

## **Chapter 3 – Environmental Consequences**

This chapter highlights the important effects of implementing each alternative, including direct, indirect and cumulative effects. It also presents the scientific and analytical basis for the comparison of alternatives presented in the alternatives chapter. Under NEPA, an effects discussion for each alternative is focused on effects relative to the significant issues. Because the proposed project has no significant issues, this chapter will discuss the achievement of purpose and need, and effects relative to significance factors.

The planning record includes all project-specific information, including resource reports, and other results of field investigations. The record also contains information resulting from public involvement efforts. The planning record is located at the Supervisor's Office in Yreka, California and is available for review during regular business hours. Information from the record is available upon request.

### **Achievement of Purpose and Need**

How each alternative addresses each aspect of the purpose and need for action at Orr Lake is discussed below.

#### **Alternative A**

People will continue to use the north shore of Orr Lake for camping, fishing, and recreating with no sanitation facilities. Over time, unsanitary conditions on the north end may significantly compromise soils and water quality in and around Orr Lake. The desired condition for facilities that cause minimal resource impacts will not be met. Alternative A will not meet the need for sanitary facilities and campsites to be designed to meet health and safety standards.

The archaeological site at the north end will continue to be degraded by illegal artifact collection and disturbed by visitors camping or driving on top of the site. Erosion in this area will continue. Alternative A will not meet the need to protect the archeological site from damage.

The road connecting east and north side camping areas will remain within riparian vegetation and continue to flood seasonally. Rutting and slumping of this road will likely continue and overall road condition will worsen over time. Riparian vegetation on the north, east, and west shores of Orr Lake is subject to heavy foot traffic (mostly for fishing) and uncontrolled vehicle traffic on the east and north sides. The existing connecting road and north end camping areas are eroding at an accelerated rate and delivering sediment to Orr Lake. This will continue to negatively impact fish and amphibian habitat, possibly resulting in dispersal of trout and amphibians from the shoreline areas, and loss of amphibian rearing habitat. Roads within the camping areas and campsite spurs will continue to expand and be modified by traffic, as vehicles are not confined to an established road. Camping, day use, and daily parking will occur throughout the area as in the past. Fishing and boat launching will continue at many locations around the lake. Alternative A will not meet the need to limit use to a sustainable level or develop facilities that cause minimal resource impacts.

## **Alternative B**

Placement of two toilets on the north end, one toilet on the east side, and drinking water faucets at both ends will provide a safer human environment at Orr Lake. The desired condition for facilities that cause minimal resource impacts will be met. Alternative B will meet the need for sanitary facilities and campsites to be designed to meet health and safety standards.

The placement of barrier cloth and fill material over the Native American site on the north end will have a beneficial, protective effect. With the barrier/fill in place, erosion will no longer affect the site, artifacts will no longer illegally be removed, and vehicle use, camping, and/or digging will no longer break artifacts or disturb the relationship of subsurface site elements. Alternative B will meet the need to protect the archeological site from damage and develop facilities that cause minimal resource impacts.

Closing the existing connecting road to motor vehicle use and converting this road to a hiking/biking trail will reduce the amount of sediment currently being transported into the lake as a result of surface runoff. Installation of fishing platforms, trails, and parking barriers will decrease trampling of the riparian vegetation surrounding Orr Lake. Constructing campsites, parking areas, barriers and signs; as well as planting native vegetation will aid in controlling use within the north and east campground areas. Alternative B will meet the need to limit use to a sustainable level and develop facilities that cause minimal resource impacts.

## **Significance Elements**

In 1978, the Council on Environmental Quality disseminated regulations for implementing NEPA. These regulations (40 CFR Parts 1500-1508) include a definition of “significantly” as used in NEPA. The elements of this definition are critical to reducing paperwork through use of a finding of no significant impact when an action will not have a significant effect on the human environment and is, therefore, exempt from requirements to prepare an environmental impact statement. Significant includes consideration of both context and intensity. These elements are addressed here in relation to the action alternatives.

**Context.** *This means that the significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting...in the case of a site-specific action; significance usually depends upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.*

In a local, regional, national, and human context the proposed project does not pose any significant short- or long-term negative effects. Resource protection measures included in these alternatives avoid adverse impacts to the extent that all impacts are within accepted levels. Proposed activities are consistent with all S&Gs in the Forest Plan.

Protecting a known cultural resource site, providing a safer human environment for the visitors of Orr Lake, and enhancing wildlife and fisheries habitat in and around this unique 80-acre lake are potential beneficial effects to the environment as a result of the proposed project. It is expected that everyone who visits Orr Lake will enjoy these beneficial effects.

Approximately 3.5 acres will be affected by placement of the barrier cloth and fill, about 1 acre of road will be decommissioned, and less than 0.5 acre of new road will be constructed. Installing the toilets will take up to 2 days, and the rest of the proposed recreation developments will take about 2-3 months to complete. New road construction will occur in the late summer or fall (after July 31), and the remaining work will occur in the spring and summer months.

**Intensity.** *This refers to the severity of impact. The following will be considered in evaluating intensity:*

(1) Impacts may be both beneficial and adverse. A significant effect may exist even if, on balance, effects are believed to be beneficial.

The proposed action involves many beneficial effects to human health and safety, and cultural and natural resources at Orr Lake. Potential beneficial effects to the natural environment due to this project include protecting riparian habitat from intense human use, protecting cultural resources from destruction, and providing a more sanitary human environment at Orr Lake. Slight amounts of sediment may be temporarily generated during construction of the proposed fishing platforms, but with implementation of BMPs and WWOs the effects will be short-lived and negligible. There will be no loss of spawning habitat for resident fish as a result of this project. Some displacement of rainbow trout, amphibians, and Western Pond Turtle may occur during construction and installation of the fishing platforms. Any displacement would be temporary in nature, and aquatic species will return to these areas shortly after the work is completed.

There would be no effect or only minor effects that do not limit the ability to breed, feed, or shelter for all other listed or special interest wildlife species.

(2) The degree of effects on public health or safety.

The proposed action will have a beneficial effect on public health and safety at Orr Lake. Placement of three toilets (one on east side and two on north end) and a barrier cloth and fill on the north end will protect visitors from unsanitary conditions that have resulted from uncontrolled use. A standard dust abatement clause will be included in the construction contract to avoid effects to air quality during construction.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The project area contains cultural resources, wetlands, and riparian areas, which will be protected as a result of the proposed action.

(4) The degree of controversy over environmental effects.

Legitimate controversy must be based on credible scientific evidence. Public involvement efforts (refer to Chapter 1, Public Involvement, Coordination, and Consultation) have not revealed any significant controversies regarding the environmental effects of this proposal or its alternatives.

(5) The degree to which the possible effects on the human environment is highly uncertain or involves unique or unknown risks.

The proposed action was designed to achieve objectives identified in the Forest Plan. Project design features and resource protection measures minimize potential adverse resource effects. Years of local expertise with these types of projects minimize the chance of highly uncertain effects or effects which involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

Due to the routine nature of the proposed action, no precedent would be set for future decisions with significant effects. Any future decisions would need to consider all relevant scientific and site-specific information available at that time.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

There are no other actions planned or foreseeable in the project area that might cumulate with the effects of the proposed action. The proposed action does not have the potential to result in cumulatively significant environmental impacts when related to other land management activities that occur around a recreational lake such as Orr Lake.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

The proposed action will protect a known cultural resource at Orr Lake, preserving the eligibility of this site for listing in the National Register of Historic Places.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The proposed project will not jeopardize the continued existence of any fish, wildlife, or plant species potentially affected by this project and protected under the Endangered Species Act.

**Fish** – There are no federally listed or anadromous fish populations, critical habitat, or essential fish habitat in the analysis area, thus no key watersheds. Therefore, there are no direct, indirect or cumulative effects to fish protected under the Endangered Species Act and their habitat.

**Wildlife** – The bald eagle (*H. leucocephalus*) is the only federally listed wildlife species expected to occur in the analysis area. With use of a limited operating period for new road construction, there will be no affect to bald eagles as a result of the Orr Lake Recreation Development.

**Plants** – No Threatened or Endangered plants were found, and none are expected to occur within this project area. Therefore, Alternatives A and B of the Orr Lake Recreation Development Project will have no effects on federally listed Threatened or Endangered plant species.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The proposed action does not threaten a violation of Federal, State, or local environmental protection laws. As discussed throughout the EA and supporting documents, the proposed action

is consistent with the Forest Plan, the National Environmental Policy Act, National Forest Management Act, the Clean Water Act, the Clean Air Act, the Endangered Species Act, the National Historic Preservation Act, the Federal Highway Safety Act, and the California Porter Cologne Water Quality Act, and Executive Order 12898.

The National Forest Management Act requires projects to be found consistent with minimum specific management requirements as provided in the implementing regulations at 36 CFR 219.27. Resource Protection 219.27(a), Riparian Areas 219.27(e), Soil and Water 219.27(f), and Diversity 219.27(g) are addressed throughout the EA discussions. Vegetative Manipulation 219.27(b) includes the planting of native vegetation to benefit water quality, and fish and wildlife habitat. Silvicultural Practices 219.27(c) and Even-Aged Management 219.27(d) do not apply as no timber harvesting is proposed.

Forestwide S&G 8-21 of the Forest Plan requires an analysis of project effects on the habitat of Management Indicator Species (MIS). River/Stream, Marsh/Lake/Pond, and Mature Ponderosa Pine species associations were selected for analysis, based on the presence of habitat that may be affected by the proposed action. The MIS analysis is located in the project file.

Executive Order 12898 relating to Environmental Justice requires an assessment of whether there would be disproportionate effects to minority or low-income populations. Low-income people visiting Orr Lake and living in the area will not be disproportionately affected by this project as there will not be any effect on cultural properties and access would not be changed in the action alternative.