

Kettle Falls and Fort Spokane Boat Launch Development Concept Plan / Environmental Assessment



Fort Spokane Campground Summer 2012

U.S. Department of the Interior
National Park Service

Kettle Falls and Fort Spokane Boat Launch Development Concept Plan
Environmental Assessment
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Lake Roosevelt National Recreation Area

Abstract

The impoundment of the Columbia River by Grand Coulee Dam formed Franklin D. Roosevelt Lake, commonly referred to as Lake Roosevelt. In 1946, the Secretary of the Interior, by his approval of an agreement between the Bureau of Reclamation (Reclamation), the Bureau of Indian Affairs (BIA), and the National Park Service (NPS), designated the NPS as the manager for Coulee Dam National Recreation Area. The agreement that allowed NPS management of the area noted that Lake Roosevelt and the adjacent lands “*offered unusual opportunities through sound planning, development, and management for health, social, and economic gains for the people of the Nations.*” The name of the area was changed in 1997 to Lake Roosevelt National Recreation Area (LARO). The Lake Roosevelt watershed encompasses about 44,969 square miles. Eighty-eight percent of this watershed is in Canada. The lake extends more than 131 miles along the Columbia River through the national recreation area — and includes the lower reaches of many rivers and streams. Most of the water in the lake comes from glacial ice, lakes, and snow high in the Canadian Rockies. As noted in the recreation area’s 2000 General Management Plan (GMP) (NPS 2000):

... the lake is popular because of its size, the quality of its water, the beauty of the surrounding scenery, and the fact that it is one of the few large lakes in the region that has an extensive amount of shoreline and adjacent lands that are publicly owned and available for public use.

The 2010 Shoreline Management Plan (SMP) and the accompanying Finding of No Significant Impact (FONSI) was a programmatic document which addressed the potential future needs of the recreation area, including those needs related to lower water levels and existing facilities. To implement development within LARO, the NPS uses development concept plans to define the facilities and activities necessary to meet the general goals and objectives set forth in the GMP and other management plans. This Kettle Falls and Fort Spokane Boat Launch Design Concept Plan / Environmental Assessment (DCP) provides guidance for the further development of two existing boat launches and associated visitor use facilities (Kettle Falls and Fort Spokane) within the recreation area and is a supplemental, site specific planning document, supporting the goals and objectives identified in the SMP.

The DCP includes the No-Action Alternative (Alternative A) and two Action Alternatives. Both Action Alternatives are consistent with the selected alternative from the SMP.

Alternative B is the National Park Service preferred alternative. The majority of predicted adverse impacts under this Alternative would occur as a result of new construction. Long-term adverse impacts would be negligible for geology and soils, vegetation, air quality, water resources, wildlife, threatened and endangered species and

their habitat, and visual resources. Long-term moderate to adverse impacts would occur to some archaeological resources.

Construction of new facilities or the improvements to existing facilities would also result in long-term beneficial impacts to the visitor experience and park operations.

Individuals or organizations wishing to provide written comments during the review period can access the Planning, Environment, and Public Comment system (PEPC) at <http://www.nps.gov/laro/parkmgmt/planning.htm> or in writing to: Superintendent, Lake Roosevelt National Recreation Area, 1008 Crest Drive, Coulee Dam WA 99116.

Contents

Introduction.....	6
Park Purpose and Significance	6
Lake Roosevelt National Recreation Area Goals	7
Project History and Planning Context.....	7
Purpose and Need.....	8
Purpose:.....	8
Need:	8
Conformance: Relationship to Laws, Policy, Planning Documents, Studies, and Agreements	10
Laws.....	10
Policies	14
Plans	16
Scoping.....	17
Project Issues.....	17
Issues and Impact Topics	18
Impact Topics Selected for Detailed Analysis	18
Impact Topics Dismissed from Further Analysis	20
Alternatives	23
Introduction	23
Alternative A (No-Action)	27
Alternative B (Action Alternative).....	30
Environmental Consequences	34
Affected Environment	40
Water Resources.....	40
Archaeological Resources	44
Visitor Experience.....	45
Park Operations	47
Environmental Impacts	48

Impacts to Vegetation.....	48
Impacts to Water Resources.....	50
Impacts to Cultural Resources	51
Visitor Experience.....	54
Consultation and Coordination.....	56
Tribal and SHPO Consultation	57
U.S. Fish and Wildlife.....	58
Bibliography.....	58

Introduction

Scope of this Environmental Assessment and Development Concept Plan

This Kettle Falls and Fort Spokane Boat Launch Development Concept Plan / Environmental Assessment (DCP) is intended to evaluate and inform the National Park Service (NPS) on the effects of expanding and reconfiguring two existing boat launches (Kettle Falls and Fort Spokane) and the associated facilities within Lake Roosevelt National Recreation Area (LARO). This document will be available to the public for a 30 day period at which time comments will be accepted. If the Superintendent finds that the proposed action will not significantly affect the quality of the environment, a “Finding of No Significant Impact” (FONSI) will be prepared and forwarded to the Pacific West Regional Director for approval.

Park Purpose and Significance

An understanding of the park’s purpose and significance and why it was established as a unit of the national park system provides an important context for assessing the degree to which reconfiguring the boat launches at Kettle Falls and Fort Spokane might impact cultural, natural, and visitor experience resources of the park.

The purpose of Lake Roosevelt National Recreation Area as outlined in the park’s 2000 General Management Plan (GMP) (NPS 2000) is to:

- Provide opportunities for diverse, safe, quality, outdoor recreational experiences for the public.
- Preserve, conserve, and protect the integrity of natural, cultural, and scenic resources.
- Provide opportunities to enhance public appreciation and understanding of the area’s significant resources.

Lake Roosevelt National Recreation Area is significant because:

- It offers a wide variety of recreation opportunities in a diverse natural setting on a 151-mile-long lake that is bordered by 312 miles of publically owned shoreline available to public use. It averages 4000 feet in width and 375 feet in depth. When full (elevation of 1,290 feet above sea level at the dam), Lake Roosevelt impounds 9 million acre feet (11.1 billion cubic meters) of water.
- It contains a large section of the upper Columbia River and a record of continuous human occupation dating back more than 9,000 years.
- It is contained within two distinct geological provinces – the Okanogan Highlands and the Columbia Plateau – which have been sculpted by Ice Age period glaciers and floods.

Lake Roosevelt National Recreation Area Goals

The GMP outlined the following goals for the national recreation area (NPS 2000):

- **Quality and Variety of the Recreational Experience:** The national recreation area offers opportunities for a wide range of high-quality outdoor recreational experiences varying from active recreation centered at developed public facilities to passive recreation and secluded areas based on a relatively undeveloped and protected public shoreline. The national recreation area continues its reputation as a destination vacation area for visitors from all parts of the Pacific Northwest.
- **Education and Interpretation:** Visitors are contacted in meaningful ways and come away from their national recreation experience with a broad understanding and appreciation of the area and its resources, safety issues, and how each visitor can participate in protecting national recreation area resources for future generations.
- **Resource Management:** The natural, cultural, and scenic resources are protected and preserved to ensure that the integrity of the environment is not compromised and the quality of the visitor experience is enhanced.
- **Operations:** Sufficient human and fiscal resources are available so that all national recreation area programs can be staffed and supported at levels that allow them to complete their missions in a manner that satisfies visitors' expectations for a high-quality recreational experience as well as protecting and preserving natural and cultural resources. Relations with national recreation areas neighbors and other managing partners are conducted in a professional and cordial manner. (NPS 2000)

Project History and Planning Context

The GMP identified the need for a planning document that would be developed to directly address the issues related to shoreline management issues. Initial planning for this document began in the summer of 2008 when NPS staff met to identify issues based on the objectives identified in the GMP. The result of this additional planning effort was the 2010 *Shoreline Management Plan and Environmental Assessment* (SMP) (NPS 2010). The SMP was intended to evaluate the need to modify visitor access opportunities along the shoreline, whether that access occurred from the lake or from land. Potential changes in management of the LARO shoreline were identified as being needed to accommodate visitors and fluctuating lake levels; to better protect natural and cultural resources; and to more effectively distribute visitor use.

The SMP included analysis of the need for additional or improved visitor facilities and other actions related to NPS management of the Lake Roosevelt shoreline called for by the GMP. The SMP is directly tiered from the GMP's call for continuing evaluation of shoreline management issues. An issue identified in the SMP was the potential for lower reservoir levels to affect some of the existing boat launches and campgrounds within LARO. This DCP

tiers from the SMP's identification and need for action relating to increased visitation, lower summer water levels, and the redistribution of visitors to accessible areas.

Purpose and Need

Purpose:

The purpose of the federal action is to identify strategies that will provide sustainable lake access, parking, and facilities to handle increased visitation and the redistribution of visitors to the two most heavily used boat launches in the North and South Districts of the park. This DCP analyzes whether the redevelopment of these two boat launches is compatible with the NPS mission of protecting park resources and providing for the enjoyment of the general public. An EA is incorporated into the DCP as appropriate and includes analysis of the impacts of this redevelopment/ reconfiguration on:

- Natural, cultural, and scenic resources
- Park operations
- The quality of the visitor experience at LARO

This DCP is intended to inform NPS decisions regarding the redevelopment/reconfiguration of the Fort Spokane and Kettle Falls boat launches and whether an Environmental Impact Statement (EIS) is warranted.

Need:

Facility construction at LARO began in the early 1940's. At that time there was little thought or understanding as to how future downstream water needs might affect the full pool water levels of the reservoir during the peak visitation summer months. As a result many of the smaller boat launches and marinas were constructed at the 1290' Above Mean Sea Level (AMSL) high waterline with boat ramps that only extended down to an elevation of 1275' or less. Beginning in 1995 in response to a Biological Opinion from the National Marine Fisheries Service and the U.S. Fish and Wildlife Service; water was allocated from the full pool levels of the reservoir in order to provide downstream water for the survival and recovery of endangered fish species. The elevation of the reservoir is reduced to the 1280' AMSL in the months of August and September as extra flows are sent downriver to augment fish passage at lower dams. Starting in 2008 the Columbia River Water Management Program allowed for an additional 1.8 feet of water that can be withdrawn from the reservoir for downstream use resulting in even lower reservoir elevations during the high visitation period. As of 2012, the Bureau of Reclamation's Odessa Aquifer Project EIS, which includes portions of the agricultural lands identified in the original Columbia Basin Irrigation Project, identified additional downstream water needs. In order to meet this need, water from Lake Roosevelt may be taken to augment and/or replenish the selected storage reservoir (Banks Lake) identified in the Odessa Aquifer Project EIS. This augmentation; especially during low

precipitation years, could result in additional drawdowns below 1278 AMSL during August and September.

As a result of the projected summer reservoir levels, five boat launches in the northern area of the park and one area in the south will not be usable during various periods of time during the summer. Visitation to the five northern launches account for approximately 15,000 of the 511,000 visitors to the park during the months of August and September, while the one southern launch accounts for approximately 3,294 visitors during this same time period.

Given the proximity of Fort Spokane and Kettle Falls to both the areas of visitor origin and to those developed areas that may experience dewatered boat launches during the summer period, these areas have been identified as the highest priority for redesign and development within the park. This DCP and environmental assessment are thus an effort to address:

1. Expected ongoing increases in visitation and demand for recreational facilities, especially during the summer months as the local and regional populations grow.
2. Potential overflow from nearby unusable NPS recreation sites where topography and land base limit the park's ability to extend the boat launches into deeper water.
3. A number of current congestion related issues at both high-use areas including:
 - o Reduce congestion in launch areas as visitors pay their fees and put-in and take-out boats
 - o Increase the capacity of the launch facilities and parking areas to handle expected increases in visitation over the next 20 years
 - o Create safer traffic flow for both launching and parking which also decreases potential traffic bottlenecks
 - o Increase visitor satisfaction by reducing wait times, redesigning parking areas to handle the larger boat and recreational vehicles, and providing bathrooms and other facilities at key locations
 - o Maximizing use of visitor use facilities through proper design and placement including designs that meet ADA standards where appropriate

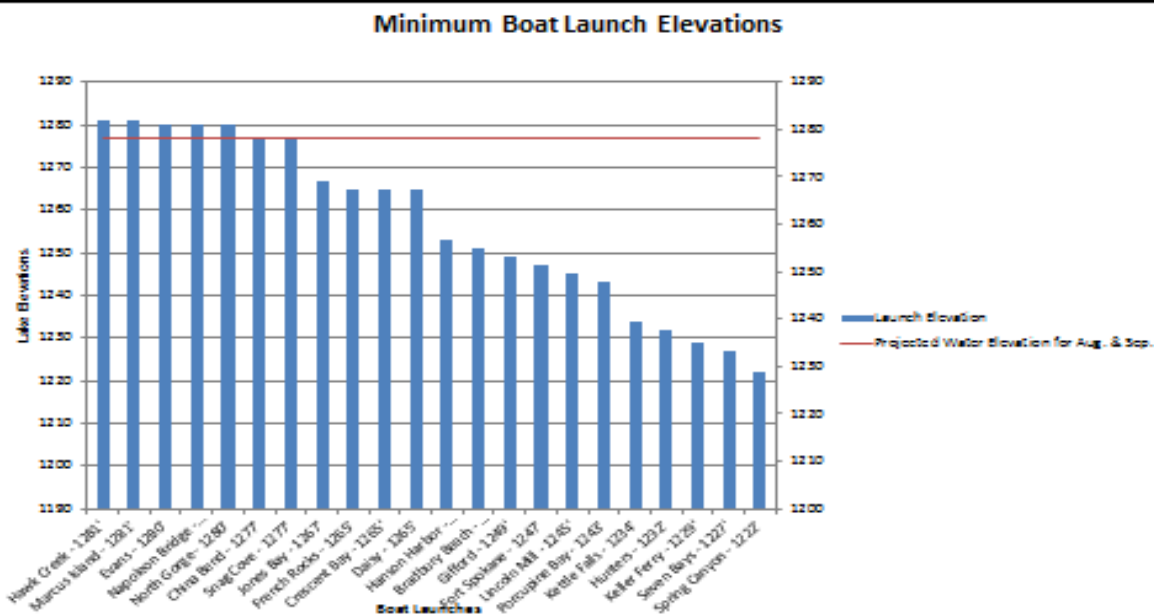


Figure 1: Launch vs. Lake Elevations

Conformance: Relationship to Laws, Policy, Planning Documents, Studies, and Agreements

Laws

NATIONAL PARK SERVICE ORGANIC ACT (1916) (16 USC 1)
(NPS MISSION)

The key provision of the legislation establishing the NPS, referred to as the 1916 Organic Act, is:

The National Park Service shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified . . . by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (16 USC 1)

1970 NATIONAL PARK SERVICE GENERAL AUTHORITIES ACT
(AS AMENDED IN 1978—REDWOOD AMENDMENT)

This act prohibits the NPS from allowing any activities that would cause derogation of the values and purposes for which the parks have been established (except as directly and specifically provided by Congress in the enabling legislation for the parks). Therefore, all units are to be managed as national parks, based on their enabling legislation and without regard for their individual titles. Parks also adhere to other applicable federal laws and regulations, such as the Endangered Species Act, the National Historic Preservation Act, the Wilderness Act, and the Wild and Scenic Rivers Act. To articulate its responsibilities under these laws and regulations, the NPS has established management policies for all units under its stewardship (*NPS Management Policies* NPS 2006).

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) (42 USC 4341 ET SEQ.)

NEPA requires the identification and documentation of the environmental consequences of federal actions. Regulations implementing NEPA are set forth by the President's Council on Environmental Quality (CEQ) (40 CFR, Parts 1500–1508). CEQ regulations establish the requirements and process for agencies to fulfill their obligations under NEPA. The purposes of this Act are:

“To declare a national policy which will encourage productive and enjoyable harmony between man and his environment and biosphere and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the Nation, and to establish a Council on Environmental Quality.”

CLEAN WATER ACT (CWA) (33 USC 1241 ET SEQ.)

Under the Clean Water Act (CWA), it is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, control, and abate water pollution. *NPS Management Policies* (NPS 2006) provide direction for the preservation, use, and quality of water in national parks.

CLEAN AIR ACT (AS AMENDED) (42 USC 7401 ET SEQ.)

The Clean Air Act (CAA) states that park managers have an affirmative responsibility to protect NRA air quality-related values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse air pollution impacts.

ENDANGERED SPECIES ACT (16 USC 1531 ET SEQ.)

The Endangered Species Act (ESA) requires federal agencies, in consultation with the Secretary of the Interior, to use their authorities in the furtherance of the purposes of the ESA and to carry out programs for the conservation of listed endangered and threatened species (16 USC 1535 Section 7(a)(1)). The ESA also directs federal agencies, in consultation with the Secretary of the Interior, to ensure that any action authorized, funded, or carried out by an agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat (16 USC 1535 Section 7(a)(2)). Consultation with the United States Fish and Wildlife Service (USFWS) is required if there is likely to be an effect.

NATIONAL HISTORIC PRESERVATION ACT (1966 AS AMENDED) (16 USC 470).

Section 106 of the National Historic Preservation Act (NHPA) directs federal agencies to take into account the effect of any undertaking (a federally funded or assisted project) on historic properties. "Historic property" is any district, building, structure, site, or object that is eligible for listing in the National Register of Historic Places (NRHP) because the property is significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture. Section 110 of NHPA also states that the Federal agencies shall assume responsibility for the preservation of the historic properties, that the agency will develop a program that identifies and evaluates historic properties, and that historic properties under the jurisdiction of the agencies shall be managed in a "*way that considers the preservation of their historic, archaeological, architectural, and cultural values. . .*"

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (NAGPRA) (1990) (43 CFR PART 10).

Section 3 has provisions regarding the custody of Native American human remains, associated and unassociated funerary remains, sacred items, and items of cultural patrimony found on federal or tribal lands after November 16, 1990, while section 8 provides for repatriation of items found before that date. Section 3 also identifies procedures regarding

the inadvertent discovery of Native American remains, funerary objects, and objects of cultural patrimony during federal actions.

THE FEDERAL NOXIOUS WEED ACT OF 1974, AS AMENDED IN 1990

This Act addresses the management of undesirable plants on federal lands. It directs federal agencies to designate an office or person adequately trained in the management of undesirable plant species to develop and coordinate an undesirable plants management program on Federal lands under the agency's jurisdiction. The amended law further states that *"Federal agencies, as appropriate, shall enter into cooperative agreements with State agencies to coordinate the management of undesirable plant species on Federal lands. A federal agency is not required under this section to carry out programs on federal lands unless similar programs are being implemented on state or private lands in the same area"*

THE 1917 WASHINGTON STATE WATER CODE

This 1917 code establishes a permit system for using surface water. It also established procedures for adjudicating all water rights prior to this code. The Washington State Legislature said *"all waters within the state belong to the public, subject to existing rights."* The legislature mandated that the state administer the water resources.

THE WASHINGTON STATE WATER RESOURCES ACT OF 1971

Under the 1971 Act, water resources are protected and managed for *"the greatest benefit of the people."* This action became necessary because of the increasing conflict in water use and applications for larger amounts of water. This law mandates water resources data collection and management and development of plans.

THE WASHINGTON STATE SHORELINE MANAGEMENT ACT OF 1972

This law was adopted with the goal of "preventing the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The policy is meant to protect the quality of water and the environment, and to preserve and enhance public access to shorelines.

Other laws, policies, and guidelines that must be considered when managing recreational use on public lands also include, but are not limited to:

- Council on Environmental Quality Regulations, Title 40 CFR 1500-1508
- NPS Director's Order 12: NPS NEPA Regulations
- NPS Director's Order 2: Park Planning
- Executive Order 11988, Floodplain Management, May 24, 1977
- Executive Order 11990, Protection of Wetlands, May 24, 1977
- Executive Order 13112, Invasive Species, February 3, 1998
- Executive Order 11514, Protection and Enhancement of Environmental Quality, March 5, 1970, as amended May 24, 1977
- Lake Roosevelt Cooperative Management Agreement, March 8, 1990

- Federal Water Pollution Control Act as amended in 2002
- Archeological Resources Protection Act, 1979

Policies

NATIONAL PARK SERVICE MANAGEMENT POLICIES (NPS 2006)

NPS *Management Policies* governs the way park managers make decisions on a wide range of issues that come before them. The following excerpts from NPS *Management Policies* are among the most applicable to this DCP.

Sec. 1.4.3. Obligation to Conserve and Provide for Enjoyment of Park Resources and Values:

“...NPS managers must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values. However, the laws do give the Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, so long as the impact does not constitute impairment of the affected resources and values.”

“...The enjoyment that is contemplated by the statute is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. It also includes deriving benefit (including scientific knowledge) and inspiration from parks, as well as other forms of enjoyment and inspiration. Congress, recognizing that enjoyment by future generations can be ensured only if the superb quality of park resources and values is left unimpaired, has provided that when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant. This is how courts have consistently interpreted the Organic Act.”

Sec. 1.4.7.1 Unacceptable Impacts:

“Park managers must not allow uses that would cause unacceptable impacts; they must evaluate existing or proposed uses and determine whether the associated impacts on park resources and values are acceptable. ...Unacceptable impacts are impacts that, individually or cumulatively, would:

- be inconsistent with a park’s purposes or values, or*
- impede the attainment of a park’s desired future conditions for natural and cultural resources as identified through the park’s planning process, or*
- create an unsafe or unhealthful environment for visitors or employees, or*
- diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or*

- *unreasonably interfere with park programs, activities, or an appropriate use, or the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park, or the NPS concessioner or contractor operations or services.*”

Sec. 8.2 Visitor Use

“To provide for enjoyment of the parks, the National Park Service will encourage visitor activities that:

- *are appropriate to the purpose for which the park was established; and*
- *are inspirational, educational, or healthful, and otherwise appropriate to the park environment; and*
- *will foster an understanding of and appreciation for park resources and values, or will promote enjoyment through a direct association with, interaction with, or relation to park resources; and*
- *can be sustained without causing unacceptable impacts to park resources or values. . . .The Service may allow other visitor uses that do not meet all the above criteria if they are appropriate to the purpose for which the park was established and they can be sustained without causing unacceptable impacts to park resources or values. For the purposes of these policies, unacceptable impacts are impacts that, individually or cumulatively, would*
- *be inconsistent with a park’s purposes or values, or*
- *impede the attainment of a park’s desired conditions for natural and cultural resources as identified through the park’s planning process, or*
- *create an unsafe or unhealthy environment for visitors or employees, or*
- *diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or*
- *unreasonably interfere with*
- *park programs or activities, or*
- *an appropriate use, or*
- *the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park, or*
- *NPS concessioner or contractor operations or services.*

Management controls and conditions must be established for all park uses to ensure that park resources and values are preserved and protected for the future. If and when a superintendent has a reasonable basis for believing that an ongoing or proposed public use would cause unacceptable impacts to park resources or values, the superintendent must make adjustments to the way the activity is conducted to eliminate the unacceptable impacts. If the adjustments do not succeed in eliminating the unacceptable impacts, the superintendent may (1) temporarily or permanently close a specific area, or (2) place limitations on the use, or (3) prohibit the use. Restrictions placed on recreational uses that have otherwise been found to be appropriate will be limited to the minimum necessary to protect park resources and values and promote visitor safety and enjoyment.”

Plans

Agreements

LAKE ROOSEVELT COOPERATIVE MANAGEMENT AGREEMENT

“FIVE PARTY AGREEMENT” (1990)

This agreement specifies management areas for the Department of the Interior, National Park Service, the Bureau of Reclamation, and the Bureau of Indian Affairs, as well as for the Confederated Tribes of the Colville Reservation and the Spokane Tribe of Indians. It identified a “Reclamation Zone, a Recreation Zone, and a Reservation Zone,” wherein certain management responsibilities for each agency are identified. Under the terms of this agreement:

“NPS shall manage, plan and regulate all activities, development, and uses that take place in the Recreation Zone in accordance with applicable provisions of federal law and subject to the statutory authorities of Reclamation, and consistent with the provisions of the agreement subject to Reclamation’s right to make use of the Recreation Zone as required to carry out the purposes of the Columbia Basin Project.”

This agreement established the Lake Roosevelt Coordinating Committee, comprised of the National Park Service, Bureau of Reclamation, Bureau of Indian Affairs, Confederated Tribes of the Colville Reservation, and Spokane Tribe of the Spokane Reservation.

TRI -PARTY AGREEMENT (1946)

This agreement, which was superseded by the Five Party Agreement, was signed by the Secretary of the Interior on December 18, 1946. It identified management responsibilities among the National Park Service, Bureau of Indian Affairs, and Bureau of Reclamation and confirmed Coulee Dam National Recreation Area (changed to Lake Roosevelt National Recreation Area in 1997) as a unit of the national park system, subject to all the NPS laws, regulations, policies, and guidelines (NPS 1997).

Scoping

Internal scoping to address lower reservoir operating levels began in 2010 when the NPS began assembling information with the goal of mitigating these effects during the months of August and September. While some preliminary analysis of this issue was addressed within the 2010 SMP; in-depth discussions did not occur until NPS staff began to identify specific areas of affect.

A project initiation proposal was completed in the summer of 2012, and a 45 day public review of the proposal was initiated on August 15, 2012. The NPS hosted three public meetings during this proposal review period. These meetings were held on:

- August 29, 2012 in the town of Colville, Washington (2 attendees)
- October 4, 2012 in Kettle Falls, Washington (9 attendees)
- October 9, 2012 in Davenport, Washington (16 attendees)

Each of these meetings were advertised in the local community newspapers. The objectives associated with this scoping and public comment period was to:

- Invite participation from federal, state, local government and other interested parties to the planning process;
- Inform all interested parties about the scope of the issues and the need to find solutions;
- Identify a preliminary range of management alternatives;
- Identify substantive environmental (including natural, cultural, recreational, and socioeconomic) issues which warranted detailed environmental impact analysis, and to eliminate issues or topics which did not require analysis;
- Identify potential environmental consequences and potential mitigation strategies.

Discussions during the three public scoping meetings supported the expansion of the Kettle Falls marina and the Fort Spokane boat launch as a mitigation measure to counter the conditions which are rendering six smaller launches unusable during the months of August and September. Oral comments and discussion received during the public meetings supported the Park Service's proposed expansion and redesign of the two areas. No written comments were received during the open comment period. Following this comment period the park finalized the proposed expansion plans for the Kettle Falls marina and the Fort Spokane boat launch utilizing the information received from both internal and external (public) sources.

Project Issues

As a result of the 2010 SMP and 2012 public scoping, the following issues were identified:

- Issues related to expanded parking

- Issues related to launch ramp congestion and the safe launching and retrieving of vessels
- Issues relating to expanding facilities at Kettle Falls and Fort Spokane

Issues and Impact Topics

Specific impact topics were developed to address potential natural, cultural, recreational, social and park operations impacts that might result from the Alternatives as identified by the public, NPS, and other agencies, and to address federal laws, regulations and executive orders, and NPS *Management Policies* (NPS 2006). A brief rationale for the selection or non-selection of each impact topic is given in this section.

Impact Topics Selected for Detailed Analysis

In this section and in the following section *Impact Topics Dismissed from Further Analysis*, the NPS analyzes all potential impacts by considering the direct, indirect, and cumulative effects of the proposed action on the environment. Impacts are described in terms of context and duration, localized or widespread. The duration of an impact can be short-term, ranging from a few days up to three years, or as long term extending up to 20 years or longer. The intensity and type of impact is described as negligible, minor, moderate, or major, and as beneficial or adverse. Where the intensity of an impact is quantitative, the numerical data is shown, however most impact analysis is qualitative and best professional judgment is used in making the determinations.

For this DCP, impact topics were dismissed from further review if:

- They do not exist in the analysis area, or
- They would not be affected by the proposal, or the likelihood of impacts are not reasonably expected.

Due to there being no effect or no measurable effects, there would either be no contribution towards cumulative effects or the contribution would be low. For each issue or topic presented below, if the resource is found in the analysis area or the issue is applicable to the proposal, then a limited analysis of direct or indirect, and cumulative effects is presented.

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; NPS *Management Policies* (NPS 2006); and NPS knowledge of the resource at LARO. Impact topics that are carried forward for further analysis are listed below:

Vegetation: NEPA calls for examination of the impacts on the components of affected ecosystems. NPS *Management Policies* (NPS 2006) call for protecting the natural abundance and diversity of park native species and communities, including avoiding, minimizing or

mitigating potential impacts from proposed projects. Actions within the alternatives would result in vegetation removal.

Water Resources: The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act (CWA) (1977) is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, and control, and abate water pollution. *NPS Management Policies* (NPS 2006) provide direction for the preservation, use, and quality of water in national parks.

The CWA is a national policy aimed at restoring, maintaining, and enhancing the chemical, physical, and biological integrity of the nation's waters and to prevent, control, and abate water pollution. Construction will result in earth disturbing activities, which increases the potential for erosion and sedimentation to occur.

Cultural Resources: Consideration of the impacts to historic properties is required under provisions of Section 106 of the NHPA (1966), as amended, and the 1995 Programmatic Agreement among the NPS, the National Conference of State Historic Preservation Officers, and the Advisory Council on Historic Preservation (ACHP). It is also required under *NPS Management Policies* (NPS 2006).

Conformance with the Archeological Resources Protection Act in protecting known or undiscovered archeological resources is necessary. *NPS Management Policies* (NPS 2006) call for ongoing inventory and analysis of the significance of archeological resources found within parks.

Federal land managing agencies are also required to consider the effects proposed actions have on properties listed in, or eligible for inclusion in, the National Register of Historic Places (i.e., Historic Properties), and allow the ACHP a reasonable opportunity to comment. Agencies are required to consult with federal, state, local, and tribal government/organizations, identify historic properties, assess adverse effects to historic properties, and negate, minimize, or mitigate adverse effects to historic properties while engaged in any federal or federally assisted undertaking (36 CFR Part 800).

Visitor Experience: Depending on the selected alternative, a variety of impacts to visitor use may occur. Based on *NPS Management Policies* (NPS 2006), impacts to visitors are considered with respect to park undertakings. Among the impacts considered in this section are visitor access and opportunities, safety, and scenic resources.

Park Operations: Impacts to park operations and visitor services are often considered in Environmental Assessments to disclose the degree to which proposed actions would change park management strategies and methods and what additional costs (including staffing) are associated with the proposal.

Impact Topics Dismissed from Further Analysis

Air Quality: Lake Roosevelt is a Class II area under the Clean Air Act. Class II areas allow only moderate increases in certain air pollutants. The actions proposed within the alternatives would result in negligible localized impacts to air quality; therefore the park dismissed this topic from further review.

Prime and Unique Farmland: The Farmland Protection Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that would result in the conversion of these lands to non-agricultural uses. Prime and unique farmland is classified by the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS). According to the NRCS online website the proposed project areas do not contain any prime and unique farmland and was therefore dismissed from analysis.

Special Status Species: The listed wildlife species identified by the U.S. Fish and Wildlife Service that may occur in the vicinity of LARO include: Grey Wolves (*Canis lupus*- *Federal Delisted in Eastern Washington, State Endangered*), Grizzly Bear (*Ursus arctos horribilis*- *Federal Threatened, State Endangered*), Canada Lynx (*Lynx Canadensis* – *Federal Threatened, State Threatened*), Wolverine (*Gulo gulo luscus* – *Federal Proposed Threatened (Candidate) and State Candidate*), Pygmy Rabbit (*Brachylagus idahoensis* – *Federal Endangered (Columbia Basin DCP) and State Endangered*), Bull Trout (*Salvelinus confluentis*- *Federal Threatened*).

There are no known occurrences of any of the above listed species within LARO, with the exception of Bull Trout (please see below). Similarly the grizzly bear and gray wolves have not been confirmed in LARO. However, since 2012, sightings of both species have occurred in the “Wedge” area between the Kettle River and Lake Roosevelt/Columbia River where they enter the U.S. from Canada. Solitary wolves have been sighted elsewhere near the reservoir and NPS lands, but the small land base of the park is not considered in any of the known wolf pack home range areas. Sightings of several grizzly, including a sow with cubs were also made in the Wedge area in 2012. There are no known nesting or rearing of young occurrences of any of the current ESA listed species of concern or of any Washington State listed species within either project area. (see Appendix A for current lists)

Due to both project sites being in Concentrated Recreation Zones (GMP 2000) with existing parking areas and launch ramps, and the close proximity of the Fort Spokane and Kettle Falls campgrounds and other NPS developed facilities, the majority of the native faunal community include only those species that have adapted to the presence of humans in the project area. Any fauna that would be present in the project areas are common species (i.e. deer mice, chipmunks, squirrels, raccoons, song birds, bull snakes, etc.) or would be considered transient. There have been no reported sightings of any of the above listed species in either project area.

The bull trout, a threatened species, is not believed to live or reproduce in Lake Roosevelt according to Spokane Tribal Fisheries and Washington Department of Fish and Wildlife biologists. Approximately three bull trout have been collected in Lake Roosevelt during

intensive fish surveys over the last decade and a half. It is believed that the three fish captured were entrained into the system from upstream bodies of water above other dams. Experts with extensive fishery experience on Lake Roosevelt, state that lake conditions such as temperature are not suitable for the long term existence of bull trout. Neither project will create conditions that would impact bull trout nor any other fish species found in the lake.

Two federally listed, proposed, or candidate plants have the potential to occur within LARO; the Ute ladies'-tresses (*Spiranthes diluvialis*) and the Spaldings' silene or catchfly (*Silene spaldingii*). There are also several state listed plant species of concern (see Appendix B) that are known to occur in or in close proximity to LARO. An intensive survey of the Kettle Falls and Fort Spokane sites did not reveal the presence of any plant species of concern.

Due to the small area of impact at both project sites and the fact that both occur within concentrated recreation zones that are heavily used, it is not believed that any birds protected under the Migratory Bird Treaty Act (MBTA) or other federal laws are nesting in the trees identified for removal, on the ground in the project area, or in immediately adjacent forested areas. Depending on the time of year the projects are initiated, NPS specialists will do a pre-construction inventory at each site for any bird nesting or rearing activities if the projects occur in April to mid-July. The project(s) will be delayed if any nests of birds protected by the MBTA or those listed as federal or state species of concern are found. This topic was not retained for further analysis.

Socioeconomics: The proposed action would neither change local or regional land use nor would it negatively affect local businesses or agencies. Implementation of the project could provide a negligible beneficial impact to the economics of the communities near Fort Spokane and Kettle Falls due to the potential for increased visitation to the area. Small seasonal shifts in where visitors access the lake through NPS facilities is not believed to create any changes in the socioeconomics of the area. Because the impact to the socioeconomics of the area would be negligible, the topic was dismissed from further analysis.

Land Use: These project areas are currently classified as "Concentrated Recreation" areas. The realignment and expansion of the parking areas under the Action-Alternative would not have an effect on current land use.

Wetlands: Executive Order 11990 requires that impacts to wetlands be addressed. No wetlands would be affected by the proposals in this Environmental Assessment. Due to the fluctuating nature of the reservoir with annual, large spring drawdowns of 40 to 70 feet, few perennial wetlands exist along the shoreline. Wetlands were mapped by the National Wetlands Inventory (USFWS 1987). Jurisdictional wetlands are found at Colville Flats (north portion of the lake) and Mill Creek (south side of Spokane River). Other potential wetlands are located west of Lincoln Mill, along the south shore bluff, in an area immediately below the Little Dalles on the west shore and in an area in the Kettle River corridor south of Barstow (NPS 2000: 60). No wetlands would be affected by the actions in the Alternatives in this Environmental Assessment.

Floodplains: Executive Order 11988 (Floodplain Management) requires an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. NPS *Management Policies*, DO-2 (Planning Guidelines), and DO-12 (Conservation Planning, Environmental Impact Analysis, and Decision Making) provide guidelines for proposals in floodplains. Executive Order 11988 requires that impacts to floodplains be addressed. Although all areas within the national recreation area that are below the 1,290 maximum pool elevation are within the floodplain (full pool level) of Lake Roosevelt, flooding is not a concern because it is controlled by Grand Coulee Dam and at other upriver dams and thus is predictable and occurs slowly and rarely. Park facilities within this area, such as docks and boat ramps, are designed to withstand fluctuating lake levels. Shoreline facilities comprise an exception to the Floodplain Management Guideline because they are recreational facilities that must occur near water and are along a manmade reservoir that is operated year-round. No overnight use is proposed in areas that would be subjected to an unpredictable rise in floodwaters.

Flash Floods: The potential for flash flood in the tributaries and side canyons of the lake exists, but because of the size and extent of the reservoir no topographical potential for or past evidence of flash flooding at either project site has occurred to date. Therefore, this impact topic has been dismissed from further analysis.

Geologic Processes/Geothermal Resources/Geological Hazards: There would be no increase or decrease in potential impacts associated with geology or geological hazards from the impacts of the proposed plan. Ongoing geological hazards associated with shoreline erosion would continue, but would not be influenced by the implementation any of the alternatives given the shoreline composition of the two areas. Furthermore these areas should not be affected by any geological event that might occur elsewhere within the reservoir or its shoreline. Neither site has extensive bluffs in the near vicinity that could slump nor result in damage to the developments from a slide induced wave.

Soils: NPS *Management Policies* (NPS 2006) require that the NPS preserve and prevent, to the extent possible the unnatural erosion, physical removal, and contamination of soils. Although both action alternatives involve ground disturbing activities, given the location and size of disturbance in proximity to previously disturbed and constructed areas, the NPS does not feel that this slight impact warrants further analysis.

American Indian Religious and Traditional Cultural Resources: Analysis of impacts to known resources is important under the NHPA and other laws, including the Native American Graves Repatriation Act (NAGPRA), American Indian Religious Freedom Act (AIRFA) and Executive Order 13007 (Indian Sacred Sites). The NPS defines American Indian traditional cultural (ethnographic) resources as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it” (DO-28, Cultural Resource Management Guideline). Traditional cultural properties are ethnographic resources listed on or eligible for the National Register of Historic Places.

To comply with the AIRFA, federal agencies must consider the effects of their actions on American Indian traditional religious practices. Based on analysis of the area of potential effects, there are no known traditional or religious use areas within the proposed project area. In addition, there are no known Indian sacred sites that would require compliance with Executive Order 13007.

There are two federally recognized tribes associated with the park, which are the Confederated Tribes of the Colville Reservation and the Spokane Tribe of Indians.

Based on ongoing consultation, there have been no ethnographic resources found or identified in the proposed project area to date (also see “Page 51: Consultation and Coordination”). Thus, there would be no effect on any known ethnographic resources as a result of the implementation of the proposed project under any of the alternatives in this Environmental Assessment.

Museum Collections: *NPS Management Policies* (NPS 2006) and other cultural resources laws identify the need to evaluate effects on NPS collections if applicable. The collections at LARO would not be affected by the proposed project, except by the potential addition of material to the collections if any is found (see mitigation measures under “Archeological Resources” in the “Environmental Consequences” chapter). Requirements for the management of museum objects are defined in 36 CFR 79.

Energy Consumption: Implementation of the proposed actions would not cause measurable increases or decreases in the overall consumption of electricity, propane, wood, fuel oil, gas or diesel associated with visitation or for park operations and maintenance.

Environmental Justice: Executive Order 12898 requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This Executive Order does not apply to the subject of this Environmental Assessment. The actions evaluated in this Environmental Assessment would not adversely affect socially or economically disadvantaged populations.

Alternatives

Introduction

The “Alternatives” section describes both the action and no action development scenarios for the Kettle Falls and Fort Spokane boat launch areas and associated facilities. These alternatives were developed to consider a range of management actions for these two areas that would address changes in visitation numbers, visitor expectations and evaluate facilities and operations as lake levels fluctuate due to drought.

Seven project objectives have been identified in the Purpose and Need section of this document. Table 1 provides a comparative look at how each alternative meets the project objectives.

Alternative A (the No-Action Alternative) describes a management action that would continue the present level of facilities and operations to maintain the status quo. The No-Action Alternative provides a basis for comparing changes in management actions and evaluating the consequences for each alternative. Should the No-Action Alternative be selected, the National Park Service would continue to manage the two facilities as they currently exist.

Alternative B considers a range of changes to the existing facilities at the Kettle Falls and Fort Spokane boat launches. Under Alternative B, the current parking areas would be expanded to increase the carrying capacity at the Fort Spokane and Kettle Falls boat launches; roads, entrance lanes, and tie-down areas would be reconfigured to reduce congestion; and fee kiosks and information boards would be relocated to easily accessible, but out-of-the-way, locations. In addition, the Fort Spokane boat launch would be expanded from a 4-lane launch ramp to 5- lanes.

Some additions that would only occur at the Kettle Falls launch ramp include a re-routing of the road into and out of the boat launch area, a redesign of the parking configuration for vehicles and boat trailers, the removal and relocation of the current bathroom facility, the addition of a new concrete vault toilet, a new trailer dump station, and upgrading the current utility service to the Kettle Falls boat launch and marina.

Alternative C considers a minimal range of changes to the existing facilities at the Kettle Falls and Fort Spokane boat launches while still meeting some of the total project objectives. Under Alternative C, the Kettle Falls entrance road and parking area would be reconfigured to accommodate increased use caused by unusable launch sites in the area. Additionally a new CXT concrete vault toilet would be constructed in close proximity to the existing outdated vault toilet at Kettle Falls. The launch ramp and launch entrance road would be expanded as in Alternative B at Fort Spokane, however no additional parking would be developed at this location.

Because Alternative B best meets all seven of the project objectives, Alternative B is the preferred alternative. The preferred alternative defines the rationale for the action in terms of resource protection and management, visitor and operational use, costs and other applicable factors.

Table 1

Project Objectives	Alternative A: No-Action Alternative	Alternative B: Action Alternative	Alternative C: Action Alternative
Increased Visitation During Summer Months	Maintain current size and configuration of both facilities	Upgrade and increase current capacity of facilities: <i>Fort Spokane</i> • Add 52 additional vehicle and trailer stalls <i>Kettle Falls</i> • Add 46 Additional Vehicle and Trailer Parking Stalls (94 Total) • Add 14 Additional Vehicle Parking Stalls (27 Total)	Upgrade and increase portions of the current capacity of Facilities: <i>Fort Spokane</i> • Maintain current configuration <i>Kettle Falls</i> • Same as Alternative B
Absorb Potential Overflow from other Locations no longer usable During August and September	Maintain the existing ramp sizes and configurations	Increase capacity at both locations: <i>Fort Spokane</i> • Increase vehicle and trailer parking to 150 total stalls <i>Kettle Falls</i> • Increase vehicle and trailer parking to 94 total stalls	Increase capacity at Kettle Falls, while maintaining current capacity at Fort Spokane
Reduce Congestion at the Fort Spokane and Kettle Falls Launch Ramps	Maintain the existing ramp sizes and configurations	• Improve traffic flow at both locations • Establish prep and tie-down lanes at both locations • Move fee station at Fort Spokane	• Improve traffic flow at both locations • Move fee station at Fort Spokane
Increase the Carrying Capacity of the two Facilities	Maintain the existing capacity of the current facilities: <i>Fort Spokane</i> • 98 Vehicle and Trailer Parking Stalls <i>Kettle Falls</i>	Upgrade and increase the current capacity of Facilities: <i>Fort Spokane</i> • 52 Additional Vehicle and Trailer Parking Stalls (150 Total)	Upgrade and increase portions of the current capacity of Facilities: <i>Fort Spokane</i> • N/A <i>Kettle Falls</i>

	• 48 Vehicle and Trailer Parking Stalls • 13 Vehicle Parking Stalls	<i>Kettle Falls</i> • 46 Additional Vehicle and Trailer Parking Stalls (94 Total) • 14 Additional Vehicle Parking Stalls (27 Total)	• 46 Additional Vehicle and Trailer Parking Stalls (94 Total) • 14 Additional Vehicle Parking Stalls (27 Total)
Create Safer More Efficient Traffic Flows		<i>Fort Spokane</i> • Widen access road from 18' to 24' and add a 12' short-term parking area • Widen turn-around radius at head of launch ramp • Widen boat launch to add a launching lane <i>Kettle Falls</i> • Establish a new boat launch access road that routes one-way traffic in and out of the boat launch • Extend length of existing parking and reconfigure how vehicles with boat trailers are parked • Widen campground access road • Provide short-term parking	<i>Fort Spokane</i> • Widen access road from 18' to 24' and add a 12' short-term parking area • Widen turn-around radius at head of launch ramp • Widen boat launch to add a launching lane <i>Kettle Falls</i> • Establish a new boat launch access road that routes one-way traffic in and out of the boat launch • Extend length of existing parking and reconfigure how vehicles with boat trailers are parked
Increase Ease of Use and Visitor Satisfaction		<i>Fort Spokane</i> • A wider boat launch and re-location of facilities to reduce common bottle necks • Addresses long launch/retrieval delays and overcrowded parking on the busiest weekends and holidays <i>Kettle Falls</i> • One-way traffic flow into and out of the	<i>Fort Spokane</i> • A wider boat launch and re-location of facilities to reduce common bottle necks • Addresses long launch/retrieval on the busiest weekends and holidays <i>Kettle Falls</i> • One-way traffic flow into and out of the

		<i>boat launch area</i> • <i>Reconfigured vehicle/boat trailer parking that removes bottlenecks and handles larger trailer sizes</i> • <i>Short term parking for visitors using restrooms and other facilities</i> • <i>Changes that allow easier access to nearby campground and waste disposal facilities</i>	<i>boat launch area</i> • <i>Reconfigured vehicle/boat trailer parking that removes bottlenecks and handles larger trailer sizes</i> • <i>Short term parking for visitors using restrooms and other facilities</i> • <i>Changes that allow easier access to nearby campground and waste disposal facilities</i>
Maximize the Use of Existing Facilities		Fort Spokane • <i>Primary mid-reservoir visitor use area and one of closest to Spokane</i> • <i>One of parks largest and most developed recreational access areas</i> Kettle Falls • <i>Largest northern NPS facility located near junctions of U.S. Highways 395, 20, & 25 with traffic between Canada and Spokane</i> • <i>Site includes concession contractor with fuel, waste pump out, houseboat rental, and retail store</i>	Fort Spokane • <i>Same as Alternative B</i> Kettle Falls • <i>Same as Alternative B</i>

Alternative A (No-Action)

The No-Action Alternative would allow for the continuation of current uses. The No-Action alternative describes the existing conditions of the developed areas at the Fort Spokane and Kettle Falls boat launches. Maintenance of the current facilities would continue as necessary and these activities would continue to be reviewed on an individual basis, including all

appropriate compliance documents. However, no additional construction or facility improvements would occur outside of normal facility maintenance.

Utility Systems

The existing utility systems at Kettle Falls include: a power and distribution system, a water supply system and distribution system, and a waste water removal and septic treatment system. These systems support the Kettle Falls marina concession operation, a park service bathhouse, trailer dump station, and a fish cleaning station.

Wastewater is transported from the concession buildings, bathhouse, and fish cleaning station to an underground septic treatment system. A number of lift stations are currently required in order to carry this wastewater uphill to the treatment area.

The current utility system at the Fort Spokane boat launch includes a power and distribution system, a water supply and distribution system, and a wastewater removal and treatment system. These systems support overhead lighting, a small bathhouse, and a fish cleaning station.

Under the No-Action Alternative the utility systems located at these two areas would remain the same, and maintenance to these systems would occur as needed.

Roads and Parking

The existing roads and parking areas for the Fort Spokane and Kettle Falls boat launches are shown in Figure 1 and Figure 2. Under the No-Action Alternative no changes to the existing roads or parking areas would occur.

Fee Collection

The two existing fee kiosks are located atop the launch ramps at both the Kettle Falls and the Fort Spokane boat launches. Under the No-Action Alternative, these kiosks will remain in their current locations.

Boat Tie Down/Prep Areas

Currently there are no designated tie-down areas at either the Fort Spokane or Kettle Falls boat ramps. Under the No-Action Alternative no designated tie-down areas would be constructed.

Public Boat Launch Capabilities

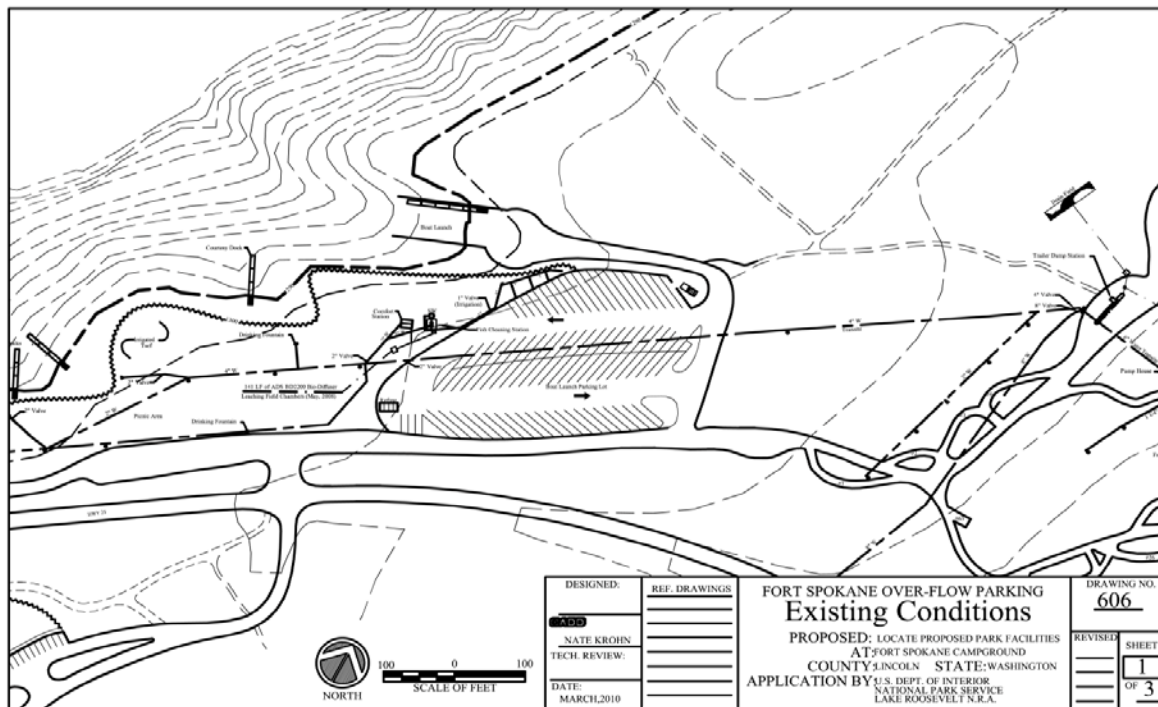
The current launch ramp at Kettle Falls is usable to lake elevation 1234'. The concrete launch ramp is sixty-five feet wide by four hundred fifty feet long. This configuration permits four boat lanes. The end section, used during low water, is twenty feet wide by one hundred feet

long. The Fort Spokane launch ramp is usable to lake elevation 1248'. The concrete launch ramp is sixty-five feet wide by one hundred fifty feet long. This configuration permits four boat lanes. The end section, used during low water, is thirty feet wide by one hundred fifty feet long. Under the No-Action Alternative there would be no change to the hardened surface or dimensions of either launch ramp outside of routine maintenance.

Launch Ramp Support Facilities

Existing launch ramp support facilities at the Kettle Falls and Fort Spokane boat launches are located at the top of each ramp and consist of vehicle and trailer parking, restroom facilities, and fish cleaning stations. There would be no change to the current launch ramp support facilities at Kettle Falls and Fort Spokane under the No-Action Alternative.

Figure 1 – Fort Spokane Boat Launch Existing Facilities



[illegible]

Alternative B is the preferred alternative and all included actions are consistent with the 2010 SMP.

- The Kettle Falls Launch Ramp
- The Fort Spokane Bathhouse and CXT Vault Toilet
- The Existing Fort Spokane Parking Area, and;
- The Kettle Falls Concession Buildings

Under Alternative B the utility systems at Kettle Falls would be upgraded. New pumps, wiring and piping will be installed at the lift station. There will be 260 linear feet of 2.5" force main installed from the lift station to the proposed comfort station. An existing manhole will be

removed at the head of the launch ramp. This manhole overflows and runs down the launch ramp into the reservoir on an annual basis. Removing the manhole will eliminate an environmental and safety concern. A 2,500 gallon septic tank will be installed adjacent to the proposed comfort station. The new force mainline and the waste from the fish cleaning station will flow into the new tank. Mixing human waste and fish waste in the same tank will allow naturally occurring bacteria to break down both types allowing the park to avoid managing additives in the waste stream to break down the fish waste. The Park will utilize existing gravity septic transport lines from the new septic tank to an existing drainfield. No improvements are being proposed to the existing drainfield, which is located near the existing bathhouse. A clean-out manhole will be added adjacent to the campground access road.

An existing over-head power line will be removed from Boise Cascade Road to the marina. Seven hundred linear feet of new underground power line will be installed by the local utility company. Three hundred linear feet of new underground power line will also be installed in the same trench as the force main, from the concession building to the proposed comfort station.

There are no formal utilities within the Fort Spokane project, but moving the fee station will allow a solar-powered light-emitting diode (LED) light to be installed. The additional light will improve safety and improve visitor services.

Roads and Parking

The entrance road and parking area at the Kettle Falls boat launch would be realigned and expanded to improve traffic flows and reduce congestion under the Alternative B. The existing vehicle and trailer parking adjacent to the fish cleaning station will be extended from thirty foot stalls to fifty foot stalls. Thirty-seven vehicle and boat trailer stalls will be added along the existing marina access road. Six vehicle-only stalls will be added in the concessionaire parking lot, designated as employee parking only.

Under Alternative B, an additional overflow gravel parking area approximately 41,000 square feet would be added adjacent to the current Fort Spokane parking area. The gravel parking lot will be designed to accommodate fifty vehicles and boat trailers. Additionally, Alternative B calls for the addition of a twenty foot by one-hundred sixty foot extension to the Fort Spokane launch ramp. This addition will provide one more launching lane usable during the high visitor use season. The existing boat launch access road and concrete turn-around at the head of the existing launch ramp will also be widened.

Fee Collection

Under this Alternative, the Fee Kiosks would be relocated to an easily accessible, but out of the way, location at both the Kettle Falls and Fort Spokane boat launches, as depicted in Figures 3 and 4.

Boat Tie Down/Prep Areas

Alternative B would establish two tie-down/launch preparation stalls by striping and adding signage at the Kettle Falls boat launch. Alternative B would also include the expansion of the current entrance road at Fort Spokane to create three tie-down/launch preparation stalls at Fort Spokane.

Public Boat Launch Capabilities

Under Alternative B there would be no change to the current launch ramp at Kettle Falls. At the Fort Spokane launch ramp, an additional twenty foot by one-hundred sixty foot concrete launching lane would be added to the existing launch ramp to facilitate the projected increased use.

Launch Ramp Support Facilities

Alternative B would also improve the associated facilities at the Kettle Falls Marina. An existing fifty year old comfort station would be removed and replaced with a prefabricated concrete vault toilet. Materials generated during the demolition of the existing comfort station such as: wiring, land clearing debris, wood, concrete, cardboard, and metals will be diverted from the landfill through salvage and recycling. All vegetative materials produced during all construction activities will be disposed of and utilized at a local steam generated energy plant. A connecting trail will be established from the existing parking lot, adjacent to the existing comfort station, to an existing nature trail. A prefabricated vault toilet will also be added near the head of the launch ramp, providing year-around accommodations. A second trailer dump station will be added across the road from the existing trailer dump station, improving vehicle flow and reducing congestion throughout the site.

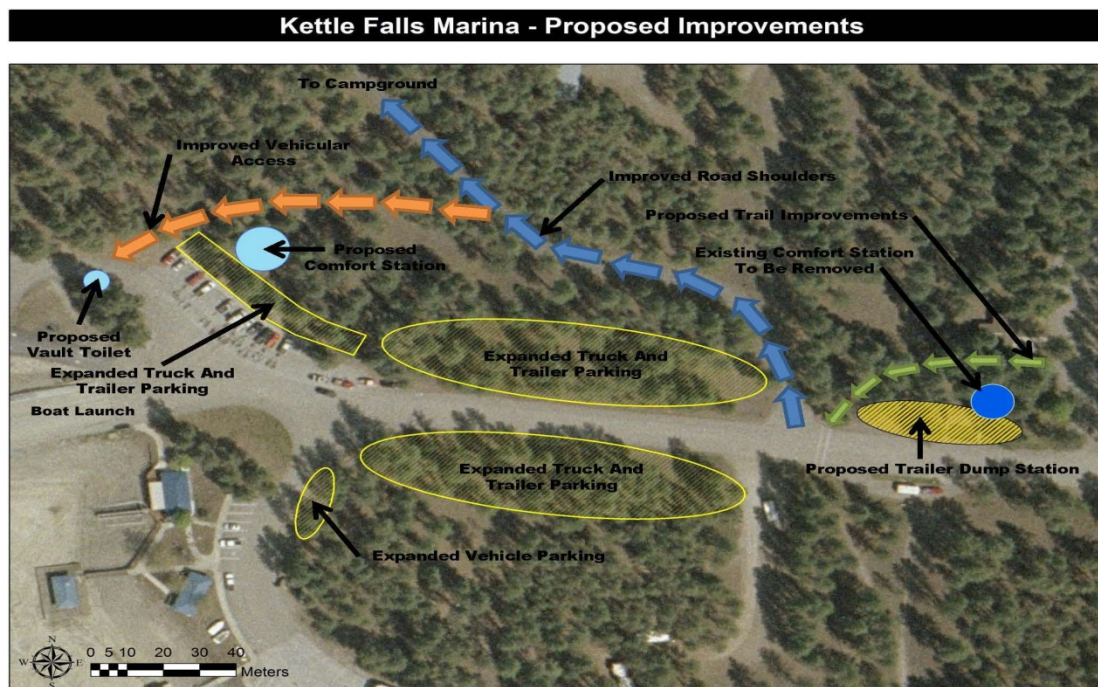
Accessibility

Alternative B will bring both project locations into compliance under the Architectural Barriers Act (ABA). Parking stalls at both sites will be designed and signed in accordance to the ABA. All new or modified facilities will be accessible and will have compliant routes to the facilities. The fee station at both locations will be fully accessible.

Figure 3 – Fort Spokane Boat Launch Proposed Improvements (Alternative B)



Figure 4 – Kettle Falls Marina Proposed Improvements (Alternative B)



Alternative C (Minimal Requirements Alternative)

Alternative C is the minimal action plan which analyzes the minimal requirements that could be taken in order to meet most of the project objectives stated in the purpose and need of the Kettle Falls and Fort Spokane EA. Each action proposed under Alternative C is consistent with the approved action plan in the 2010 SMP.

Under Alternative C, the National Park Service would upgrade the parking, entrance road, and some facilities at Kettle Falls to handle additional demand from unusable launches. All actions at Fort Spokane would be the same as Alternative B, although under this alternative no additional truck and trailer parking would be added. Currently, the Fort Spokane parking area is under existing capacity at most times, therefore increased visitation and overflow from other areas can currently be absorbed. If in the future visitation increases beyond Fort Spokane's capacity, under this alternative, additional overflow traffic and visitation traffic would be redirected to other nearby park locations which access similar areas of the lake (i.e. Porcupine Bay, Seven Bays, and Lincoln Mill).

Utility Systems

Similar to Alternative A, routine maintenance of these systems would continue to occur on an as needed basis, or as mandated by outside regulating agencies.

Roads and Parking

Similar to Alternative B, under Alternative C the entrance road and parking area at the Kettle Falls boat launch would be realigned and expanded to improve traffic flows and reduce congestion. The existing vehicle and trailer parking adjacent to the fish cleaning station will be extended from thirty foot stalls to fifty foot stalls. Thirty-seven vehicle and boat trailer stalls will be added along the existing marina access road. Six vehicle-only stalls will be added in the concessionaire parking lot, designated as employee parking only.

Alternative C mirrors the actions of Alternative B at the Fort Spokane boat launch minus the inclusion of any additional overflow parking.

Fee Collection

Under Alternative C the fee kiosk would remain in its current location at the Kettle Falls boat launch. The Fort Spokane boat launch fee kiosk would be relocated as described in Alternative B.

Boat Tie Down/Prep Areas

Under Alternative C, two new tie down areas would be established at both the Kettle Falls and Fort Spokane boat launch areas, similar to what is proposed under Alternative B.

Public Boat Launch Capabilities

The public boat launch at Fort Spokane would include the addition of a 20 x 160 foot concrete launching lane adjacent to the current launch ramp as described under Alternative B. No improvements would occur at the Kettle Falls boat launch.

Launch Ramp Support Facilities

Under Alternative C there would be no additional support facility improvements at either location, with the exception of an additional prefabricated vault toilet at the Kettle Falls boat launch.

	Summary of Impacts of New Construction			
	Miles of Paved Roads (Existing Within Project Area)	New Paved Surface Area (Square Foot)	New Structure Footprint Area (Square Foot)	Restored Area (Square Foot)
Kettle Falls Alternative B	2.01 Miles of roads, 185,303 SF of parking	32,058 SF of new paved surface	2,961 SF (including underground utility line placement)	2,400 SF will be restored after the removal of the current bathhouse
Kettle Falls Alternative C	2.01 Miles of roads, 185,303 SF of parking	23,240 SF of new paved surface	515 SF (Two pre-fabricated dry vault toilets, septic tank and manhole)	2,400 SF will be restored after the removal of the current bathhouse
Fort Spokane Alternative B	0.43 Miles of roads, 256,367 SF of parking	3,300 SF of new paved surface	17,388 (gravel parking lot)	none
Fort Spokane Alternative C	0.43 Miles of roads, 256,367 SF of parking	3,300 SF of new paved surface	none	none

Environmentally Preferred Alternative

In accordance with NPS Director's Order 12, Conservation Planning, Environmental Impact Analysis and Decision-making, the NPS is required to identify the environmentally preferred alternative in environmental documents. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act (NEPA) of 1969, which is guided by the Council on Environmental Quality (CEQ). The CEQ (46 FR 18026 – 46 FR 18038) provides direction that “the environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101 (b)”, which considers:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;

4. Preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;
5. Achieving balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities, and
6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depleted resources.

The environmentally preferred alternative is “the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources (46 FR 18026 – 46 FR 18038). According to NPS NEPA Handbook (DO-12), through identification of the environmentally preferred alternative, the NPS decision-makers and the public are faced with the relative merits of choices and must clearly state through the decision-making process the values and policies used in reaching final decisions.

Under Alternative A (No Action) the natural and cultural resources of the park would continue to be protected according to current policies and regulations. Alternative A satisfies CEQ criteria 1, 4, and 6, and while it does meet some aspect of the other CEQ criteria it does not fully address all of the aspects related to population and resource balancing or health and safety concerns.

Implementation of Alternatives B and C would directly address CEQ criterion 2 and 5, and partially address some of the aspects of criterion 3 and 6, these alternatives fail to meet any aspect of criteria 4.

After consideration of the CEQ criteria concerning environmental policy, Alternative A is the environmentally preferred alternative. Alternative A would cause the least amount of damage and best protects the cultural and natural resources of the two areas being analyzed in this document.

Alternatives Considered but Dismissed

A loop road and larger gravel parking lot was considered but dismissed at Fort Spokane. A conceptual design was developed to improve traffic flow and orientate vehicles preparing to launch towards the water. The route of the loop road through a culturally rich area negated this and resulted in the park proposing the route outlined in Alternative B & C which greatly minimizes the impacts to the known archeological sites. The original proposed gravel parking area was over 70,000 square feet, large enough to accommodate 80 vehicle and trailers. The potential resource impacts were felt to be too high from a parking area of this size and the park could not substantiate the need.

Several road layouts were considered but dismissed at Kettle Falls. The proposed road identified in Alternative B and C was the outcome of several site visits and re-designs. The

park also considered changing the truck and trailer stalls in front of the fish cleaning station to vehicle only stalls. This was dismissed based on the need for additional truck and trailer stalls.

Environmental Consequences

Methodology

The NEPA requires that environmental documents disclose the environmental impacts of the proposed federal action, reasonable alternatives to that action, and any adverse environmental effects that cannot be avoided should the proposed action be implemented. NEPA requires consideration of context, intensity and duration of impacts, indirect impacts, cumulative impacts, and measures to mitigate impacts. In addition to determining the environmental consequences of the alternatives, NPS *Management Policies* (NPS 2006) and Director's Order-12, Conservation Planning, Environmental Impact Analysis, and Decision-making require analysis of potential effects to determine if actions would impair park resources. As directed by DO-12 (as amended October 2011) the park's determination of no impairment will be documented in an attachment to the Finding of No Significant Impact decision document.

This section explains the basis for the analysis of the environmental impacts of project alternatives on affected park resources.

Environmental Impact Analysis

The analysis in the Environmental Consequences section compares the effects of the alternatives based on the following definitions of context, type of impact, duration of impact, and area of impact as well as cumulative impacts.

Context

Setting within which impacts are analyzed – such as the project area or region, or for cultural resources – the area of potential effects.

Type of Impact

A measure of whether the impact will improve or harm the resource and whether that harm occurs immediately or at some later point in time.

- **Beneficial:** Reduces or improves impact being discussed.
- **Adverse:** Increases or results in impact being discussed.
- **Direct:** Caused by and occurring at the same time and place as the action, including such impacts as animal and plant mortality, damage to cultural resources, etc.
- **Indirect:** Caused by the action, but occurring later in time at another place or to another resource, including changes in species composition, vegetation structure,

range of wildlife, offsite erosion or changes in general economic conditions tied to park activities.

Duration of Impact

Duration is a measure of the time period over which the effects of an impact persist. The duration of impacts evaluated in this Environmental Assessment may be one of the following:

- **Short-term:** Often quickly reversible and associated with a specific event, one to five years
- **Long-term:** Reversible over a much longer period, or may occur continuously based on normal activity, or for more than five years.

Area of Impact

- **Localized:** Detectable only in the vicinity of the activity
- **Widespread:** Detectable on a landscape scale (beyond the affected site)

Cumulative

The Council on Environmental Quality (CEQ) describes a cumulative impact as follows (Regulation 1508.7):

A “Cumulative impact” is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The cumulative projects addressed in this analysis include past and present actions, as well as any planning or development activity currently being implemented or planned for implementation in the reasonably foreseeable future. Cumulative actions are evaluated in conjunction with the impacts of an alternative to determine if they have any additive effects on a particular resource.

All Impacts, Except Special Status Species and Cultural Resources

Note: Special Status Species and Cultural Resources impact determinations are formally determined under the Endangered Species Act (Section 7) and the National Historic Preservation Act (Section 106), respectively.

- **Negligible:** Impacts would have no measurable or perceptible changes in resource size, integrity, or continuity.

- **Minor:** Impacts would be measurable or perceptible but would be localized within a relatively small area. The overall viability of the resource would not be affected and, if left alone, would stabilize and/or recover.
- **Moderate:** Impacts would cause a noticeable change in the resource (e.g., abundance, distribution, quantity, or quality); however, the impact would remain localized within the park.
- **Major:** Impacts to the resource would be substantial, highly noticeable, permanent, and affect large areas in or outside the park.

Note: Cultural resources impacts are also initially characterized as noted above, however the conclusion follows the format below, and makes a formal determination of effect under Section 106 of the National Historic Preservation Act. In accordance with NPS *Management Policies* (NPS 2006), the analysis in this Environmental Assessment fulfills the responsibilities of the National Park Service under Section 106 of the National Historic Preservation Act.

Cultural Resources Impacts

- **No Effect:** There are no historic properties in the Area of Potential Effect (APE); or, there are historic properties in the APE, but the undertaking will have no impact on them.
- **No Adverse Effect:** There will be an effect on the historic property by the undertaking, but the effect does not meet the criteria in 36 CFR Part 800.5(a)(1) and will not alter characteristics that make it eligible for listing on the National Register. The undertaking is modified or conditions are imposed to avoid or minimize adverse effects. This category of effects is encumbered with effects that may be considered beneficial under NEPA, such as restoration, stabilization, rehabilitation, and preservation projects.
- **Adverse Effect:** The undertaking will alter, directly or indirectly, the characteristics of the property making it eligible for listing on the National Register. An adverse effect may be resolved by developing a memorandum or program agreement in consultation with the SHPO, ACHP, American Indian tribes, other consulting parties, and the public to avoid, minimize, or mitigate the adverse effects (36 CFR part 800.6(a)).
- **Significant Impact:** An impact to a National Register historic property would be considered significant when an adverse effect cannot be resolved by agreement among SHPO, ACHP, American Indian tribes, other consulting and interested parties, and the public. The impact will diminish the integrity of location, design, setting, materials, workmanship, feeling or association characteristics that make the historic property eligible for inclusion in the National Register Historic Places. The resolution must be documented in a memorandum or programmatic agreement or the FONSI.

Affected Environment

The construction of the Grand Coulee Dam altered the region's bio-physiographic features and serves to regulate the lake's hydrology. Although recreation and visitor experience needs are considered in the lake level regulation, the Bureau of Reclamation primarily manages downstream flows from the dam for electric power generation, irrigation for the Columbia Basin Project, water for salmon migrations, water supplies for cities and industry, and to control downstream flooding. The lake level can vary up to 80 feet in elevation each year. In a wet year, the lake is typically drawn down in the spring to provide for storage of significant amounts of spring runoff and snow melt coming from Canada and the upper river tributaries as a flood control measure for downriver communities as far away as Portland, Oregon.

This section summarizes the affected environment at the Kettle Falls and Fort Spokane launch ramps.

Vegetation

Lake Roosevelt National Recreation Area is located in a semi-arid transition zone and bisects two ecoregions, the Columbia Basin ecoregion and the Okanogan Highlands ecoregion. These areas are characterized by differences in water availability, surface geology and climate. As a result, plant communities along the 150 mile-long reservoir gradually change from shrub-steppe plant communities (dominated by sagebrush and bunchgrass) to ponderosa pine and mixed conifer woodlands. Drier areas in the south near the dam are characterized by shrub-steppe and have rainfall averaging 11 inches per year, while wetter areas near Colville average about 17 inches per year and are characterized by ponderosa pines and Douglas-fir (NPS 2000). Rural areas are dominated by pasture and agricultural lands, while areas of native vegetation contain plant communities from either the Columbia Basin or Okanogan Highlands ecoregions.

Plant communities in the Columbia Plateau ecoregion include:

- **Shrub-steppe:** Shrub-steppe habitat is the major vegetation type throughout the Columbia Plateau, appearing in large landscape patches. Livestock grazing is the primary land use in the shrub-steppe although much of this area has been converted to irrigation or dry land farming.
- **Ponderosa Pine and Mixed Conifer Woodlands:** On wetter north facing slopes above the lake shore, pine forests mix with Douglas fir and the vegetation of the shrub-steppe.
- **Grasslands:** The plateau above Lake Roosevelt is composed of gentle slopes with deep silty loess soils in an expansive rolling dune- like landscape (converted to agriculture in Lincoln County). Grasslands near the shore occur in a patchwork with shrub-steppe landscape, often created by brush removal, chaining or spraying, or by fire.
- **Riparian-Wetlands:** A minor component of the Columbia Plateau ecoregion, riparian and wetland habitat occupies areas of seeps and stream beds providing dense vegetative cover.

Plant communities in the Okanogan Highlands ecoregion include:

- **Ponderosa Pine and Mixed Conifer Woodlands:** The ponderosa pine woodland habitats typify the lower tree-line, transitioning to mixed conifers on the wetter slopes or north facing slopes which may include Douglas fir and Western larch.
- **Canyon Shrublands:** This habitat is generally found in steep canyons surrounded by grasslands and below or in a mosaic with the Ponderosa pine and eastside oak woodland habitat. This habitat can develop near talus slopes, at the heads of dry drainages, and toe slopes in moist shrub-steppe and steppe zones.
- **Grasslands:** Eastside grassland habitats appear in valley bottoms. It can also be part of the lower elevation forest matrix in open meadows and on dryer slopes. Agricultural uses and introduced perennial grasses on abandoned or planted fields are common.

Areas along the middle and upper lake, between the Spokane River and Kettle Falls, transition from shrub-steppe to a mix of dense ponderosa pine/mixed conifer (primarily Douglas fir) forests, and grasslands. Alder, willow, hazelnut, and black cottonwood are common along the waterways, and some rocky mountain juniper may be found on rocky river bars. Common shrubs include chokecherry, serviceberry, wild rose, Douglas hawthorn, snowberry, and occasionally some smooth sumac and elderberry. Forbs include hairy goldaster, phlox, and nodding onion.

Although the dramatic rise and fall of water prevents riparian vegetation from establishing along the shoreline, a few native and introduced plants have colonized limited stretches of the riparian edges along the lake. The shoreline and lowland areas, those lower than the 1290' foot elevations are dominated by reed canary grass. It occupies most of the area within a few feet in elevation of the annual high water line. There are extensive stands of this grass in the large shallow bays (i.e. the Kettle Arm, the Kettle Falls developed area and the , Spokane Arm). Native pondweeds growing in the reservoir fluctuation zone (1275' to 1290') do particularly well in the upper stretches of the Spokane Arm and backwater areas of the reservoir. The dense growth in the water can cause concerns for visitors who are boating or swimming.

Water Resources

The lake extends more than 131 miles along the Columbia River to nearly the Canadian border and includes the lower reaches of many rivers and streams. The national recreation area includes portions of two major tributaries, 29 miles of the 111-mile-long Spokane River in the south and approximately 10 miles of the 175-mile-long Kettle River in the north. Smaller tributaries include the Colville and Sanpoil Rivers. Besides the Columbia River, other water in Lake Roosevelt comes from the Spokane River (7 percent) and the Colville, Kettle and Sanpoil Rivers combined (4 percent) (NPS 2000).

Full pool elevation is 1,290 feet above sea level, and minimum pool elevation is 1,208 feet. For short periods during wetter years, excess runoff may be discharged over the spillway at Grand Coulee Dam. At full pool, the reservoir surface covers about 81,000 acres with more than 510 miles of shoreline. Water depths range from 400 feet immediately upstream from the dam to 14 feet deep near the international border. Historically, the reservoir level is

highest from late June through the winter months with weekly small fluctuations. In the late winter and early spring, the water level is usually lowered to hold spring runoff (NPS 2000).

The lake provides more than 9.4 million acre-feet of storage at any one time to support various uses such as power generation, flood control, irrigation, domestic water supply, industry, recreation, and additional flows for anadromous fish passage in the lower Columbia River. Periodic fluctuations in water level occur to accommodate these demands, sometimes leaving a draft of up to 82 feet and exposing former floodplains and/or steeply eroding banks (NPS 2000).

Surface water resources include Lake Roosevelt, springs and seeps, intermittent and perennial streams and small rivers, and two major rivers that flow into Lake Roosevelt, the Spokane and Kettle Rivers.

Springs

Relatively few springs occur near Lake Roosevelt. The largest spring is within the Fort Spokane Military Reserve Historic District and supports domestic visitor and agency use and large-scale administrative and maintenance project needs. Ongoing monitoring of the spring's flow rates is occurring related to water usage.

Wetlands

Wetlands have been mapped for the national recreation area by the National Wetlands Inventory Program (NPS 2008). The two largest wetlands are at the mouths of the Kettle and Colville Rivers. Due to the fluctuating nature of the reservoir, few perennial wetlands exist along the shoreline. More common are intermittent wetland areas that flood seasonally. Two areas within the national recreation area have been evaluated and delineated as jurisdictional wetlands (meeting federal criteria). These include Colville Flats in the northern portion of the lake and the Mill Creek inlet on the south side of the Spokane River. Other non-evaluated wetlands include an area west of Lincoln Mill along the south shore bluff, an area immediately below the Little Dalles on the west shore, and an area in the Kettle River corridor south of Barstow.

Surface Water Quality

Lake Roosevelt waters are classified by the State Department of Ecology as AA (extraordinary), which means that they are afforded the maximum level of protection under state water quality regulations (WAC 173, Sec. 201A) (NPS 2000). The quality of these waters shall markedly and uniformly exceed the requirements for all or substantially all uses. Characteristic uses designated for Class AA waters include, but are not limited to:

- Water supply for domestic, industrial and agricultural uses;
- Stock watering;
- Fish and shellfish (including migration, rearing, spawning, and harvesting);
- Wildlife habitat; and
- Recreation (primary contact recreation, sport fishing, boating and aesthetic enjoyment).

Various water quality criteria have been established for Class AA waters, one of which includes:

“Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste” (NPS 2000). (Note: The impairment in this water quality standard is different from “impairment” as defined by the NPS in the Organic Act).

There have been concerns about water quality in the lake for several years, primarily due to an influx of pollutants from mining in Canada (see below), from a former uranium mine (Midnite Mine) on the Spokane Indian Reservation, and from the silver and lead producing region on the upstream tributaries of the Spokane River. There have been no NPS sponsored efforts for regular monitoring to address pollution from boats, campgrounds, human waste, and neighboring point and non-point sources of pollution.

In the early 1980s, concerns about water quality in Lake Roosevelt were first reported in a USFWS study that reported elevated concentrations of arsenic, cadmium, lead, and zinc in fish.). Two primary point sources of pollution affected the lake—the lead-zinc smelter in Trail, British Columbia and the Pulp Mill in Castlegar, British Columbia. Beginning in 1896 and ending in 1995, the Canadian smelter discharged tons of furnace slag and effluent per day into the Columbia River. During the period from 1900 to 1922 several other smelters on the Upper Columbia permanently closed at Northport, Grand Forks, Greenwood, and Boundary Falls thereby reducing other significant sources of slag and liquid effluents.

The GMP noted that this, along with other improvements, should reduce the amounts of metals being discharged to the Columbia River (NPS 2000). The current effects of these improvements are being studied as part of an Environmental Protection Agency (EPA) administered Remedial Investigation/Feasibility Study for the Upper Columbia/Lake Roosevelt site.

Long-term threats to water quality remain severe (NPS 1997). Threats include land use, recreational use, ongoing discharges from factories, and the existence of millions of tons of heavy metals on the bottom of Lake Roosevelt, near the international border. According to the NPS report (1997) coarse grained sediments at the northern end of the reservoir contain higher concentrations of zinc, lead and copper; while finer grained sediments downstream have higher concentrations of mercury and cadmium.

In 1994, the Washington Department of Health issued a health advisory to lake users, recommending that the consumption of fish be limited due to toxic substances, dioxins and furans in lake water. These were attributed to the Celgar Pulp Mill, which later completed a multiyear upgrade to its facilities to reduce the potential for this contamination. The 2009 data confirmed that the dioxins and furans advisory was no longer warranted.

In June 2006, EPA released beach sediment data from samples that were collected from 15 beaches at Lake Roosevelt. In the spring of 2005, nine developed beaches within the recreation area were sampled, three beaches on the Colville and Spokane Reservations were sampled, and three beaches north of the recreation area were sampled. All 15 samples taken within the recreation area and reservations tested within acceptable health based risk standards for short-term recreational users (e.g., 14 consecutive days on one beach in the summer). The three beaches north of the recreation area had slightly elevated levels of arsenic and one of those beaches had slightly elevated levels of lead. These beaches were further evaluated in 2009 and 2010. The same beaches are still of concern with elevated concentrations of metals. EPA has recently released additional Fish tissue results from samples taken in 2009. After reviewing the data, the Department of Health updated their fish advisory stating “fish in Lake Roosevelt contain chemicals, including mercury, which may be hazardous to your health. Women, who might become pregnant, are pregnant, nursing, and young children less than six years old may be especially at risk. These individuals should limit the amount of fish they consume from Lake Roosevelt.” Lake Roosevelt is now part of a state-wide Department of Health Advisory regarding mercury consumption.

Cultural Resources

Cultural resource information is derived from reports edited by Jerry Galm (1984) of Archaeological and Historical Services of Eastern Washington University in Cheney. J. Scott King and T. Webber Greiser of Historical Research Associates in Seattle (1995), give background information on the archeological resources in what is now the Lake Roosevelt basin (NPS 2000).

Cultural resources abound in what are now recreation area lands. Although many cultural resources were impacted from initial clearing operations in the 1930's and 1940's, in conjunction with construction of the Grand Coulee Dam, and creation of Lake Roosevelt, later testing has indicated that intact subsurface archaeological deposits remain within the reservoir. Cultural resources include a range of prehistoric and historic sites, dating back to as early as 9000 years ago. Sites include the remains of multiple prehistoric occupations, including the important Kettle Falls fishery, and early fur trapping and military establishments, such as the Hudson's Bay Fort Colville, and a large number of historic townsites abandoned prior to inundation of the Columbia River and creation of Lake Roosevelt. Prehistorically and historically, habitation and fishing sites tended to cluster along the lower terraces of the Columbia and Spokane Rivers, which are now inundated by Lake Roosevelt. Many lower terraces in the upper reservoir become exposed during draw-downs. Other types of sites, such as those indicative of hunting and gathering, are more

widely distributed and can occur in both the lower inundated terraces and the upper terraces, above the high-water line. Higher lake levels protect submerged archeological resources, which suffer potential exposure when draw-downs make them accessible, not only legally to archeologists undertaking excavation and data recovery, but also to looting and damage from vehicles illegally driven on the draw-down (NPS 2000). For some sites, this has resulted in an irretrievable loss to the archaeological record of the Upper Columbia Region (NPS 2000).

About 80 percent of the recreation area above the full operating pool of the lake (1,290 feet) has undergone initial archeological surveys. More than 200 archeological sites have been identified within National Park Service managed lands. The sites range from pictographs and petroglyphs to habitation and fishing sites and other evidences of human occupation. These include burial sites and cobble tools or modified core tools often found on upper terraces. Sites vary from eroded surface scatters, to preserved sites with considerable depth. Much is known, therefore, about the types of sites that occur and about their patterns of form and distribution, both prehistorically and historically (NPS 2000).

Visitor Experience

The park can be reached via numerous state and U.S. highways, including State Route 55, State Route 17, State Route 20, State Route 174, U.S. Highway 2, U.S. Highway 395, and Interstate 90. U.S. Highway 2 is the primary east-west route for the southern part of the park, while State Route 20 is the primary east-west route in the northern part of the park. State Route 25 is the primary north/south highway with a northern portion of the park also accessible from U.S. Highway 395. Gateway communities, include the towns of Coulee Dam, Grand Coulee and Electric City near the Grand Coulee Dam, Wilbur and Davenport along the southern half and Kettle Falls on the northern portion of the recreation area., Smaller towns (Creston, 7-Bays, Hunters, Daisy, Rice, and Marcus) offer limited services and unincorporated towns and county areas make up the rest of the developed areas near the park. In a 1996 visitor use study, most visitors were from Washington State (74 percent), from Canada (13 percent) or from other Pacific Northwest areas (5 percent). Only about seven percent were from other parts of the U.S. and less than one percent were from a foreign country other than Canada. About 46 percent of the respondents were repeat visitors (NPS 2000). The 2013 recreational use study (NPS 2013) reported similar numbers with a slight increase in visitation from Washington State (83 percent) and a slight decrease in visitation numbers from other areas including Canada and other areas of the Pacific Northwest.

Visitor Use

Although the recreation area is open all year, similar to most areas in the National Park System, visitor use is not evenly distributed throughout the calendar year. Visitor use is relatively low and stable between November and March, but begins to rise in April, until it reaches a summertime peak in July and August, whereupon it falls until November.

Visitor use is also uneven over the many individual dispersed visitor access points within the recreation area. As cited in the LARO GMP, NPS records showed the highest levels of visitor use occurred at Kettle Falls (304,080), followed by Fort Spokane (119,088 for the visitor center and 116,714 for the campground), Spring Canyon (103,251), Seven Bays Marina (100,949), Keller Ferry Campground (88,053), Hunters Campground (77,832), and Hawk Creek Campground (61,687). Six areas accounted for between 4-8 percent of total visitor use, while four recorded more than 100,000 visits in 1997. Nine other areas accounted for one quarter of one percent to three percent of visitor use (NPS 2000).

Recreational use in the North District (Kettle Falls area) varies widely, with most use occurring at Kettle Falls, Hunters, Gifford, and Evans campgrounds. In the South District (Spokane Arm and Fort Spokane to Spring Canyon), use is more evenly distributed, with most occurring at Fort Spokane, Spring Canyon, Seven Bays Marina, Keller Ferry, Hawk Creek and Porcupine Bay.

The 2011 *Upper Columbia River Recreational Use Survey* (NPS 2013) found that 83 percent of the average 1.5 million annual visitors to LARO were from the State of Washington. The study further detailed that twenty-nine percent of the total visitation originated from Spokane County, while another 15.5 percent originated from Stevens County.

According to the 2000 and 2010 U.S. Census reports (U.S. Census 2013), both Spokane and Stevens Counties have experienced a population growth during this 10 year period (12.75% and 8.65% respectively). The city of

Spokane, located in Spokane County is the largest metropolitan area in eastern Washington State. Two major thoroughfares allow access from Spokane to LARO; State Highway 395 which runs north through Stevens County to Kettle Falls and on to Canada, and State Highway 2 running west towards Fort Spokane and on to Seattle and the heavily populated areas of western Washington.

Lake level fluctuations can impact visitor use year-round. Forty to seventy foot drawdowns can occur during the spring to allow for flood control during the spring snow melt, typically

***Lake Roosevelt Public Visitation
Statistics***

<u>Year</u>	<u>Recreation Visitors</u>
1950	280,688
1960	647,400
1970	652,900
1980	833,400
1990	1,542,515
2000	1,415,627
2010	1,324,074
2011	1,523,474
2012	1,781,972 (17%)

Total Visitors since 1947

57,388,031

occurring in March through late May. Low water during these periods result in many of the boat launches being unusable and during periods of extreme drawdowns (below 1222') all NPS boat launch facilities are rendered unusable. Rapidly rising lake levels, extremely cold water, and heavy run-off limit houseboat use, canoeing and swimming in June. Full pool levels (1290') in early July cover nearly all of the exposed beach areas where boat-in camping can occur. Fluctuating lake levels in late July to early September can leave boats and houseboats stranded overnight or flood tents camping on the drawdown.

Area Descriptions

Fort Spokane: This highly developed area contains a drive-in campground with 67 sites and two group sites as well as an amphitheater. The boat launch accommodates two cars at a time. There is parking for 81 cars and 88 boat trailers. There is a visitor center and historic fort with interpretive trails. It also contains a large swim beach (imported sand), a fish-cleaning station, and a picnic area with a picnic shelter and play structures. NPS maintenance and other offices are also located here.

Original construction of the Fort Spokane boat launch began in 1950, and by 1952 there was an established road, parking area, and launch ramp at its current location. In 1957 LARO submitted a 2.5 million dollar prospectus under the Mission 66 program. This prospectus was approved, with 1/3 of the funding earmarked for further development of the Fort Spokane area, including areas at or adjacent to the launch ramp. The current launch ramp was expanded in 1974 and no additional improvement to the launch has occurred since that time. The parking area was expanded to its current footprint in 1980.

Kettle Falls: This is the site of a full-service concessionaire marina with an office, convenience store, houseboat rentals, fuel and dump station. The larger area around the marina also includes NPS offices and maintenance buildings, a boat launch and parking, a campground, picnic and day use areas, a swim beach, a series of hiking trails, and a softball field.

Construction of the Kettle Falls boat launch and parking began in the 1950's similar to Fort Spokane. Since 1961, the footprint of the launch ramp and parking area has been expanded on several times, with the latest major expansion occurring in the early 1990's. In its current layout the Kettle Falls boat ramp and parking area will support 48 trucks and trailers, 13 vehicles minus trailers, and the launching of four vessels at one time. The current parking configuration for vehicles and boat trailers can quickly become congested and have bottlenecks if longer vehicles/trailers park and extend out into the traffic flow.

Park Operations

Lake Roosevelt currently has 69 full-time equivalent employees who work in maintenance, visitor and resource protection, interpretation and education, natural and cultural resources management, and administration. Staffing levels at both the Kettle Falls and Fort Spokane launch areas vary throughout the season with the highest number working during the

summer season. The proposed action improvements would not have any effect on maintenance related staffing needs at these locations, however congestion and delays caused by maintenance activities should be reduced under both action alternatives. Similarly, both action alternatives may affect visitor and resource protection staff responses to these areas as traffic flows improve and visitor conflicts decrease.

Environmental Impacts

Impacts to Vegetation

Impacts Under Alternative A (No Action)

There would be long-term negligible to minor, localized adverse impacts to vegetation from land based facilities, such as parking, access roads, boat launches, and high visitor use traffic on social trails. Overflow/off-road parking would continue during periods of high use and may increase as lower lake levels affect other NPS facilities. The continued maintenance of existing facilities, including trails, buildings and roads and non-native vegetation removal would continue.

Impacts Under Alternative B

In addition to long-term negligible to minor impacts from existing operations as in Alternative A, Alternative B would have long-term negligible to moderate localized impacts on vegetation.

Localized long-term negligible to minor adverse effects would occur from constructing and paving roads, and from replacing/relocating the comfort station and utilities at Kettle Falls. Localized long-term moderate impacts would occur from constructing facilities (including expanding the existing parking area at Kettle Falls and constructing an overflow parking area and expanding the launch ramp at Fort Spokane).

Approximately 1.07 acres of vegetation will be permanently removed at the Fort Spokane launch ramp and proposed overflow parking area. The previous bitterbrush/ponderosa pine environment and associated vegetation will be replaced with hardened and semi-hardened surfaces. Eight $\leq$ 15 inch diameter ponderosa pine trees will be removed with this alternative.

Approximately 0.73 acres of vegetation will be removed adjacent to the Kettle Falls launch ramp and marina. The predominantly ponderosa pine and mixed understory will be replaced within hardened surfaces. Included with this replacement will be the removal of approximately 0.33 acres of non-native invasive black locust which has infested a pocket of ground north of the existing parking area. There will also be approximately 115 ponderosa pine trees (the majority of which are small diameter saplings less than 2 inch dbh) removed as part of this alternative.

Impacts Under Alternative C

Under Alternative C, the long-term negligible to minor impacts associated with the current operations at these locations would continue similar to Alternative A. Impacts from construction activities, including the construction of a new entrance road, parking area, and vault toilet at Kettle Falls and the expansion of a new boat launch lane at Fort Spokane would be similar to Alternative B. However, the overall impact to vegetation would be reduced under this alternative by excluding the addition of a new bathhouse at Kettle Falls and parking area at Fort Spokane.

Measures to Avoid, Minimize, or Mitigate Impacts

- Washing offsite plant seeds and debris from vehicles and equipment before they enter project sites.
- Salvaging native plant material prior to construction and re-planting it afterwards.
- Revegetating project areas with native seed mixes and erosion prevention materials where needed.
- Importing weed-free clean fill and topsoil.
- Delineating clearing limits to minimize the amount of vegetation loss.
- Clearing and grubbing only those areas where construction would occur.
- Replanting native deciduous trees of nursery stock adjacent to construction areas in order to minimize visual intrusions, provide screening, and mitigate the loss of some of the existing vegetation.

Cumulative Impacts

Combined, past actions have had moderate, long-term localized adverse impacts on vegetation due to a nearly complete replacement of native understory vegetation with introduced grasses and forbs or asphalt road and parking areas. Adverse impacts to vegetation as a result of other past and ongoing actions include; vegetation loss from removal and erosion, from development and concentrated visitor use in these two areas, as well as from areas where native plants have been disturbed and revegetation has not occurred naturally or been undertaken. Construction damage to tree roots and covering roots with impervious materials have also had and may continue to adversely impact a few, larger individual conifer trees at both project sites.

Conclusion

Alternative A would have long-term negligible to minor adverse impacts on vegetation and negligible cumulative adverse effects.

Alternative B would include most of the impacts from long-term operations seen in Alternative A, but would have additional short and long-term negligible to moderate adverse impacts on localized areas of vegetation through the construction of new facilities and

parking areas at both sites, although actual disturbance will be minimal given the density of vegetation at these two locations. There would be no major adverse effects to vegetation or their values from the implementation of the alternatives described in this Environmental Assessment.

Similar to Alternatives A and B, Alternative C would have long-term negligible to minor adverse impacts to vegetation from ongoing operations and use of the areas. Alternative C would also have negligible to moderate short to long-term adverse impacts on a smaller area of vegetation as compared to Alternative B through the proposed construction activities.

Impacts to Water Resources

Impacts Under Alternative A (No Action)

Marinas, campgrounds and other large developments along the reservoir can potentially impact water quality. Sanitary facilities and boat fuel and cleaning solvents at marinas are of particular concern (NPS 1997). As a result, there would be long-term minor adverse impacts from the presence of these facilities on Lake Roosevelt. Ongoing water quality impacts, including the release of unspent fuel from boats and personal watercraft would also continue and would likely increase over time as visitor use increases until better technology results in the reduction of these contaminants during boat and PWC operation.

Impacts Under Alternatives B and C

Existing minor to moderate adverse impacts to water quality in Alternative A would mostly continue in Alternatives B and C. Impacts would be similar to Alternative A, however, all new parking areas, utility systems and facilities will be designed to meet current environmental protection laws and policies, thus providing increased protection to water resources from runoff and contamination from parking lot effluents. These would still constitute long-term adverse minor to moderate impacts.

Measures to Avoid, Minimize, or Mitigate Impacts

- Designing and adding runoff barriers to paved parking areas where possible to reduce contamination from petroleum products.
- Delineating staging areas away from the lake and marking them to prevent incremental expansion.
- Minimizing the amount of disturbed earth area and the duration of soil exposure to rainfall.
- Minimizing soil disturbance and re-seeding disturbed areas as soon as practical with erosion prevention materials placed where needed.
- Placing and retaining silt fencing between the shoreline and construction/disturbed areas until stabilization (by reseeding or revegetation) occurs.

Cumulative Impacts

Past actions occurring in the recreation area and surrounding Lake Roosevelt have affected water quality. These actions include road construction, industrial releases, agricultural operations, sewage and waste storage and treatment operations and recreational use. Visitor use and facilities in the recreation area contribute to sediments and pollutants, including oil and other contaminants from motor vehicles as well as litter that can enter drainages and affect water quality. Any proposed development project (e.g., addition of new visitor service facilities, parking areas, and a boat launch expansion) would contribute both beneficial and adverse impacts to water quality. Given the localized nature of these actions, overall impacts on water quality would be long-term, adverse and minor.

Conclusion

Alternative A would likely continue to have short- and long-term, localized, minor to moderate adverse effects on water quality.

Alternatives B and C would also have short- and long-term localized minor to moderate adverse effects on water quality.

Impacts to Cultural Resources

Impacts Under Alternative A (No Action)

There would be little to no adverse effects to archaeological resources by the implementation of this alternative as a result of the continuation of current management.

Impacts Under Alternative B

Under Alternative B, there would be no adverse effect to archaeological resources at Kettle Falls, similar to Alternative A. Archaeological surveys of the project area included surface inventory and subsurface testing as well as the documentation of an existing comfort station, constructed in 1954 adjacent to the NPS visitor contact station. Archaeological sites 45ST28 and 45ST205 are located close to the project area but will not have adverse effects by project activities.

Under the proposed project the existing comfort station at Kettle Falls, which is considered a historic building due to its age, is scheduled for demolition and a new comfort station will be constructed at a location closer to the boat launch ramp. The building was evaluated and determined not to be significant under any evaluation criteria defined in 36 CFR Part 60. In Section 106 compliance consultation, the Washington SHPO concurred with the NPS “Determination of No Historic Properties Affected” in the project area, hence there would be no effect.

At Fort Spokane however, archaeological testing and fieldwork within the boundaries of the proposed parking lot and road expansion confirmed that intact cultural deposits are present at this location. In consultation with the State Historic Preservation Officer and the Spokane Tribe of Indians, the NPS has determined that the Area of Potential Effect (APE) of the project is located within an archaeological site, which has been determined to be eligible for inclusion in the National Register of Historic Places. This site is a 700 meter long lithic scatter extending from the Fort Spokane Bridge-through the launch ramp area and east through a portion of the campground. Archaeological testing discovered that there are intact subsurface cultural deposits-including multiple hearth features and activity areas-in or adjacent to the proposed area of disturbance for the project. The proposed project would constitute an adverse effect.

Impacts Under Alternative C

The impacts to cultural resources under Alternative C would be similar to those impacts described in Alternatives A and B. However under Alternative C, the APE of the project is significantly reduced with the exclusion of the overflow parking area at Fort Spokane, and that the bathhouse facility will not be relocated at Kettle Falls.

Mitigation Measures

- The NPS has entered into a Memorandum of Agreement (MOA) with the Washington State Department of Archaeology and Historic Preservation and the Spokane Tribe's Historic Preservation Officer, which stipulates that NPS will conduct a mitigation plan to address the adverse effects of the project on the archaeological site (which was conducted in the fall of 2011). The mitigation plan called for the data recovery of archaeological deposits that will be impacted by construction. Based on this plan, data recovery expanded the excavation in the affected area in order to locate any important cultural features and/or artifact scatters and then excavate them. Recovery efforts were largely concentrated in areas within the project that had the highest probability of containing cultural resources and were located in zones that may be subjected to the most destructive construction activities (i.e. cutting, grading, and impact from heavy equipment). Upon completion of the mitigation work in 2011, a total of nineteen 1 meter by 1 meter units were excavated from the outlined mitigation area, which measured 88,500 square feet in area. Significant subsurface cultural features and associated artifacts were recovered within this defined zone; these resources, however, did not appear to extend into areas expected to be directly impacted from construction activities. Archaeological data recovered during the mitigation project supported previous conclusions that the archaeological site was eligible for listing to the National Register of Historic Places, containing evidence for a long term prehistoric occupation of the area.
- All construction work will be monitored by at least one Park Service archaeologist. Monitoring work will include the collection of data, including GPS data points and

photographs that outline stages of construction and all ground-disturbing activities. In the case of the discovery of archaeological remains, all construction work will be halted until the significance of the cultural deposits is properly assessed and documented and the signatories to the MOA consulted about the proposed treatment of the deposits.

Cumulative Impacts

No cumulative impacts would occur to cultural resources under Alternative A through the continuation of current management at either the Kettle Falls or Fort Spokane launch sites. Alternatives B and C would contribute no adverse effects to cultural resources at the Kettle Falls area, however the implementation of either Alternative B or Alternative C at Fort Spokane would directly or indirectly alter the characteristics of intact cultural deposits, thereby causing an adverse effect.

Conclusion

Alternative A would continue to have little to no cumulative effect on cultural resources.

The implementation of Alternative B and C would have an adverse effect on potential unidentified cultural resources located within the proposed construction footprint of the launch ramp and entrance road at Fort Spokane. To limit this effect, it is recommended that construction activities be limited to previously disturbed areas of the archaeological site. Overall, construction activities will be confined to the following: Cutting for the expanded boat launch ramp turn-around and additional launch ramp will be restricted to an area measuring no more than 30 feet to the north of the existing turn-around and ramp. Cutting for the expanded launch ramp access road and additional staging/tie down area will be restricted as well, to no more than 20 feet to the north of the existing boat launch access road. All construction activities, including heavy equipment traffic, will be restricted from areas outside the outlined construction footprint (colored sections in the map below); these areas will be marked with flagging or fencing.

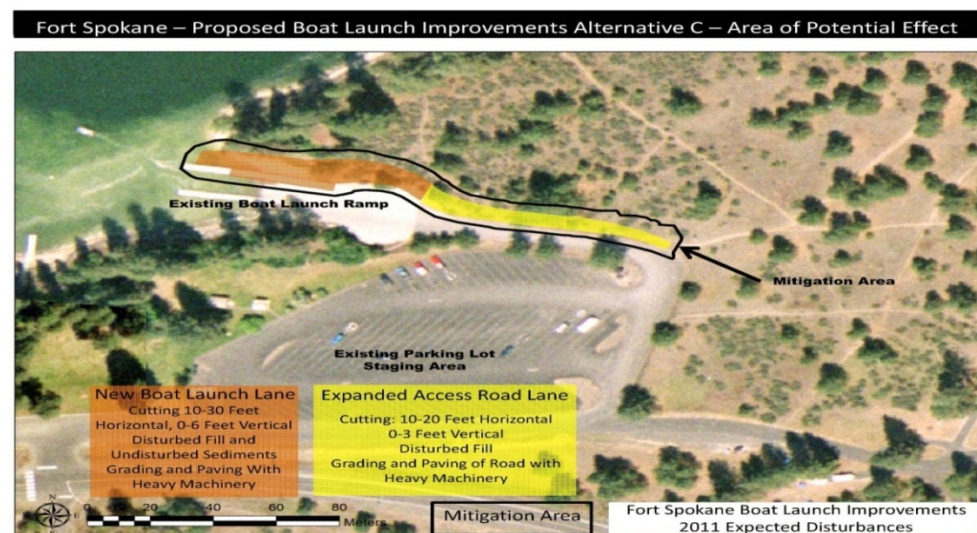
Under Alternative B, limited ground disturbance is proposed for the gravel parking lot area; a 4 inch base of gravel with 1 1/4 inch minus rock will be added as a base, with a 5/8 inch minus topcoat which will level the area for vehicle traffic. All staging for construction activities will be confined to the existing Fort Spokane parking lot and boat launch access road, as well as within the proposed overflow parking lot, if needed.

The MOA also states that adverse effects to the archaeological site will be mitigated through data recovery of the proposed construction area, which was conducted in 2011. This data was used to address multiple² research questions pertaining to the prehistory of the Upper Columbia River and Plateau Region.

Figure 5 – Fort Spokane Area of Potential Impact (Alternative B)



Figure 6 – Fort Spokane Area of Potential Impact (Alternative C)



Visitor Experience

Impacts Under Alternative A (No Action)

There would be no new improvements to either the Kettle Falls or Fort Spokane boat launches under this alternative. There would, however, continue to be several visitor opportunities associated with these two locations. Because there would be no new improvements, the overall impact to the visitor experience at these locations would continue

to present long-term negligible to moderate negative impacts arising from a continued increase in visitor use and the associated bottlenecks arising because of boat launch limitations at both sites.

Impacts Under Alternative B

Under Alternative B, new visitor use improvements would be made to both the Kettle Falls and Fort Spokane boat launch areas. New designated tie-down areas would reduce congestion and traffic delays; additional parking would facilitate easier access and reduce off-road parking; and the relocation of informational kiosks and fee stations would provide easier access to park and permit information.

Construction of new and expanded facilities would result in short-term minor to moderate localized adverse impact on visitors, depending on whether the construction required the closure of existing facilities or delays in accessing these facilities. Noise and activity associated with the construction could also impact some visitor experiences in the adjacent campground, which would be another localized short-term minor adverse impact. Long-term major beneficial impacts would occur at both sites as boat launch and associated facility improvements reduced delays, bottlenecks, and parking limitations on high visitor use days or as other NPS boat launch facilities were de-watered.

Impacts from Alternative C

Impacts under Alternative C would reflect those of Alternative B, except additional overflow parking at Fort Spokane would not be available on high visitor use days and the bathhouse at Kettle Falls would not be relocated.

Mitigation Measures

- Avoiding evening, weekend and holiday work by requiring approval from the superintendent. Longer construction delays or total road closures may also require approval from the superintendent.
- Conducting materials deliveries (to the degree possible) in the early morning and late evening hours.
- Scheduling work around high visitor use days and times, such as holidays and weekends.
- Developing a safety plan prior to the initiation of construction to ensure the safety of recreation area visitors, workers, neighbors, and park staff.
- Schedule Resource Protection or other trained staff assistance to help with traffic flow when partial road closures may be needed.

Cumulative Effects

Over time there have been many visitor use facilities constructed within Lake Roosevelt National Recreation Area by the NPS and by the Tribes. These facilities have had both short-term minor to moderate and long-term moderate to major beneficial impacts on visitor experience. Under all alternatives, the recreation area would continue to implement the direction found in the GMP to modify recreational facilities and to improve resource conditions. These new actions combined with ongoing management of recreation area resources would continue to result in negligible to minor adverse and beneficial effects on visitor experience. Alternative A would present a long-term negative impact that would increase as visitation increases and combined with other impacts would reach major impacts to visitor the experience.

Conclusion

Alternative A would have short- and long-term negligible adverse effects on the visitor experience, including visitor access opportunities, and safety. Alternatives B and C would have short- and long-term negligible to moderate localized adverse effects due to increased localized traffic and long-term negligible to moderate beneficial impacts as a result of increased capacity and traffic flows. Adverse localized short-term impacts to the visitor experience would be greatest from Alternative B, during construction and reconfiguration work.

Park Operations

Impacts Common to All Alternatives

The current maintenance staffing levels required to maintain the Kettle Falls and Fort Spokane boat launches will remain unchanged under Alternatives A, B, and C. Both *Action Alternatives* (Alternative B and C) do not propose any additional infrastructure to either site, rather upgrades to the infrastructure that is currently onsite. Maintenance schedules and staffing levels would therefore remain unchanged under all alternatives.

Impacts Under Alternative B

Maintenance staffing and operations will remain unchanged under Alternative B, however as facilities are upgraded and improvements are made to the existing utility systems the frequency of necessary repairs maybe reduced. Visitor and Resource Protection operations may also be reduced as improvements to traffic flows and parking reduce the number of visitor conflict incidents. However the number of routine patrols conducted by the Resource and Visitor Protection staff will remain unchanged under this Alternative.

Impacts from Alternative C

Impacts to Park Operations under this Alternative will be the same as those under Alternative B.

Mitigation Measures

No mitigations were identified.

Cumulative Effects

Under Alternative A, as system components and facilities age there is the potential for long-term minor effects, as the frequency of system and facility repairs increase. Under both Alternatives A and B, there would be no effect on current maintenance operations, while there is the potential for a minor beneficial effect on Visitor and resource Protection operations as traffic congestion is reduced, thereby reducing visitor use conflicts.

Conclusion

Under all proposed alternatives there would be little to no effect on park operations within these two locations.

Consultation and Coordination

Ray DePuydt	Archaeologist (LARO)
Ken Hyde	Chief of Integrated Resources (LARO)
Jon Edwards	Environmental Protection Specialist (LARO)
Nate Krohn	Landscape Architect (LARO)
Randy Abrahamson	Spokane Tribe of Indians THPO
Guy Mora	Colville Confederated Tribes THPO
Rob Whitlam	Washington State Archaeologist

Tribal and SHPO Consultation

All applicable regulatory requirements, consultations, and associated compliance have been initiated. Washington SHPO responded to a scoping letter sent April 13, 2011 requesting additional information on the project's Area of Potential Effect, potential staging areas and access routes and changes in the initial construction plans. Consultation with SHPO will continue with the release of the EA.

On April 14, 2011 The Washington SHPO concurred with NPS' determination of the project APE at Fort Spokane and on May 3, 2011 a Determination of Eligibility for the archaeological site located there was signed by NPS and the SHPO. In a June 6, 2011 letter, the SHPO concurred with NPS's Determination of Adverse Effect of the project and made comments on the 4 draft MOA and Recovery Plan. A Memorandum of Agreement which outlines the measures that NPS would take to address the adverse effects of the project was signed by NPS, the Washington SHPO, and the STI THPO on August 3, 2011. The MOA was filed at the Advisory Council on Historic Preservation on August 9, 2011.

Consultation with area tribes has been initiated and is ongoing. American Indian groups traditionally associated with the parks were also sent scoping letters on April 4, 2011. The tribes will be provided the opportunity to review the EA and submit comments.

For Kettle Falls: On January 13, 2013 NPS consulted with the Washington State SHPO, regarding the project's Area of Potential Effect. On January 28, 2013 the Washington State SHPO concurred with the determination that No Historic Properties would be affected by the project. On January 24, 2013 a consultation letter was sent to the THPO at the Confederated Tribes of the Colville Reservation. To date the CCT have not responded to the letters.

U.S. Fish and Wildlife

Section 7 of the Endangered Species Act (1973) requires agencies to consult with the U.S. Fish and Wildlife Service (USFWS) regarding any action authorized, funded, or carried out by a federal agency to ensure that it does not jeopardize any listed species or its critical habitat. In consultation with the USFWS, the NPS was directed to the USFWS website for the most recent list of protected species in the project area. This list was used as the basis for the special status species analysis in this EA. The list would be checked for updates prior to construction.

Because there would be no effect on species listed or proposed as threatened or endangered from implementation of the alternatives in this EA, no additional consultation with the USFWS was considered necessary.

The distribution list includes the following:

U.S. Congress

Congresswoman Cathy McMorris Rodgers
Senator Patty Murray
Senator Maria Cantwell

U.S. Bureau of Reclamation

Grand Coulee Office, Planning

U.S. Natural Resource Conservation Service

Colville, Washington
Davenport, Washington

U.S. Fish and Wildlife Service (Spokane, WA)

Indian Nations

Confederated Tribes of the Colville Reservation
Spokane Tribe of the Spokane Reservation

State of Washington

Office of Archeology and Historic Preservation

Counties

Lincoln County Planning Department
County Commissioners

Stevens County Planning Department
County Commissioners

Organizations and Educational Institutions

Lake Roosevelt Forum

Bibliography

- Galm, Jerry R. (editor). 1984. *A Design for Management of Cultural Resources in the Lake Roosevelt Basin of Northeastern Washington* Reports in Archaeology and History 100-83. Cheney, Washington: Archaeological and Historical Services, Eastern Washington University.
- King, J. Scott, et al. 1995. *Results of Archaeological Excavations at the Lions Island Site, Stevens County, Washington*. Prepared under contract by Historical Research Associates for the Pacific West Region, National Park Service.
- National Park Service, 2013. *Upper Columbia River Recreational Use Survey: Summary of Visitor Characteristics*. Prepared under contract by Industrial Economics, Incorporated for Pacific West Region, National Park Service.
- National Park Service. 2008. *Lake Roosevelt National Recreation Area Shoreline Management Plan Alternative Development Workshop Agenda and Notes*. Report on file, Lake Roosevelt National Recreation Area, Coulee Dam, Washington.
- National Park Service, 2006. *National Park Service Management Policies*. National Park Service, Washington D.C.
- National Park Service. 2001. *National Park Service Director's Order 12: Conservation Planning, Environmental Impact Analysis and Decisionmaking*. National Park Service, Washington, D.C.
- National Park Service. 2000. *General Management Plan: Lake Roosevelt National Recreation Area*. Denver Service Center, Denver, Colorado. Report on file, Lake Roosevelt National Recreation Area, Coulee Dam, Washington.
- National Park Service. 1997. *Lake Roosevelt National Recreation Area, Washington: Water Resources Scoping Report*, prepared by Jon L. Riedel, in cooperation with Chris Gable, Joanie Lawrence, and Scott Hebner. Technical report NPS/NRWRD/NRTR-97/107.
- National Park Service. 1998. *Cultural Resources Management Guideline*. NPS-28, Washington, D.C.
- U.S. Census Bureau. 2013. *State & county Quickfacts: Spokane and Stevens County, WA*. Retrieved July 13, 2013, from <http://quickfacts.census.gov/qfd/states/53/53063.html>
- U.S. Department of the Interior. 1995. *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Washington, DC.

U.S. Department of the Interior. 1990. *Lake Roosevelt Cooperative Management Agreement*. Colville Business Council, Spokane Indian Tribe, National Park Service, Assistant Secretary for Water and Science, Assistant Secretary for Fish, Wildlife, and Parks, Commissioner Bureau of Reclamation, Assistant Secretary for Bureau of Indian Affairs, Secretary, Department of the Interior.

U.S. Fish and Wildlife Service. 1987. *National Wetlands Inventory maps for Kettle Falls, Bays, Mountain, Rice, and Marcus, Washington*.

Appendixes

Appendix A – Special Status Wildlife Species

Gray wolf (*Canis lupus*)

Listing Status: Federal de-listed State: Endangered

General Information

The Gray Wolf, being a keystone predator, is an integral component of the ecosystems to which it typically belongs. The wide range of habitats in which wolves can thrive reflects their adaptability as a species, and includes temperate forests, mountains, tundra, taiga, and grasslands.

Canada Lynx (*Lynx canadensis*)

Listing Status: Federal: Threatened State: Threatened

General Information

The lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The winter pelage of the lynx is dense and has a grizzled appearance with grayish-brown mixed with buff or pale brown fur on the back, and grayish-white or buff-white fur on the belly, legs and feet. Summer pelage of the lynx is more reddish to gray-brown. Adult males average 10 kilograms (22 pounds) in weight and 85 centimeters (33.5 inches) in length (head to tail), and females average 8.5 kilograms (19 pounds) and 82 centimeters (32 inches). The lynx's long legs and large feet make it highly adapted for hunting in deep snow. The distribution of lynx in North America is closely associated with the distribution of North American boreal forest. In Canada and Alaska, lynx inhabit the classic boreal forest ecosystem known as the taiga. The range of lynx populations extends south from the classic boreal forest zone into the subalpine forest of the western United States, and the boreal/hardwood forest ecotone in the eastern United States. Forests with boreal features extend south into the contiguous United States along the North Cascade and Rocky Mountain Ranges in the west, the western Great Lakes Region, and northern Maine. Within these general forest types, lynx are most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx.

Grizzly bear (*Ursus arctos horribilis*)

Listing Status: Federal: Threatened State: Endangered

General Information

Grizzly Bears reach weights of 180-680 kg (400-1,500 lb); the male is on average 1.8 times as heavy as the female, an example of sexual dimorphism. Their coloring ranges widely across geographic areas, from blond to deep brown or black. These differences, once attributed to subspeciation, are now thought to be primarily due to the different environments these bears inhabit, particularly with regard to diet and temperature. The Grizzly has a large hump over the shoulders which is a muscle mass used to power the forelimbs in digging. The head is large and round with a concave facial profile. In spite of their massive size, these bears can run at speeds of up to 55 km/h (35 mph).

Pygmy Rabbit (*Brachylagus idahoensis*)(Columbia Basin Distinct Population Segment (DPS))

Listing Status: Federal: Endangered State: Endangered

General Information

The Pygmy Rabbit, *Brachylagus idahoensis* is a North American rabbit, and is one of only two rabbit species in America to dig its own burrow. The Pygmy Rabbit differs significantly from species within either the *Lepus* or *Sylvilagus* genera and is generally considered to be within the monotypic genus *Brachylagus*.

Currently only known to occur in Benton, Douglas, and Grant County, Washington

Bull Trout (*Salvelinus confluentus*)

Listing Status: Federal: Threatened

General Information

Bull trout (*Salvelinus confluentus*) are members of the family Salmonidae and are char native Washington, Oregon, Idaho, Nevada, Montana and western Canada. Compared to other salmonids, bull trout have more specific habitat requirements that appear to influence their distribution and abundance. They need cold water to survive, so they are seldom found in waters where temperatures exceed 59 to 64 degrees (F). They also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors. Bull trout may be distinguished from brook trout (*Salvelinus fontinalis*) by several characteristics: spots never appear on the dorsal (back) fin, and the spots that rest on the fish's olive green to bronze back are pale yellow, orange or salmon-colored. The bull trout's tail is not deeply forked as is the case with lake trout (*Salvelinus namaycush*). Bull trout exhibit two forms: resident and migratory. Resident bull trout spend their entire lives in the same stream/creek. Migratory bull trout move to larger bodies of water to overwinter and then migrate back to smaller waters to reproduce. An anadromous form of bull trout also exists in the Coastal-Puget Sound population, which spawns in rivers and streams but rears young in the ocean. Resident and juvenile bull trout prey on invertebrates and small fish. Adult migratory bull trout primarily eat fish. Resident bull trout range up to 10 inches long and migratory forms may range up to 35 inches and up to 32 pounds. Bull trout are currently listed coterminously as a threatened species.

Appendix B – Special Status Plant Species

Common Name	Scientific Name	State Status	Federal Status	LARO 2005 Plant Inventory	Counties where found	Preferred Habitat
Ute ladies'-tresses	<i>Spiranthes diluvalvis</i>	E	T	Not found	Okanogan	...wetland complexes...inundated wet meadow zones... elevations from 720' to 1500'.
Columbia crazyweed	<i>Oxytropis campestris</i> var. <i>columbiana</i>	E		Present	Ferry Stevens	Gravelly banks along Columbia River from the confluence with the Spokane River north to near the Canadian border – gravel bars and stony river or lake shores between 1200 & 3000 feet. Most populations...extirpated due to habitat destruction by...Grand Coulee Dam.
Palouse milk-vetch	<i>Astragalus arrectus</i>	T		Not found	Lincoln	grassy hillsides, sagebrush flats, river bluffs, and open ponderosa/Douglas fir forests in grassy or shrub dominated openings growing on all aspects in soil ranging from rocky and dry to moist and rich...elevations from 100' to 4000'....
Yellow lady's-slipper	<i>Cypripedium parviflorum</i>	T		Not found	Ferry, Stevens, Okanogan	Bogs and wet forests. In the channeled scablands...around periphery of ponds and in low moist areas...elevations from 2100' to 3440'
Spaldings' silene or catchfly	<i>Silene spaldingii</i>	T	T	Not found	southern Lincoln	...occurs in Blue Mtn. and Columbia Basin...primarily within open grasslands with a minor shrub component and occasionally with scattered conifers ...at elevations of 1900' to 3050'.

T = Threatened; E = Endangered

List of Vascular Plants Tracked by the Washington Natural Heritage Program

<http://www1.dnr.wa.gov/nhp/refdesk/lists/plantrnk.html> (November 2012)

1997 Produced as part of a cooperative project between the Washington Department of Natural Resources, Washington Natural Heritage Program, and the U.S.D.I. Bureau of Land Management.