 1969, as amended
- Executive Order 12875, Enhancing the Intergovernmental Partnership
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Presidential Memorandum: Government-to-Government Relations with Native American Tribal Governments, April 29, 1994
- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
- Tribal Treaties, Statutes, and Executive Orders as discussed under 3.14 Indian Trust Assets.

Reclamation has adhered to these laws and regulations as applicable to the development of this project and will continue to do so as Tribal consultation continues.

4.3.5 Tribal Government Comments and Reclamation Responses

Reclamation received a comment letter from the Shoshone-Bannock Tribes, dated August 4, 2006. Two primary concerns were expressed in the letter:

- Erosion at a cultural site near the project is causing a loss of site integrity
- Development of the campground puts this site at risk from vandalism and unauthorized collection, resulting from increased human presence

Both of these concerns are addressed in Chapter 3, *Affected Environment and Environmental Consequences*, Section 3.10, *Cultural Resources*. These matters will be the subject of future consultations as well.

During the Government to government meeting with the Shoshone Bannock Tribes, Tribal staff and some Tribal council members voiced opposition to the project due to its potential to impact an important archeological site. Reclamation anticipates written comments from the Shoshone-Bannock during the public review period for the Draft EA.

5 Environmental Commitments

The following mitigation measures and BMPs will be implemented to avoid or minimize potential effects to the resources that could result from construction of the Poison Creek Replacement Campground.

5.1 Landscape Preservation and Impact Avoidance

1. Developed facilities will complement the surrounding landscape.
2. Disturbed areas resulting from any construction will be revegetated.
3. To the maximum extent practicable, all existing trees, shrubs, and other naturally occurring vegetation will be preserved and protected from construction operations and equipment except where clearing operations are required for the construction of the campground.
4. To the maximum extent practicable, all maintenance yards, field offices, and staging areas will be arranged to preserve trees, shrubs, and other vegetation.
5. Clearing will be restricted to that area needed for construction. In critical habitat areas—including, but not limited to, wetlands and riparian areas—clearing may be restricted to only a few feet beyond areas required for construction.
6. Stream corridors, wetlands, riparian areas, steep slopes, or other critical environmental areas will not be used for equipment or materials storage or stockpiling; construction staging or maintenance; field offices; hazardous material or fuel storage, handling, or transfer; or temporary access roads, in order to reduce environmental damage.
7. Excavated or graded materials will not be stockpiled or deposited on or within 100 feet of any steep slopes (defined by industry standards), wetlands, riparian areas, or stream banks (including seasonally active ephemeral streams without woody or herbaceous vegetation growing in the channel bottom), or on native vegetation.
8. To the maximum extent possible, staging areas, access roads, and other site disturbances will be located in disturbed areas, not in native or naturally occurring vegetation.
9. The width of all new permanent access roads will be kept to the absolute minimum needed for safety, avoiding wetland and riparian areas where possible. Turnouts and staging areas will not be placed in wetlands.

5.2 Erosion and Sediment Control

1. The design and construction of facilities will employ applicable recognized BMPs to prevent possible soil erosion and subsequent water quality impacts.
2. The planting of grasses, forbs, trees, or shrubs beneficial to wildlife, or the placement of riprap, sand bags, sod, erosion mats, bale dikes, mulch, or excelsior blankets will be used to prevent and minimize erosion and siltation during construction and during the period needed to reestablish

permanent vegetative cover on disturbed sites.

3. Final erosion control and site restoration measures will be initiated as soon as a particular area is no longer needed for construction, stockpiling, or access. Clearing schedules will be arranged to minimize exposure of soils.
4. Cuts and fills for relocated and new roads will be sloped to facilitate revegetation.
5. Soil or rock stockpiles, excavated materials, or excess soil materials will not be placed near sensitive habitats, including water channels, wetlands, riparian areas, and on native or naturally occurring vegetation, where they may erode into these habitats or be washed away by high water or storm runoff. Waste piles will be revegetated using suitable native species after they are shaped to provide a natural appearance.

5.3 Biological Resources

1. Rare and sensitive species clearances described below will be conducted after project authorization, but prior to the start of construction.

5.4 Site Restoration and Revegetation

1. Construction areas, including storage yards, will limit the amount of waste material and trash accumulations at all times.
2. All unused materials and trash will be removed from construction and storage sites during the final phase of work. All removed material will be placed in approved sanitary landfills or storage sites and work areas will be left to conform to the natural landscape.
3. Upon completion of construction, grade any land disturbed outside the limits of lake pools, permanent roads, and other permanent facilities to provide proper drainage and blend with the natural contour of the land. Following grading, revegetate using plants native to the area, suitable for the site conditions, and beneficial to wildlife.
4. Where applicable, consult with the following agencies to determine the recommended plant species composition, seeding rates, and planting dates:
   - Idaho Department of Fish and Game (IDFG)
   - U.S. Natural Resources Conservation Service (NRCS)
   - U.S. Forest Service (USFS)
   - U.S. Bureau of Land Management (BLM)
5. Grasses, forbs, shrubs, and trees appropriate for site conditions and surrounding vegetation will be included on a plant list developed during site design. Species chosen for a site will be matched for site drainage, climate, shading, resistance to erosion, soil type, slope, aspect, and vegetation management goals. Wetland and riparian species will be used in revegetating disturbed wetlands. Upland revegetation shall match the plant list to the site's soil type, topographic position, elevation, and surrounding communities.

5.5 Pollution Prevention

1. All Federal and state laws related to control and abatement of water pollution will be complied with. All waste material and sewage from construction activities or project-related features will be disposed of according to Federal and state pollution control regulations.
2. Construction contractors may be required to obtain an NPDES permit as established under Public Law 92–500 and amended by the Clean Water Act (Public Law 95-217). IDPR will develop and strictly follow the provisions of the SWPPP.
3. Construction specifications shall require construction methods that will prevent entrance or accidental spillage of pollutants into flowing or dry watercourses and underground water sources. Potential pollutants and wastes include refuse, garbage, cement, concrete, sewage effluent, industrial waste, oil and other petroleum products, aggregate processing tailings, mineral salts, drilling mud, and thermal pollution.
4. Eroded materials shall be prevented from entering streams or watercourses during dewatering activities associated with structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses.
5. Any construction wastewater discharged into surface waters will be essentially free of settling material. Water pumped from behind cofferdams and wastewater from aggregate processing, concrete batching, or other construction operations shall not enter streams or watercourses without water quality treatment. Turbidity control methods may include settling ponds; gravel-filter entrapment dikes; approved flocculating processes not harmful to fish or other aquatic life; recirculation systems for washing aggregates; or other approved methods.
6. Any riprap shall be free of contaminants and not contribute significantly to the turbidity of the lake.
7. Appropriate controls to reduce stormwater pollutant loads in post-construction site runoff identified in the *Handbook of Valley County Storm Water Best Management Practices* (Valley County 1997) shall be followed. The appropriate facilities shall be properly designed, installed, and maintained to provide water quality treatment for runoff originating from all recreational facilities.
8. Waste facilities should be connected, whenever possible, to sanitary sewer systems instead of septic tanks to avoid water quality problems from failed tanks.

5.6 Noise and Air Pollution Prevention

1. Contractors will be required to comply with all applicable federal, state, and local laws and regulations concerning prevention and control of noise and air pollution. Contractors are expected to use reasonably available methods and devices to control, prevent, and reduce atmospheric emissions or discharges of atmospheric contaminants and noise.

2. Contractors will be required to reduce dust from construction operations and prevent it from damaging dwellings or causing a nuisance to people. Methods such as wetting exposed soil or roads where dust is generated by passing vehicles will be employed.

5.7 Cultural Resource Site Protection

1. Cultural resource personnel, or other land management personnel sensitized to cultural resource management concerns, will periodically monitor the project area to determine if operations, natural erosion, or land use is damaging cultural resources. If significant sites are being damaged, management actions to protect the site will be implemented.

6 Preparers

Name	Background	Responsibility
U.S. Bureau of Reclamation		
Steve Dunn	Natural Resource Specialist	Project Manager, Senior Review
Jill Lawrence	Native American Affairs Coordinator	Indian Trust Assets Tribal Coordination
Ray Leicht	Archaeologist	Cultural Resources and Indian Sacred Sites
CH2M HILL		
Chuck Blair	Senior Wildlife Ecologist	Senior Review, EA Project Manager, Wildlife, Threatened and Endangered Species
Wendy Haydon	Recreation Planner	Recreation, Socioeconomics and Environmental Justice
Raena Ballantyne	Anthropologist	Cultural Resources
Judy Ferguson	Botanist	Wetlands and rare plants
Doug Bradley	Fishery Biologist	Aquatic Resources, Water Quality
Jason Carr	GIS Mapping	GIS Mapping
Brandy Wilson	Technical Writer	Technical Writing and Editing

7 Distribution List

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7.3 Government Agencies

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7.4 Interested Groups

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James Piotrowski
President
Ted Trueblood Capter, Trout Unlilmited
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7.5 Information Repositories

Boise Public Library
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Caldwell Public Library
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Caldwell, ID 83605-4165

Cascade Public Library
105 Front Street
Cascade, ID 83611

Acquisitions Department
Idaho State Library
325 W. State Street
Boise, ID 83702-6055

McCall Public Library
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McCall, ID 83638

Parma Library
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8 References

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Appendix A: Wildlife Species Present Near the Poison Creek Replacement Campground Project

TABLE A-1
Water-Oriented Birds That May Occur in the Immediate Vicinity of the Proposed Replacement Campground

Common Name	Scientific Name
bald eagle	*Haliaeetus leucocephalus*
several species of gulls	*Larus* spp.
American avocet	*Recurvirostra americana*
osprey	*Pandion haliaetus*
white pelican	*Pelecanus erythrorhynchos*
mallard	*Anas platyrhynchos*
pintail	*Anas acuta*
western grebe	*Aechmophorus occidentalis*
common merganser	*Mergus merganser*
American wigeon	*Anas americana*
great blue heron	*Ardea herodias*
common loon	*Gavia immer*
black-necked stilt	*Himantopus mexicanus*
Canada goose	*Branta canadensis*
snow goose	*Chen caerulescens*
belted kingfisher	*Ceryle alcyon*
killdeer	*Charadrius vociferus*
lesser yellowlegs	*Tringa melanoleuca*
spotted sandpiper	*Actitis macularia*
Wilson's phalarope	*Phalaropus tricolor*

Sources: Reclamation 1991, FWS 1990, and Groves et al. 1997

TABLE A-2
Bird Species That May Use Willow, Cottonwood, and Conifer Forest Habitat Types in the Proposed Replacement Campground Area

Common Name	Scientific Name
evening grosbeak	*Coccothraustes vespertinus*
tree swallow	*Tachycineta bicolor*
dipper	*Cinclus mexicanus*
gray jay	*Perisoreus canadensis*
western kingbird	*Tyrannus verticalis*
dark-eyed junco	*Junco hyemalis*
mountain chickadee	*Parus gambeli*
vesper sparrow	*Pooecetes gramineus*
chipping sparrow	*Spizella passerina*
mountain bluebird	*Sialia currucoides*
Steller's jay	*Cyanocitta stelleri*
calliope hummingbird	*Stellula calliope*
yellow-rumped warbler	*Dendroica coronata*
yellow warbler	*Dendroica petechia*
Lewis' woodpecker	*Melanerpes lewis*
black-backed woodpecker	*Picoides arcticus*
wrens	*Troglodytes* spp.
nuthatches	*Sitta* spp.
red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
long-eared owl	*Asio otus*
great-horned owl	*Bubo virginianus*

Sources: Reclamation 1991, FWS 1990, and Groves et al. 1997

TABLE A-3
Amphibians and Reptiles Found in the Lake Cascade RMP Area

Common Name	Scientific Name
Amphibians	
long-toed salamander	*Ambystoma macrodactylum columbianum*
western toad	*Bufo boreas*
Pacific chorus frog	*Hyla regilla*
spotted frog	*Rana luteiventris*
Reptiles	
rubber boa	*Charina bottae*
gopher snake	*Pituophis melanoleuces deserticola*
common garter snake	*Thamnophis sirtalis*
western garter snake	*Thamnophis elegans*

Sources: Reclamation 1991, FWS 1990, and Groves et al. 1997

TABLE A-4
Small Mammal Species Present in the Lake Cascade RMP Area

Common Name	Scientific Name
masked shrew	*Sorex cinereus*
long-legged brown bat	*Myotis volans*
little brown myotis	*Myotis lucifugus*
deer mouse	*Peromyscus maniculatus*
montane meadow mouse	*Microtus montanus*
red squirrel	*Tamiasciurus hudsonicus*
mountain cottontail	*Sylvilagus nuttallii*
yellow pine chipmunk	*Eutamias amoenus*
porcupine	*Erethizon dorsatum*

Sources: Reclamation 1991, FWS 1990, and Groves et al. 1997

TABLE A-5
Game and Non-Game Fish Species Found in Lake Cascade

Common Name	Scientific Name
Cold Water Game Species	
Hatchery rainbow trout	*Oncorhynchus mykiss*
redband trout	*Oncorhynchus mykiss gairdneri*
kokanee salmon*	*Oncorhynchus nerka kennerlyi*
coho salmon (land locked)*	*Oncorhynchus kisutch*
mountain whitefish	*Prosopium williamsoni*
Warm Water Game Species	
smallmouth bass	*Micropterus dolomieui*
black crappie	*Pomoxis nigromaculatus*
tiger muskie (sterile northern pike hybrid with muskellunge)	*Esox lucius x E. Masquinongy*
yellow perch	*Perca flavenscens*
channel catfish	*Ictalurus punctatus*
black bullhead	*Amerurus melas*
brown bullhead	*Amerurus nebulosus*
Pumpkinseed	*Lepomis gibbosus*
Non-Game Fish	
Northern pikeminnow (formerly called northern squawfish)	*Ptychocheilus oregonensis*
large-scale sucker	*Catostomidae macrocheilus*

Source: IDFG 2000, personal communication with Paul Jansen as cited in Reclamation 2002.
*Salmonid presence a result of historic stocking

Appendix B: Consultation and Coordination with Tribal Governments

June 5, 2006	Letter to the Chairman of the Shoshone-Paiute Tribal Council; Notification and Invitation to Discuss Proposed Activities Concerning a Cultural Site near Lake Cascade
June 5, 2006	Letter to the Chairman of the Fort Hall Business Council, Shoshone-Bannock Tribes; Notification and Invitation to Discuss Proposed Activities Concerning a Cultural Site near Lake Cascade
June 5, 2006	Letter to the Chairman of the Burns Paiute Tribe; Notification and Invitation to Discuss Proposed Activities Concerning a Cultural Site near Lake Cascade
June 5, 2006	Letter to the Chairman of the Nez Perce Tribe; Notification and Invitation to Discuss Proposed Activities Concerning a Cultural Site near Lake Cascade
July 14, 2006	Field Trip to Lake Cascade with Shoshone-Bannock Tribal staff
July 26, 2006	Letter to Shoshone-Bannock Tribal Staff Coordinating a Government-to-Government Meeting with the Fort Hall Business Council and Providing Information Requested at the July 14, 2006 Field Trip
July 27, 2006	Letter to the Chairman of the Shoshone-Paiute Tribal Council requesting a Government -to-Government Meeting to Discuss Proposed Activities near a Cultural Site at Lake Cascade
August 4, 2006	Letter from the Shoshone-Bannock Cultural Resources Coordinator expressing concern for erosion of the cultural site and development of a campground
August 14, 2006	Letter to the Chairman of the Shoshone-Paiute Tribal Council Requesting Comments on the Proposed Campground at Lake Cascade
August 14, 2006	Letter to the Chairman of the Fort Hall Business Council, Shoshone-Bannock Tribes requesting Comments on the Proposed Campground at Lake Cascade
August 14, 2006	Letter to the Chairman of the Burns Paiute Tribal Council requesting Comments on the Proposed Campground at Lake Cascade
August 14, 2006	Letter to the Chairman of the Nez Perce Executive Committee requesting Comments on the Proposed Campground at Lake Cascade

August 22, 2006	Field Trip to Lake Cascade with Shoshone-Paiute Tribal Staff
October 11, 2006	Meeting with the Fort Hall Business Council to Discuss the Proposed Activities at Lake Cascade
November 15, 2006	Letter to Chairman of the Fort Hall Business Council of the Shoshone-Bannock Tribes, summarizing the October 11, 2006 meeting where the Campground proposal at Lake Cascade was discussed
January 30, 2007	Letter to the Cultural Resources Coordinator for the Shoshone-Bannock Tribes of the Fort Hall Reservation transmitting the Archaeological Testing Report for Lake Cascade, Idaho
January 30, 2007	Letter to the Cultural Resources Director for the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation transmitting the Archaeological Testing Report for Lake Cascade, Idaho
April 12, 2007	Government to Government meeting between Shoshone-Bannock Business Council and Reclamation's Area Manager, Fort Hall, Idaho