

## **Attachment E-12: Draft Recreation Resources Management Plan**



***Boundary Hydroelectric Project (FERC No. 2144)***

***Draft  
Recreation Resources Management Plan***

**Seattle City Light**

**September 2009**



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**List of Acronyms and Abbreviations**

Access Board	U.S. Architectural and Transportation Barriers Compliance Board
ADA	Americans with Disabilities Act
ARRWP	Annual Recreation Report and Work Plan
BLM	USDI Bureau of Land Management
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FSORAG	Forest Service Outdoor Recreation Accessibility Guidelines
FSTAG	Forest Service Trail Accessibility Guidelines
GPS	Global Positioning System
HPMP	Historic Properties Management Plan
I&E	interpretation and education
NAVD	North American Vertical Datum
NFS	National Forest System
NPS	National Park Service
O&M	operations and maintenance
PAD	Pre-Application Document
PAOT	people-at-one-time
PM&E	protection, mitigation, and enhancement
PUD	Public Utility District
Project	Boundary Hydroelectric Project (FERC No. 2144)
RCO	WA Recreation and Conservation Office
RD	recreation day
ROS	Recreation Opportunity Spectrum
RP	Relicensing Participant
RRMP	Recreation Resources Management Plan
RRS	Recreation Resource Study
RRWG	Recreation Resources Work Group
RV	recreation vehicle
SCL	Seattle City Light
TRMP	Terrestrial Resources Management Plan
USFS	USDA Forest Service
VAOT	vehicles-at-one-time
WROS	Water Recreation Opportunity Spectrum

# Draft

## Recreation Resources Management Plan Boundary Hydroelectric Project (FERC No. 2144)

### 1 INTRODUCTION

The Boundary Hydroelectric Project (FERC No. 2144) (Project) is owned and operated by Seattle City Light (SCL) under a license administered by the Federal Energy Regulatory Commission (FERC). The Project is located in northeast Washington on the Pend Oreille River in Pend Oreille County and was constructed in the mid-1960s. The current FERC license for the Project expires on September 30, 2011.

The Project, including the 17.5-mile long, approximately 1,794-acre (based on the current normal maximum forebay water surface elevation of 1,994 feet NAVD 88 and an inflow of 55,000 cfs) Boundary Reservoir, offers many recreational opportunities including boating, waterskiing, fishing, swimming, sightseeing, picnicking, wildlife viewing, and camping, among others. There are several existing recreation sites and use areas at the Project, including five developed recreation sites (of which three are owned and operated by SCL) and multiple dispersed shoreline sites. Within the region, the Project occupies an important niche in the provision of outdoor recreation opportunities, in particular water-based and water-enhanced opportunities, in a highly scenic, uncrowded setting.

As part of a comprehensive protection, mitigation, and enhancement (PM&E) program under a new FERC license, SCL, in coordination with the relicensing participants (RPs) and in particular the Recreation Resources Workgroup (RRWG), prepared this Draft Recreation Resources Management Plan (RRMP). The RRMP evolved from the recreation-related relicensing studies and analyses, in particular the Recreation Resource Study (RRS) (SCL 2009a) and Recreation Needs Analysis (Exhibit E, Attachment E-1, of the License Application? SCL 2009b), and describes the programs and measures that SCL will implement over the new license term. These programs and measures will provide new and/or enhanced recreation opportunities at the Project. Comments on the RRMP received from RRWG members, and SCL's responses to those comments, are provided in Appendix 1.

#### 1.1. Purpose and Scope

The RRMP provides a management framework for the protection, mitigation, and enhancement of recreation resources and other resources affected by Project-related recreation during the new license term. The RRMP represents a single "umbrella" package of PM&E measures for Project-related recreation resources and opportunities. The RRMP defines SCL's involvement, role, and responsibilities in implementing recreation resource components of the FERC license. More specifically, the RRMP is an implementation plan that will be used to monitor, design, construct, fund, operate, and maintain existing and proposed public recreation facilities and programs at the Project. To achieve these purposes, the RRMP includes five implementation programs:

- Recreation Facility Capital Improvements Program
- Recreation Facility Operations and Maintenance (O&M) Program
- Shoreline Dispersed Recreation Management Program
- Recreation Monitoring Program
- Multi-Resource Interpretation and Education (I&E) Program

The RRMP is specific to SCL's recreation resource roles and responsibilities. It does not make management or resource commitments for other members of the RRWG, such as the USDA Forest Service (USFS), USDI Bureau of Land Management (BLM), or other entities. The RRMP and its implementation programs include an adaptive management process: SCL and RRWG members will review the status of the RRMP implementation actions, analyze recreation use and other monitoring data, and plan for future actions accordingly.

The geographic scope of the RRMP (also referred to as the RRMP planning area) includes lands and waters within the FERC Project boundary, as well as other adjacent lands with a Project-related recreation nexus (i.e., areas where the Project directly induces and/or augments recreation opportunities and use). Figure 1.1-1<sup>1</sup> displays the RRMP planning area, including existing developed recreation sites and use areas.

## 1.2. Content and Organization

The RRMP is organized into the following five chapters:

- **Chapter 1: Introduction** - introduces the RRMP within the context of relicensing, describes baseline recreation conditions at the Project, presents the purpose and scope of the RRMP, and provides an overview of the plan's contents and organization.
- **Chapter 2: Roles, Responsibilities, Communication, and Coordination** - describes the structure, roles, and responsibilities of the RRWG (for SCL and other members) in coordinating and implementing the RRMP over the term of the license. It also summarizes ongoing communication avenues between SCL and the RRWG, as well as the content and schedule for recreation-related reports, work plans, and periodic reviews and potential updates to the RRMP.
- **Chapter 3: Project Vision, Goals, and Objectives** - provides the overarching goals for managing Project-related recreation resources and opportunities during the term of the new license. These goals and objectives form the basis of the RRMP and are directed at providing appropriate and safe recreation opportunities, mitigating Project effects on recreation and potential recreation effects on other resources, and enhancing the visitor experience at the Project.

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<sup>1</sup> The Project boundary shown on maps in this RNA is the existing Project boundary of Exhibit K. For the location of the proposed Project boundary, see Exhibit G of the License Application.

- **Chapter 4: Recreation Resource Programs** - includes the five implementation programs that are considered essential for protecting, mitigating, and/or enhancing recreation resources and opportunities associated with the Project. Each program includes a management framework (to help guide the recreation-related decision-making process), fundamental components, and measureable actions and objectives.
- **Chapter 5: References** - provides the references cited in the RRMP.

Legend



● Developed Recreation Sites

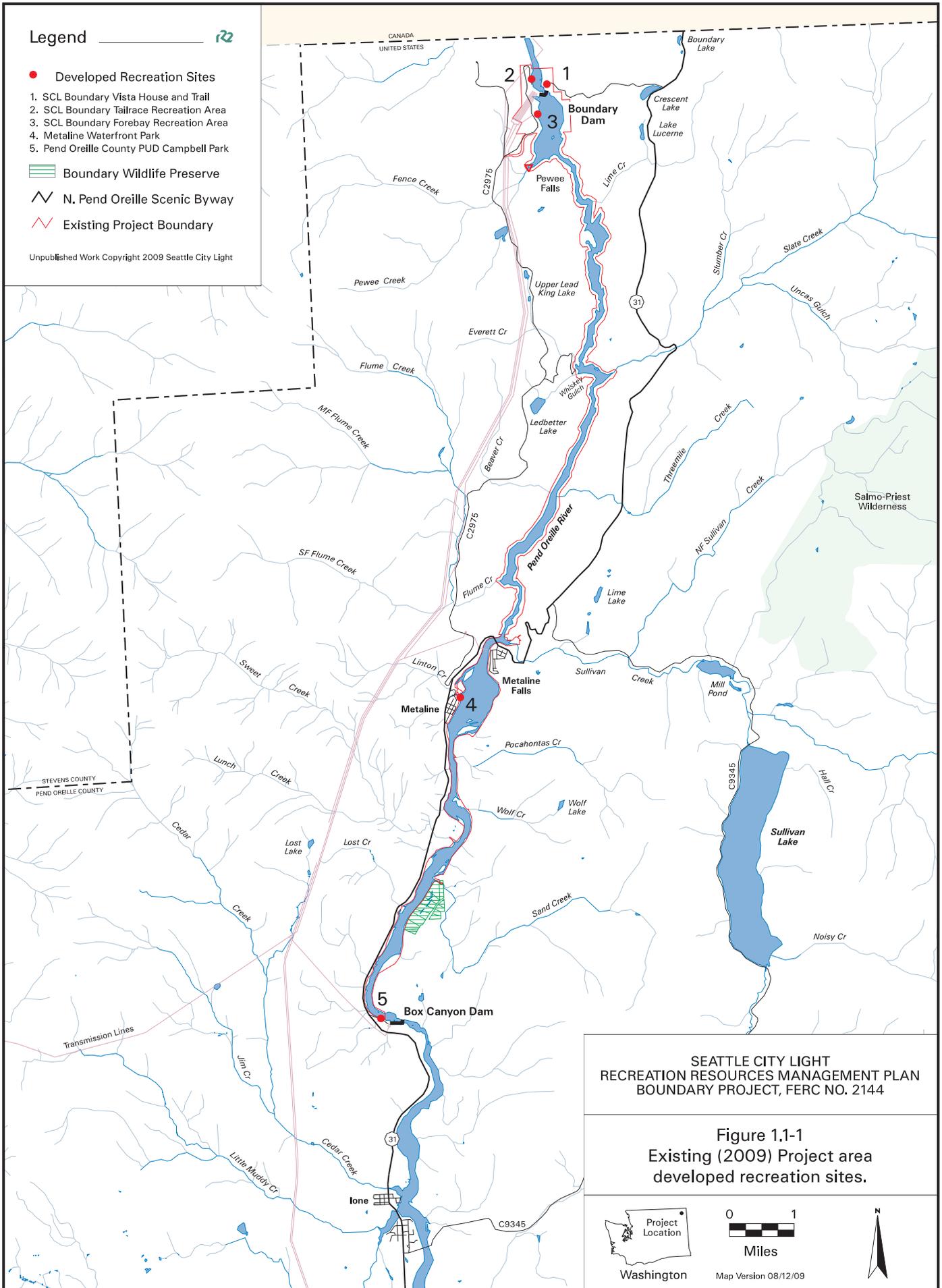
- 1. SCL Boundary Vista House and Trail
- 2. SCL Boundary Tailrace Recreation Area
- 3. SCL Boundary Forebay Recreation Area
- 4. Metaline Waterfront Park
- 5. Pend Oreille County PUD Campbell Park

Boundary Wildlife Preserve

N. Pend Oreille Scenic Byway

Existing Project Boundary

Unpublished Work Copyright 2009 Seattle City Light



SEATTLE CITY LIGHT  
RECREATION RESOURCES MANAGEMENT PLAN  
BOUNDARY PROJECT, FERC NO. 2144

Figure 1,1-1  
Existing (2009) Project area  
developed recreation sites.



Washington



Miles



Map Version 08/12/09

The RRMP also includes appendices that present standard operating procedures, site-specific concept plans, reporting templates, and other supporting information. These include the following:

- Relicensing Participants Consultation (Appendix 1)
- Existing Project Recreation Sites and Use Areas (Appendix 2)
- Preliminary Annual Recreation Report and Work Plan Template (Appendix 3)
- Planned New/Enhanced Recreation Sites and Use Areas (Appendix 4)
- USFS Built Image Guide - Rocky Mountain Province (Appendix 5)
- RRMP Implementation Schedule and Cost (Appendix 6)
- Project Recreation O&M Standards (Appendix 7)

### **1.3. Resolution of Conflicting Guidance**

To resolve potential conflicts when implementing the RRMP after license issuance, the following prioritized list of agreements, plans, and other documents will guide the decision-making process. For purposes of RRMP implementation, those agreements, plans, and documents that are listed in a higher position supersede those lower on the list. The priority hierarchy is as follows:

- FERC License Order (including Federal Power Act [FPA] Section (4e) Final Terms and Conditions).
- FERC-approved Project resource-specific management plans, including the final RRMP, and other plans; secondarily, the associated broader goals and objectives.
- Other federal, state, and local regional resource management plans (e.g., USFS, BLM, etc.) that influence Project land, water, and recreation resources and opportunities.

As noted previously, the RRMP was developed in consultation with the RRWG. The RRMP was also prepared in coordination with other Project-related resource management plans. This coordination should minimize the potential for conflicts in implementing the RRMP. If there is conflict during implementation of specific RRMP-related actions, SCL will generally address these issues using the communication and coordination processes described in Chapter 2 of this plan, in addition to the prioritized list of agreements, plans, and document listed above.

### **1.4. Baseline Project Recreation Conditions**

#### **1.4.1. Project Recreation Development and Use Levels**

This section provides an overview of existing recreation development and use at the Project to establish baseline conditions at the time of relicensing. The Project area and existing recreation developments are displayed in Figure 1.1-1. Existing recreation developments include three SCL-managed sites and two other sites managed by other entities. The SCL-managed sites include:

- SCL Vista House Recreation Area - This site includes the Vista House (which provides interpretive displays and views of Boundary Dam and the Pend Oreille River), an outdoor viewing platform (which also provides views of Boundary Dam and Reservoir), a trail connecting the Vista House to the viewing platform, and a gravel parking area, among other site amenities (e.g., restrooms, trash receptacles, picnic tables, etc.).
- SCL Tailrace Recreation Area - This site includes picnic tables, a paved parking area, views of Boundary Dam and the Pend Oreille River, and access to the Machine Hall and Visitors' Gallery (which provides interpretive displays, views of the generator floor, and restrooms). Visitors to the Tailrace Recreation Area must pass through a staffed security checkpoint and must be approved for entry.
- SCL Forebay Recreation Area - This site includes a boat launch, picnic area, and 11 defined campsites, among other site amenities (e.g., historic cabin, restrooms, trash receptacles, picnic tables, fire pits, horseshoe pits, etc.).

Conceptual-level site plans for each of these existing developed recreation sites are provided in Appendix 2. The Pre-Application Document (PAD) (SCL 2006) and RRS Final Report (SCL 2009a) provide detailed information on existing conditions at each of these SCL recreation sites. Proposed changes to these sites are described in Section 4.1.

The two other significantly developed recreation sites along the reservoir shoreline include the Town of Metaline Waterfront Park and Pend Oreille County Public Utility District (PUD) Campbell Park. Both Metaline Waterfront Park and Pend Oreille County PUD Campbell Park have developed boat launches that provide access to Boundary Reservoir.

In addition to these five developed recreation sites, 25 dispersed use sites and areas (including the BLM Boundary Recreation Area) were identified during relicensing in the Project vicinity (SCL 2009). Some of these sites offer boat-in recreational opportunities along the reservoir shoreline and are addressed in the Shoreline Dispersed Recreation Management Program described in Section 4.3.

Estimated current (i.e., 2007 season at the time of relicensing) annual Project-related recreation use is 15,000 recreation days (RD) (SCL 2009a). Table 1.4-1 lists estimated Project-related annual use, by site. Annual recreation use at SCL's three developed recreation sites accounts for approximately 11,100 visits. These recreational use levels will be used for baseline comparison purposes during the periodic monitoring efforts described in Section 4.4.

#### **1.4.2. Project Operations**

From Memorial Day weekend to Labor Day weekend, SCL will restrict forebay water surface fluctuations to facilitate reservoir access and related-recreational activities. The summer forebay water surface elevation restriction will involve maintaining water surface elevations above 1,984 feet North American Vertical Datum (NAVD) 88<sup>2</sup> from 6:00 am through 8:00 pm from Memorial Day weekend (starting Friday evening) through Labor Day weekend (through Monday

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<sup>2</sup> Elevation values are in datum NAVD 88 unless otherwise noted.

evening). At night during the summer restriction period, the forebay water surface elevation will be maintained above elevation 1,982 feet NAVD 88 from 8:00 pm through 6:00 am.

**Table 1.4-1.** Estimated Project-related recreation use at the time of relicensing (2007).

<b>Recreation Site/Use Area</b>	<b>Estimated Annual Use (Recreation Days)<sup>1</sup></b>
Vista House Recreation Area (SCL)	2,200
Tailrace Recreation Area/Machine Hall Visitors' Gallery (SCL)	2,400
Forebay Recreation Area – Campground (SCL)	1,900
Forebay Recreation Area – Day Use Area (SCL)	4,600
Pend Oreille County PUD Campbell Park Boat Launch <sup>2</sup>	600
Town of Metaline Waterfront Park Boat Launch <sup>2</sup>	1,800
Boundary Recreation Area (BLM) (semi-developed)	100
Reservoir Shoreline Dispersed Campsites	400
Private Shoreline Use Areas	1,000
<b>TOTAL</b>	<b>15,000</b>

**Notes:**

- 1 Recreation days are FERC’s preferred unit of recreation measurement. One RD is defined as a visit by a person to a recreation area for any length of time during a 24-hour period.
- 2 Only reservoir-based/boat launch use is considered Project-related at this site.

Source: RRS Final Report (SCL 2009a)

## **2 ROLES, RESPONSIBILITIES, COMMUNICATION, AND COORDINATION**

This section describes the roles and responsibilities of SCL and other members of the RRWG, including communication, protocols, meetings, and periodic review of the implementation of the RRMP.

### **2.1. Roles and Responsibilities**

Implementation of the RRMP is the responsibility of SCL as the FERC licensee. SCL’s expectations of the basic roles of other members of the RRWG (i.e., the primary recreation resource entities involved in RRMP implementation) are listed below. SCL, through the RRMP, cannot assign funding, staffing, or other resource allocation responsibilities to other entities, such as members of the RRWG, unless specified in an adopted memorandum of agreement or understanding, or other legal document. As such, implementation of the RRMP will involve the following anticipated roles and responsibilities during the term of the new license.

#### **2.1.1. Seattle City Light**

SCL’s RRMP implementation responsibilities include the following:

- Funding and implementing all aspects of the RRMP.
- Appointing an SCL representative to the RRWG.

- Coordinating all aspects of the RRMP with the RRWG and other interested parties, as needed.
- Consulting with the RRWG and other interested parties when necessary and as directed in the FERC license and the RRMP.
- Preparing an annual Recreation Action and Work Plan in consultation with the RRWG, distributing it for review to the RRWG and other interested parties as requested, and submitting it to FERC.
- Periodically updating the RRMP, if needed, in consultation with the RRWG, distributing the updated RRMP to the RRWG and other interested parties for review, and submitting it to FERC.
- Coordinating an annual RRWG meeting, which will include: (1) notifying the RRWG participants of the annual meeting at least one month in advance of the meeting, (2) preparing a meeting agenda and distributing it to RRWG members, (3) providing a location/facility for the annual meeting, (4) drafting a meeting summary (e.g., issues, discussions, decisions, etc.) and distributing it to RRWG members, and (5) providing supporting documents and material, as needed, for the meeting.
- Coordinating additional RRWG meetings, if needed, to meet unanticipated needs that may arise over the term of the license.

### **2.1.2. Recreation Resource Workgroup**

The RRWG will consist of staff from SCL, USFS and BLM (the two federal agencies responsible for managing federal lands in the Project area), and the National Park Service (NPS). Other entities that will be encouraged to participate in the group include the towns of Metaline and Metaline Falls, the Washington State Recreation and Conservation Office (RCO), and other agencies/entities, as appropriate. Participation in the RRWG is voluntary.

The potential list of participants in the RRWG represents the agencies and stakeholders that regularly attended Boundary Project relicensing meetings on recreation resource issues and actively participated in the development of recreation PM&E measures and the RRMP. It is recognized that in the future, other agencies or entities may request to participate in implementation of the RRMP. Designating specific agencies for representation in the RRWG is not intended to exclude other parties who may have a legitimate interest in implementation of the RRMP. It is, however, important that the vision, intent, and programs developed and agreed to by SCL and the RPs, and reflected in the RRMP, be preserved into the future.

RRWG member implementation responsibilities associated with the RRMP include the following:

- Consulting with SCL when RRWG consultation is required by the license and/or RRMP.
- Reviewing and commenting on the annual Recreation Action and Work Plan, as well as any potential updates of the RRMP.

- Participating in the annual RRWG meeting.
- Providing available technical data and expertise, as needed, to assist in achieving the RRMP's resource management objectives.
- Coordinating implementation of activities on or near federally managed lands addressed in the RRMP.
- Keeping SCL and other members of the RRWG informed of any changes in agency policies or land management direction or prescriptions that could affect implementation of the RRMP.
- Helping to ensure that the RRMP is in compliance with applicable laws and regulations.

## **2.2. Communication and Coordination**

Timely and effective communication and coordination among members of the RRWG, as well as other Project-related resource groups, is important to the successful implementation of the RRMP and achievement of resource goals and objectives. Annual meetings, work plans and progress reports, RRMP updates, recognition and acceptance of the respective participant roles and responsibilities, and ongoing and active participation from all RRWG and other interested parties are addressed below.

### **2.2.1. Meetings**

The RRWG will meet annually to review the previous year's actions and implementation status and to discuss planned activities for the current calendar year. It is anticipated that the annual meeting will be held early in the calendar year to coincide with the preparation of the Annual Recreation Report and Work Plan schedule outlined in Section 2.2.2. SCL will provide at least 30 days notice to RRWG members of the annual meeting. An annual meeting may be cancelled if a plurality of RRWG members agrees to cancel the meeting (or no RRWG members respond to SCL's meeting request). However, to ensure continued communication and coordination, no more than two consecutive annual meetings may be cancelled. SCL and the RRWG may convene additional meetings, if needed, to address RRMP implementation concerns and/or issues that arise between annual meetings.

At annual and/or other meetings, decisions by the RRWG will be by consensus, but cannot preempt the FERC License Order or its authority. For the RRWG, consensus is defined as general, if not total, agreement by the group. Consensus implies that all parties have stated their opinions and preferences, that discussion and/or debate has taken place, that the solution is generally accepted by all parties, and that agreement is strong enough so that it will hold for some time without the need to revisit the issue.

### **2.2.2. Annual Recreation Report and Work Plan**

SCL will prepare and file with FERC an Annual Recreation Report and Work Plan (ARRWP) for the duration of the new license term. The ARRWP will consist of the following components:

- **Annual Recreation Report** that documents SCL's recreation-related license implementation actions completed during the previous calendar year.
- **Work Plan** that describes SCL's planned activities for the coming calendar year.
- **Supporting Documentation** that captures the consultation record and process with the RRWG, as well as other implementation actions (e.g., periodic monitoring results, changes to recreation site O&M, updates to I&E-related materials, etc.). Supporting documentation will likely be included as appendices to the ARRWP.

A preliminary template for the ARRWP is provided in Appendix 3.

SCL will prepare a draft ARRWP and distribute it to the RRWG for review by approximately February 1 of each year to coincide with the annual meeting (Section 2.2.1). The RRWG will have 30 days to review and provide formal comments to SCL on the draft ARRWP. SCL and the RRWG will discuss the draft ARRWP at the annual meeting, which will be scheduled during (approximately half way through) the 30-day review period (see Section 2.2.1). This will allow SCL and the RRWG to review and address questions and comments collaboratively prior to when formal comments are due on the draft ARRWP. After the official 30-day comment period, SCL will revise the ARRWP, as needed based on comments received, and prepare a final ARRWP. SCL will file the final ARRWP with FERC by April 1 of each year and provide copies to the RRWG.

### **2.2.3. Periodic Review and Update of the RRMP**

On an annual basis, major revisions to the RRMP are not anticipated; however, slight changes to planned actions and/or schedules may be required and will be documented in the ARRWP. On a long-term basis, SCL will review and potentially update the RRMP every 12 years during the new license term. As with the ARRWP, this review and potential update will be scheduled to coincide with the annual meeting to facilitate discussion and input by the RRWG. If during any 12-year period substantive changes are needed, SCL will update the RRMP at that time (as opposed to waiting until the end of the 12-year period). Factors that may trigger an update to the RRMP include:

- Revisions and updates to other Project resource management plans.
- Revisions and updates to agency-adopted comprehensive and/or management plans.
- New and/or revised federal, state, or local policies, regulations, and laws.
- Changes to the FERC license.
- Results from the periodic monitoring program (as described in Section 4.4).
- Catastrophic natural/social disorder events (e.g., major earthquakes, forest fires, terrorism, etc.).

These factors would only trigger an update to the RRMP if they significantly affect Project recreation resources. Should an update to the RRMP be necessary, SCL will prepare a draft of the updated RRMP and distribute it to the RRWG for review. The RRWG will have 30 days to review and submit comments on the draft updated RRMP. SCL and the RRWG may meet to

discuss the draft updated RRMP during or immediately following the 30-day review period. After the official 30-day comment period, SCL will revise and finalize the updated RRMP, as needed based on received comments. The final updated RRMP will include a record of the consultation process. SCL will file the final updated RRMP with FERC and provide copies to the RRWG. The RRMP will become part of the new FERC license. As such, FERC will need to approve any proposed updating of the RRMP. Implementation of any updates to the RRMP will be subject to review and approval of the proposed updates by FERC.

### **3 PROJECT VISION, GOALS, AND OBJECTIVES**

#### **3.1. Project Recreation Vision**

This section presents the Project vision, which will guide management of Project recreation resources. This vision will help guide SCL's development and implementation of recreation resource programs at the Project over the term of the new license. It is meant to be consistent with adjacent land management directives, but at the same time, it reflects the requirements of a FERC-licensed hydroelectric project. As with other elements of the RRMP, the vision does not make resource or management commitments for adjacent federal or state land and resource managers. The implementation programs in the RRMP are designed to be consistent and compatible with this vision, including each location's unique natural setting and resources, as well as the desired recreation experience and future conditions.

The vision for Project recreation resources acknowledges the unique qualities of the Project that should be preserved and/or enhanced over time and should not be degraded. These unique qualities include the following:

- The canyon area of the reservoir between Metaline Falls and the forebay, known as the canyon reach, is unique in the region. It offers an outstanding water-based experience to view the unique features in the canyon including geology and steep rock faces, wildlife, historic structures and old mining adits, waterfalls and seeps, dense forest vegetation, nearby mountains, and a sense of enclosure. One can achieve solitude here alone or have a group experience. This is a destination experience that can be accessed and viewed by motorized and human-powered watercraft.
- Peewee Falls is another outstanding natural feature in the Project area. Located in a cove in the forebay, water from Peewee Creek drops to the reservoir along a rock face. The falls feature is large, loud, can be seen well from a distance across the forebay, and can also be experienced up close by boat. This is a destination experience. Peewee Falls can be viewed by motorized and human-powered watercraft and via a new trail and viewpoint being proposed by SCL.
- The falls or rapids north of the Highway 31 bridge in Metaline Falls are unique in the region. Located below towering Washington Rock and at a natural constriction in the river canyon, this unique natural feature can be observed from the bridge, via watercraft, and from viewpoints on the shoreline at a new Metaline Falls portage trail being proposed by SCL. Boating through the falls can be a constraint or barrier, but also a desired experience for some more experienced boaters.

- The Project facilities constitute a unique engineering wonder and source of clean, renewable energy. The thin-arch dam crosses a narrow gap in the steep river canyon, and the Machine Hall, carved out of solid rock, is huge and houses several large generators. Even the Project transmission lines include uniquely engineered “pickle forks” that are very striking to look at because of their angles. The Project is a destination and may be experienced via group tours or individually from the Vista House Recreation Area, Forebay Recreation Area, and Tailrace Recreation Area/Machine Hall Visitors’ Gallery.

To protect these unique Project features and the natural setting, and to preserve and/or enhance the unique recreation experience enjoyed by visitors and area residents alike, the following is the Project vision:

- Protect the unique natural features of the Project and preserve and enhance the natural, uncrowded visitor experience during the new license term. Monitor conditions over time and take appropriate management actions as needed.
- Focus new facilities and amenities at existing recreation sites and use areas where feasible, thereby preserving the Project’s other natural areas for low-impact, dispersed recreation use and conservation.
- Enhance reservoir access opportunities at boat launches while maintaining uncrowded boating use levels on the water.
- Provide visitors with new day use trail (land and water) opportunities to experience Peewee Falls and the canyon reach.
- Enhance the I&E experience and visitor awareness at Project recreation sites and facilities by providing messages related to Project engineering and clean renewable energy production, natural and cultural resources, and safe boating on the reservoir.
- Provide and maintain adequate recreation facilities that are not crowded, are well maintained, and are designed to provide a natural, non-urban experience.
- Provide recreation facilities that are accessible to all visitors and area residents, where feasible, including the physically disabled.

To help implement the Project vision, the RRMP establishes a Recreation Opportunity Spectrum (ROS)-based planning and management framework. This framework acknowledges the diversity of recreation settings and opportunities at the Project and establishes baseline conditions for periodic monitoring efforts. At the Project, the ROS-based framework will be composed of three distinct settings or classifications, including Rural, Roaded Natural, and Semi-Primitive Motorized. Table 3.1-1 describes these classifications, including pertinent biophysical/visual, social, and managerial attributes.

The ROS-based classifications listed in Table 3.1-1 are only applicable to lands and waters within the FERC Project boundary. For RRMP planning and monitoring purposes, the Boundary Reservoir surface area settings are defined separately using Water Recreation Opportunity Spectrum (WROS) setting classifications (Rural Developed and Rural Natural WROS settings

generally correspond to ROS Roaded Natural and Semi-Primitive Motorized settings). Figure 3.1-1 overlays the land-based settings/classifications listed in Table 3.1-1 on the Project area. Subsequent sections of the RRMP, including its implementation programs, build off of these settings/classifications and provide specific direction related to site development, management controls, and monitoring.

**Table 3.1-1.** Project area ROS-based classifications.

<b>Setting/Classification</b>	<b>Biophysical/Visual Attributes</b>	<b>Social Attributes</b>	<b>Managerial Attributes</b>
Semi-Primitive Motorized (WROS: Rural Natural)	Area is characterized by a predominantly unmodified natural environment.	Concentration of users is low, but visitors may encounter or observe evidence of other users.	Facilities are provided for the protection of resources and the safety of visitors. Onsite controls/ restrictions may be present, but are subtle and/or provided only at access areas. Spacing of sites/groups may be formalized to promote appropriate dispersed use and limit contacts between groups. Motorized uses are generally permitted, but may be minimized at certain sites/areas.
Roaded Natural (WROS: Rural Developed)	Area is characterized by a generally natural environment, although some resource modifications/utilization practices may be evident.	Concentration of users is moderate (moderate evidence of the sights and sounds of other humans).	Visitor safety and security are provided via on-site controls (e.g., signage, etc.). Facilities (including group facilities) are provided for user convenience, as well as visitor safety and resource protection. Motorized uses are permitted and associated facilities (e.g., access roads, boat launches, etc.) are designed and constructed to specific standards.

**Table 3.1-1, continued...**

<b>Setting/Classification</b>	<b>Biophysical/Visual Attributes</b>	<b>Social Attributes</b>	<b>Managerial Attributes</b>
Rural	Area is characterized by a substantially modified natural environment. Human-made structures (e.g., dams, substations, transmission lines, towns, etc.) may be the dominant feature of the landscape. Resource modifications /utilization practices are evident, but may be designed to harmonize with the natural environment where appropriate.	Concentration of users is moderate to high (sights and sounds of other humans are readily evident).	Visitor safety and security are provided via on-site controls and restrictions (e.g., on-site management presence, signage, etc.). Recreation sites are designed and constructed for moderate to heavy use. Motorized uses are the primary method of access, and associated facilities (e.g., access roads, boat launches, etc.) are designed and constructed to specific standards.

Source: Based on Clark and Stankey 1979.

Legend



● Developed Recreation Sites

1. SCL Boundary Vista House and Trail
2. SCL Boundary Tailrace Recreation Area
3. SCL Boundary Forebay Recreation Area
4. Metaline Waterfront Park
5. Pend Oreille County PUD Campbell Park

Rural

Roaded Natural

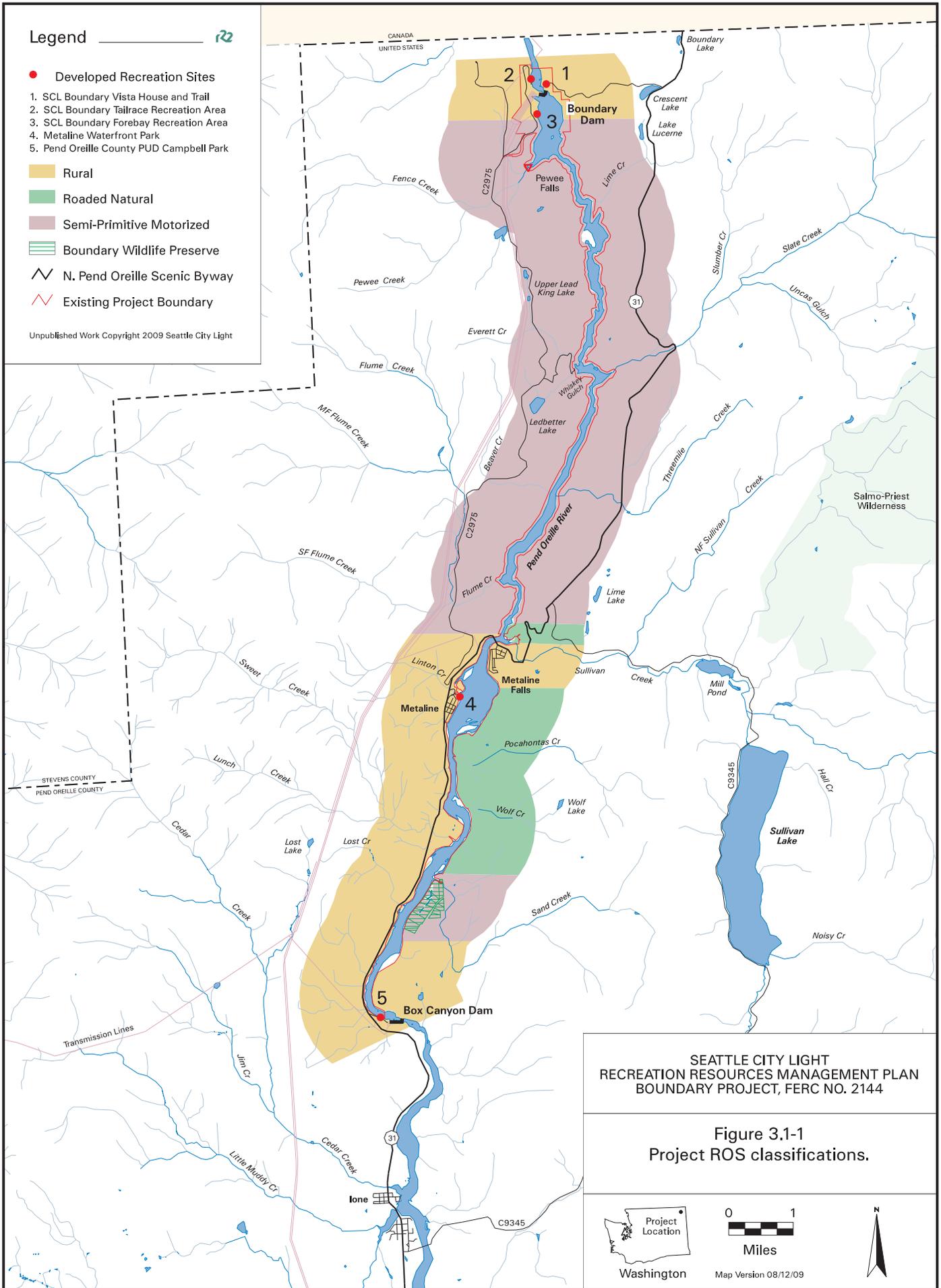
Semi-Primitive Motorized

Boundary Wildlife Preserve

N. Pend Oreille Scenic Byway

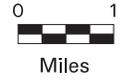
Existing Project Boundary

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BOUNDARY PROJECT, FERC NO. 2144

Figure 3.1-1  
Project ROS classifications.



Washington

Map Version 08/12/09

### 3.2. Goals and Objectives

The RRMP facilitates appropriate recreation use and development in the Project area and preserves and enhances the Project vision and desired recreation experience. Through implementation of the RRMP, potential recreation-related impacts on other resources at the Project are minimized and managed. To help achieve this aim, the RRMP includes the following goals and objectives:

**Goal 1:** Avoid, minimize, or mitigate potential adverse effects on or from recreation resources at the Project.

- Objective 1a: To the extent feasible, locate, design, and manage recreation use at the Project to minimize potential adverse effects on other Project resources (e.g., terrestrial, cultural, water quality, etc.).
- Objective 1b: Minimize potential Project operational effects on recreation resources and opportunities by limiting summer season (Memorial Day - Labor Day) water surface level fluctuations to accommodate boat launch usability (see Section 2.3.1 of Exhibit E of the License Application).
- Objective 1c: When possible, schedule recreation and hydroelectric facility O&M activities to minimize potential adverse effects on recreation and public use at the Project.

**Goal 2:** Protect, mitigate, and/or enhance public recreation resources at the Project.

- Objective 2a: Provide a range of water-based and reservoir-oriented recreation opportunities (from more primitive to more developed) that allow for a diversity of visitor choices and experiences.
- Objective 2b: Provide and maintain a series of developed recreation sites, as well as a network of designated dispersed shoreline sites and use areas, that accommodate current and potential future recreation needs at the Project.
- Objective 2c: Enhance and improve the condition of Project recreation sites and use areas by considering visitor use patterns, preferences, and needs.
- Objective 2d: Where feasible and appropriate, provide accessible (Americans with Disabilities Act [ADA] compliant) site features and recreation opportunities.
- Objective 2e: Where appropriate, provide multi-resource I&E opportunities that provide information on the Project's hydroelectric facilities and operations, as well as natural and cultural resources.
- Objective 2f: Periodically monitor recreation use and impacts to identify changing visitor preferences and needs, provide continued high-quality recreation experiences, and ensure that potential impacts remain within acceptable limits.

**Goal 3:** Provide cost-effective recreation facilities and activities.

- Objective 3a: When possible, coordinate recreation facility construction-related activities with other construction projects so as to potentially maximize construction efficiency and minimize the overall length of time of construction-related activities at the Project.
- Objective 3b: Design and provide public recreation facilities that will minimize both construction and long-term O&M costs.
- Objective 3c: Provide public recreation facilities that are responsive to visitor preferences and allow for future modification, as visitor preferences may change over time.

**Goal 4:** Provide for visitor safety, health, and security at the Project.

- Objective 4a: Provide routine O&M of Project recreation sites and use areas to ensure that facilities are fully functional per their specific design and safety guidelines.
- Objective 4b: Communicate to visitors potential hazards resulting from Project operations.
- Objective 4c: Provide recreation facilities and activities that are compatible with Project hydroelectric facilities, operations, and security considerations.
- Objective 4d: Periodically review Project security policies and update site-specific plans, as needed.

**Goal 5:** Manage Project recreation resources to be consistent with federal, state, and local land and resource management plans, as amended.

- Objective 5a: Provide recreation opportunities that are consistent with current federal, state, and local land and resource management plans, as amended, including the Colville National Forest Land and Resource Management Plan (USFS), Spokane Resource Management Plan (BLM), Statewide Comprehensive Outdoor Recreation Plan (RCO), and Pend Oreille County Comprehensive Plan, among others.

## 4 RECREATION RESOURCE PROGRAMS

The five implementation programs described in this section are intended to guide recreation management under the new FERC license. These programs include the following:

- Recreation Facility Capital Improvements Program
- Recreation Facility Operations and Maintenance (O&M) Program
- Shoreline Dispersed Recreation Management Program
- Recreation Monitoring Program
- Multi-Resource Interpretation and Education (I&E) Program

### 4.1. Recreation Facility Capital Improvements Program

The Recreation Facility Capital Improvements Program focuses on recreation facility development and includes proposed locations, conceptual layouts, and descriptions for recreation facility development measures that will help meet current and anticipated future recreation needs at the Project. Some of these measures are modifications to existing Project recreation facilities, while others require the development of new Project recreation sites and use areas. The program includes general recreation site design guidelines that will be used during the design and construction phases of new and/or enhanced recreation sites. Additionally, the program includes estimated costs and an implementation schedule. In general, this program is specific to those sites that are categorized as “developed;” dispersed recreation sites and planned improvements are described in Section 4.3.

#### 4.1.1. Project Recreation Site Development Levels

For purposes of the relicensing-related recreation studies and analyses (e.g., Recreation Resource Study [SCL 2009a], Recreation Needs Analysis [SCL 2009b]), recreation sites at the Project were generally described as developed or dispersed. Developed recreation sites include those with built or constructed facilities, while dispersed recreation sites include those with user-defined or created site features and/or site-specific impacts (e.g., fire rings, areas of exposed soil, vegetation damage, etc.). During the new license period, SCL will continue to provide a range of recreation site opportunities and experiences, from dispersed to developed. However, instead of relying on the dispersed/developed dichotomy, the RRMP uses a site development scale based on similar scales used by the USFS as a component of their land and resource management planning process.

The recreation site development scale for Project-related recreation development ranges from Development Levels 0 to 5 (Levels 0-2 generally correspond to dispersed sites, while Levels 3-5 generally correspond to developed sites). Table 4.1-1 lists typical attributes of each development level, including the associated ROS-type classification (Table 3.1-1) where each level of development is appropriate. The development attributes listed in Table 4.1-1 represent typical or common features that are considered acceptable for the given development level; sites within a certain development level will not necessary have each typical attribute associated with that level.

The Recreation Facility Capital Improvements Program focuses on those sites categorized as Development Levels 3 through 5. Dispersed recreation sites or those use areas generally categorized as Development Levels 0 through 2 are described in Section 4.3 (Shoreline Dispersed Recreation Management Program).

**Table 4.1-1.** Project recreation site development levels.

Development Level	Development Attributes
0	<p><u>No Site Modification</u></p> <ul style="list-style-type: none"> <li>• No site development/constructed facilities exist.</li> <li>• No on-site management controls and/or regimentation occurs.</li> <li>• Spacing of sites is informal (i.e., not designed) and often established by visitors and topographic conditions.</li> <li>• Primary access is via non-motorized trail or by water.</li> <li>• Typically located in Semi-Primitive Motorized areas, although may also be located in Roded Natural areas (where appropriate).</li> </ul>
1	<p><u>Almost No Site Modification</u></p> <ul style="list-style-type: none"> <li>• Rustic or rudimentary site development/constructed facilities exist – designed primarily for the protection of site resources, rather than for visitor comfort.</li> <li>• No synthetic construction materials are used.</li> <li>• Little to no on-site management controls and/or regimentation occurs.</li> <li>• Site spacing is informal and designed to minimize contact between visitors.</li> <li>• Primary access is via non-motorized trail or by water.</li> <li>• Typically located in Semi-Primitive Motorized areas, although may also be located in Roded Natural areas (where appropriate).</li> </ul>
2	<p><u>Minimal Site Modification</u></p> <ul style="list-style-type: none"> <li>• Rustic or rudimentary site development/constructed facilities exist – designed primarily for the protection of site resources rather than visitor comfort.</li> <li>• Use of synthetic construction materials is discouraged.</li> <li>• Minimal on-site management controls and/or regimentation occurs.</li> <li>• Site spacing is informal and designed to minimize contacts between visitors.</li> <li>• Primary access is via pedestrian trail, water, or primitive road.</li> <li>• Interpretation and education opportunities are informal, if provided.</li> <li>• Typically located in Semi-Primitive Motorized areas, although may also be located in Roded Natural areas (where appropriate).</li> </ul>

Table 4.1-1, continued...

Development Level	Development Attributes
3	<p><u>Moderate Site Modification</u></p> <ul style="list-style-type: none"> <li>• Site development/constructed facilities are designed equally for site protection and visitor comfort.</li> <li>• Native materials are typically used in the construction of contemporary/rustic facilities.</li> <li>• Moderate on-site management controls and/or regimentation occurs.</li> <li>• Development density is approximately 3 sites (e.g., campsites, picnic sites, etc.) per acre.</li> <li>• Primary access is via higher standard roads and by water – access roads are typically hard surfaced, and shoreline access is formalized.</li> <li>• Minimal interpretation and education opportunities may be provided.</li> <li>• Typically located in Roaded Natural areas, although may also be located in Rural areas (where appropriate).</li> </ul>
4	<p><u>Heavy Site Modification</u></p> <ul style="list-style-type: none"> <li>• Site development/constructed facilities are designed primarily for visitor comfort and convenience; resource protection may be secondary.</li> <li>• Constructed facilities may include synthetic materials.</li> <li>• Native plants are prioritized in site design.</li> <li>• Moderate to high on-site management controls and/or regimentation occurs.</li> <li>• Development density is approximately 3-5 sites per acre.</li> <li>• Primary access is via high standard roads used by passenger vehicles and by water – access roads are typically paved, and shoreline access is formalized.</li> <li>• Formalized interpretation and education opportunities may be provided.</li> <li>• Typically located in Rural areas, although may also be located in Roaded Natural areas (where appropriate).</li> </ul>
5	<p><u>Extensive Site Modification</u></p> <ul style="list-style-type: none"> <li>• Site development/constructed facilities are designed for visitor comfort and convenience.</li> <li>• Synthetic materials are commonly used for constructed facilities.</li> <li>• Native and non-native plants are used in site design – mowed lawns and other manicured vegetation are typical.</li> <li>• High level of on-site management controls and/or visitor regimentation occurs.</li> <li>• Development density is approximately 5 sites or more per acre (i.e., high density).</li> <li>• Primary access is via high standard roads used by passenger vehicles and by water – access roads are paved, high-speed highways (state/county/city/etc.-maintained), and shoreline access is formalized.</li> <li>• Formalized interpretation and education opportunities are provided, including signs, services, and other appropriate media.</li> <li>• Typically located in Rural areas.</li> </ul>

Source: Based on Forest Service Manual 2300 – Publically Managed Recreation Opportunities (USFS 2006a).

#### 4.1.2. Planned Recreation Facility Capital Improvements

Table 4.1-2 lists the recreation facility capital improvements planned during the new license term. These sites are also identified on Figure 4.1-1. Appendix 4 includes conceptual site plans for each of the Project recreation sites identified in Table 4.1-2. The conceptual site plans provide an overview of planned improvements at the site but should not be considered final designs. During the planning and design phase of implementing the measures identified in Table 4.1-2, SCL will consider and incorporate, as appropriate, design guidance related to ADA accessibility (see Section 4.1.2.1 regarding "Universal Design"), as well as architectural, aesthetic, and sustainability guidelines for recreation sites and facilities. These guidelines are described in Sections 4.1.2.1 and 4.1.2.2.

In addition to the planned measures listed in Table 4.1-2, SCL will also periodically repair and/or replace recreation site facilities, infrastructure, and amenities, as needed, based on monitoring facility conditions and normal life cycles. SCL will also consider additional recreation facility capital improvements during the new license term based on changing Project recreation demand and needs (based on periodic monitoring).

**Table 4.1-2.** Project recreation site capital improvements.

Area/Site <sup>1</sup>	Development Level <sup>2</sup>	Planned Improvements
Vista House Recreation Area (existing)	Level 5	<ul style="list-style-type: none"> <li>• Add I&amp;E signage and/or other opportunities at the overlook platform.</li> <li>• Provide ADA-accessible parking, vault toilet, and pathways that connect ADA-accessible facilities.</li> </ul>
Peewee Falls Viewpoint and Trail (new)	Level 3/4	<ul style="list-style-type: none"> <li>• Develop a new accesible trail and trailhead in the vicinity of the Vista House access road to a viewpoint of Peewee Falls. The trail alignment would take advantage of the existing National Forest System (NFS) road network in this area.</li> <li>• Develop trail and appropriate support facilities, including parking, vault toilet, and signage.</li> </ul>
Tailrace Recreation Area/ Machine Hall Visitors' Gallery (existing)	Level 5	<ul style="list-style-type: none"> <li>• Update I&amp;E signage and displays at the Machine Hall Visitors' Gallery.</li> <li>• Provide ADA-accessible parking, vault toilets, and pathways that connect ADA-accessible facilities.</li> </ul>

**Table 4.1-2, continued...**

Area/Site <sup>1</sup>	Development Level <sup>2</sup>	Planned Improvements
Forebay Recreation Area (existing)	Level 5	<ul style="list-style-type: none"> <li>• Enhance campground facilities at this site: increase the number of designated recreation vehicle (RV) and tent campsites (approximately 22 to 25 total depending on the physical site layout), better delineate campsites, provide appropriate signage, use vegetation and/or other site features (e.g., rocks) to create separation between campsites and day use picnic sites, and limit vehicle access to roads and parking areas.</li> <li>• Enhance day use picnic sites with signage, improved access, and separation from campsites.</li> <li>• Provide additional I&amp;E signage and/or other opportunities.</li> <li>• Extend an existing boat ramp lane so that boats may be launched/retrieved during the primary recreation season (Memorial Day weekend to Labor Day weekend) without problems due to fluctuating reservoir water surface elevations. Provide adequate parking, signage, and circulation at the boat launch.</li> <li>• Provide ADA-accessible parking, restrooms, boarding float, picnic sites, campsites, and pathways that connect ADA-accessible facilities.</li> </ul>
Metaline Falls Portage Trail (new)	Level 3/4	<ul style="list-style-type: none"> <li>• Develop a new portage trail in the vicinity of the falls to provide non-motorized boaters an alternative to avoiding or running the rapids at the falls.</li> <li>• Provide I&amp;E signage.</li> </ul>
Metaline Waterfront Park Boat Launch (existing)	Level 5	<ul style="list-style-type: none"> <li>• Replace the existing boat launch and extend a boat ramp lane so that boats may be launched/retrieved during the primary recreation season (Memorial Day weekend to Labor Day weekend) without problems due to fluctuating reservoir water surface elevations.</li> <li>• Provide adequate gravel roadway access to the boat ramp, improved circulation and parking for single vehicles and vehicles with trailers, and other boat launch support facilities (e.g., signage, boarding float).</li> <li>• Provide ADA-accessible parking, boarding float, and pathways that connect ADA-accessible facilities.</li> <li>• Provide an accessible dual vault restroom in the vicinity of the boat launch parking area or potentially combine this new facility with a new, larger upgraded park restroom facility (location undefined) developed in coordination with the Town of Metaline</li> </ul>

Notes:

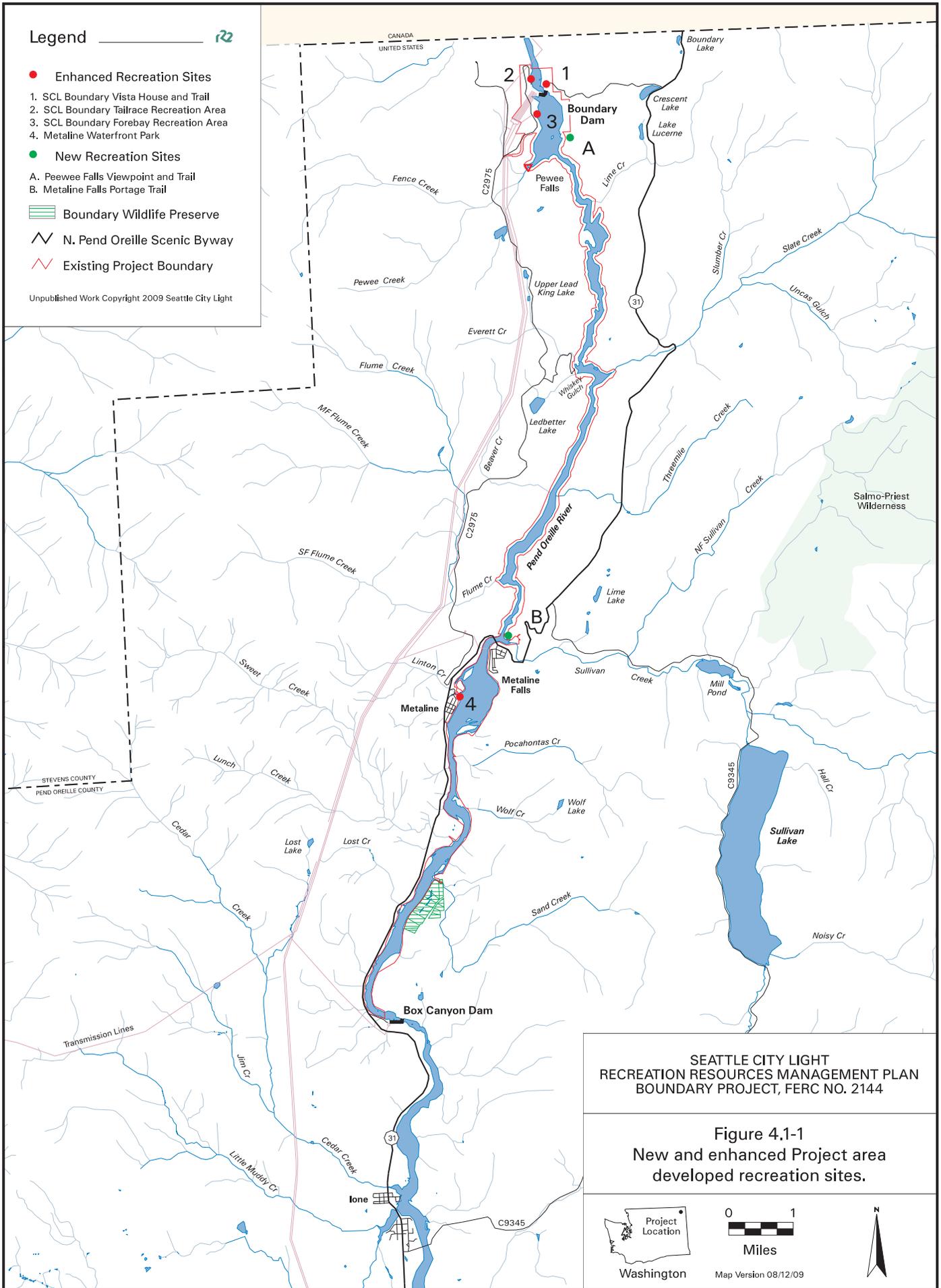
- 1 Site plan number corresponds to conceptual site drawing provided in Appendix 4.
- 2 See Table 4.1-1 for a description of development levels.

Legend



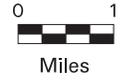
- Enhanced Recreation Sites
  1. SCL Boundary Vista House and Trail
  2. SCL Boundary Tailrace Recreation Area
  3. SCL Boundary Forebay Recreation Area
  4. Metaline Waterfront Park
- New Recreation Sites
  - A. Peewee Falls Viewpoint and Trail
  - B. Metaline Falls Portage Trail
- ▨ Boundary Wildlife Preserve
- ∩ N. Pend Oreille Scenic Byway
- ∩ Existing Project Boundary

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Figure 4.1-1  
New and enhanced Project area  
developed recreation sites.



Washington

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#### 4.1.2.1. Accessibility Requirements and Guidelines

ADA accessibility is generally outside the purview of FERC, although “Universal Design” and “Universal Access” are encouraged at FERC-licensed hydroelectric projects. Universal design typically refers to sites, facilities, and other features that are usable for all people, not just those with disabilities. SCL will consider universal design during the design phase of recreation capital improvements, but will generally rely on ADA accessibility guidelines to help foster consistency between Project recreation sites located on federal and SCL-managed Project lands.

The ADA, signed into law in 1990, protects individuals with disabilities by specifying that adequate access to facilities, including outdoor recreation sites, be provided to the physically disabled. To help implement ADA accessibility measures required by law, the U.S. Architectural and Transportation Barriers Compliance Board (Access Board) developed ADA Accessibility Guidelines to consider when designing facilities. The Accessibility Guidelines provide guidance related to recreation boating facilities, fishing piers and platforms, signs, parking, restrooms, accessible routes, and other outdoor recreation facilities (Access Board 2004). Recently, the Access Board developed Accessibility Guidelines for Outdoor Developed Areas that include guidelines for trails, outdoor recreation access routes, beach access routes, and picnic and camping facilities (Access Board 2007).

In addition to the Access Board guidelines, the USFS has also developed two sets of accessibility guidelines (USFS 2006b, 2006c): (1) Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG), and (2) Forest Service Trail Accessibility Guidelines (FSTAG). Both sets of guidelines apply to outdoor recreation development on National Forest System (NFS) lands, but these guidelines may also be utilized by SCL during the design phase of Project-related capital improvements (note: SCL will use the USFS guidelines for any Project-related recreation development on NFS lands). The USFS accessibility guidelines differ from the Access Board guidelines in that the USFS guidelines not only provide guidance related to accessibility, but also consider the natural setting or ROS classification where the facility is located.

The FSORAG and FSTAG describe a process for determining the feasibility of providing accessible facilities, as well as a set of guidelines related to providing accessible features. In general, outdoor recreation facilities on NFS lands must be accessible unless they meet one of the following criteria established in FSORAG and FSTAG (USFS 2006b, 2006c):

- Compliance would cause substantial harm to other resources or unique characteristics of the site.
- Compliance would substantially change the setting or purpose (e.g., ROS classification) of the site or would not be consistent with the applicable land management plan.
- Compliance would require construction or materials that are prohibited by federal, state, or local law.
- Compliance would be impractical because of topography or prevailing construction practices.

Both the FSORAG and FSTAG are closely related to the Access Board Accessibility Guidelines for Outdoor Developed Areas and will be updated when the Access Board Accessibility Guidelines are finalized. This will help ensure consistency in terminology and the application of these guidelines at outdoor recreation areas across the U.S. Since the Access Board and USFS Accessibility Guidelines are not final and will be updated and revised over time, SCL will review and incorporate the most current version of both during the design and construction documentation process for all Project recreation capital improvements. Specifically, SCL will design and construct Project recreation facilities on NFS lands using the most current FSORAG and FSTAG. At Project recreation sites on other lands (e.g., SCL, BLM, etc.), SCL will review and incorporate the most current accessibility guidelines from either the Access Board and/or the USFS.

#### *4.1.2.2. Recreation Site Design Guidelines*

During the design phase for the Project recreational facility capital improvements, SCL will use appropriate design guidelines to ensure that renovations and new construction enhance or retain the aesthetic character of the area. The ROS classifications and development levels guide the design process but should be augmented with additional guidelines that influence the image, aesthetics, and sustainability of the planned improvements. The USFS has developed a useful guidebook with recommendations and examples of recreation facility designs that are appropriate within specific “ecological, physical, and cultural settings.” The guidebook, entitled *Built Environment Image Guide for National Forests and Grasslands (or Image Guide)*, provides region-specific design guidelines for administrative and recreation facility development on NFS lands. The intent of the guidebook is “to improve the image, aesthetics, sustainability, and overall quality of Forest Service facilities consistent with the agency’s role as leaders in land stewardship” (USFS 2001). SCL will consult and may use elements of the *Image Guide*, as appropriate, in the design of Project recreation facility capital improvements.

The *Image Guide* provides general design guidelines and siting criteria that are organized into three general categories: (1) ecological, (2) cultural, and (3) sustainability. The key elements of each of these categories are listed in Table 4.1-3.

In addition to the guidelines listed in Table 4.1-3, the *Image Guide* also recommends a thorough understanding and recognition of the long-term economic value of greater durability, improved function, and lower maintenance and energy costs associated with well-designed outdoor recreation facilities. As a result, Project recreation facilities should be well constructed, durable, and built with consideration of the local climate.

The Project is located within the Rocky Mountain Province (as defined in the *Image Guide*). The *Image Guide* provides specific design guidelines for this province, including province-specific landscape, ecological, and cultural context, siting criteria, appropriate structure types, styles, and materials, color/aesthetic recommendations, and sustainability principles, among others. Appendix 5 includes the full set of design guidelines and recommendations for the Rocky Mountain Province. SCL will use the design guidelines on all Project recreation facilities located on NFS lands, and will consider their use on other Project recreation facility improvements and enhancements, as appropriate.

**Table 4.1-3.** General design guidelines for recreation sites.

Design Context	Built Environment Guidelines
Ecological	<ul style="list-style-type: none"> <li>• Should grow from the character (e.g., climate, vegetation, geology, etc.) of the site.</li> <li>• Should not disturb (or minimize disturbance to) ecological integrity and function of the site.</li> <li>• Should match the visual features (e.g., color, texture, form, etc.) of the native landscape.</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>• Should grow from the native landscape setting and physical characteristics of the site.</li> <li>• Should acknowledge the traditions of indigenous people, early settlers, and/or subsequent development.</li> <li>• Should be based on other national and/or regional architectural styles.</li> </ul>
Sustainability	<ul style="list-style-type: none"> <li>• Should minimize the use of resources.</li> <li>• Should help conserve ecosystems and their functions.</li> <li>• Should result in healthy built environments.</li> </ul>

Source: Based on USFS 2001.

### 4.1.3. Recreation Facility Capital Improvements - Schedule and Funding

All of the recreation facility capital improvement measures identified in Table 4.1-2 will be completed during the first 10 years following license issuance by FERC. The schedule for recreation improvements has been developed in coordination with other Project-related construction projects to maximize efficiency and minimize disturbance to recreation visitors and area residents. Appendix 6 provides an approximate schedule and lists estimated costs for currently planned recreation capital improvements (Table 4.1-2). SCL will communicate and document any updates, if needed, to the schedule and estimated costs on an annual basis as a component of the ARRWP process. Schedules and costs associated with potential future recreation facility capital improvement projects that result from monitoring will be documented during the ARRWP process.

Construction of recreation facility improvements and maintenance/construction of hydroelectric facilities have the potential to result in temporary disruptions to Project visitors and area residents. These disruptions may include noise, dust, traffic obstructions, and temporary site closures, among other visitor inconveniences. Potential nuisance effects associated with construction activities may temporarily diminish the recreational experience for some visitors and/or area residents. While these potential nuisances will be temporary, SCL will adequately sign, as well as communicate to the public, any construction activities that may impact recreational experiences at the Project.

### 4.2. Recreation Facility Operations and Maintenance Program

SCL will be responsible for routine O&M at Project-related developed recreation sites and use areas (SCL’s O&M responsibilities at dispersed shoreline sites are described in Section 4.3). Specifically, SCL is responsible for scheduling and performing all necessary O&M (e.g., staffing, equipment, materials, management, implementation, etc.) at the following developed recreation sites and use areas:

- Vista House Recreation Area

- Peewee Falls Viewpoint and Trail
- Tailrace Recreation Area/Machine Hall Visitors' Gallery
- Forebay Recreation Area
- Metaline Falls Portage Trail
- Metaline Waterfront Park Boat Launch (the boat launch only, not the entire park)

SCL will routinely maintain these recreation sites and use areas when they are open and available for public use (i.e., during the primary recreation season). SCL staff (and/or contractors) will perform routine O&M at these sites in accordance with the facility maintenance standards and frequencies described in Appendix 7. These recreation facility O&M standards and frequencies may be revised, if needed, during the new license term. Any changes will be documented and reviewed during the ARRWP process (note: revisions to Appendix 7 do not constitute a significant revision to the RRMP and thus will not require an update to the plan).

Annual estimated costs associated with routine O&M at Project-related recreation sites is provided in Appendix 6.

The Forebay Recreation Area will be used to maintain the large sluice maintenance gate that is attached to Boundary Dam. Approximately every 10 years, the gate will be removed from the dam and relocated via water to the Forebay Recreation Area for major maintenance. Once in place at the Forebay Recreation Area, maintenance of the gate will generally take up to one year to complete. The sluice gate will be positioned in an area of concrete approximately 50 x 100 feet in size (used for boat launch parking when not used for sluice gate maintenance) and will be housed within a temporary metal building for a portion of the maintenance. Recreation visitors will be notified of any temporary site closures or other restrictions prior to maintenance of the gate, and SCL will seek to minimize impacts to visitors to the extent practicable.

### **4.3. Shoreline Dispersed Recreation Management Program**

The Shoreline Dispersed Recreation Management Program provides a framework for development and management of dispersed recreation sites along the reservoir shoreline. The RRS identified 25 dispersed recreation sites in the Project vicinity (SCL 2009a). Sixteen of these sites are located along the reservoir shoreline (Figure 4.3-1); the remaining sites are either located upland from the reservoir shoreline or are inappropriate for dispersed recreational uses (e.g., sensitive resource areas). The Shoreline Dispersed Recreation Management Program will focus on the 16 designated shoreline sites, as well as any new shoreline sites that may be created/developed during the new license term.

#### **4.3.1. Suitable Shoreline Recreation Sites**

Multiple areas along the reservoir shoreline are used for dispersed recreation activities (e.g., camping, shoreline fishing, day use, etc.). These areas tend to be characterized by easy shoreline access (via watercraft) and relatively flat topography. A review of the shoreline in the lower reservoir area revealed that, to a great degree, use has been established where topography allows shoreline access. In the upper reservoir area, in addition to topography, a key constraint to dispersed recreation use along the shoreline is private land ownership. Given these conditions, it

is not anticipated that a large number of additional dispersed recreation sites will be established during the new license period. At the present time, the focus of the Shoreline Dispersed Recreation Management Program is on the 16 shoreline sites that have already been established and deemed suitable (Figure 4.3-1). During the new license term, if new shoreline sites are established, they will be managed under the Shoreline Dispersed Recreation Management Program only if they meet the following suitability criteria:

- Not located in a jurisdictional wetland and/or does not significantly affect a wetland's function.
- Does not significantly affect a sensitive resource, habitat, or species.
- Does not significantly affect eligible cultural resource sites.
- Is of adequate size for either day and/or overnight use (e.g., level tent pad space, room for a campfire, etc.).
- Has either water-based or land-based access (although some sites may have both).
- Shoreline access is associated with low erosion potential.

User-defined shoreline sites that do not meet these criteria (or that cannot be modified via site improvements) will be closed, rehabilitated, and will not be managed as a Project-related recreation site. As noted in the Recreation Monitoring Program (Section 4.4), up to a 10 percent increase in the number of dispersed shoreline recreation sites will be tolerated in a six-year period (to coincide with periodic monitoring), as long as they meet the suitability criteria listed above. This will avoid the potential rapid proliferation of new shoreline sites over a short period of time.

#### **4.3.2. Shoreline Recreation Site Development Levels**

Currently, the 16 shoreline sites included in the Shoreline Dispersed Recreation Management Program are considered Development Level 0 sites (Table 4.1-1). During the first 10 years of the new license term, SCL will enhance six of these designated sites consistent with Development Level 2. These six sites include the following site numbers (as shown on Figure 4.3-1):

- Site 2 (BLM Recreation Area)
- Site 4 (Ledbetter Cove)
- Site 7 (Deadman's Eddy)
- Site 12 (Lime Creek)
- Site 13 (Monument Bar)
- Site 14 (Wolf Creek)

Three of these sites (2, 4, and 7) are on BLM-managed lands, and the other three (12, 13, and 14) are on NFS lands. SCL will be responsible for developing and maintaining these six sites but will coordinate its activities with the USFS and BLM.

Per Development Level 2 guidelines, enhancements at the six dispersed shoreline recreation sites identified above will be minimal. The intent of keeping the enhancements at these sites to a

Development Level 2 is to both provide a continued rustic experience for Project visitors and to protect sensitive resources. Constructed improvements at each of these sites will be determined during the planning and design phase of license implementation, but will likely include the following:

- A fire ring
- Picnic tables (1-2 depending on the size of the site)
- Tent pad or pads depending on the size of the site (no more than four tent pads will be located at one site)
- A primitive sanitation facility or other appropriate system

During the design phase, SCL will coordinate sanitation options with the USFS and BLM. Sanitation options to be considered include constructed toilets (e.g., lightly developed, composting, etc.) and sanitation systems (e.g., buckets, etc.).

The remaining 10 designated dispersed shoreline recreation sites will remain as Development Level 0 sites until periodic monitoring indicates that there is a need for additional improved sites. All of the designated dispersed shoreline recreation sites will be managed and potentially improved to a maximum Development Level of 2 or 3 in areas categorized as Semi-Primitive Motorized and Roaded Natural, respectively. This will help protect and provide for the desired visitor experience at these sites.

Access to the designated dispersed shoreline sites will be primarily by water, although some sites also have non-motorized trail or primitive road access. To the extent feasible, multiple access options (e.g., water, trail, road, etc.) to a specific site will be discouraged to limit potential conflicts between different user groups.

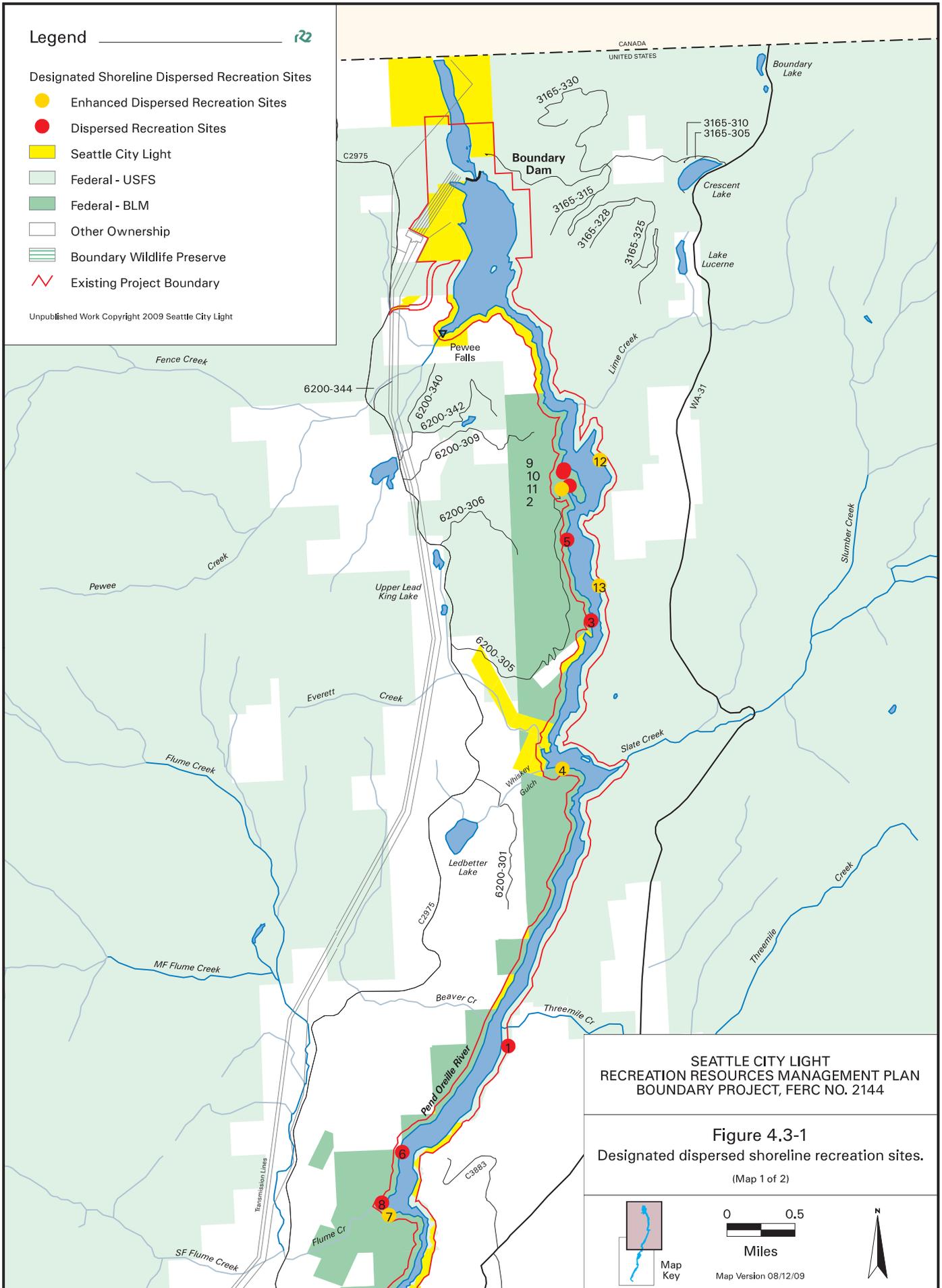
Legend



Designated Shoreline Dispersed Recreation Sites

- Enhanced Dispersed Recreation Sites
- Dispersed Recreation Sites
- Seattle City Light
- Federal - USFS
- Federal - BLM
- Other Ownership
- Boundary Wildlife Preserve
- Existing Project Boundary

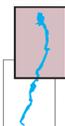
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RECREATION RESOURCES MANAGEMENT PLAN  
BOUNDARY PROJECT, FERC NO. 2144

Figure 4.3-1  
Designated dispersed shoreline recreation sites.

(Map 1 of 2)



Map Key



Miles

Map Version 08/12/09

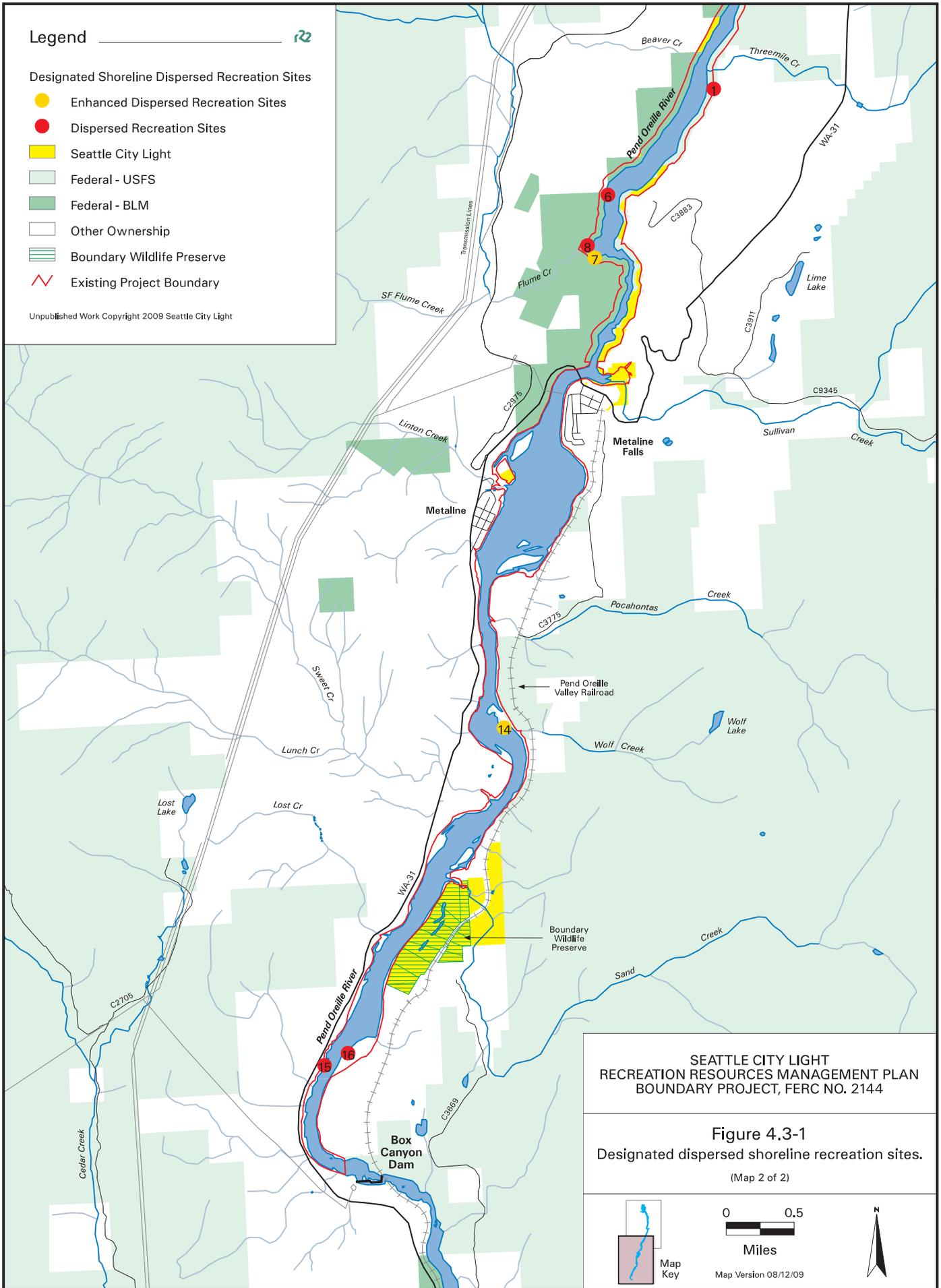


Legend

Designated Shoreline Dispersed Recreation Sites

- Enhanced Dispersed Recreation Sites
- Dispersed Recreation Sites
- Seattle City Light
- Federal - USFS
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- Boundary Wildlife Preserve
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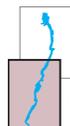
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RECREATION RESOURCES MANAGEMENT PLAN  
BOUNDARY PROJECT, FERC NO. 2144

Figure 4.3-1  
Designated dispersed shoreline recreation sites.

(Map 2 of 2)



Map Key



Miles

Map Version 08/12/09



### **4.3.3. Shoreline Site Visitor Management**

As noted previously, the 16 existing shoreline sites will be formally designated as Dispersed Shoreline Recreation Sites. These sites will be displayed on Project maps and other media available to visitors to the Project. Overnight use will be encouraged at the six improved shoreline sites, although day and overnight use will be allowed at the other 10 designated shoreline sites as well. Designated shoreline site use and appropriate visitor behavior will generally be communicated at put-in areas (instead of at the sites themselves). Typical information provided to visitors will likely include the following:

- Camping is allowed at all designated shoreline sites, but encouraged at those sites with sanitation facilities.
- Fires are only permitted at shoreline sites where fire rings are provided.
- Permanent or semi-permanent visitor constructed facilities are not allowed.
- Maximum length of stay at a site is 14 consecutive days.
- Leave No Trace backcountry principles (litter, sanitation, vegetation, etc.) apply.

In addition, all designated shoreline sites will be “pack-it-in, pack-it-out,” meaning no trash receptacles will be provided. Dispersed shoreline site visitor use information (e.g., messages, media, etc.) will be incorporated into the Multi-Resource I&E Program described in Section 4.5. SCL staff will periodically monitor visitor use and behaviors during the primary recreation season (Section 4.4, Recreation Monitoring Program).

It is anticipated that the designated shoreline sites (as well as other Project recreation sites) will be recognized by the Pend Oreille Water Trail group. SCL will cooperate with the Water Trail group to facilitate this use along Boundary Reservoir (via signage, management directives, etc.) at the request of the Water Trail group. SCL will continue to manage and maintain the designated shoreline dispersed sites regardless of the status of the water trail.

## **4.4. Recreation Monitoring Program**

The Recreation Monitoring Program is designed to measure recreation use levels and impacts, and changes in visitor perceptions and needs over time. It also provides general guidance on potential management actions that may be considered to address use level and/or impact-related concerns. Each of these components provides important information that will allow SCL, in cooperation with the RRWG, to determine if specific management objectives are being met or if a change in management direction is needed. The Recreation Monitoring Program is integral to the overall implementation of the RRMP, as it provides the basis for maintaining and enhancing the desired recreation experience and resources over the term of the license.

### **4.4.1. Monitoring Indicators and Standards**

Effective recreation monitoring programs are guided by resource condition “indicators” and “standards,” which are necessary to define appropriate visitor capacities (Stankey et al. 1985; Shelby and Heberlein 1986; Manning 1999, 2007). Indicators refer to quantifiable measures of important use level, social, and biophysical conditions; standards define the level of those

indicators that are considered acceptable to provide the desired recreational experience. If monitoring indicates that specific conditions (indicators) are approaching or exceeding acceptable levels (standards), then appropriate management actions should be implemented, or at a minimum, a review of conditions and potential actions should be initiated.

The Recreation Monitoring Program relies on three types of indicators and standards: (1) visitor use capacity, (2) social capacity, and (3) biophysical capacity. These indicators and standards acknowledge both existing and desired future conditions. Any changes in monitoring protocols, indicators, standards, or capacities will be made in consultation with the RRWG and documented in Project monitoring reports. Each of the three primary types of indicators and standards is described briefly below.

- **Visitor Use Capacity** - Measures include people-at-one-time (PAOT), vehicle-at-one-time (VAOT), surface water acres per watercraft, and occupancy rates at recreation sites, as well as on the reservoir surface. The specific use level indicators and standards include recreation site capacity, reservoir surface area capacity, and reported boating accidents/incidents.
- **Social Capacity** - Measures include interactions between visitors or groups of visitors to the Project. The specific social capacity indicators and standards include perceived crowding, group encounters, and reported conflict levels.
- **Biophysical Capacity** - Measures include recreation-related impacts on natural/cultural resources. The specific biophysical capacity indicators and standards include the number of new user-created sites, the size and condition of existing designated shoreline sites, litter, and sanitation. Biophysical capacity will only be monitored at dispersed shoreline sites and use areas (developed recreation sites are designed to concentrate use and minimize biophysical impacts).

Table 4.4-1 provides an overview of the monitoring indicators and standards. These indicators and standards are based on the RRS Final Report (SCL 2009a) and are relevant to current and anticipated future use at the Project. The RRWG may modify and/or develop new indicators and standards, if needed, in the future to address documented changes in recreation uses, activities, and preferences that may result in undesirable impacts. Any changes to the indicators and standards in Table 4.4-1 will be captured in the RRMP update process, as described in Section 2.2.3.

The standards listed in Table 4.4-1 are specific to the RRMP's ROS-based classifications (Table 3.1-1) and site development levels (Table 4.1-1). Further, these standards will be maintained through the primary recreation season, which extends from Memorial Day (end of May) through Labor Day (beginning of September). Most of the data/information associated with the indicators and standards listed in Table 4.4-1 will be collected by SCL staff per the schedule described in Section 4.2. However, the social capacity indicators will require a periodic (every 12 years) visitor survey. The visitor survey will be modeled on the RRS visitor survey but will likely be more limited in scope. This will allow for a shorter, more focused visitor survey that will help ensure an efficient data collection process.

While most of the indicators listed in Table 4.4-1 are reflected in the RRS (SCL 2009a), several are being modified for long-term monitoring purposes. These include the following:

- **Perceived Crowding** - Recreation researchers have developed a consistent measure of perceived crowding (Heberlein and Vaske 1977). The methodology involves asking visitors to indicate how crowded the area was at the time of their visit using a 9-point scale from “not at all crowded” to “extremely crowded.” The scale can be analyzed from various perspectives, but has traditionally been collapsed into a dichotomous variable (not crowded versus any degree of crowding). This provides a conceptually meaningful break point between those who described the site as “not at all crowded” (scale points 1 and 2) and those who described the site as slightly, moderately, or extremely crowded (scale points 3 through 9).

A meta-analysis of 35 studies (Shelby et al. 1989) identified five distinct categories of crowding when the scale was collapsed into the dichotomous variable (i.e., uncrowded versus crowded). These five categories include the following:

- “Uncrowded” - Less than 35 percent of visitors report a crowding level of 3 or higher. These areas provide relatively unique low-density opportunities, and managers should be concerned about preserving the conditions that maintain these relatively rare opportunities.
- “Low normal crowding” - 35 to 50 percent of visitors report a crowding level of 3 or higher. These areas typically have few “impact problems,” and moderate use increases are unlikely.
- “High normal crowding” - 50 to 65 percent of visitors report a crowding level of 3 or higher. These areas should be scrutinized because they are probably approaching capacity, and adding more use may exacerbate “impact problems.”
- “Over capacity” - 65 to 80 percent of visitors report a crowding level of 3 or higher. These areas are probably over capacity, and management should consider reducing use or managing for high-density and crowded conditions.
- “Greatly over capacity” - More than 80 percent of visitors report a crowding level of 3 or higher. These areas offer very high-density experiences (some have labeled these “sacrifice” areas); without substantial reductions in use, management must focus on managing inevitably crowded conditions.

Standards for perceived crowding at the Project are based on these research findings.

- **Number of New User-Created Sites** - The goal of the Shoreline Dispersed Recreation Site Management Program is to maintain the number of sites at approximately the baseline level (16 designated sites), but the proposed standard would allow some increase over the term of the new license.
- **Size and Condition of Designated Dispersed Shoreline Sites** - Recent recreation studies (Brown et al. 2008) suggest that the precise perimeter monitoring of dispersed recreation sites has systematic reliability problems. Instead, qualitative assessments of site size (“small-medium-large”) and one or more site photographs (with global positioning system [GPS] coordinates and a metal spike to indicate the location of the

photo point) are recommended. This type of qualitative, rapid assessment technique tends to be more consistent over time and results in fewer measurement errors. Standards for size and condition of dispersed shoreline recreation sites are based on this recommended methodology and associated findings.

To the extent feasible, SCL will coordinate its monitoring efforts with USFS and BLM monitoring efforts. This may result in a more efficient monitoring process and allow Project-specific data to be compared with other regional data. For example, SCL may be able to use similar questions in its periodic visitor surveys (planned every 12 years) to those used by the USFS for its National Visitor Use Monitoring process.

**Table 4.4-1.** Recreation monitoring indicators and standards.

Monitoring Indicator	Monitoring Standards		
	Semi-Primitive Motorized	Roaded Natural	Rural
<i>Visitor Use Capacity</i>			
Recreation Site Capacity	Development Levels 0-2: <ul style="list-style-type: none"> <li>On average, the number of occupied sites is 70% (or less) on weekends and holidays.</li> <li>On average, the number of occupied sites is 40% (or less) on weekdays.</li> </ul>	Development Levels 0-2: <ul style="list-style-type: none"> <li>On average, the number of occupied sites is 70% (or less) on weekends and holidays.</li> <li>On average, the number of occupied sites is 40% (or less) on weekdays.</li> </ul> Development Levels 3-5: <ul style="list-style-type: none"> <li>On average, weekend and holiday site occupancy is 90% (or less) of facility design capacity.</li> <li>On average, weekday site occupancy is 60% (or less) of facility design capacity.</li> </ul>	Development Levels 3-5: <ul style="list-style-type: none"> <li>On average, weekend and holiday site occupancy is 90% (or less) of facility design capacity.</li> <li>On average, weekday site occupancy is 60% (or less) of facility design capacity.</li> </ul>
Reservoir Surface Area Capacity <sup>1</sup>	Rural Developed Setting (Highway 31 Bridge south and Forebay area) – 20-50 acres per watercraft. Rural Natural Setting (Highway 31 Bridge north, except Forebay area) – 50-110 acres per watercraft.		

Table 4.4-1, continued...

Monitoring Indicator	Monitoring Standards		
	Semi-Primitive Motorized	Roaded Natural	Rural
<b>Social Capacity</b>			
Perceived Crowding	Development Levels 0-2: <ul style="list-style-type: none"> <li>On average, less than (&lt;) 50% of visitors report a perceived crowding level of 3 or higher (on a 9-point scale) on weekends and holidays.</li> <li>On average, less than (&lt;) 35% of visitors report a perceived crowding level of 3 or higher on weekdays.</li> </ul>	Development Levels 0-2: <ul style="list-style-type: none"> <li>On average, less than (&lt;) 50% of visitors report a perceived crowding level of 3 or higher (on a 9-point scale) on weekends and holidays.</li> <li>On average, less than (&lt;) 35% of visitors report a perceived crowding level of 3 or higher on weekdays.</li> </ul> Development Levels 3-5: <ul style="list-style-type: none"> <li>On average, less than (&lt;) 80% of visitors report a perceived crowding level of 3 or higher on weekends and holidays.</li> <li>On average, less than (&lt;) 65% of visitors report a perceived crowding level of 3 or higher on weekdays.</li> </ul>	Development Levels 3-5: <ul style="list-style-type: none"> <li>On average, less than (&lt;) 80% of visitors report a perceived crowding level of 3 or higher on weekends and holidays.</li> <li>On average, less than (&lt;) 65% of visitors report a perceived crowding level of 3 or higher on weekdays.</li> </ul>
Reported Conflict Levels	Average of 10% (or less) of visitors report a specific type of conflict.	Average of 20% (or less) of visitors report a specific type of conflict.	Average of 20% (or less) of visitors report a specific type of conflict.
<b>Biophysical Capacity</b>			
Number of New User-Created Dispersed Shoreline Sites	No more than a 10% increase (over relicensing levels – approximately 2 new sites) in the number user-created sites in a 6-year period. Sites in sensitive resource areas will be closed and rehabilitated as needed. If new sites are suitable, they may be included as designated dispersed sites.		
Size and Condition of Designated Shoreline Dispersed Sites	Size (i.e., area of impact) of designated shoreline dispersed sites should not increase substantially (e.g., from small to medium, medium to large, etc.). Condition (i.e., natural/cultural resources) should not substantially decline (based on photo comparison and qualitative assessment).		Not relevant

Table 4.4-1, continued...

Monitoring Indicator	Monitoring Standards		
	Semi-Primitive Motorized	Roaded Natural	Rural
Litter	<p>Development Levels 0-2:</p> <ul style="list-style-type: none"> <li>Litter at less than 10% of sites during the primary recreation season.</li> <li>No more than 3 significant litter events (requiring site cleanup) at an individual site during the primary recreation season.</li> </ul>	<p>Development Levels 0-2:</p> <ul style="list-style-type: none"> <li>Litter at less than 10% of sites during the primary recreation season.</li> <li>No more than 3 significant litter events (requiring site cleanup) at an individual site during the primary recreation season.</li> </ul> <p>Development Levels 3-5:</p> <ul style="list-style-type: none"> <li>Minor amounts of litter at sites with trash receptacles.</li> </ul>	<p>Development Levels 3-5:</p> <ul style="list-style-type: none"> <li>Minor amounts of litter at sites with trash receptacles.</li> </ul>
Sanitation	<p>Development Levels 0-2:</p> <ul style="list-style-type: none"> <li>Sanitation issues at less than 10% of sites without sanitation facilities during the primary recreation season.</li> <li>No more than 3 significant sanitation instances (requiring site cleanup) at an individual site during the primary recreation season.</li> </ul>	<p>Development Levels 0-2:</p> <ul style="list-style-type: none"> <li>Sanitation issues at less than 10% of sites without sanitation facilities during the primary recreation season.</li> <li>No more than 3 significant sanitation instances (requiring site cleanup) at an individual site during the primary recreation season.</li> </ul> <p>Development Level 3-5:</p> <ul style="list-style-type: none"> <li>No sanitation issues – restrooms provided.</li> </ul>	<p>Development Level 3-5:</p> <ul style="list-style-type: none"> <li>No sanitation issues – restrooms provided.</li> </ul>

Note:

- Reservoir surface water capacity designations correspond to Water Recreation Opportunity Spectrum settings and guidelines (Haas et al. 2004). The Rural Developed and Rural Natural WROS settings generally correspond to ROS Roaded Natural and Semi-primitive Motorized settings (as described in Table 3.1-1) respectively.

Monitoring-based decisions should be informed by scientific research, RRWG input, and sound professional judgment. The indicators and standards listed in Table 4.4-1 are based on information from the relicensing studies, RRWG input, other FERC-related recreation monitoring programs, and recreation resource monitoring best management practices (as described in the scientific literature). The intent of the indicators- and standards-based monitoring program is to identify the “limits of acceptable change” (standards), use monitoring to determine if impacts are approaching those limits or standards, and then take appropriate management actions to reduce the impact to acceptable levels (if/when necessary).

The results of the recreation monitoring process will be used to make informed decisions about how best to manage Project recreation resources. In most cases, management actions are contingent upon reaching monitoring threshold levels. In general, there are three possible management responses that can be taken based on the results of the monitoring process:

- Continue with current management approach and strategies if monitoring data are below established standards.
- Consider increasing the frequency of monitoring actions (e.g., every year over a three-year period instead of once every 6/12 years) to confirm that monitoring data are approaching established standards
- Consider a change in management approach and/or strategies if monitoring data are considered at or exceeding established standards.

Specific examples of potential management responses for each capacity indicator include the following:

#### Visitor Use Capacity

- Communicate to visitors other regional opportunities in an effort to help distribute use.
- Expand existing developed recreation sites and/or construct new developed recreation sites.
- Increase the number of designated dispersed shoreline recreation sites.
- Limit boat speeds.
- Increase boat ramp efficiency and capacity.
- Increase boater education efforts regarding Project operations.
- Implement a user fee at developed recreation sites.
- Implement a permit system and/or cap use.

#### Social Capacity

- Provide additional visitor management and/or enforcement.
- Expand buffers between users/user groups.
- Zone (e.g., spatial, temporal, etc.) the Project for different uses.
- Provide increased visitor information regarding appropriate visitor behavior.

### Biophysical Capacity

- Provide increased visitor information regarding appropriate visitor behavior.
- Enhance dispersed shoreline recreation sites.
- Designate additional dispersed shoreline recreation sites.
- Establish a reservation system for dispersed shoreline recreation sites.
- Provide additional visitor management and/or enforcement.

These potential management responses are examples only and others may be considered if indicators exceed standards. Recreation-related management decisions should also be coordinated with other resource areas (e.g., natural, cultural, etc.) as necessary in an effort to avoid conflicting management actions. Furthermore, to the extent feasible, Project area recreation-related management actions should be coordinated with regional recreation providers and stakeholders to promote regional recreation opportunities and visitor distribution.

SCL will share applicable monitoring data and information, as well as subsequent standards-based decisions, with the RRWG during the annual meeting and via the Annual Recreation Report (Section 2.2.2) and/or Monitoring Report (Section 4.4.2).

In addition to the RRMP's Recreation Monitoring Program, Project monitoring plans have been developed for other resources (e.g., a Terrestrial Resources Management Plan, Historic Properties Management Plan, etc.). These other monitoring plans focus on a broader range of potential impacts, including those from public and recreation use, on their respective resources. As noted in Section 2.2, SCL will communicate and coordinate resource management plan implementation measures, as needed, internally to avoid conflicting actions.

#### **4.4.2. Monitoring Schedule**

Most recreation-related monitoring will occur either every six or 12 years to coincide with FERC Form 80 reporting requirements, although some tasks will be completed on an annual basis. Table 4.4-2 summarizes the frequency, measurement tool, and reporting mechanism for recreation-related monitoring at the Project.

In addition to FERC Form 80, every six years, SCL will prepare a monitoring report to summarize the results of the monitoring process (to coincide with each FERC Form 80 filing). The monitoring report will be included with the Annual Recreation Report (Section 2.2.2) during FERC Form 80 years. It will include monitoring data for the current monitoring period, provide comparisons to previous monitoring periods, and, if appropriate, make management recommendations if monitoring indicators are at or have exceeded established standards.

**Table 4.4-2.** Recreation monitoring indicators, frequency, measurement tool, and reporting mechanism.

Indicator	Frequency	Measurement Tool	Reporting Mechanism
Recreation Site Capacity	Every 6 Years	On-site observations	FERC Form 80 (included with ARRWP)
Reservoir Surface Area Capacity	Every 6 Years	On-water observations	Monitoring Report (included with ARRWP)
Perceived Crowding	Every 12 years	Visitor survey	Monitoring Report (included with ARRWP)
Reported Conflict Levels	Every 12 years	Visitor survey	Monitoring Report (included with ARRWP)
Number of New User-Created Dispersed Sites	Every 6 years <sup>1</sup>	On-site observations	Monitoring Report (included with ARRWP)
Size and Condition of Designated Shoreline Dispersed Sites	Every 6 years	On-site observations	Monitoring Report (included with ARRWP)
Litter	Multiple times annually	On-site observations	ARRWP
Sanitation	Multiple times annually	On-site observations	ARRWP

**Note:**

1 New dispersed shoreline sites may be identified and potential action taken on a more frequent basis, if needed.

## 4.5. Multi-Resource Interpretation and Education Program

This section describes the preliminary framework for SCL's Multi-Resource I&E Program within the Project area during the new license term. The purpose of the I&E Program is to provide enhanced experiences for visitors, encourage participation in multi-resource protection measures by area visitors, and promote cooperative, safe behaviors to benefit all Project area resources and visitors. The focus of the I&E Program is primarily on Project area resources, although it may contain broader, regional themes and messages. SCL, with input from the RRWG and other RPs, will develop the I&E Program, including construction-level detail, following license issuance.

The multi-resource I&E Program will be built around a prominent Project area theme, supported by multiple subthemes, topics, and messages. The potential I&E theme, subthemes, topics, and messages may include the following: wayfinding, water trail, cultural/historical resources, scenic byway, geologic resources, renewable energy, dam engineering, terrestrial resources, fish and aquatic resources, visitor management and rules, and Project operations and public safety. In addition, the I&E Program will identify media (e.g., signs, brochures, internet, etc.), sites, and services (e.g., tours) to be provided during the new license term.

### 4.5.1. Interpretation and Education Schedule and Funding

SCL will develop the final details of the I&E Program during the first three years of the new license term. A draft version of the I&E Program will be provided to the RRWG and other workgroups for review and comment. The final I&E Program will be filed with FERC and also made available to the RRWG and other workgroups. It is anticipated that I&E-related

enhancements in the Project area will be timed to occur within the first 10 years of the new license period to coincide with the planned recreation facility developments and dispersed shoreline improvements described in Sections 4.1 and 4.3, respectively.

SCL anticipates that it will cost approximately \$200,000 (Appendix 6) to complete the I&E Program, including media design, graphics, and text. Cost estimates for new and/or improved I&E-related facilities (e.g., signs, kiosks, etc.) are included in the costs for each recreation site expected to have I&E facilities (Appendix 6).

To maintain the I&E Program and related measures/facilities, SCL will provide long-term funding and support for routine O&M, including the repair and replacement of I&E facilities over time, as well as periodic updates to the program's themes and messages. On an annual basis, significant changes to the I&E Program are not anticipated; on a longer term basis, the program will be reviewed and updated, as needed, to coincide with potential RRMP revisions (Section 2.2.3).

#### **4.5.2. Interpretive Theme and Subthemes**

An I&E Program is typically tied together by an overall theme. This theme communicates the central or key story at the Project. Subthemes or topics are then developed that support or illustrate the central theme. An overall theme, as well as subthemes, topics, and specific messages, will be developed in the final I&E Program. Since the scope of the final I&E Program will be multi-resource, the subthemes, topics, and messages will likely evolve out of the key resource areas at the Project including terrestrial, aquatic and fisheries, cultural, and recreation/aesthetics.

Preliminary concepts or ideas for topics related to each of these resource areas include the following:

##### Terrestrial Resources

- Habitat and rare, Threatened, and Endangered species protection
- Bank erosion and stabilization (in particular at dispersed shoreline recreation sites)
- Overview of vegetation at the Project
- Common wildlife species that may be viewed at the Project
- Geologic features and history

##### Fisheries and Aquatic Resources

- Conservation of native salmonids
- Bull trout identification and protection
- Proper fish handling (catch and release)
- Brook trout harvesting regulations in tributaries
- Minimizing the spread of invasive aquatic species
- Role of Boundary Reservoir within the larger Pend Oreille River watershed

### Cultural Resources

- Rich and varied heritage of the Pend Oreille Valley
- Native Americans, early settlers/homesteaders
- Mining and hydroelectric development
- Fragile/irreplaceable nature of cultural resources

### Recreation and Aesthetic/Visual Resources

- Recreation opportunities at the Project (and region)
- Appropriate visitor behaviors
- Wayfinding - directions, information, maps, etc.
- Scenic canyon reach and Peewee Falls
- Scenic Byway points of interest at the Project

#### **4.5.3. Identification of Sites for New/Enhanced Interpretation and Education Opportunities**

The location of new I&E facilities and other media is critical to the overall success of the program. Specific sites within the Project area will be finalized (preliminary I&E sign/kiosk sites are defined in Appendix 4 in the concept site plans) based on their ability to support interpretation of the Project's identified theme, subthemes, and messages.

Potential locations for new and/or improved I&E facilities (signs, kiosks) and other media (brochures, maps, and website information) include the following (among others):

- Project recreation sites (Vista House, Tailrace, and Forebay recreation areas) (signs and kiosks)
- Vista House and Machine Hall Visitors' Gallery (exhibits and displays, audio and video presentations, and tours)
- Project boat launches at the Forebay Recreation Area and Metaline Waterfront Park (signs, kiosks, and pamphlets)
- SCL website (digital information)
- Community information centers in Metaline and Metaline Falls (brochures and pamphlets)
- Regional tourism/information centers and Scenic Byway portal sites (brochures and pamphlets)

New/improved signs, kiosks, and other types of I&E facilities are most appropriate at locations in the Project area, while brochures, maps, and/or other types of take-away media are likely more appropriate at locations in the region and on the SCL website.

In addition to the developed recreation sites and information centers, I&E signage (e.g., wayfinding, resource protection, etc.) may also be sited along the reservoir shoreline in appropriate locations. However, signs should be used sparingly and only where absolutely necessary along the reservoir shoreline to communicate a specific message so as to minimize potential aesthetic and vandalism impacts, as well as O&M obligations.

#### **4.5.4. Interpretation and Education Design Guidelines and Sign Standards**

The intent of the I&E Program is not only to inform visitors and area residents about the important elements of the Project and its resources, but also to protect the beauty of the natural setting. I&E facilities should complement, not dominate the setting. Appropriate design guidelines and sign standards will help meet this intent. The design guidelines and sign standards will include typical elements such as an appropriate color palette, font palette, sign layout and organization, sign types, and sign structures, among others. The design guidelines and sign standards will be used to design, construct, and install I&E facilities at the Project during the term of the new license.

## 5 REFERENCES

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## **Appendix 1 Relicensing Participant Consultation**

*This appendix includes a record of relicensing participant (RP) consultation associated with the development of the Draft Recreation Resources Management Plan (RRMP). To date, this consultation process included RP review of the Draft RRMP (July 8, 2009 version) and a conference call with RPs to discuss the Draft RRMP. This appendix includes the following:*

- *Summary table of RP comments on the Draft RRMP*
- *Relicensing participant comment letters/emails on the Draft RRMP*
- *Meeting summary from July 15, 2009 RP conference call regarding the Draft RRMP*

*This appendix will be updated in the future to reflect RP comments on this Draft RRMP being attached to Exhibit E of SCL's License Application.*



## Summary of RP Comments on the Draft RRMP

RP comments on the Draft RRMP (July 8, 2009 version) are summarized in Table A.1-1. The table also includes SCL’s responses to RP comments

**Table A.1-1.** RP comments on Draft RRMP and SCL responses.

RP Comment	SCL Response
RP Comment Letters/Emails	
<p><b>USFS</b></p> <p>I suggest adding the items bolded to the list below, which is on page 39 of the Boundary Draft Recreation Resources Management Plan, under 4.5.2 Interpretive Theme and Subthemes:</p> <p><u>Terrestrial Resources</u></p> <ul style="list-style-type: none"> <li>• <b>Overview of the vegetation with common trees of the area</b></li> <li>• <b>Common animals and birds seen in the area</b></li> <li>• <b>Geological overview of the area</b></li> </ul> <p><u>Aquatic and Fisheries Resources</u></p> <ul style="list-style-type: none"> <li>• <b>Orientation: how the Pend Oreille River fits into the larger watershed of the region</b></li> </ul> <p><u>Recreation and Aesthetic/Visual Resources</u></p> <ul style="list-style-type: none"> <li>• <b>Mission/vision of each of the state and federal landowners in the area (the public doesn't understand their roles/responsibilities)</b></li> </ul>	<p>SCL appreciates the USFS input on potential I&amp;E-related topics. The list of potential topics in Section 4.5.2 have been updated to reflect the USFS input, except Recreation and Aesthetic/Visual Resources. SCL does not believe it is responsible for helping the public understand the roles and responsibilities of state and federal landowners in the Project vicinity.</p>
<p><b>NPS</b></p> <p>The RRMP looks good and I appreciate the addition of the shoreline dispersed recreation use program. I've attached the RRMP with some track changes listed in the monitoring section, dispersed section, and Appendix 6. The main comments are similar to things we've talked about already and made comments on before, we'd like to see a few additional things included:</p> <ol style="list-style-type: none"> <li>1. Boundary Dam portage</li> <li>2. Interpretation: web-based and printed material for the Boundary Dam water trail</li> <li>3. Trails to and connecting the two viewpoints</li> </ol>	<p>Comment noted.</p> <ol style="list-style-type: none"> <li>1. SCL will facilitate a portage around Boundary Dam if the planned Pend Oreille River Water Trail extends downstream of the dam. Until that time, the public is able to use the existing infrastructure in this area (e.g., Forebay Recreation Area boat launch, access roads, Tailrace Recreation Area, etc.) as a defacto portage trail around the dam. However, public use on the Pend Oreille River below Boundary Dam is very limited due to security restrictions associated with the unmanned US/Canada border.</li> <li>2. SCL will address I&amp;E materials at the Project, including the Pend Oreille River Water Trail, during development of the future multi-resource I&amp;E Program.</li> <li>3. In the Draft RRMP, SCL has proposed a new Peewee Falls viewpoint and trail along the eastern shoreline of Boundary Reservoir (based on recreation needs and opportunities as identified in the Recreation Resource Study and Recreation Needs Analysis). At this time, no other viewpoints or trails (except the new Falls Portage Trail) along the reservoir shoreline are proposed. Additional viewpoints and/or trails with a Project nexus may be considered in the future based on periodic monitoring (as described in the Recreation Monitoring Program).</li> </ol>

Table A.1-1, continued...

RP Comment	SCL Response
<p><u>Section 4.3.3, Page 29:</u> Add the following sentence to the last paragraph: <b>In the event that the water trail group is no longer functioning, SCL will continue to maintain and promote use of appropriate dispersed sites.</b></p> <p><u>Section 4.4.1, Page 36:</u> Add the following bullets under Visitor Use Capacity:</p> <ul style="list-style-type: none"> <li>• <b>Implement a permit system and/or cap use</b></li> <li>• <b>Complete an additional recreation use study to determine perceived crowding and desired use levels.</b></li> </ul> <p><u>Appendix 6, Page 6-2:</u> Add the following bullet under Peewee Falls Viewpoint and Trail (new):</p> <ul style="list-style-type: none"> <li>• <b>Trail at other viewpoint and connector</b></li> </ul> <p><u>Appendix 6, Page 6-2:</u> Add the following bullets under Designated Dispersed Shoreline Recreation Sites (6):</p> <ul style="list-style-type: none"> <li>• <b>10 sites</b></li> <li>• <b>Boundary dam portage</b></li> <li>• <b>I &amp; E web and printed material for water trail</b></li> </ul>	<p>The NPS’s suggested addition has been revised to read: “SCL will continue to manage and maintain the designated shoreline dispersed sites regardless of the status of the water trail.”</p> <p>Implementing a permit system and/or cap use has been added to the list of potential management responses related to visitor use capacity. Additional studies are already discussed as a management response in the paragraph/bullets preceeding the lists of potential management responses in this section.</p> <p>As noted previously, no other viewpoints or trails (except the new Falls Portage Trail) along the reservoir shoreline are proposed. Additional viewpoints and/or trails with a Project nexus may be considered in the future based on periodic monitoring (as described in the Recreation Monitoring Program).</p> <p>This section of Appendix 6 lists capital facility improvements only. The 10 unimproved shoreline designated dispersed sites are addressed in the Shoreline Dispersed Recreation Management Program that is listed separately in the table. The Metaline Falls Portage Trail is listed as a separate action under the captial improvements. SCL will address I&amp;E materials at the Project, including the Pend Oreille River Water Trail, during development of the future multi-resource I&amp;E Program.</p>
<p><b><u>FERC</u></b></p> <p>I spoke with Hydropower Administration &amp; Compliance staff and learned that including ADA compliant facilities in the RRMP is not an issue for them. They will not check to see of the developed facilities comply with ADA because it is outside the purview of the Commission, although the use of Universal Design is encouraged. The term "ADA compliant" is not allowed in the license order (the Commission uses "Universal Access"). Since the RRMP will likely be adopted in its entirety within the order, terminology should not be an issue.</p>	<p>The term “ADA compliant” is not used in the Draft RRMP. The ADA discussion in Section 4.1 has been revised with the following paragraph: “ADA accessibility is generally outside the purview of FERC, although “Universal Design” and “Universal Access” are encouraged at licensed-hydroelectric projects. Universal design typically refers to sites, facilities, and other features that are usable for all people, not just those with disabilities. SCL will consider universal design during the design phase of recreation capital improvements, but will generally rely on ADA accessibility guidelines to help foster consistency between Project recreation sites located on federal and SCL-managed Project lands.”</p>

**Table A.1-1, continued...**

RP Comment	SCL Response
July 15 Conference Call	
<p>Comments on the Draft RRMP included:</p> <ul style="list-style-type: none"> <li>• Consider incorporating discussion of how to deal with outfitters and guides (in the future)</li> <li>• Clarify consistency between ROS and WROS setting categories</li> <li>• Add appropriate agencies/entities to the RRWG participant list – such as Pend Oreille County PUD, NPS, Towns of Metaline and Metaline Falls, etc.</li> <li>• Incorporate ADA information from Mark Ivy</li> <li>• Clarify schedule in Appendix 6 – add more precise dates for capital actions</li> <li>• Clarify qualitative/rapid assessment methodology for dispersed sites</li> </ul>	<ul style="list-style-type: none"> <li>• At this time, SCL does not feel that a specific management approach to outfitters and guides is needed (since this type of use is so low). The RRMP has mechanisms (e.g., annual meetings with the RRWG, Recreation Monitoring Program, etc.) that will identify potential issues with outfitters/guides if they arise in the future.</li> <li>• Descriptions of the WROS surface water setting classifications and corresponding ROS settings have been added to appropriate sections of the Draft RRMP (including Sections 3.1 and 4.4)</li> <li>• Additional agencies/entities have been added to the list of potential RRWG participants.</li> <li>• See previous response regarding ADA terminology in the Draft RRMP.</li> <li>• Appendix 6 provides a range of years for each of the planned capital improvements. A range of 2-3 years is appropriate at this time since the planned recreation improvements will need to be incorporated into a master construction schedule for all planned construction-related projects under the new license. This will help maximize construction efficiency at the Project, while potentially limiting the length of time recreation sites are impacted by construction activities. SCL will develop a more precise schedule of construction-related actions at the Project pending issuance of the new license.</li> <li>• The qualitative assessment technique for dispersed sites has been clarified in the Recreation Monitoring Program.</li> </ul>

**RP Comment Letters/Emails on the Draft RRMP**

The USFS, NPS, and FERC provided written comments and/or guidance (via email) on the Draft RRMP (July 8, 2009 version). Copies of the written comments from each of these agencies are provided below.

## USFS – Kathleen Ahlenslager and Jann Bodie

Marjorie J Bodie <[mbodie@fs.fed.us](mailto:mbodie@fs.fed.us)> 7/15/2009 11:30 AM >>>

Michele, As I mentioned on today's conf. call, please note Kathy's suggestions on 4.5.2 Interpretive Subthemes. Thanks, jann

Jann Bodie  
Forest Landscape Architect  
Colville National Forest  
765 South Main  
Colville, WA 99114  
(509) 684-7190  
[mbodie@fs.fed.us](mailto:mbodie@fs.fed.us)

I suggest adding the items bolded to the list below, which is on page 39 of the Boundary Draft Recreation Resources Management Plan, under 4.5.2 Interpretive Theme and Subthemes, "Preliminary concepts or ideas for topics....."

### Terrestrial Resources

Habitat and rare, threatened, and endangered species protection  
Bank erosion and stabilization (in particular at dispersed shoreline recreation sites)

**Overview of the vegetation with common trees of the area**

**Common animals and birds seen in the area**

**Geological overview of the area**

### Aquatic and Fishery Resources

Conservation of native salmonids  
Bull trout identification and protection  
Proper fish handling (catch and release)  
Brook trout harvesting regulations in tributaries  
Minimizing the spread of invasive aquatic species  
**Orientation: how the Pend Oreille River fits into the larger watershed of the region**

### Cultural Resources

Rich and varied heritage of the Pend Oreille Valley  
Native Americans, early settlers/homesteaders  
Mining and hydroelectric development  
Fragile/irreplaceable nature of cultural resources

### Recreation and Aesthetic/Visual Resources

Recreation opportunities at the Project (and region)  
Appropriate visitor behaviors  
Wayfinding – directions, information, maps, etc.  
Scenic Canyon Reach and Peewee Falls  
Scenic Byway points of interest at the Project  
**Mission/vision of each of the state and federal landowners in the area (the public doesn't understand their roles/responsibilities)**

## NPS – Susan Rosebrough

In addition to the emailed comments below, Susan Rosebrough also provided comments and revisions in the Draft RRMP. Her comments and revisions are included after the email.

>>> <Susan\_Rosebrough@nps.gov> 7/14/2009 1:37 PM >>>

Hi Michele,

Thanks for the opportunity to review the RRMP. I was planning on making the meeting tomorrow and I'm sorry to say that I need to be at another meeting at the same time on the Sultan River.

The RRMP looks good and I appreciate the addition of the shoreline dispersed recreation use program. I've attached the RRMP with some track changes listed in the monitoring section, dispersed section, and Appendix 6. The main comments are similar to things we've talked about already and made comments on before, we'd like to see a few additional things included:

1. Boundary Dam portage
2. Interpretation: web-based and printed material for the Boundary Dam water trail
3. Trails to and connecting the two viewpoints

(See attached file: 20090708\_Draft\_Boundary\_RRMP\_with\_Appendices.srcomments.doc)

I'm sorry I can't make the meeting, I will try to call in mid-morning, but unfortunately, I'm involved in the Sultan River Settlement Agreement, and the recreation discussion recently got scheduled at the same time and I need to be a part of that. As you know settlement discussions are constantly in flux and I didn't know about this when we scheduled the Boundary meeting awhile back.

Thanks,

Susan

Susan Rosebrough  
National Park Service  
Rivers, Trails and Conservation Assistance  
909 First Avenue  
Seattle, WA 98104

206/220-4121(work)  
206/851-1657 (cell)  
susan\_rosebrough@nps.gov  
www.nps.gov/pwr/rtca

Comment/revisions in Draft RRMP (in bold):

Section 4.3.3, Page 29

It is anticipated that the designated shoreline sites (as well as other Project recreation sites) will be recognized by the Pend Oreille Water Trail group. SCL will cooperate with the Water Trail group to facilitate this use along Boundary Reservoir (via signage, management directives, etc.) at the request of the Water Trail group. **In the event that the water trail group is no longer functioning, SCL will continue to maintain and promote use of appropriate dispersed sites.**

Section 4.4.1, Page 36

Visitor Use Capacity

- Communicate to visitors other regional opportunities in an effort to help distribute use.
- Expand existing developed recreation sites and/or construct new developed recreation sites.
- Increase the number of designated dispersed shoreline recreation sites.
- Limit boat speeds.
- Increase boat ramp efficiency and capacity.
- Increase boater education efforts regarding Project operations.
- Implement a user fee at developed recreation sites.
- **Implement a permit system and/or cap use**
- **Complete an additional recreation use study to determine perceived crowding and desired use levels.**

Appendix 6, Page 6-2

Peewee Falls Viewpoint and Trail (new)

- Develop a new accessible trail and trailhead in the vicinity of the Vista House access road to a viewpoint of Peewee Falls.
- Develop a trail and appropriate support facilities, including parking, vault toilet, and signage.
- Extend FR 3165329 to a new gravel parking area and trailhead with a single-vault ADA toilet.
- **Trail at other viewpoint and connector**

Appendix 6, Page 6-2

Designated Dispersed Shoreline Recreation Sites (6)

- Enhance 6 shoreline recreation sites (3 BLM and 3 USFS sites) to accommodate boat-in camping and day use – typical enhancements will include 2 tent pads, 2 day use picnic tables, watercraft landing/tie-up area, signage, and sanitation systems.
- **10 sites –**
- **Boundary dam portage**
- **I & E web and printed material for water trail**

## FERC – Mark Ivy

Mark Ivy provided the following input on the Draft RRMP after the July 15, 2009 RP conference call.

From: Mark Ivy [Mark.Ivy@ferc.gov]  
Sent: Thursday, July 16, 2009 12:26 PM  
To: Michele Lynn; Everett, Chuck; Capozzi, Sergio  
Subject: ADA compliant facilities

Hello Sergio, Chuck & Michele,

I spoke with Hydropower Administration & Compliance staff and learned that including ADA compliant facilities in the RRMP is not an issue for them. They will not check to see if the developed facilities comply with ADA because it is outside the purview of the Commission, although the use of Universal Design is encouraged. The term "ADA compliant" is not allowed in the license order (the Commission uses "Universal Access"). Since the RRMP will likely be adopted in its entirety within the order, terminology should not be an issue.

Also I did not mean to imply yesterday that I am not interested in the implementation phase of the RRMP. On a personal level I would like to stay involved, but my official role ends with the license order. I have enjoyed participating in this planning process.

Sincerely,

Mark

Mark Ivy, PhD  
Outdoor Recreation Planner  
Division of Hydropower Licensing  
Federal Energy Regulatory Commission  
888 First Street NE  
Washington, DC 20426  
202.502.6156  
202.219.2152 (fax)

## Summary Notes from July 15, 2009 Draft RRMP Conference Call with RPs

### Seattle City Light Boundary Project Relicensing Recreation Resources Management Plan (RRMP) Teleconference July 15, 2009

#### In attendance

Jann Bodie, USDA Forest Service (USFS)  
Rich Bowers, Hydropower Reform Coalition (HRC)  
Sergio Capozzi, EDAW  
Chuck Everett, EDAW  
Randall Filbert, Long View Associates (LVA)  
Susan Harris, Pend Oreille River Tourism Alliance (PORTA)  
Michele Lynn, Seattle City Light (SCL)  
Carol Mack, Washington State University, Pend Oreille County Extension (WSU Extension)  
Mark Ivy, Federal Energy Regulatory Commission (FERC)

#### Teleconference Summary

##### **Agenda**

Michele Lynn (SCL) stated that the purpose of the teleconference was to get RPs' feedback on the draft Recreation Resources Management Plan (RRMP), which was distributed by SCL on July 8, 2009. Michele stated that SCL was not requesting text edits but was hoping to determine whether RPs generally agreed with the measures identified in the plan. Michele said that RPs would have the opportunity to provide written comments on the draft RRMP when it was filed with FERC on September 30, 2009.

Michele emphasized that the RRMP being discussed, which would be filed along with SCL's License Application in September 2009, did not necessarily include recreation measures being discussed as part of the Boundary Project settlement negotiations. Michele reminded RPs that content related to a potential Agreement in Principle (AIP) was confidential and therefore would not be discussed during the teleconference or incorporated into the meeting summary, which would become part of the public record.

Michele noted that Susan Rosebrough (National Park Service) had a last minute change of schedule and would not be participating in the teleconference but that she had provided comments on the draft RRMP to SCL via email.

Chuck Everett (EDAW) provided an overview of the content of the draft RRMP: 1) an introduction, which explained the purpose, scope, content and organization of the plan, the process for resolving conflicting guidance, and a characterization of baseline recreation conditions, development and use levels, and Project operations; 2) a description of roles, responsibilities, communication, and coordination, which included a description of the

Recreation Resource Workgroup (RRWG), RRWG meetings, the Annual Recreation Report and Work Plan, and periodic review and update of the RRMP; 3) a section describing Project vision, goals, and objectives, similar to what was presented in the Recreation Needs Analysis; and 4) the description of proposed recreation resource programs. Chuck emphasized that the RRMP would be filed with FERC as a draft, with the understanding that elements of the plan would need to be refined by SCL and the RRWG following issuance of the new Project license.

Sergio Capozzi (EDAW) reviewed SCL's proposed recreation resource programs: Recreation Facility Capital Improvements Program, Recreation Facility Operations and Maintenance Program, Shoreline Dispersed Recreation Management Program, Recreation Monitoring Program, Multi-Resource Interpretation and Education Program (see following sections).

### **Recreation Facility Capital Improvements Program**

Sergio Capozzi (EDAW) explained that the scale for Project-related recreation development ranges from Development Levels 0 to 5, with levels 0-2 generally corresponding to dispersed sites and levels 3-5 corresponding to developed sites (see Table 4.1-1 of the RRMP).

Sergio reviewed the proposed capital improvements in the RRMP:

- Vista House Recreation Area (existing; Level 5)
- Peewee Falls Viewpoint and Trail (new; Level 3/4)
- Tailrace Recreation Area/ Machine Hall Visitors' Gallery (existing; Level 5)
- Forebay Recreation Area (existing; Level 5)
- Metaline Falls Portage Trail (new; Level 3/4)
- Metaline Waterfront Park Boat Launch (existing; Level 5)

Sergio noted that the RRWG had visited the locations of the Peewee Falls Viewpoint and Trail and Metaline Falls Portage Trail during the May 5-6, 2009 site visits. Sergio said that to the extent practicable and appropriate, capital improvements would be designed using USFS recreation design guidelines (see Appendix 5 of the RRMP, USFS Built Image Guide – Rocky Mountain Province) and would be accessible per Americans with Disabilities Act (ADA) guidelines.

Chuck Everett (EDAW) stated that the Forebay Recreation Area will be used infrequently to maintain the Boundary Dam sluice maintenance gate, which will involve removing the gate from the dam and barging it to the Forebay Recreation Area, approximately every 10 years. Chuck stated that maintenance activities will take one year to complete and that during that time the sluice maintenance gate will occupy a 50 foot by 100 foot concrete pad in the recreation area. Chuck said the concrete pad, which will be used for boat launch parking when not used for sluice gate maintenance, will be housed within a temporary metal building for a portion of each maintenance period. Chuck said that recreation visitors will be notified of temporary site closures or other restrictions prior to maintenance activities and that SCL will minimize impacts to visitors to the extent practicable.

- *Comment* – Mark Ivy (FERC) asked whether SCL could transport the sluice maintenance gate to a less prominent location than the Forebay Recreation Area during the years that maintenance is required.  
*Response* – Chuck Everett (EDAW) replied that the sluice maintenance gate is a massive object, 35 feet by 70 feet and weighing over 300 tons, which requires a very sturdy foundation and cannot be moved far once it is out of the water. Chuck stated that SCL's engineers had evaluated all possible options, and periodic use of the Forebay Recreation Area was the only feasible option.
- *Comment* – Jann Bodie (USFS) asked if activities associated with the sluice maintenance gate could be conducted outside the recreation season (i.e., before Memorial Day or after Labor Day).  
*Response* – Michele Lynn (SCL) and Chuck Everett (EDAW) replied that maintenance activities associated with the sluice maintenance gate could not be conducted in winter because temperatures were too low to allow for certain tasks to be performed and that SCL's engineers had determined that at least some maintenance activities would need to take place during the recreation season. However, closure of the recreation area will be limited to when the gate is being transported to and positioned on the concrete pad, while the temporary housing is being erected, and other times if valuable equipment needs to be secured or other maintenance tasks require temporary closure. Michele stated that SCL was considering installing interpretive signs to explain the purpose for, and steps associated with, the maintenance work.
- *Comment* – Mark Ivy (FERC) asked if there were plans to construct a day-use area with parking in conjunction with the Metaline Falls Portage Trail.  
*Response* – Michele Lynn (SCL) replied that the RRMP being filed with SCL's License Application would not include a proposal to construct a day-use area with parking in association with the Metaline Falls Portage Trail. Michele said that the RNA did not identify a need for additional vehicle access locations for launching boats.
- *Comment* – Mark Ivy (FERC) stated that he needed to confer with FERC's Division of Hydropower Administration and Compliance (DHAC) to determine the authority FERC has as it relates to ADA directives; he said he believed that FERC generally directs licensees to provide “universal access.” Mark agreed to provide this information to Michele Lynn (SCL) by August 1, 2009.
- *Comment* – Mark Ivy (FERC) stated that the draft RRMP should be more specific regarding when measures are to be implemented, i.e., specifying the year following license issuance when a particular measure is to be implemented rather than providing a range of years during which implementation could occur.  
*Response* – Michele Lynn (SCL) replied that specific years, rather than ranges of years, would be identified in the final RRMP (to be developed after license issuance), and that all parties needed to be reasonable about how long some measures might take to implement, given the time required to complete agency consultation, develop final designs, and obtain necessary permits.

- *Comment* – Jann Bodie (USFS) asked if the draft RRMP was structured in a way that would allow for the incorporation of trail standards developed in the future by the USFS. *Response* – Sergio Capozzi (EDAW) stated that the draft RRMP could be updated to incorporate trail standards provided by the USFS.

### **Recreation Facility Operation and Maintenance Program**

Sergio Capozzi (EDAW) explained that the draft RRMP included a section describing the operation and maintenance (O&M) program associated with the capital improvements described above. Sergio noted that O&M associated with dispersed shoreline sites was addressed separately as part of the Shoreline Dispersed Recreation Management Program section of the draft RRMP. Sergio stated that Appendix 7 of the final RRMP will describe in detail maintenance standards and frequencies, routine maintenance activities, and major repairs associated with capital facilities.

### **Shoreline Dispersed Recreation Management Program**

Sergio Capozzi (EDAW) stated that the Shoreline Dispersed Recreation Management Program section of the draft RRMP outlined a framework for development and management of dispersed recreation sites along the reservoir shoreline. Sergio stated that the Recreation Resource Study had identified 25 dispersed recreation sites in the Project vicinity, 16 of which are located in appropriate locations along the reservoir shoreline. Sergio said that the proposed Shoreline Dispersed Recreation Management Program would focus on these 16 designated shoreline sites, as well as any new shoreline sites that might be created or developed during the new license term.

Sergio stated that during the new license term, new shoreline sites would only be established and managed if they meet suitability criteria to avoid conflicts with sensitive resources, such as wetlands, sensitive species and their habitats, and cultural resource sites. Sites would also have to be large enough for either day and/or overnight use, be accessible from land or water, and have low potential for erosion.

Sergio stated that during the first 10 years of the new license term SCL would enhance six sites to a Development Level 2 status:

- Site 2 (BLM Recreation Area)
- Site 4 (Ledbetter Cove)
- Site 7 (Deadman's Eddy)
- Site 12 (Lime Creek)
- Site 13 (Monument Bar)
- Site 14 (Wolf Creek)

Improvements to each of the six aforementioned sites will (at a minimum) include a fire ring, a tent pad or pads, and a primitive sanitation facility or other appropriate system. Sergio stated that the other 10 designated sites would remain at Development Level 0 until monitoring indicates a need for additional improvements. Michele Lynn (SCL) stated that SCL believed its

proposed approach to development of shoreline dispersed sites was consistent with the primitive, non-motorized use objective identified by the USFS. Sergio stated that the six sites will be displayed on Project maps and other media and that overnight use will be encouraged at these six improved shoreline sites, although day and overnight use will be allowed at the other 10 designated shoreline sites.

- *Comment* – Jann Bodie (USFS) agreed that SCL's proposed approach was consistent with USFS dispersed-use recreation objectives for the Project area and that the scope of the proposal reflected agreements made during the May 2009 site visit.
- *Comment* – Jann Bodie (USFS) stated that SCL's proposal for dispersed sites did not include installation of tables. She said that tables would still be consistent with Development Level 2 criteria, while helping to concentrate recreational use where SCL and the land management agencies considered use to be most appropriate.  
*Response* – Sergio Capozzi (EDAW) stated that picnic tables may also be considered at the improved shoreline sites. He also acknowledged that it is easier to increase development at a site than to reduce it, and accordingly SCL had decided to err on the side of less development at this time. Chuck Everett (EDAW) added that similar thinking had led SCL to allow for flexibility in terms of the type of sanitation facilities that would be constructed at the sites. Chuck said that SCL was proposing to wait until after license issuance, when more information is available, to finalize specifics regarding sanitation facilities.
- *Comment* – Jann Bodie (USFS) agreed that it would be prudent to wait until after license issuance to identify some development specifics for the dispersed recreation sites.
- *Comment* – Mark Ivy (FERC) noted that some of the dispersed sites identified for development were on BLM land and asked if SCL had been coordinating with the BLM regarding the draft RRMP.  
*Response* – Michele Lynn (SCL) replied that she had been keeping Jane Hughes (BLM) apprised of the proposals being made in the draft RRMP. Michele stated that the BLM would not likely get deeply involved in the process but generally supported the measures being proposed, the proposed level of development, and SCL's commitment to maintain the identified dispersed sites. Michele stated that SCL would work with the BLM to acquire an administrative agreement to conduct development on BLM land.
- *Comment* – Jann Bodie (USFS) asked whether the RRMP would contain language regarding potential limits on commercial and noncommercial uses of dispersed sites.  
*Response* – Sergio Capozzi (EDAW) stated that the draft RRMP contained no such language, but that limits for commercial and noncommercial use could be imposed by the land managers if a need for limits is identified based on the results of the recreation monitoring program. Michele Lynn (SCL) added that the RRWG will meet annually to review the previous year's actions and implementation status, and to discuss planned activities for the current calendar year. At that time, the RRWG could determine whether monitoring results indicate the need for imposing use limits at dispersed sites.

- *Comment* – Mark Ivy (FERC) asked if literature developed to promote the proposed water trail would encourage users to use the six dispersed sites identified for development.  
*Response* – Michele Lynn (SCL) replied that the water trail program was still in the early stages of its development and that details of what literature might be needed, and whether including specific details in any such literature to promote the water trail, would likely be made following license issuance.

## Recreation Monitoring Program

Sergio Capozzi (EDAW) stated that the Recreation Monitoring Program would measure recreation use levels and impacts, identify changes in visitor needs, and provide general guidance on management actions to address use-level or impact-related concerns. Sergio explained that monitoring would rely on three types of indicators: Visitor Use Capacity, Social Capacity, and Biophysical Capacity. Sergio noted that Table 4.4-1 of the draft RRMP provided a detailed description of the recreation monitoring indicators and standards.

Sergio explained that Visitor Use Capacity measures include the number of people or vehicles using a resource at one time, surface water area per watercraft, and occupancy rates at recreation sites. Social Capacity measures interactions between visitors, including perceived crowding, group encounters, and conflict levels. Biophysical Capacity measures recreation-related impacts on natural or cultural resources and only has relevance at dispersed shoreline sites and use areas. Sergio stated that most recreation-related monitoring would take place every six or 12 years to coincide with FERC Form 80 reporting but that some tasks would be completed annually. Sergio noted that SCL will also coordinate monitoring with USFS and BLM monitoring to improve efficiency and allow data to be compared with regional data; for example, SCL could fashion periodic visitor surveys to be similar to those used by the USFS as part of its National Visitor Use Monitoring process.

- *Comment* – Mark Ivy (FERC) asked whether actual perimeter measurements of dispersed sites, rather than qualitative estimates of site size, i.e., small, medium or large, would produce more reliable monitoring results.  
*Response* – Sergio Capozzi (EDAW) replied that perimeter measurements of dispersed recreation sites can introduce systematic reliability problems and that qualitative assessments of site size, coupled with photographs, reduce observer bias and make results more comparable over time (per recent recreation-related research).
- *Comment* – Mark Ivy (FERC) asked how SCL had determined that the RRWG would consist of the USFS, BLM, and SCL. Mark stated that the Pend Oreille County PUD and the towns of Metaline and Metaline Falls would be affected by the implementation of measures included in the RRMP.  
*Response* – Chuck Everett (EDAW) replied that the USFS and BLM were specifically identified because they are the agencies with primary land management responsibilities along the reservoir shoreline, but there was no attempt to limit attendance to these entities. Chuck stated that the PUD, the towns of Metaline and Metaline Falls, and any other interested entities would be welcome as members of the RRWG. Michele added

that any group joining the RRWG at a later date would need to respect the decisions made by the current RPs (and reflected in the RRMP).

### **Multi-Resource Interpretation and Education Program**

Sergio Capozzi (EDAW) stated that the draft RRMP outlined SCL's proposed Multi-Resource I&E Program, which would enhance the visitor experience, encourage participation in environmental protection measures, and promote safety. Sergio acknowledged that the I&E program, as presented in the draft RRMP, was still very preliminary and that specifics associated with its implementation would be finalized with the RRWG following license issuance.

Sergio stated that the I&E program would be built around a prominent Project area theme, supported by subthemes, topics, and messages. Sergio explained that the resource-specific themes presented in the draft RRMP had been provided by technical leads for the respective resource areas. Sergio noted that more detail, including specific messages, media to be used, and coordination with other programs would be developed during refinement of the RRMP.

- *Comment* – Jann Bodie (USFS) stated that she would send Michele Lynn (SCL) a list of I&E content suggestions drafted by the CNF botanist.  
*Response* – Michele Lynn (SCL) replied that SCL would appreciate the suggestions but noted that the description of the I&E program in the draft RRMP would remain preliminary for the September 2009 filing. The specific themes, topics, and messages of the program will be developed and incorporated into the RRMP after license issuance.
- *Comment* – Susan Harris (PORTA) asked for the name of the SCL contact person associated with the I&E program, stating that coordination between SCL and those administering the water trail program should take place before the scope of the I&E program is defined.  
*Response* – Michele Lynn (SCL) replied that at the current time there was no SCL contact person designated for the I&E program and that greater specificity related to the I&E program probably would not be developed until after license issuance (i.e., likely no earlier than 2012). Michele explained that SCL could not invest in the specifics of the I&E program until FERC issued its license order.

### **Draft RRMP Appendices**

Sergio Capozzi (EDAW) listed and briefly explained the proposed content of the appendices to the draft RRMP:

- Appendix 1: Relicensing Participants Consultation
- Appendix 2: Existing Project Recreation Sites and Use Areas
- Appendix 3: Annual Recreation Report and Work Plan – Draft Template
- Appendix 4: Planned New/Enhanced Recreation Sites and Use Areas
- Appendix 5: USFS Built Image Guide – Rocky Mountain Province
- Appendix 6: RRMP Implementation Schedule and Cost
- Appendix 7: Project Recreation O&M Standards

## **Action Items**

- SCL agreed to review the date ranges for recreation capital improvements in the draft RRMP. More specific dates may be included if practicable based on the full suite of license-related resource proposals. If more specific dates are not possible for the draft RRMP, SCL will refine them for the final RRMP (to be developed following license issuance).

## **Closing**

Michele Lynn (SCL) stated that based on the teleconference it appeared that everyone was in general agreement with the measures proposed by SCL in its draft RRMP. Jann Bodie (USFS) and Mark Ivy (FERC) concurred. Michele stated that there would be no more RP reviews of the draft RRMP prior to SCL's filing of its License in September 2009.

The teleconference concluded at 10:30 am.

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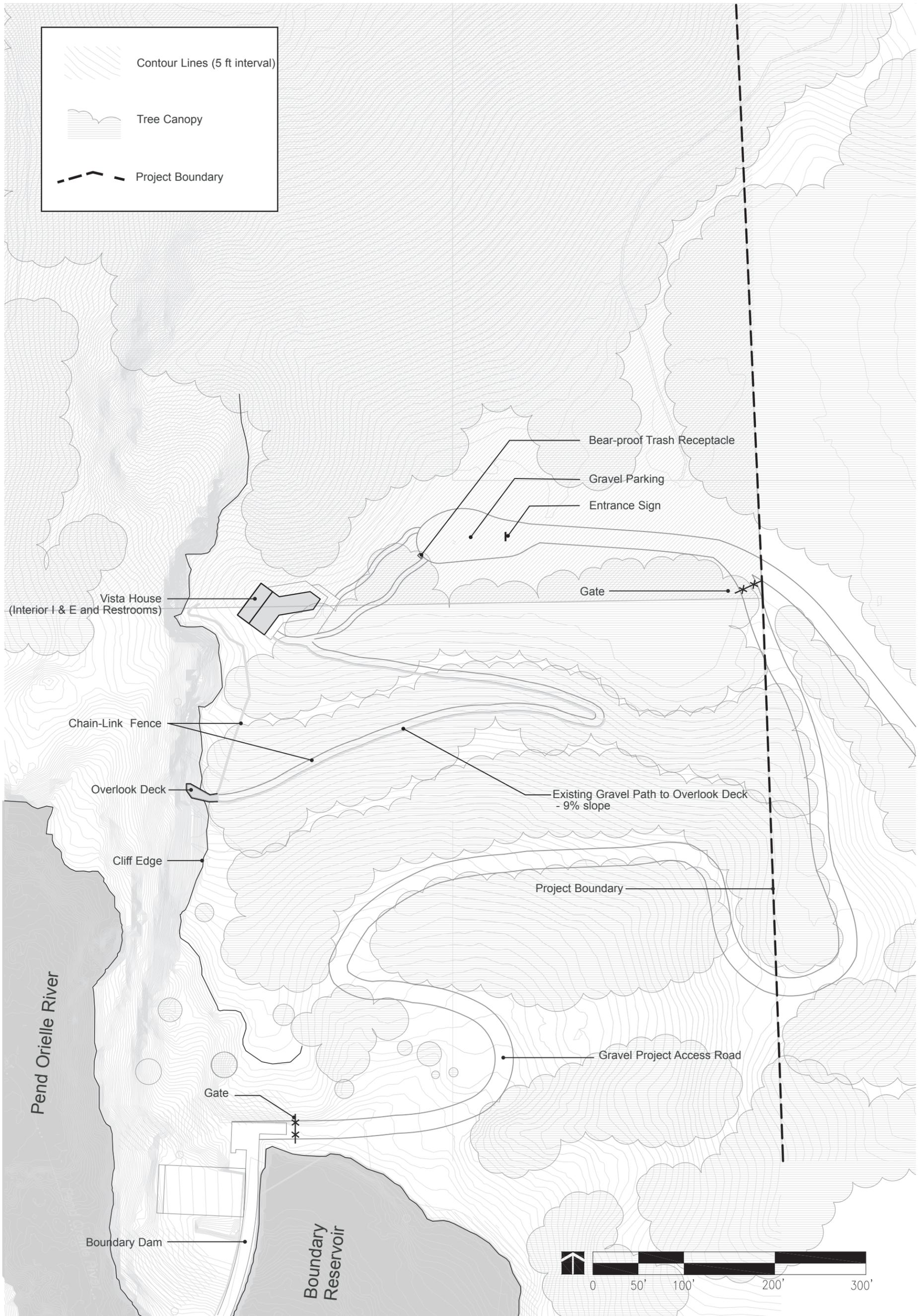
## **Appendix 2 Existing Project Recreation Sites and Use Areas**

*This appendix contains conceptual site plans for SCL's existing developed recreation sites, including:*

- *Vista House Recreation Area*
- *Tailrace Recreation Area/Machine Hall Visitors' Gallery*
- *Forebay Recreation Area*

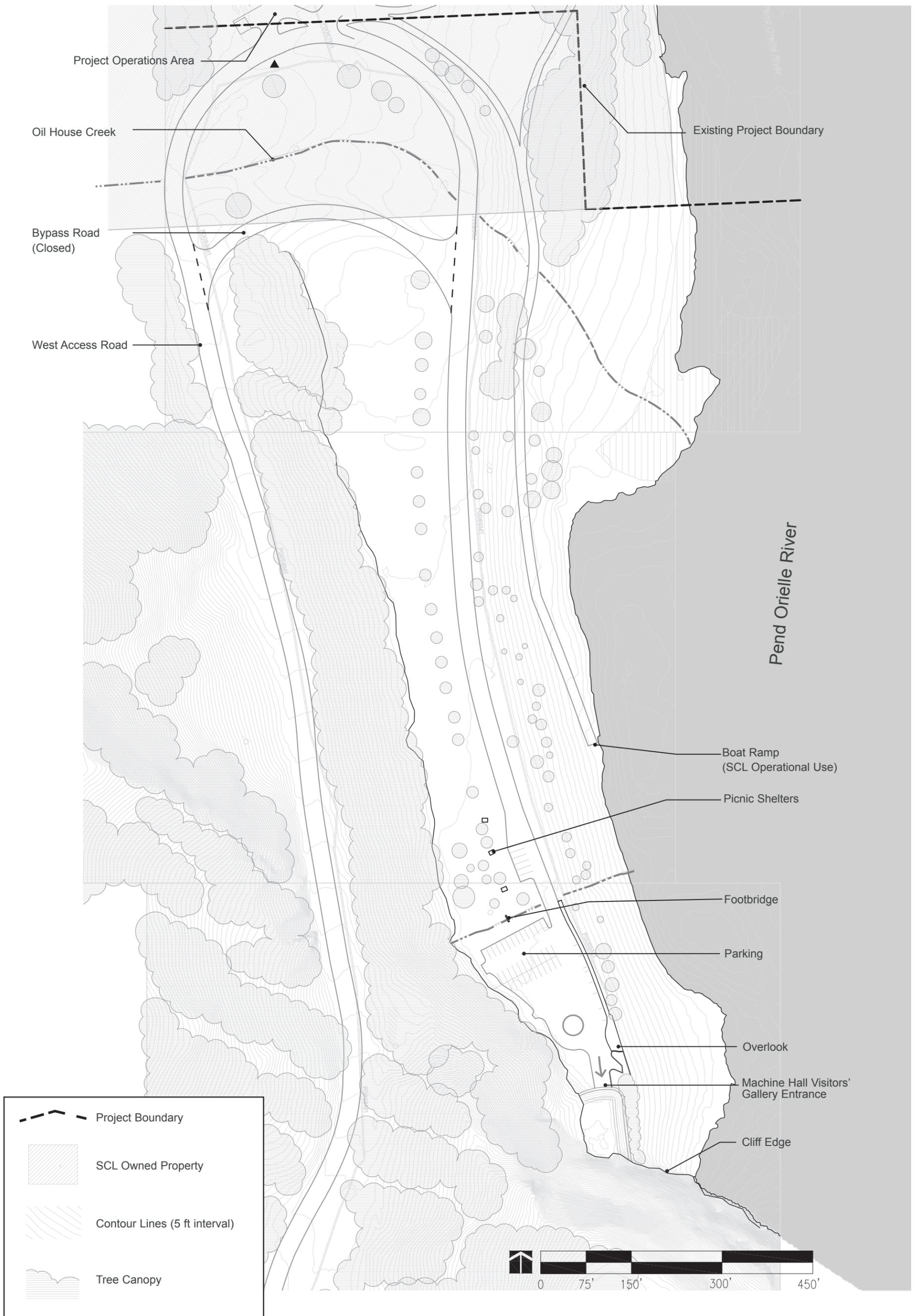
*Planned improvements/enhancements at these sites under the new FERC license are described in Appendix 4.*





## Vista House Recreation Area (Existing)





Tailrace Recreation Area (Existing)





Forebay Recreation Area (Existing)



## **Appendix 3 Preliminary Annual Recreation Report and Work Plan Template**

*This appendix contains a preliminary template for the Annual Recreation Report and Work Plan (ARRWP). SCL will use the ARRWP to report and plan recreation actions during the new license term. SCL will revise the preliminary ARRWP template during the first year of the new license. The template may also be revised, if needed, during the license term.*



## **Preliminary Template – Annual Recreation Report and Work Plan**

The intent of the Annual Recreation Report and Work Plan (ARRWP) is to annually summarize key accomplishments and plan future recreation-related actions and measures under the new FERC license for the Boundary Hydroelectric Project (FERC Project No. 2144). Seattle City Light (SCL) is responsible for completing the ARRWP on an annual basis per the schedule described in Section 2.2.2. Prior to filing the ARRWP with FERC, SCL will solicit review and input from the Recreation Resources Workgroup (RRWG), per the instructions described below.

The ARRWP consists of three components:

1. Previous Calendar Year Summary of Recreation Actions and Measures - this component of the ARRWP is intended to provide a broad overview of implementation actions completed during the previous calendar year. It will use the format presented below and will include a summary of planned and actual funding, completed actions (stated as brief, bulleted points), and any other pertinent notes.
2. Planned Recreation Actions and Measures in the Next Calendar Year - this component is intended to provide a summary of actions and measures planned for the next calendar year. It will use the format presented below and will include a planned funding estimate, list of actions, and any other pertinent notes.
3. Attachments - this component will include a consultation record that documents the RRWG review of the draft ARRWP, periodic monitoring reports, and any other pertinent information that supports the continued implementation of the RRMP.

**ANNUAL SUMMARY**

Calendar Year: \_\_\_\_\_

	<u>Planned</u>	<u>Actual</u>
Capital Improvement Budget	\$	\$
Operations and Maintenance Budget	\$	\$
<b>Total</b>	\$	\$

**Summary of Completed Actions:**

---

Recreation Facility Capital Improvements

- 
- 

Project Recreation Facility O&M

- 
- 

Shoreline Dispersed Recreation Management

- 
- 

Recreation Monitoring

- 
- 

Multi-Resource I&E

- 
- 

**Notes:**

---

**WORK PLAN**

Calendar Year: \_\_\_\_\_

	<u>Planned</u>
Capital Improvement Budget	\$
Operations and Maintenance Budget	\$
<b>Total</b>	\$

**Summary of Planned Actions:**

---

Recreation Facility Capital Improvements

- 
- 

Project Recreation Facility O&M

- 
- 

Shoreline Dispersed Recreation Management

- 
- 

Recreation Monitoring

- 
- 

Multi-Resource I&E

- 
- 

**Notes:**

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**ATTACHMENTS**

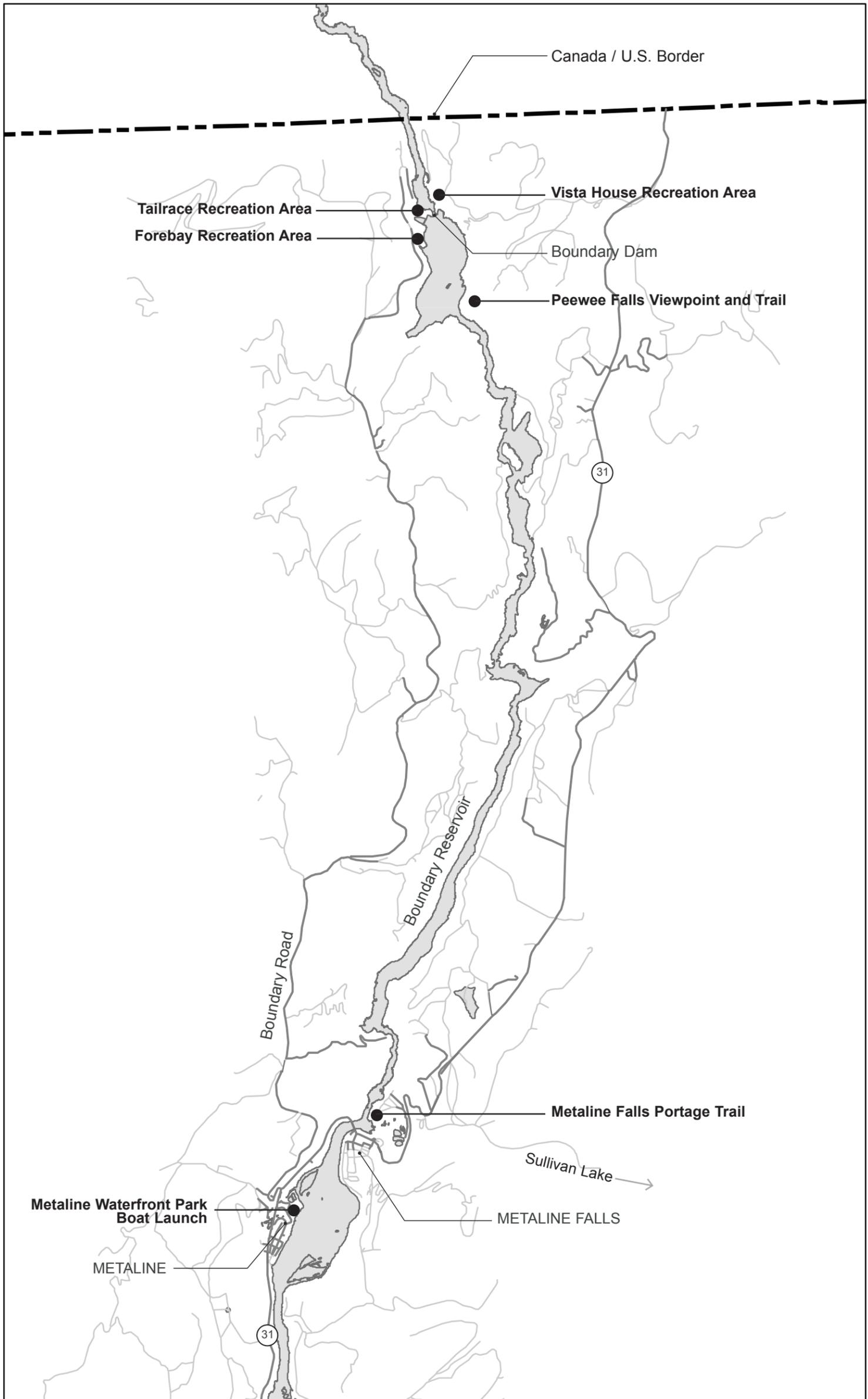
*To be included in the future.*

## **Appendix 4 Planned New/Enhanced Recreation Sites and Use Areas**

*This appendix contains conceptual site plans for the developed recreation sites that will be constructed or enhanced by SCL under the new license, including:*

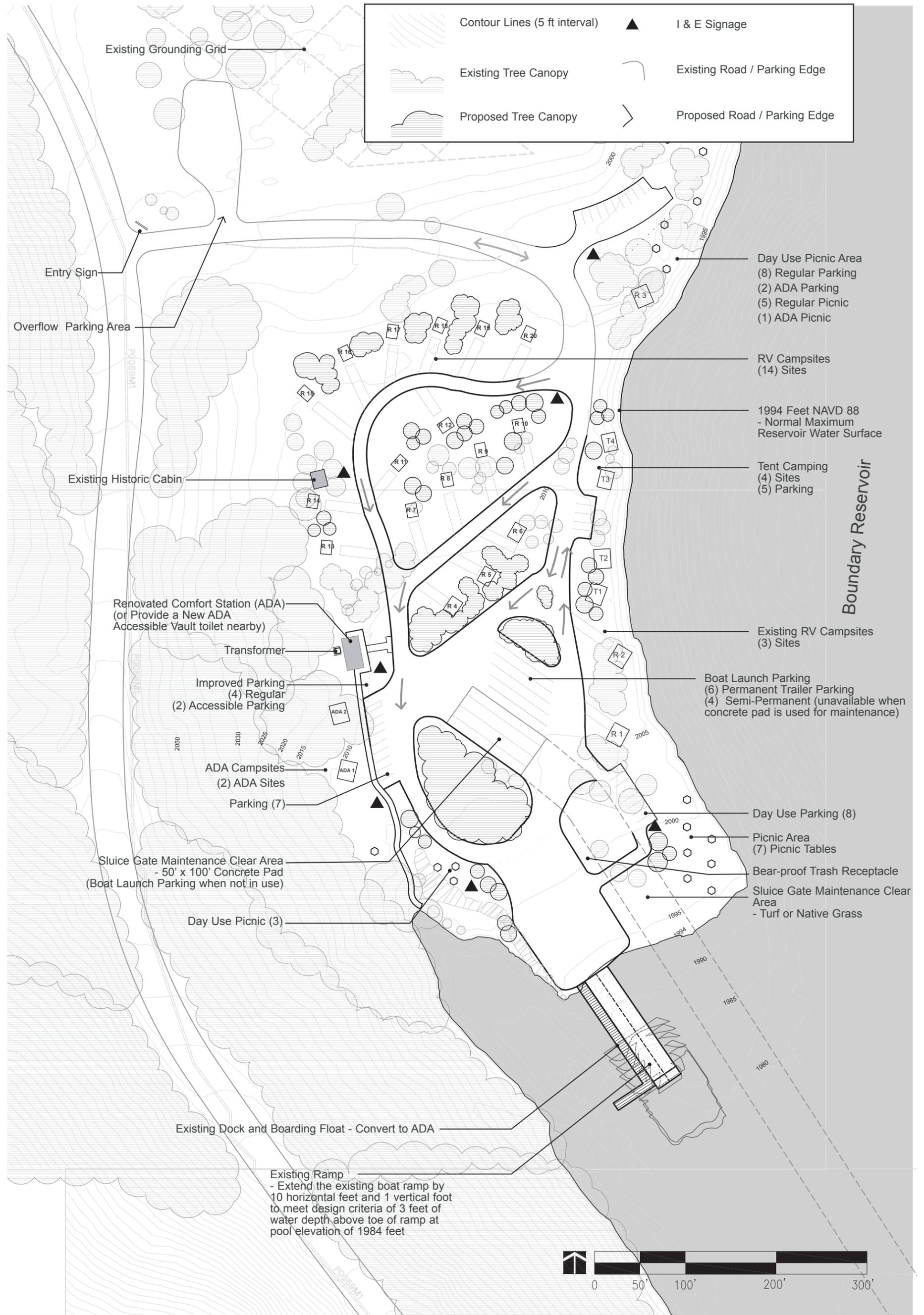
- *Vista House Recreation Area*
- *Peewee Falls Viewpoint and Trail*
- *Tailrace Recreation Area/Machine Hall Visitors' Gallery*
- *Forebay Recreation Area*
- *Metaline Falls Portage Trail*
- *Metaline Waterfront Park Boat Launch (the boat launch only, not the entire park)*





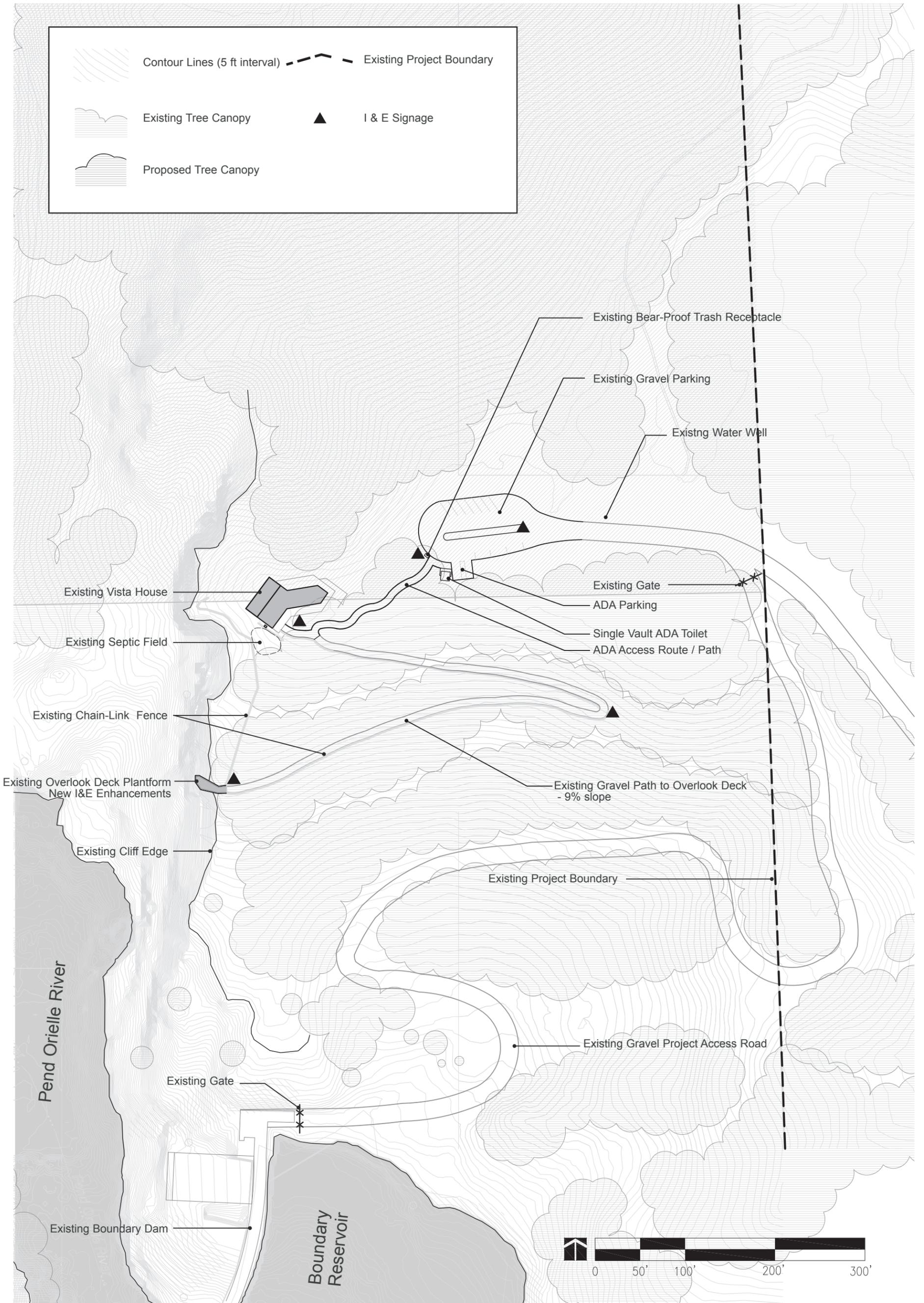
Locator Map





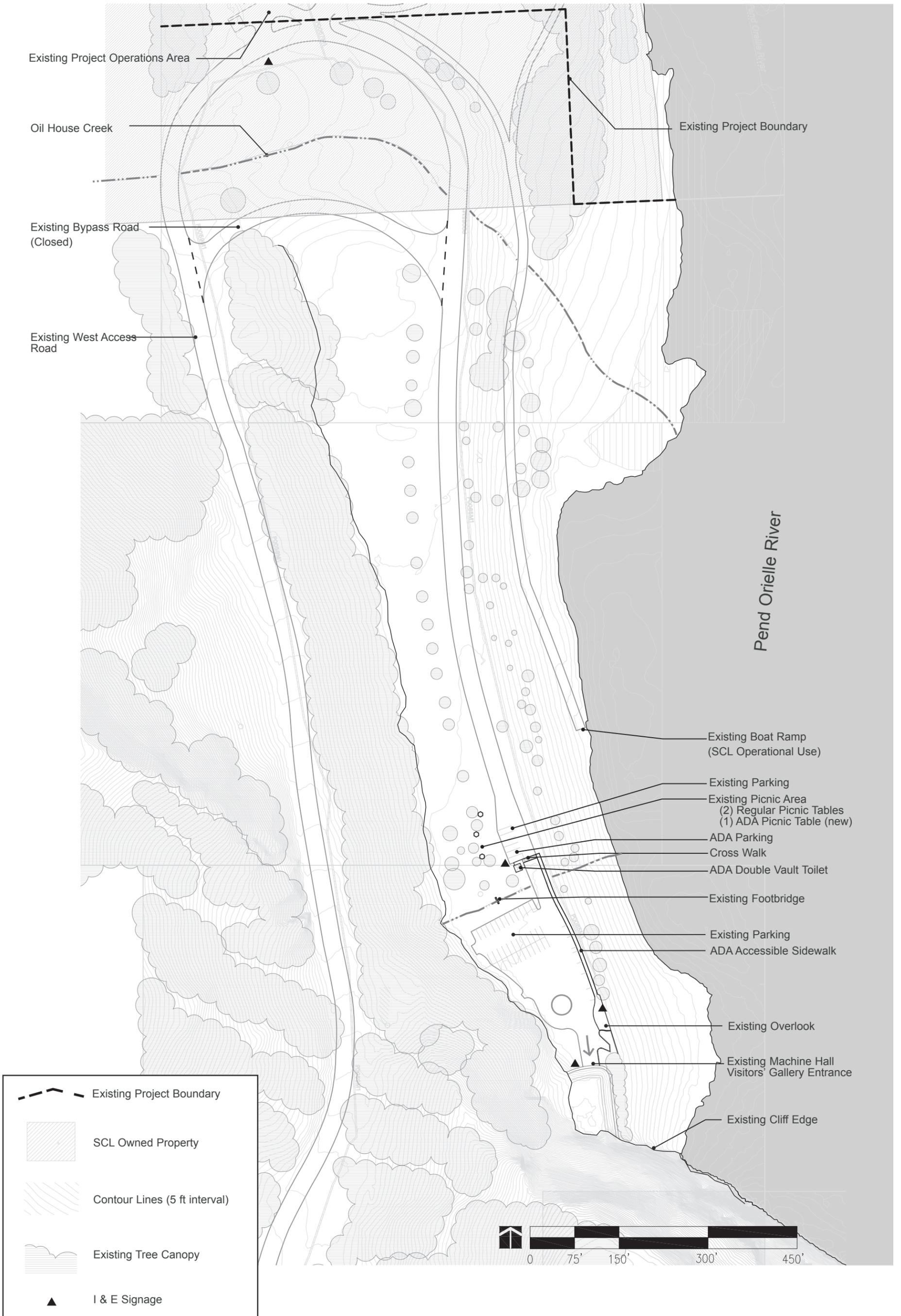
## Forebay Recreation Area





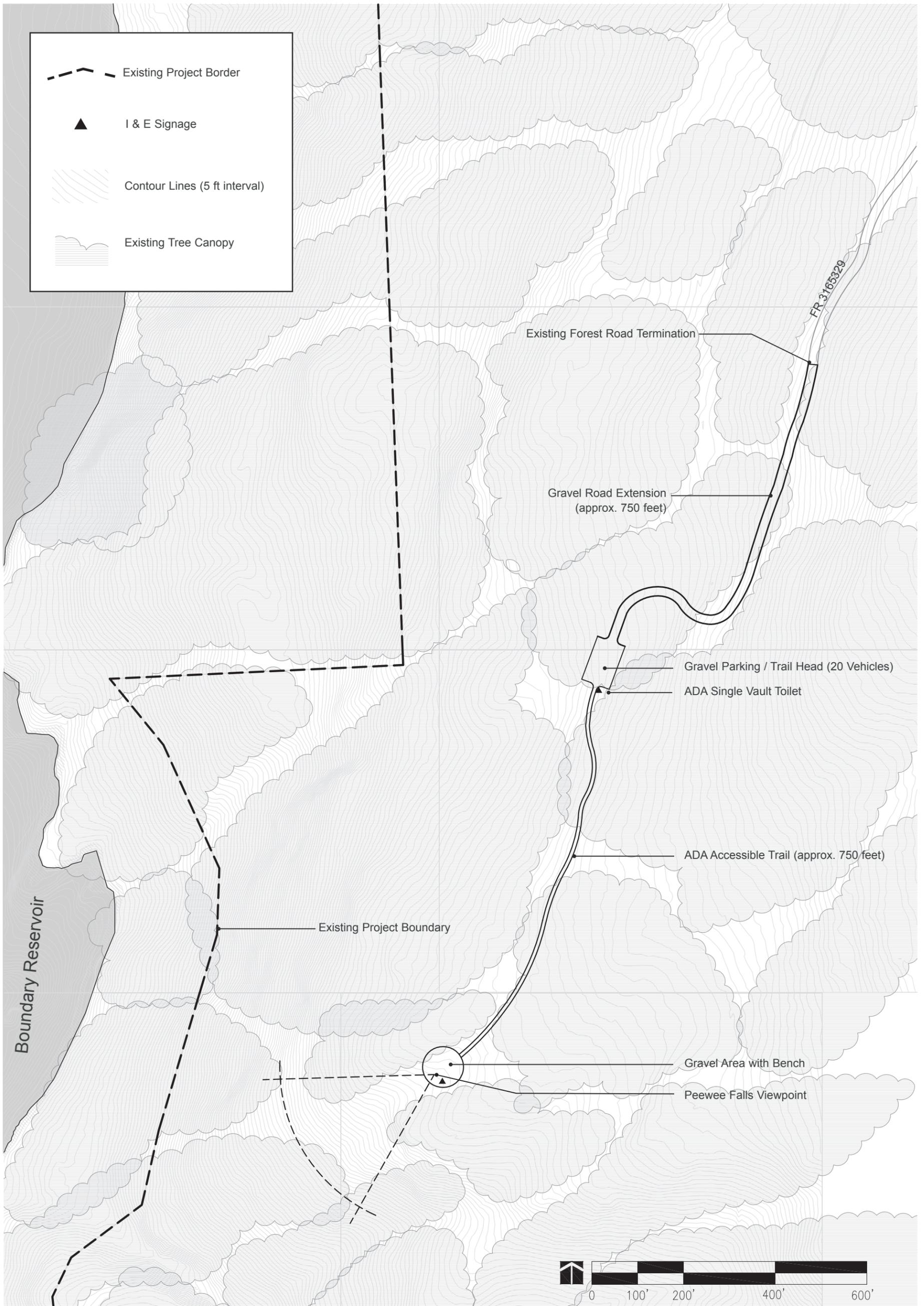
## Vista House Recreation Area





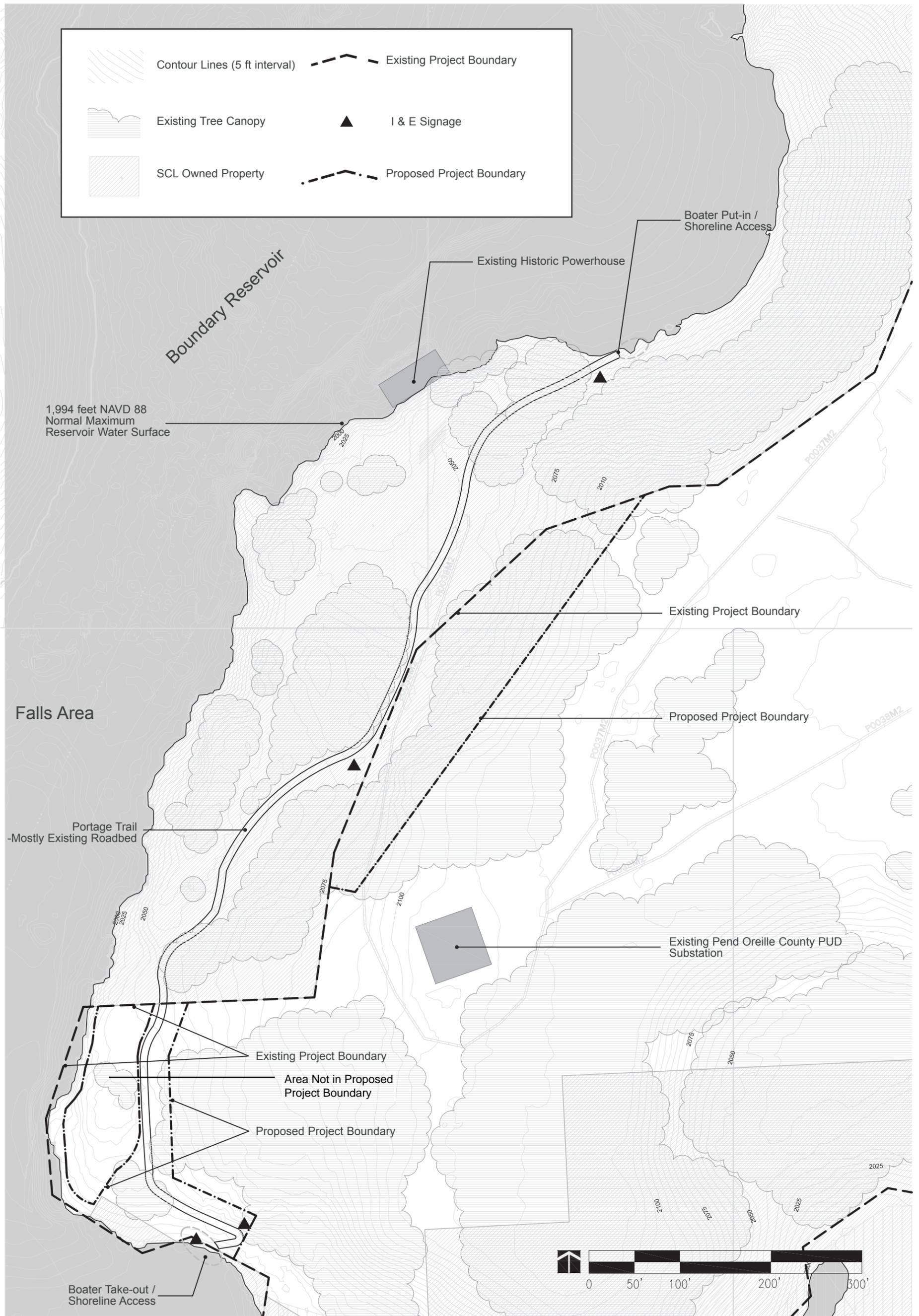
Tailrace Recreation Area





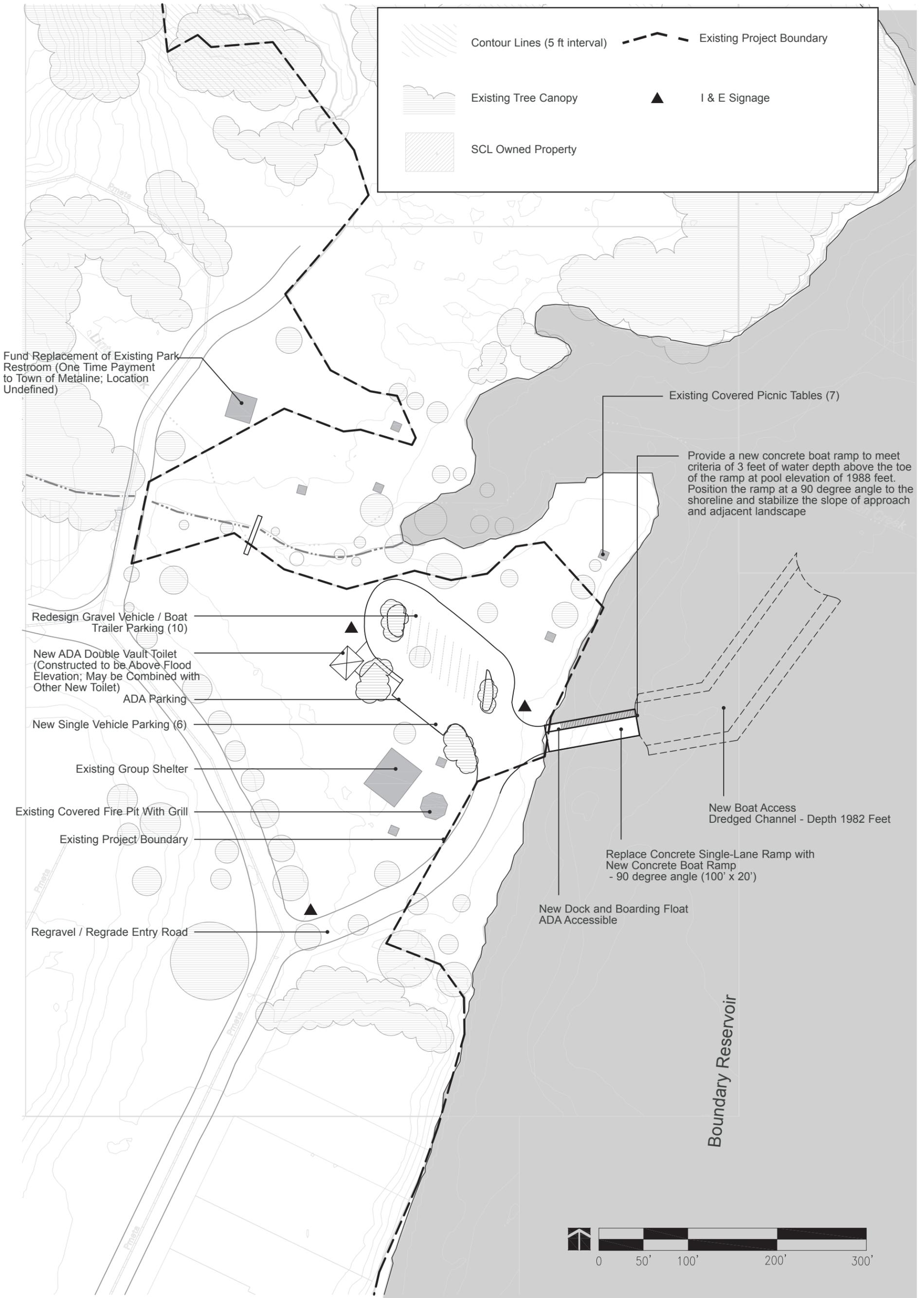
## Peewee Falls Viewpoint and Trail





## Metaline Falls Portage Trail





## Metaline Waterfront Park Boat Launch



## **Appendix 5 USFS Built Image Guide – Rocky Mountain Province**

*This appendix provides an excerpt from the Built Environment Image Guide for the National Forests and Grasslands (Image Guide) (USDA-FS 2001) that provides appearance and design guidance for the Rocky Mountain Province, which includes the Project. It also includes Appendix C of the Built Image Guide, which provides ROS design-related guidance. SCL will use the Image Guide for Project-related recreation development on National Forest System (NFS) lands; SCL will consult and incorporate, as appropriate, the Image Guide for Project-related recreation development on other (non-NFS) Project lands.*

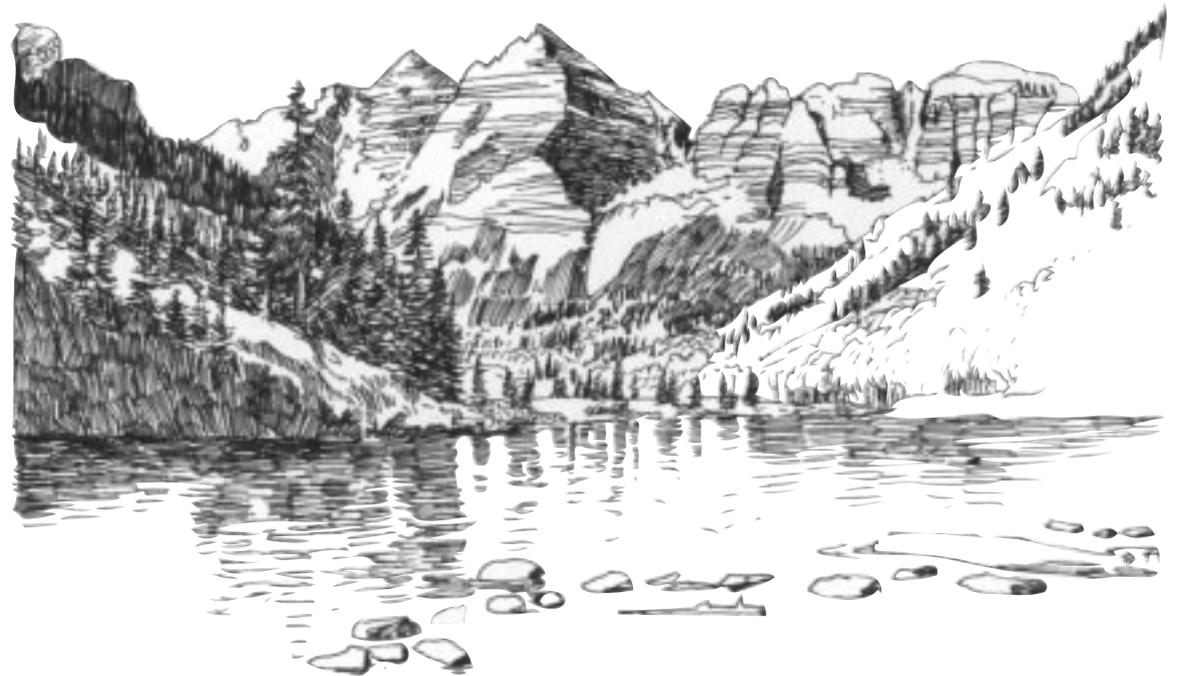


Chapter 4.6

## The Rocky Mountain Province

*“If we build in sensible ways, responding to the opportunities and limitations afforded by each site, the light, climate and topography, we will also begin to reinforce the distinctive character of our region, deepening its residents’ sense of place.”*

—Jeff Limerick





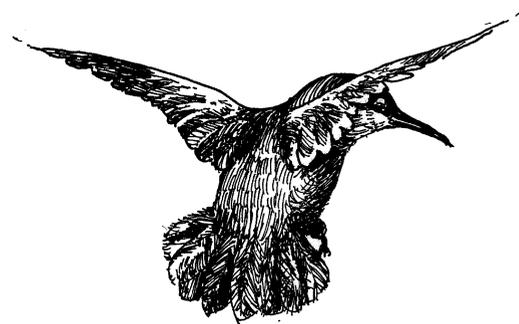
## OVERVIEW: CHARACTER OF THE ROCKY MOUNTAIN PROVINCE BUILT AND NATURAL ENVIRONMENTS

The Rocky Mountain Province contains some of our Nation's most celebrated landscapes. It also is a repository for examples of rustic architecture and landscape design that match the scale and materials of the province's mountains, valleys, and canyons. From the historic lodges of Yellowstone to the contemporary mountain resorts, this province offers many examples of buildings, roads, and site furnishings that seem to grow from their landscape settings. Author Harvey Kaiser notes that the Old Faithful Inn embodies the three "key working principles" of rustic design: "use of natural, local materials; allusions to pioneer building techniques; and strong ties to the site."

Contemporary Forest Service design should synthesize rustic precedents with contemporary needs and realities. For example, historic rustic architecture appeared comfortable within the forest, but this effect was frequently achieved by placing a veneer of natural materials over a conventional building. Today's Rocky Mountain structures may not always use natural materials. Yet they can still complement their settings, be more durable, consume less energy, and lay more lightly within the landscape than structures from previous eras.

The province's vast landscapes dwarf buildings and structures. Even though the landscape is overpowering in scale, it is fragile. Once disturbed, it heals slowly, if at all. Poorly designed buildings protrude awkwardly and destroy the long, open vistas that westerners treasure.

While this can be a challenging province in which to build, it also has high potential to promote sustainable designs built from locally harvested, renewable materials. It can take advantage of passive and active solar, as well as wind power.



## INFLUENCES ON ARCHITECTURAL CHARACTER

### LANDSCAPE AND ECOLOGICAL

The Rocky Mountain Province is generally sunny, dry, cool, and windy with long, sweeping vistas. In addition, the broad valleys, parks, and high plateaus of the mountains feature prairie-like qualities, such as flat land, grasslands instead of forests, and long views.

Geology is varied. It changes from exposed sedimentary sandstone in the foothills to granite outcrops in alpine glacier fields. Buildings may be enclosed by vegetation and landforms, with more limited vistas than in other provinces. Vegetation is more abundant and large scaled, including coniferous and deciduous forests with juniper, pinon, fir, spruce, lodgepole pine, willows, aspens, scrub oak, and cottonwoods.

The Rocky Mountain Province can be divided into foothills, broad mountain valleys, narrow valleys and canyons, alpine, and high plateaus.

The glaciated terrain of northern Idaho, western Montana, and eastern Washington encompasses some 38,100 square miles which includes rugged mountains, steppes, coniferous forests, and alpine meadows. Winters are harsh and skies are more gray than blue. Greater precipitation (compared to the rest of the province) makes possible stands of trees, such as giant western red cedar.

The middle and southern Rocky Mountains encompass a 102,300-square-mile area. Vegetation occurs in zones from the foothills (where grasslands and ponderosa pine dominate), to the subalpine spruce-fir forests, to the tundra of alpine areas above 14,000 feet. The mountains are punctuated by broad, flat valleys called “parks.”

The coniferous Black Hills area in South Dakota, Nebraska, and Wyoming, springs from a core of Precambrian rock rising between 1,000 and 5,000 feet from the Plains Province. Trees range from white spruce, to eastern broadleaf species, such as ash and oak, to ponderosa pine and aspen. There are no alpine zones in these low mountains.

### CULTURAL

This province contains some of the oldest structures in the United States, dating to the cliff dwellings and pueblo villages constructed by the Anasazi peoples. Yet we consider it a “new” province in America’s history because it was settled by Europeans well after the East Coast or the Southwest.

*Cultural influences include:*

*Farming and Ranching:* Isolated in windswept, sun-beaten settings, the traditional farms and ranches of the Rocky Mountain Province provide excellent examples of architectural response to climate. They were built from materials available nearby. Their orientation and rooflines were carefully planned to withstand snow loads, high winds, and hot sun. They were often clustered in sheltering, village-like complexes making them flexible for changing uses and adaptations.

*Mining:* Mining structures, such as headframes, are among the province's industrial landmarks. They are unadorned, muscular structures, frequently built on the steepest and most sensitive natural landscapes. Although the mining legacy is sometimes that of environmental destruction, the simple and powerful structural forms continue to inspire new designs. Mining towns were built quickly with log cabins and shacks. After the railroads arrived, the more prosperous towns evolved, grew, and created sophisticated urban architecture derived from the towns and cities of the East. Cities such as Aspen, Colorado, and Park City, Utah, built fine hotels and opera houses that endure today as landmarks.

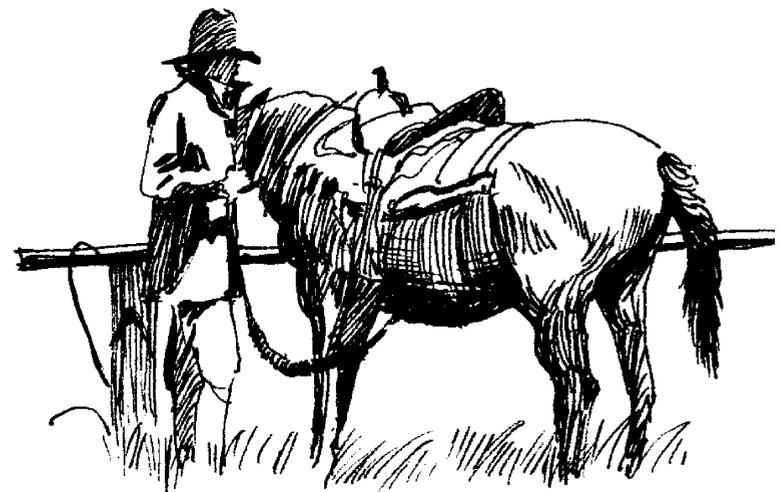
*Railroads:* They not only shaped the landscape and influenced settlement patterns, they also allowed building materials and prefabricated building parts, such as cast-iron façades, to be shipped from other provinces.

*Immigration:* The first European settlers imported their own building traditions, styles, and techniques. The mountain town of Crested Butte, Colorado, contains numerous examples of wooden Gothic buildings that Croatian carpenters constructed using Central European styles. Other important influences include Spanish, Mexican, and Mormon styles.

*Rustic Style:* In the first half of this century, the National Park Service and the Forest Service adapted the rustic style, which had been developed from models such as Swiss chalets and 19th century Adirondack lodges. Influential examples include the Old Faithful Inn at Yellowstone (1904) and the Timberline Lodge on Mt. Hood (1937).

Rustic-style buildings, often built by the CCC, are highly crafted structures featuring native stone and unhewn logs. The scale of details can be massive, even in the cases of kiosks or cabins. The rustic style was popularized in the 1900 to 1940 era by resort developers like Averill Harriman, who called Sun Valley, Idaho, the St. Moritz of America. In the Rocky Mountain Province, the public associates images of rustic-style lodges with recreation.

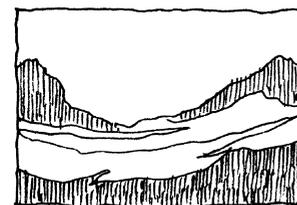
*Solar-oriented and Sustainable Design:* For three decades, the Rocky Mountain Province has been a leader in this area. This is in part because ever-present sunshine can be harnessed for heat and power. Institutions such as the Rocky Mountain Institute in Snowmass, Colorado, have provided leadership in "green" building and design.



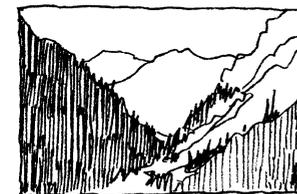
## SUMMARY OF INFLUENCES AND RESPONSES THAT SHAPE THE CHARACTER OF THE BUILT ENVIRONMENT

### ECOLOGICAL INFLUENCES

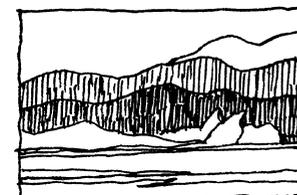
- Sparse rainfall.
- Low humidity.
- Abundant and intense sunlight.
- Dramatic freeze-thaw cycles.
- Visible geology—an abundance of rock visible on the Earth's surface.
- Long vistas with dramatic views.
- Wide-open landscapes that provide little sense of enclosure or sheltering from wind and sun.
- High winds.
- Thin soils.
- Less diverse vegetation compared to more humid, rainy provinces.
- Mountainous terrain including the high peaks that form the “spine of the Nation.”
- High elevation.
- Clear, brilliant skies.



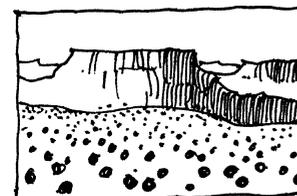
Broad mountain valleys



Narrow mountain valleys



Foothills



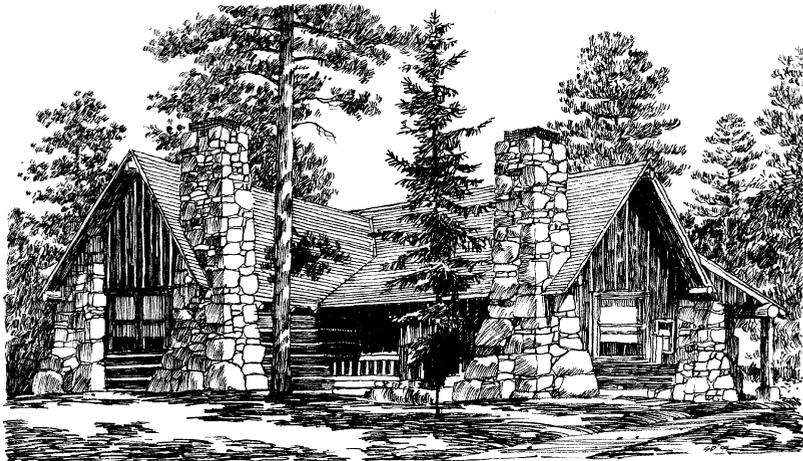
High plateaus

## CULTURAL INFLUENCES

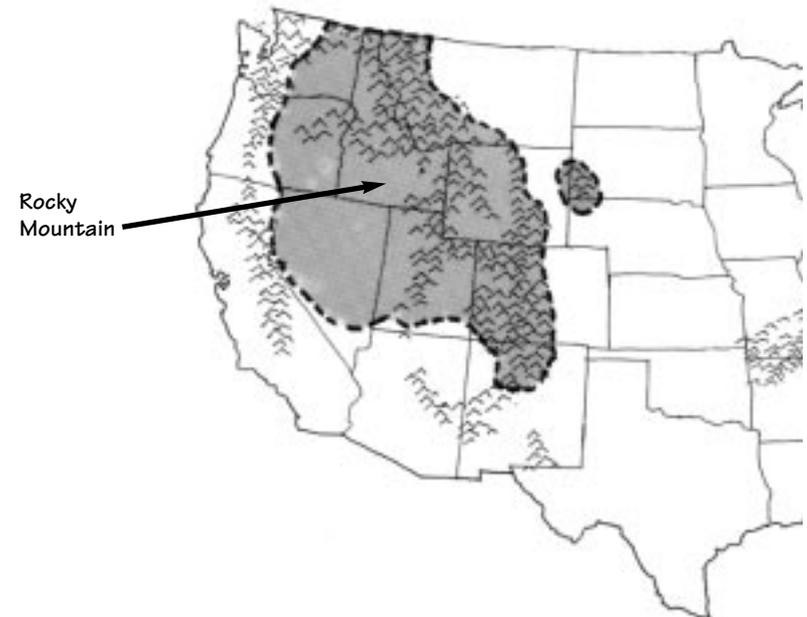
- European, Mormon, and Native American cultures.
- Mining.
- Ranching.
- Tourism, including national parks and resorts.
- Fast growing population with strong demands and expectations for all kinds of recreation.
- Strong heritage of rustic architecture and design.
- National forests and other public lands that comprise the majority of acreage.
- Strong public expectation for “wilderness experience.”

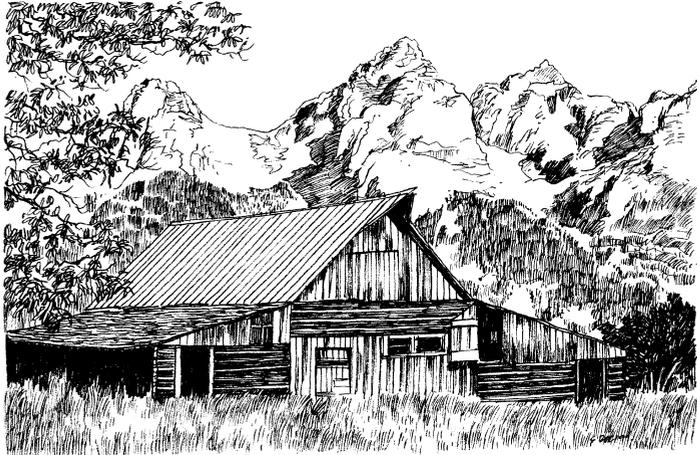


Native American influence



Rustic influence





Ranching influence



Mining influence

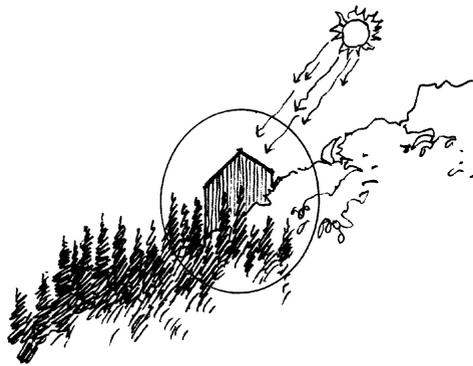


Railroads

## ARCHITECTURAL GUIDELINES FOR THE ROCKY MOUNTAIN PROVINCE

### SITING

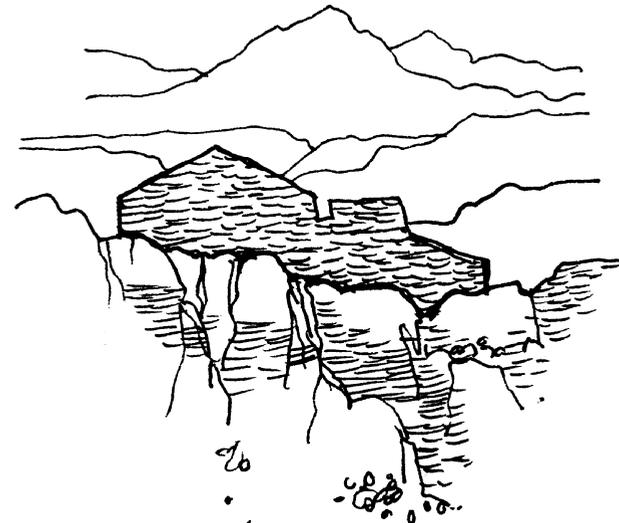
- Locate structures at the edges of clearings.
- Place buildings on the south side of dense vegetation or mountain slopes to ensure adequate sun for heat and light.
- Use low vegetation on the north side to anchor buildings to their sites.



On edges: good sun exposure



Structures located at transitions



Building in context with geological setting



Structural forms echo landscape forms

## MASSING AND SCALE

Mountain buildings and structures can be dwarfed by the grandeur of the soaring forests and rugged geological formations that surround them. Mountain buildings set within overscaled landscapes often include overscaled building elements, such as oversized doors and windows, heavy timber structures, and boulders incorporated into the building base. Such elements help humans relate to the overpowering scale of the landscape.

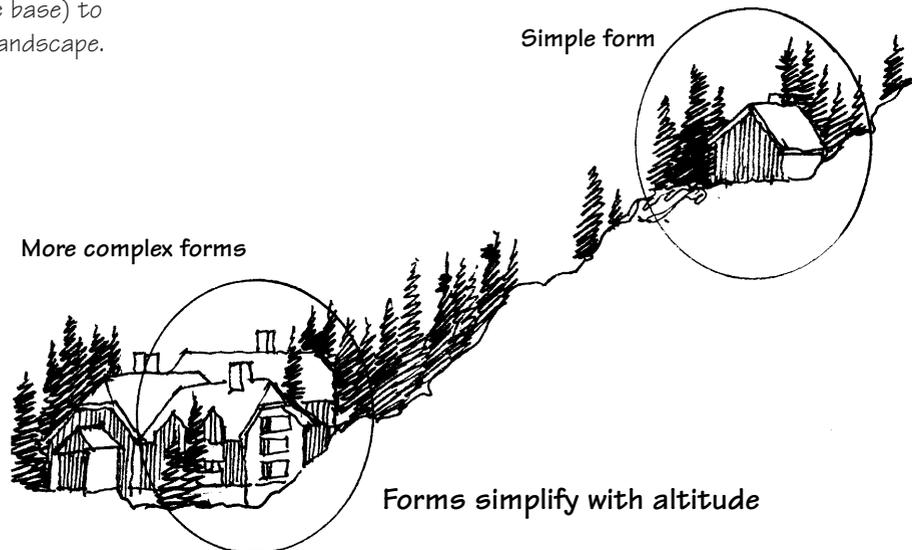
- Use simple, compact forms.
- Break up larger buildings with similarly shaped smaller masses.
- Repeat simple forms.
- Use large-scale building materials (such as boulders at the base) to match the scale of the landscape.



Large-scale materials



Simple form



Repetition of simple forms

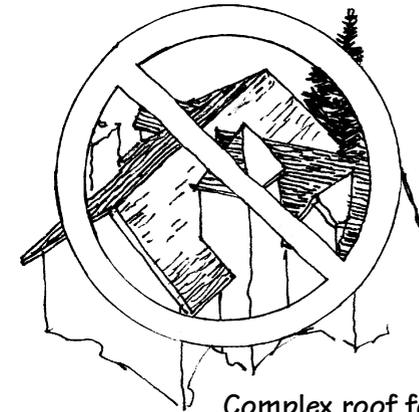
## ROOFS

Roofs should convey a strong sense of protection. They typically dominate the architectural composition.

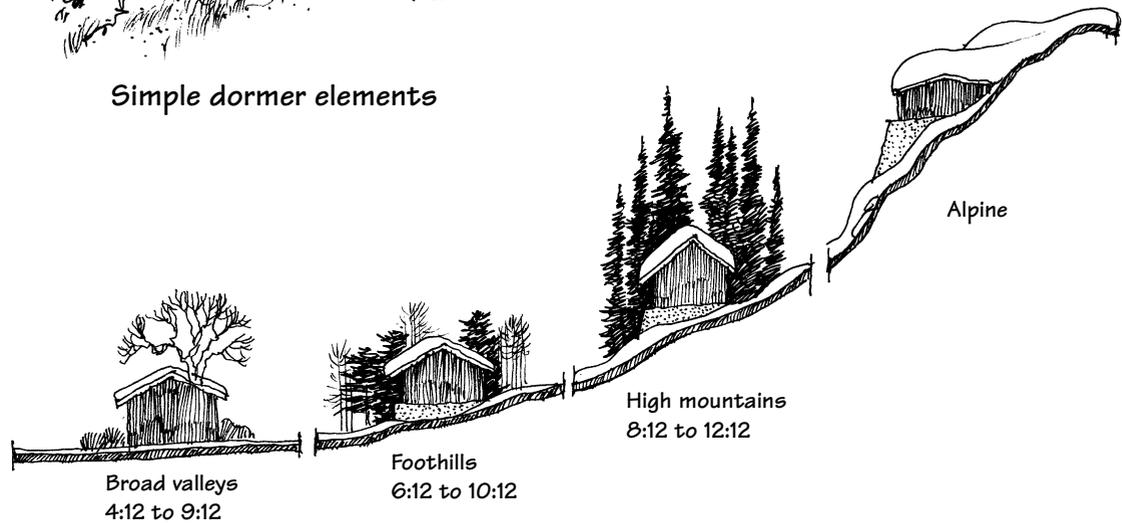
- Echo topography with the roofline.
- Increase pitch as the site steepens or as the forest becomes more vertical.
- Use alpine roofs with flatter pitch to avoid snowshed problems.
- Avoid complex multiple roof forms such as those that combine shed and gable dormers. These create “valleys” that trap moisture and cause maintenance problems.
- Provide broad overhangs at sites enclosed by landforms or vegetation.
- Provide modest overhangs at exposed, windy sites.



Simple dormer elements



Complex roof forms

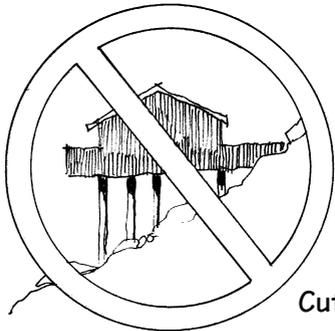


Roof pitch varies with verticality of landscape and setting

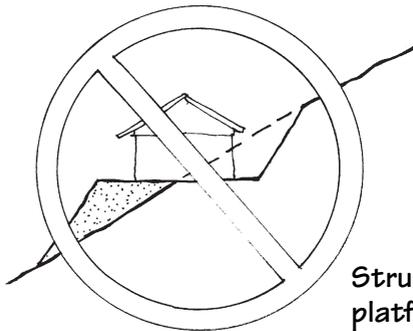
## BASE

The base functions as the transition from the landform to the mid-wall, creating a sense that the structure is growing out of the site.

- Anchor the building into the site with a strong base.
- Use a uniform base on moderate slopes to provide a platform for the building.
- Step the base on steep slopes or for large buildings to match the forms and volumes of the building.



Cut and fill



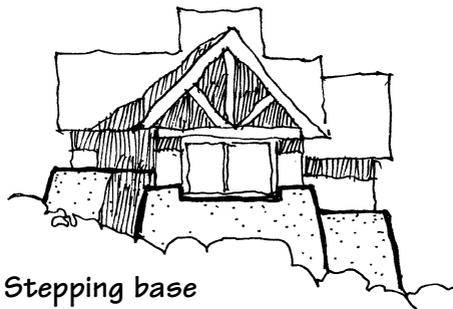
Structural platform



Base takes up grade



Where appropriate, base can "grow" out of the stone outcroppings



Stepping base in response to grade

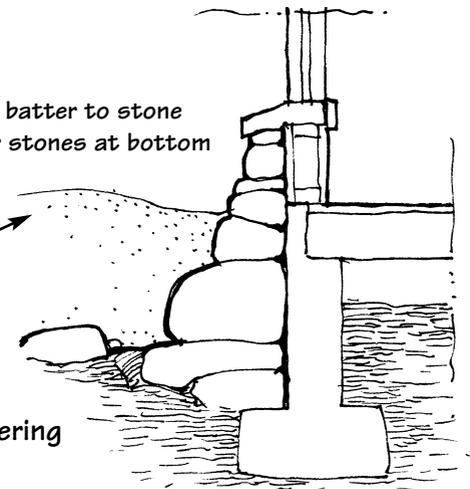


Stepping base on steep slope

- Slight batter to stone
- Larger stones at bottom

Snow

Weathering Base



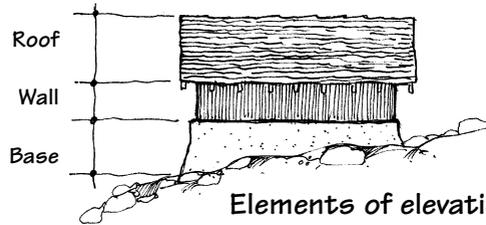
## WALLS

Walls can appear to be thick and substantial, with heavy corners. Emphasize corners through:

- Using larger materials.
- Making them solid—avoid placing windows and other openings in the corners.

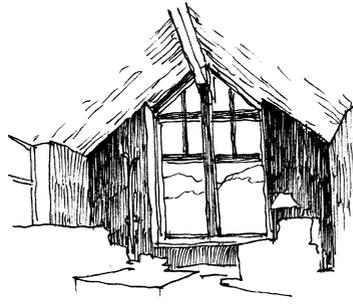
## WINDOWS AND OPENINGS

- Concentrate windows toward the center of wall planes to emphasize the mass of corners.
- Express windows as “punched” openings within solid, massive walls.
- Recess windows into the wall face to emphasize building mass and to protect windows from weather.
- Extend and slope window sills to shed water.
- Build a large porch to serve as an outdoor extension of the building.
- Construct a vestibule or airlock for comfort and energy efficiency.



Elements of elevation:  
Wall is less dominant than roof

Strong corners

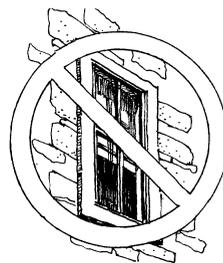


Large windows

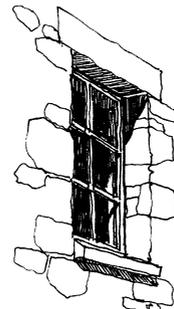


Porch as an outdoor room

Windows are openings to the exterior:



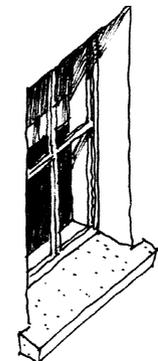
Flush windows with boxed frame



Recessed windows



Clusters of vertical windows are effective



Sloping sill with drip

## STRUCTURE

- In buildings designed for public use, express the structure by exposing wood beams, trusses, brackets, or framing.
- Handle cosmetic expressions of structure—such as nonstructural log beams—with care.

## MATERIALS

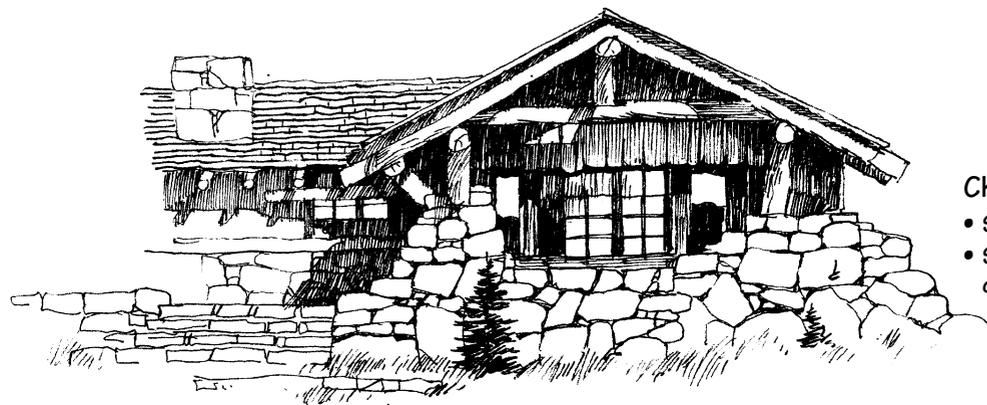
- Use stone, wood, heavy timber, and other natural materials when they are available and practical to use.
- Substitute manufactured materials, such as synthetic stone, if they can achieve the appearance of natural materials. The key is to make the scale, color, and texture of materials correspond to the setting.
- Consider costs and availability in remote locations.

### *Roof Materials*

- Design to achieve the look of cedar-shake shingles using such substitutes as heavy-textured asphalt shake shingles.
- Use metal if sensitively designed.



Well-defined main entry expressing structural elements

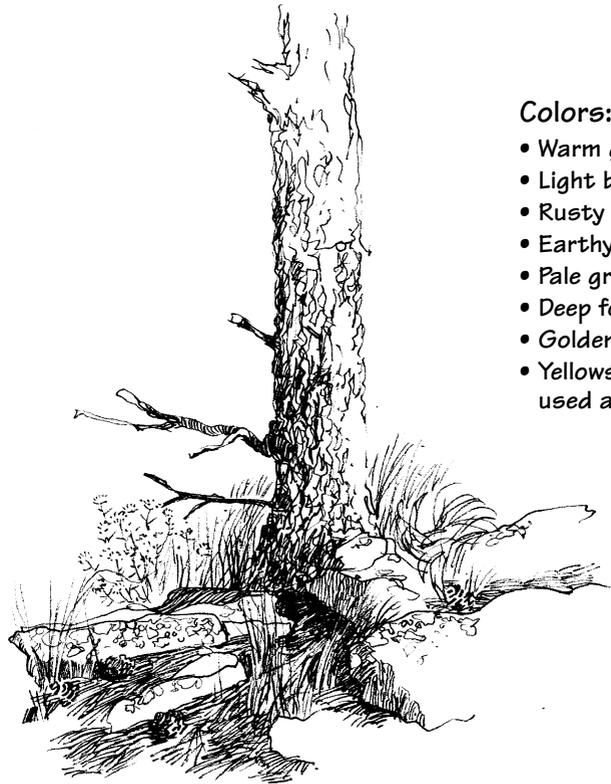


### Characteristics:

- Structure exposed
- Stone and timbers openly expressed

## COLOR

- Analyze the local landscape for indigenous colors and materials.
- Use color schemes that are inspired by rock outcrops, leaves or needles, tree trunks and bark, and colors found on the forest floor.
- Dominate the palette with earth tones.
- Integrate colors with natural materials where possible.
- Use accent colors drawn from accents of the setting: the green or orange-rust of lichen, the red-brown of red-twig dogwood, the deep burgundy of willow stands, and the ivory of aspen bark.

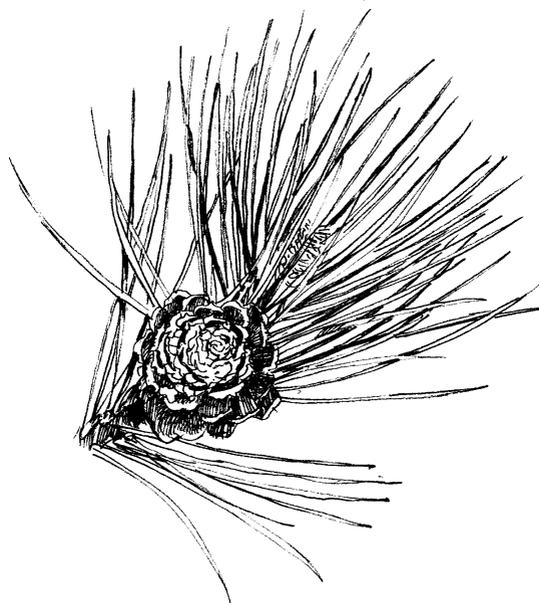


### Colors:

- Warm grays of bark
- Light browns
- Rusty brown of needles
- Earthy rose of rocks
- Pale greens of lichens
- Deep forest greens of trees
- Golden brown of pinecones
- Yellows & violets of wildflowers used as accents

## SUSTAINABILITY

- Minimize site disturbance by following the contours of the land and locating structures near existing utilities.
- Minimize the construction of new roads and parking.
- Use local and indigenous building materials.
- Integrate passive solar into building design with proper orientation, massing, window location, shading, ventilation, and shade structures.
- Use natural, nontoxic building materials that require little maintenance. Use photovoltaics for supplementary power.
- Use thick, massive walls for thermal mass, such as masonry, earth walls, and so forth.
- Emphasize water conservation in fixtures, water harvesting, xeriscaping, and graywater recycling.
- See the “Common Principles” section in the introduction of this chapter for more recommendations on sustainability.



## SYNTHESIS

Structures of the Rocky Mountain Province should match the impressive scale and texture of their settings. Achieve this by using materials found in the landscape, such as timbers, boulders, and natural stone pavers, and by making substantial structural members, such as brackets, beams, and posts, visible. Designers can examine and learn from the province's rich tradition of rustic architecture, log cabins, and mining structures.

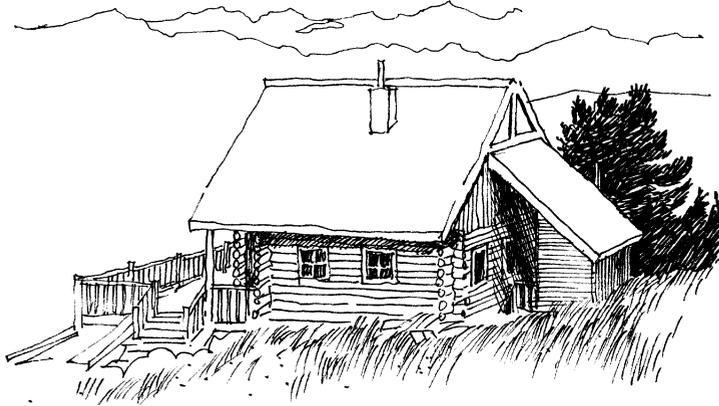
### Restroom characteristics:

- Strong roof with protected entry
- Extra daylight-exposed structure
- Strong base
- Can be prefabricated or built on site



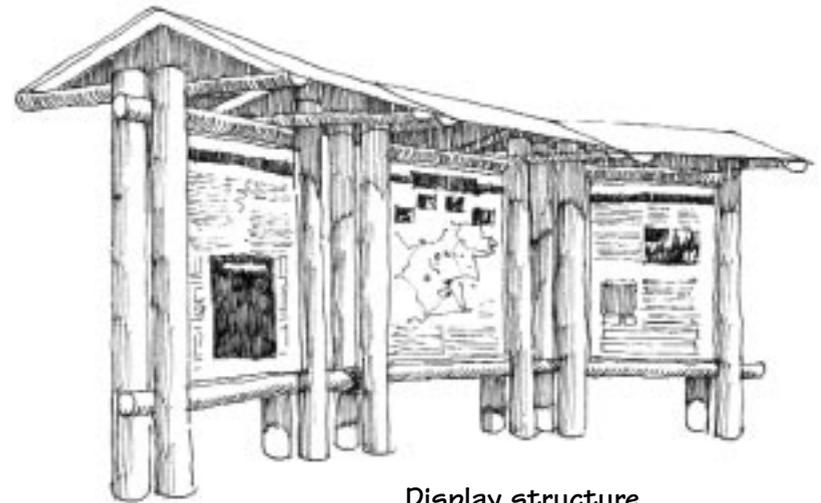
### Public office characteristics:

- Simple roof
- Well-defined entry
- Broad porches



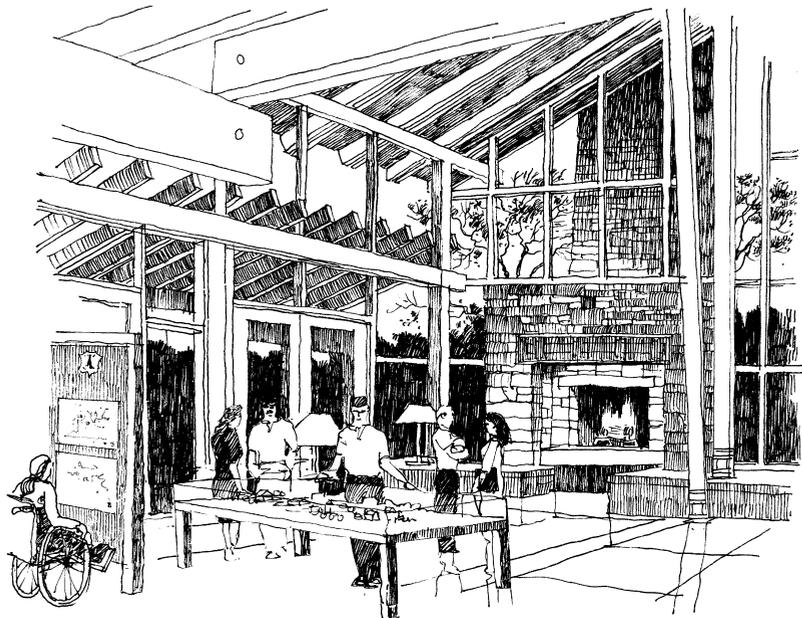
**Recreation cabin characteristics:**

- Simple massing
- Outdoor room
- Local materials
- Detached toilet



**Display structure characteristics:**

- Fully expressed log structure
- Overhang for protection



**Visitor center characteristics:**

- Open, expressed structure
- Daylighting, open to views
- Natural materials



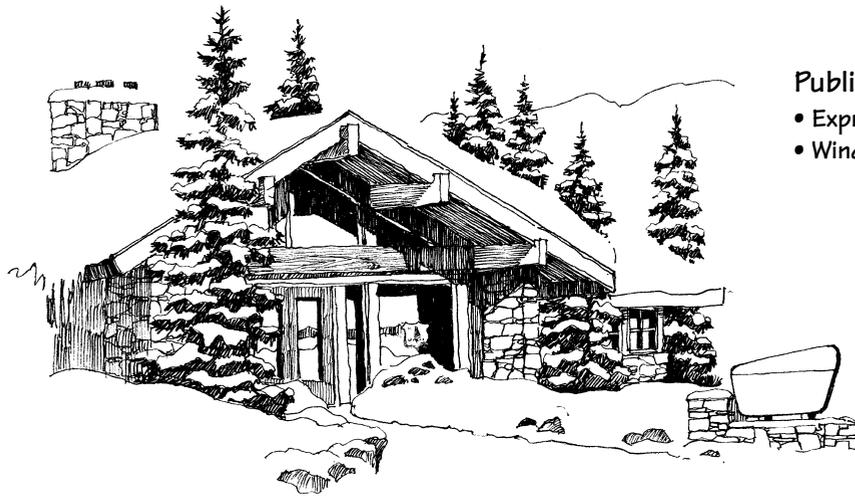
**Public/office characteristics:**

- Strong entry identity
- Daylighting



**Vista point characteristics:**

- Unobstructed views
- Natural materials
- Stone and setting of stone match local formation
- Flowing natural line of path, integrated into site



**Public/office characteristics:**

- Exposed structure of stone and heavy timber
- Window area contained within strong structure

**Utilitarian building characteristics:**

- Simple massing and form
- Landscaping to screen work areas
- Materials sensitive to the setting
- Protected entry



Appendix C

## Recreation Opportunity Spectrum (ROS)

The following reflects information contained in FSM 2330.3; the Recreation Opportunity Spectrum Color Poster (R6-REC-118-94); and ROS Primer and Field Guide (R6-REC-021-90). The color matrix shows by ROS Setting the kind of “on-site development” that can be considered “normal,” “fully compatible,” “inconsistent,” or “unacceptable.”

ROS Setting	On-Site Development				
	No facilities for user comfort; rustic and rudimentary ones for site protection only. Synthetic** materials excluded. Use undimensioned native* materials only. No site modifications for facilities.	Rustic and rudimentary facilities primarily for site protection. Use undimensioned native* materials. Avoid use of synthetic** materials. Little or no site modifications for facilities. Limited and subtle site modification.	Rustic facilities providing some comfort for the user as well as site protection. Contemporary/rustic design usually based on use of native* materials. Synthetic** materials should not be evident. Moderate site modification.	Some facilities designed primarily for user comfort and convenience. Some synthetic** but harmonious materials may be incorporated. Design may be more complex and refined. Moderate to heavy site modifications for facilities.	Facilities mostly designed for user comfort and convenience. Synthetic** materials are commonly used. Facility design may be highly complex and refined but in harmony or complementary to site. Heavy site modifications for facilities.
Primitive (P)	Normal	Inconsistent	Unacceptable	Unacceptable	Unacceptable
Semiprimitive nonmotorized (SPNM)	Fully compatible	Normal	Inconsistent	Unacceptable	Unacceptable
Semiprimitive motorized (SPM)	Fully compatible	Normal	Inconsistent	Unacceptable	Unacceptable
Roaded Natural (RN)	Inconsistent	Fully compatible	Normal	Inconsistent	Unacceptable
Rural (R)	Inconsistent	Inconsistent	Fully compatible	Normal	Inconsistent
Urban (U)	Inconsistent	Inconsistent	Inconsistent	Fully compatible	Normal

\* Native refers to materials found naturally in nature. It needn't come from or near the project site.

\*\* Synthetic materials should not be used in primitive settings. Where possible, they should be avoided in semi-primitive settings, but if used, they should not be evident to the user. In roaded natural settings, native materials are usually used, and synthetics, if used, should not be evident to the user.

## Legend

Normal

“Normal” describes “normal” conditions found in the ROS Setting

Fully compatible

“Fully compatible” describes conditions that meet or exceed the norm for the ROS setting

Inconsistent

“Inconsistent” describes conditions not generally compatible with the normal setting conditions, but which may be necessary under some circumstances to meet management objectives. The more removed from the “norm” shown in the above matrix, the more questionable the condition would be. For example, a pit toilet acceptable in a SPNM setting would be very questionable in a rural or urban setting. Use of metal or plastic siding or roofing that appears obviously synthetic to a visitor would be inconsistent in a roaded natural setting.

Unacceptable

“Unacceptable” describes conditions that, under any circumstance, do not permit the creation or maintenance of an ROS Setting, and which will cause a change in that setting towards one that is more developed. For example, moderate or heavy site modification and development of facilities for user comfort would change a primitive ROS setting into one that is more developed.

The following example describes typical ROS settings as described in the “1986 ROS Book.” Acreages and distances described may vary somewhat between regions.

### **PRIMITIVE**

Generally, it is on a setting of at least 5,000 acres and 3 miles away from all roads and trails with motorized use (or has sufficient spatial or topographic characteristics to allow a sense of solitude). Access is via nonmotorized trails or cross country. Very low interactions with other visitors. Very high chance of solitude; unmodified natural or natural-appearing environment.

### **SEMIPRIMITIVE NONMOTORIZED**

A setting that has an area of primitive roads\* or trails that are not open to motorized use; is generally at least 2,500 acres in size; and is between 1/2 and 3 miles from all roads, railroads, or trails with motorized use. Access is via nonmotorized trails or nonmotorized primitive roads or cross-country. Low contact frequency with other visitors. High probability of solitude; natural-appearing environment.

### **SEMIPRIMITIVE MOTORIZED**

A setting that has an area that allows motorized use, is generally at least 2,500 acres in size, and is at least 1/2 mile from a better than primitive road.\*\* It is within 1/2 mile of primitive roads or trails used by motor vehicles. Access is via motorized trails or primitive roads or cross-country, where terrain and regulations permit. Low to moderate contact frequency with other visitors. Environment may have moderately dominant alterations, but these do not dominate views from trails or primitive roads in the area.

### **ROADED NATURAL**

A setting in an area that is within 1/2 mile of a better than primitive road. Access is primarily via conventional motorized use on roads. Contact frequency with other users may be low to moderate on trails and moderate to high on roads. Environment is natural appearing as viewed from visually sensitive roads and trails.

### **RURAL**

Predominantly a culturally modified setting where the natural environment has been substantially modified, i.e., structures are readily apparent, pastoral or agricultural or intensively managed wildland landscapes predominate as viewed from visually sensitive roads and trails. Access is primarily via conventional motorized use on roads. Contact frequency with other users may be moderate to high in developed sites and moderate away from developed sites.

### **URBAN**

Urbanized environment with dominant structures, traffic lights, and paved streets. Access is highly intense, motorized, and often with mass transit supplements. Contact frequency and interaction with large numbers of people is high. Recreation places may be city parks and large resorts.

\* Primitive roads are not constructed or maintained and are not generally suitable for highway type vehicles.

\*\* Better than primitive roads are constructed or maintained for the use of highway type vehicles.

The following matrices show in gray shading those portions of the ROS where the well-designed use of material described at the left is either “normal” or “fully compatible.” Where not shaded, material use may be “inconsistent” or “unacceptable.” Note that Roaded Natural (RN) was enlarged to show more detail, reflecting both the widespread nature and importance of this setting in the national forest built environment. As a rule of thumb, when one-third or less of a setting is shaded, use the material with caution. Check first with FSM direction to determine suitability of certain improvements, e.g. shelters and play equipment.

### Buildings

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
<b>Exterior Materials</b>													
Native							■	■	■				
Mix of native and synthetic										■	■	■	■
<b>Exterior Colors</b>													
Earthtones							■	■	■	■			
Complements built environs											■	■	■
<b>Exterior Coatings</b>													
Stains and some paints							■	■	■	■			
Stains or paints								■	■	■	■	■	■
<b>Exterior Finishing</b>													
Roughsawn/rustic/nonglare							■	■	■				
Smoothly finished								■	■	■	■	■	■
<b>Site Setting</b>													
Natural surroundings dominate							■	■	■				
Natural/built environment codominate										■	■		
Built environment dominates											■	■	■

**Roads**  
(See FSM 7709.58 for Maintenance Level Definitions)

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
Primitive (User defined)*													
Level 2 (High clearance)													
Level 3 (Passenger car single lane with turnouts)													
Level 4 (Passenger car mostly double laned with aggregate surfacing)													
Level 5 (Passenger car mostly double laned with paved surface)													
* Not necessarily closed to vehicles, so not Level 1. The above does not preclude use of designed drainage and other features to minimize road-caused resource impacts.													

**Site Circulation and Traffic Control**

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
<b>Trails</b>													
Native material													
Gravel													
Asphalt/concrete													
<b>Primary Access Routes to Recreation Facilities</b>													
3'-wide native material													
3'-wide aggregate													
4'- to 6'-wide aggregate													
4'- to 6'-wide asphalt													
4'- to 6'-wide concrete or pavers													

### Site Circulation and Traffic Control (continued)

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
4'- to 6'-wide wood boardwalk													
4'- to 6'-wide synthetic boardwalk													
6'- to 8'-wide surfaced trail or any type boardwalk													
<b>Fencing*</b>													
Barbed wire with wood posts													
Woodfence (jackleg, worm, pole)													
Barbed wire with steel posts													
Electric (portable)													
Wood (dimensional lumber)													
Metal, chainlink, plastic													
<b>Barriers/Walls</b>													
Downed logs, plants, or rocks in combinations													
Dry rock walls or earth berms													
Constructed log cribbing or walls													
Mortared rock walls													
Timber or concrete walls													
All-log or dimensional wood wheelstops/barriers													
Combination concrete/wood wheelstops													
Concrete wheelstops													
Recycled plastic wheelstops													

\* Although steel fencing materials are synthetic, they may offer less visually impacting solutions that better maintain an ROS setting, especially when not in the immediate foreground.

### Water, Sanitation, and Electrical Facilities

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
<b>Drinking Water</b>													
Handpump							■	■	■				
Pressurized water system													
Wood-covered hydrant							■	■	■	■	■	■	■
Wood drinking fountain									■	■	■	■	■
Prefab. concrete/metal fountain										■	■	■	■
<b>Showers, Laundry, Utilities</b>													
Showers/laundry										■	■	■	■
RV Dumps									■	■	■	■	■
Telephone									■	■	■	■	■
Electrical/sewer hookups										■	■	■	■
<b>Garbage Collection</b>													
Pack it in, pack it out	■	■	■	■	■	■	■						
Garbage cans							■	■	■	■	■	■	■
Dumpsters									■	■	■	■	■
<b>Toilets</b>													
Pit toilets		■	■	■	■								
Wood-frame SST w/o screen					■	■	■	■	■				
Wood-frame SST w/screen							■	■	■	■	■		
Precast concrete SST									■	■			
Flush toilets (all kinds)										■	■	■	■

Signs for Recreation Sites and Trails (Adapted from EM-7100-15 Sign and Poster Guidelines for the Forest Service)

	Primitive	Semiprimitive Nonmotorized	Semiprimitive Motorized	Roaded Natural	Rural	Urban
<b>Sign Panel Materials</b>						
Solid wood (or appearing so)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Plywood			Shaded	Shaded	Shaded	Shaded
Metal, fiberglass, synthetics*			Shaded	Shaded	Shaded	Shaded
<b>Sign Panel Color/Finish</b>						
Natural	Shaded	Shaded	Shaded			
Preservative not evident (if used)	Shaded	Shaded				
Stained	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Painted			Shaded	Shaded	Shaded	Shaded
Etched or decals					Shaded	Shaded
Reflectorized			Shaded	Shaded	Shaded	Shaded
<b>Sign Support Material</b>						
Tree	Shaded	Shaded	Shaded			
Rustic wood post (preservative not evident)	Shaded	Shaded				
Wood post			Shaded	Shaded	Shaded	Shaded
Metal or synthetic post					Shaded	Shaded
<b>Sign Support Color/Finish</b>						
Natural (or appearing so)	Shaded	Shaded	Shaded			
Preservative not evident (if used)	Shaded	Shaded				
Stained	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Painted			Shaded	Shaded	Shaded	Shaded
Anodized					Shaded	Shaded
* Limited use in SPM/RN.						

### Interpretive Facilities

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
No interpretive facilities													
Simple signs of native material													
Simple signs or wayside exhibits of native or natural appearing material with some refinement of design													
More complex wayside exhibits													
Major interpretive sites (typically staffed)													

### Nonvehicular Bridges

	Primitive		Semiprimitive Nonmotorized		Semiprimitive Motorized		Roaded Natural			Rural		Urban	
Logs													
Logs with dimensional wood*													
Dimensional wood													
Concrete													
Steel													
Wood preservatives not evident (if used)													
Synthetic													

\* Use of dimensional lumber for decking of bridges in P and SP settings is often necessary, although such materials in those ROS settings should not otherwise be used.

## **Appendix 6 RRMP Implementation Schedule and Costs**

*This appendix contains an implementation schedule and cost estimate for SCL recreation-related actions and measures planned under the new license. The implementation schedule includes a target range of years when each capital facility development measure will be completed. A more precise schedule for these actions will be developed in conjunction with a master construction schedule for the Project following license issuance.*



## RRMP Implementation Schedule and Costs

Proposed capital facility development measures	Preliminary estimated cost (\$2009) <sup>1</sup>	Schedule/priority <sup>2</sup>
<b><u>Existing Recreation Capital Facility Needs</u></b>		
<u>Forebay Recreation Area</u> <ul style="list-style-type: none"> <li>• Enhance campground facilities at this site: increase the number of designated recreation vehicle (RV) and tent campsites (approximately 22 to 25 total depending on the physical site layout), better delineate campsites, provide appropriate signage, use vegetation and/or other site features (e.g., rocks) to create separation between campsites and day use picnic sites, and limit vehicle access to roads and parking areas.</li> <li>• Enhance day use picnic sites with signage, improved access, and separation from campsites.</li> <li>• Provide additional I&amp;E signage and/or other opportunities.</li> <li>• Extend an existing boat ramp lane so that boats may be launched/retrieved during the primary recreation season (Memorial Day weekend to Labor Day weekend) without problems due to fluctuating reservoir water surface elevations. Provide adequate parking, signage, and circulation at the boat launch.</li> <li>• Provide ADA-accessible parking, restrooms, boarding float, picnic sites, campsites, and pathways that connect ADA-accessible facilities.</li> <li>• Provide a new concrete pad (50' x 100') and vehicle circulation for a new sluice gate maintenance area.</li> </ul>	\$2,332,000	D1 / P1
<u>Vista House Recreation Area</u> <ul style="list-style-type: none"> <li>• Add I&amp;E signage and/or other opportunities at the overlook platform.</li> <li>• Provide ADA-accessible parking, vault toilet, and pathways that connect ADA-accessible facilities.</li> </ul>	\$250,000	D1 / P3
<u>Tailrace Recreation Area/Machine Hall Visitors' Gallery</u> <ul style="list-style-type: none"> <li>• Update I&amp;E signage and displays at the Machine Hall Visitors' Gallery.</li> <li>• Provide ADA-accessible parking, vault toilets, and pathways that connect ADA-accessible facilities.</li> </ul>	\$316,000	D1 / P3
<u>Peewee Falls Viewpoint and Trail (new)</u> <ul style="list-style-type: none"> <li>• Develop a new accessible trail and trailhead in the vicinity of the Vista House access road to a viewpoint of Peewee Falls.</li> <li>• Develop a trail and appropriate support facilities, including parking, vault toilet, and signage.</li> <li>• Extend FR 3165329 to a new gravel parking area and trailhead with a single-vault ADA toilet.</li> </ul>	\$195,000	D1 / P2

Proposed capital facility development measures	Preliminary estimated cost (\$2009) <sup>1</sup>	Schedule/priority <sup>2</sup>
<u>Designated Dispersed Shoreline Recreation Sites (6)</u> <ul style="list-style-type: none"> <li>Enhance 6 shoreline recreation sites (3 BLM and 3 USFS sites) to accommodate boat-in camping and day use – typical enhancements will include 2 tent pads, 2 day use picnic tables, watercraft landing/tie-up area, signage, and sanitation systems.</li> </ul>	\$253,000	D1 / P2 (4 sites – Lime Creek and Monument Bar [USFS]; BLM Boundary Recreation Area and Ledbetter Cove {BLM}) and P3 (2 site – Wolf Creek [USFS] and Flume Creek [BLM])
<u>Metaline Falls Portage Trail (new)</u> <ul style="list-style-type: none"> <li>Develop a new portage trail in the vicinity of the falls to provide non-motorized boaters an alternative to avoiding or running the rapids at the falls.</li> <li>Provide I&amp;E signage.</li> </ul>	\$127,000	D1 / P2
<u>Metaline Waterfront Park Boat Launch (existing)</u> <ul style="list-style-type: none"> <li>Replace the existing boat launch and extend a boat ramp lane so that boats may be launched/retrieved during the primary recreation season (Memorial Day weekend to Labor Day weekend) without problems due to fluctuating reservoir water surface elevations.</li> <li>Provide adequate gravel roadway access to the boat ramp, improved circulation and parking for single vehicles and vehicles with trailers, and other boat launch support facilities (e.g., signage, boarding float).</li> <li>Provide ADA-accessible parking, boarding float, and pathways that connect ADA-accessible facilities.</li> <li>Provide an accessible dual vault restroom in the vicinity of the boat launch parking area or potentially combine this new facility with a new, larger upgraded park restroom facility (location undefined) developed in coordination with the Town of Metaline.</li> </ul>	\$1,669,000	D1 / P1
<b><u>Future Recreation Capital Facility Needs</u></b>		
<u>All Project-Related Recreation Sites</u> <ul style="list-style-type: none"> <li>Over 50 years, replace and/or significantly repair various recreation site facilities, infrastructure, and amenities, as needed, based on facility condition; replace at normal facility life cycles.</li> <li>If needed, consider additional recreation capital facility development based on periodic monitoring during the license term (see RRMP Monitoring Program).</li> </ul>	\$2,000,000 to \$3,000,000 (over 50 years)  Not Included	D3 – D5 (assumes 20 to 30-year life-cycle for typical recreation facilities)
<b>Summary of capital improvement costs</b>		
Total Capital Facility Improvement Cost Est.	\$5,142,000	
Total Future Capital Facility Improvement Cost Est.	\$2,000,000 to 3,000,000	

Proposed capital facility development measures	Preliminary estimated cost (\$2009) <sup>1</sup>	Schedule/priority <sup>2</sup>
<b>Proposed programmatic and O&amp;M measures</b>		
<u>RRMP Implementation &amp; Coordination</u> <ul style="list-style-type: none"> <li>Implement appropriate communication and coordination protocols to help make coordinated, timely, and informed decisions related to the implementation of the RRMP and other Project-related resource management plans (e.g., TRMP, HPMP, etc.). Conduct regular consultation to help coordinate implementation actions across Project resource management plans.</li> <li>Participate (as a member of a regional coalition) in the development of a regional water trail program on the Pend Oreille River. SCL's role would be limited to specific actions on Boundary Reservoir.</li> </ul>	\$10,000/yr. (coord. and meetings)  \$15,000 (coordination and meetings)	D1 – D5
<u>Shoreline Dispersed Recreation Management Program</u> <ul style="list-style-type: none"> <li>Develop 6 existing dispersed sites (BLM and USFS) for day use and overnight camping.</li> <li>Implement a program for the management of all shoreline dispersed sites.</li> </ul>	Est. costs included elsewhere	D1 – D5
<u>Operations and Maintenance (O&amp;M) Program</u> <ul style="list-style-type: none"> <li>Implement the O&amp;M Program for SCL-managed recreation sites and use areas, including periodic O&amp;M of designated dispersed shoreline recreation sites, during the term of the new license.</li> <li>Provide annual maintenance at the boat launch at Metaline Waterfront Park.</li> <li>Periodically re-assess public access/security policies and needs at the Tailrace Recreation Area and Machine Hall Visitors' Center.</li> </ul>	\$65,000/yr. (existing SCL sites)  \$20,000/yr. (new SCL sites)	D1 – D5
<u>Recreation Monitoring Program</u> <ul style="list-style-type: none"> <li>Implement a periodic recreation monitoring program with facility and visitor management actions and triggers identified.</li> </ul>	\$5,000/yr. \$30,000 once every other 6 yrs. \$90,000 once every 12 yrs.	D1 – D5
<u>Interpretation and Education Program</u> <ul style="list-style-type: none"> <li>Develop a multi-resource (recreation, aesthetics, geology, engineering, fisheries/aquatics, cultural/historic, and terrestrial) Interpretation and Education (I&amp;E) Program. The I&amp;E Program will establish themes, topics, messages, media, and prioritized services that will be constructed and installed at recreation sites throughout the Project, as well as other potential locations (e.g., regional information centers, internet, etc.).</li> <li>I&amp;E construction documents and implementation costs are included in the Capital Improvements Costs.</li> </ul>	\$200,000 (finalize I&E plan; graphics design and content development)  I&E facility costs included in sites	D1 – D5
<b>Summary of costs</b>		
Total Capital Facility Improvement Cost Est.	\$4,743,000	
50 Yr. Capital Facility Life-Cycle Replacement Cost Est.	\$2,000,000 to \$3,000,000	
Annual Facility O&M Cost Est.	\$85,000/yr.	

Proposed capital facility development measures	Preliminary estimated cost (\$2009) <sup>1</sup>	Schedule/priority <sup>2</sup>
Programmatic Cost Est.	\$10,000/yr. \$15,000/yr. \$5,000/yr. (\$30,000/\$90,000 every 6/12 years) \$200,000	

Notes:

- 1 Costs provided in Exhibit D and the Developmental Analysis of Exhibit E are shown in 2007 dollars.
- 2 Schedule is defined by decade of the new license: D1 = first decade, D2 = second decade, etc. Assumes a 50-year license. For Capital Improvements, a priority is also provided, where P1 = Years 3-5, P2= Years 6-7, and P3 = Years 8-10. Assumes all identified capital improvements will be completed during the first decade of the new license.

## **Appendix 7 Project Recreation O&M Standards**

*This appendix will contain an overview of SCL's recreation site O&M standards. These O&M standards may be revised, if needed, during the new license term to meet recreation site needs.*



*This appendix is a placeholder only. SCL will develop appropriate maintenance standards and frequencies during the development of the Final RRMP (post-license).*

<b>Facility Type</b>	<b>Maintenance Standard</b>	<b>Recommended Frequency</b>

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