

# LAND MANAGEMENT PROGRAM

*A guide to Chelan PUD's program for  
managing the lands and shorelines within the  
Rocky Reach Hydroelectric Project Boundary*

**ROCKY REACH HYDROELECTRIC PROJECT  
FERC Project No. 2145**



**Public Utility District No. 1 of Chelan County**  
Wenatchee, Washington

Prepared with assistance from  
Kleinschmidt Associates  
Gresham, Oregon

*December 2013*



<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>	<b>RESOURCES WITHIN THE PROJECT BOUNDARY .....</b>	<b>35</b>
<b>INTRODUCTION .....</b>	<b>3</b>	6.1 Regional Setting .....	35
1.1 Project Structures, Operation, and Boundary .....	3	6.2 Geology and Soils.....	35
1.2 Project Licensing History.....	5	6.3 Water Quality.....	36
1.3 FERC Regulatory Setting, Requirements, and Authorizations .....	5	6.4 Aquatic Resources .....	37
1.4 Other Regulatory Jurisdictions and Management Initiatives .....	6	6.5 Aquatic Habitat.....	41
<b>PURPOSE, GOALS AND OBJECTIVES .....</b>	<b>9</b>	6.6 Terrestrial .....	42
2.1 Chelan PUD’s Land Management Program Goals and Objectives.....	9	6.7 Land Use .....	44
2.2 Land Management Program Scope .....	9	6.8 Cultural Resources .....	44
2.3 Chelan’s Responsibilities and Rights to Authorize Non-Project Uses .....	10	6.9 Recreation .....	45
2.4 Public Outreach and Agency Consultation.....	10	6.10 Aesthetics .....	46
<b>CHELAN PUD’S LAND MANAGEMENT PROGRAM.....</b>	<b>11</b>	<b>LITERATURE CITED .....</b>	<b>47</b>
3.1 Steps for seeking Chelan PUD approval within the Permitting Process.....	11	<b>ACRONYMS AND ABBREVIATIONS LIST .....</b>	<b>49</b>
3.2 Projects that Require Chelan PUD and/or FERC Approval..	13	<b>STANDARD TERMS LIST .....</b>	<b>51</b>
3.3 Chelan PUD Review Process .....	15	<b>FREQUENTLY ASKED QUESTIONS.....</b>	<b>61</b>
<b>WASHINGTON STATE PERMITTING PROCESS .....</b>	<b>21</b>	<b>LIST OF TABLES</b>	
4.1 Joint Aquatic Resource Permit Application (JARPA) .....	21	Table 3-1: Steps for seeking Chelan PUD approval for a proposed project .....	12
4.2 JARPA Guidelines .....	25	Table 3-2: Land and shoreline use approvals (Standard Land Use Article) .....	14
4.3 Best Management Practices .....	26	Table 3-3: Resource Land Management Classification Summary .	16
<b>COMPLIANCE AND ENFORCEMENT .....</b>	<b>29</b>	Table 5-1: Examples of shoreline uses, alterations and water quality issues.....	31
5.1 Land Management Program Update Process .....	29	<b>LIST OF FIGURES</b>	
5.2 Program Monitoring and Review .....	30	Figure 1: Project location and project boundary.....	7
		<b>LIST OF APPENDICES</b>	
		Appendix A: Resource maps .....	53
		Appendix B: Standard land use article.....	55
		Appendix C: Public outreach and agency consultation .....	59
		Appendix D: Chelan PUD contacts.....	67



## EXECUTIVE SUMMARY

The shorelines along the Columbia River are a critical resource that supports our region's environment, economy, and recreational activities. To preserve and protect the delicate balance between environmental, economic, and social pressures, caring for our shorelines is a responsibility we all share.

The Rocky Reach Hydroelectric Project reservoir extends nearly 43 miles from the Rocky Reach Dam, owned and operated by Chelan County PUD, to the upstream Wells Hydroelectric Project dam, owned and operated by Douglas County PUD. Chelan PUD is able to operate the Rocky Reach Project through a license granted by the Federal Energy Regulatory Commission (FERC). The current license was granted in 2009 and is for a period of 43 years. This long-term license contains a number of requirements Chelan PUD must meet for operating the Rocky Reach Project and to protect environmental resources, public recreation, access to the water, cultural resources, and water quality.

The Rocky Reach Project License contains numerous protection, mitigation, and enhancement requirements and responsibilities. In relation to the shorelines within the reservoir, our federal license requires that we understand and are attentive to the many demands placed on the shorelines so that the license commitments required in the long-term license can be reliably met.

Chelan PUD has developed this Lands Management Program Guide to help clarify its role in the authorization of land and shoreline uses within the Rocky Reach Project Boundary. This document is arranged in the following manner:

## SECTIONS 1 AND 2

***Introduction, purpose, and objectives of the Land Management Program:*** In sections 1 and 2, you will find information on operations of the project/dam, the project boundary and the Federal Energy Regulatory Commission (FERC) requirements. In addition there is further explanation of why the Land Management Program guide was developed and the goals and objectives of the program. The Standard Land Use Article is important to Chelan PUD as it evaluates requests for land use within the project boundary. The complete Land Use Article as outlined in the Rocky Reach license can be found in Appendix B. Public and agency involvement during the development of this document is summarized in Section 2.4 and in Appendix C.

## SECTION 3

***Chelan PUD's Land Management Program:*** This section provides the steps an applicant will typically use when permitting a project or use within Chelan PUD's Project Boundary and provides a table summarizing the types of projects that may be approved by Chelan PUD and those that will require approval from the FERC. Also, to help identify land and shoreline areas that may require greater resource protection, Chelan PUD has developed shoreline classifications, Integrated Use, Resource Management, and Project Operations. Maps depicting the shoreline classifications can be found in Appendix A.

## SECTION 4

***Washington State's Joint Aquatic Resource Permit Application process:*** Most proposed uses along the shorelines in Washington State require coordination, review and approval by multiple local, state, and federal agencies. To balance and protect the many, often competing resources and land uses, local, state, and federal regulators require permits for shoreline uses. The Joint Aquatic Resources Permit Application (JARPA) form that helps streamline the environmental permitting process into one application is discussed in this Section. Additionally, Section 4.3 outlines Best Management Practices that may be implemented to lessen the potential effects of a project or use on a resource. Using Best Management Practices is encouraged by Chelan PUD.

## SECTION 5

***Compliance and Enforcement:*** The Standard Land Use Article (Appendix B) directs Chelan PUD to oversee non-project uses of land along the shorelines and to take action to prevent those uses that are unauthorized. Monitoring and inspection activities are discussed here.

## SECTION 6

***Resources within the Project Boundary:*** Details of the environmental and recreational resources found within the Project Boundary are discussed in this section. Examples of the resources discussed include fish, wildlife, water quality, land use, cultural resources, recreation, and aesthetics.

## SECTION 7

***Literature Cited:*** This section provides a list of all literature and citations used in this document.



## 1 INTRODUCTION

The Rocky Reach Hydroelectric Project (FERC No. 2145) (Project) is owned and operated by the Public Utility District No. 1 of Chelan County (Chelan PUD) and licensed by the Federal Energy Regulatory Commission (FERC).<sup>(1)</sup> The FERC Project License, License Article 5 and more specifically the Land Use Article 410<sup>(2)</sup> directs Chelan to oversee activities within the Project Boundary and take action to prevent unauthorized uses of lands and shorelines within the Project Boundary. The FERC License defines Lands and Waters necessary to operate the hydroelectric facility, including those necessary for all of the beneficial uses, as the Project Boundary. Chelan PUD manages the Project Boundary in accordance with its License.

The Land Management Program addresses competing demands for access to Project lands while supplementing ongoing resource management protection and enhancement efforts and providing guidance on current and future Non-Project uses. The plan provides defined and consistent management strategies for the Project's lands, reinforces the letter and spirit of the Settlement Agreement, is consistent with the conditions contained within the Project License, and addresses resource concerns and demands at the Project. The Land Management Program Guide serves as a reference document for the public and includes the following:

- A description of Project operations and the Project Boundary.

(1) *Relicensed by FERC Order on Offer of Settlement and Issuing New License (126FERC ¶61,138; February 19, 2009).*

(2) *The Land Use Article is an article found in most licenses with a provision for licensees to have authority to grant permissions for certain types of uses and occupancies of the project Lands and Waters and to convey certain interests without prior Commission approval.*

- A discussion of Chelan PUD's regulatory and management responsibilities.
- A discussion of Chelan PUD's land management goals and objectives.
- Descriptions of resources relevant to land management planning.
- A discussion of Chelan PUD's agency and stakeholder consultation and outreach.
- Management guidelines for lands within the Project Boundary.
- Definitions of Land Management Classifications and maps.
- A description of evaluation processes for Non-Project uses and Chelan PUD's role in that evaluation process.
- Land Management Program monitoring/enforcement and amendment processes.

### 1.1 PROJECT STRUCTURES, OPERATION, AND BOUNDARY

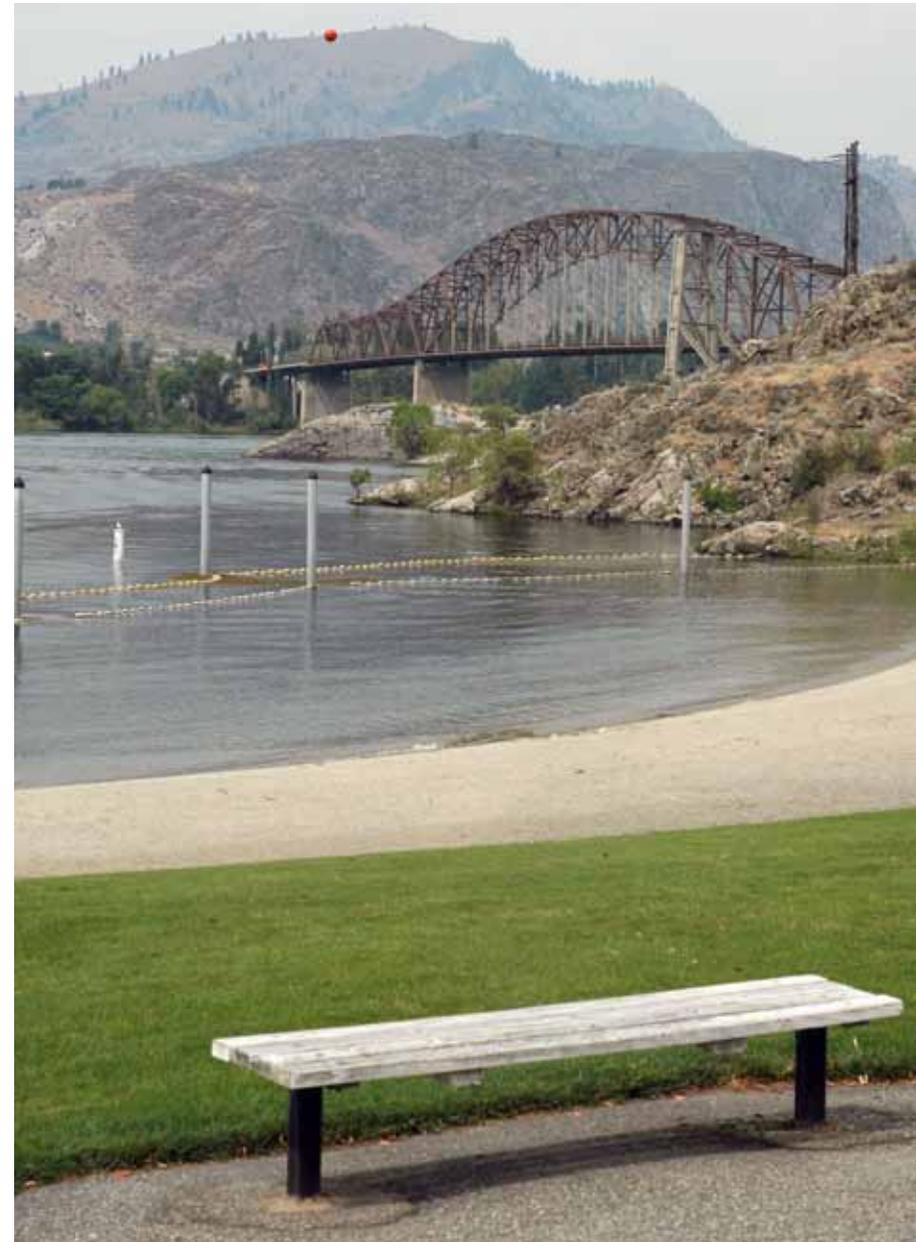
The Project is located on the Columbia River in Chelan and Douglas Counties, in central Washington, approximately seven miles upstream of the city of Wenatchee. The dam is 215 river miles below the Canadian border and 474 river miles above the mouth of the Columbia River at Astoria, Oregon. The mid-line of the reservoir forms the boundary between Douglas County to the east and Chelan County to the west. FERC issued the initial License for the Rocky Reach Hydroelectric Project July 11, 1957 and issued a new License on February 19, 2009 for a period of 43 years.

The Project consists of a 130-foot-high concrete gravity dam, which incorporates a spillway, powerhouse and non-overflow structures, as well as power transmission, fish passage and visitor facilities. The Project reservoir extends about 43 miles upstream to the Public Utility District No. 1 of Douglas County's (Douglas PUD) Wells dam. The Project reservoir has a

surface area of 9,050 acres at the normal maximum headwater elevation of 707 feet National Geodetic Vertical Datum (NGVD) at the forebay.

Rocky Reach is a run-of-river Project, which means that the average daily inflow is equal to the average daily outflow. As a result, the water level is not constant throughout the reservoir, but increases measurably from Rocky Reach dam to Wells dam. Chelan PUD is a signatory to the Mid-Columbia Hourly Coordination Agreement, along with Douglas PUD, Public Utility District No. 2 of Grant County (Grant PUD) and the Bonneville Power Administration (BPA). Under the terms of this agreement, the five non-federal projects on the Columbia River (Wells, Rocky Reach, Rock Island, Wanapum, and Priest Rapids, hydroelectric project dams), as well as the Grand Coulee and Chief Joseph federal projects, are operated in a coordinated manner to optimize water use through this section of the Columbia River. Chelan PUD operates the Project reservoir with a normal maximum headwater elevation of 707 feet NGVD and minimum headwater elevation of 703 feet NGVD. Additionally, Chelan PUD has a License requirement to provide for storage space and passage of flood flows when ordered by the U.S. Army Corps of Engineers to an elevation of 710 feet NGVD.

The Project reservoir extends approximately 43 miles upstream from the Rocky Reach Dam to Douglas PUD's Wells Project (FERC No. 2149). The Project Boundary encloses the reservoir and the tailrace below the Rocky Reach dam and includes designated recreational sites. The Project Boundary is an administrative marker to clearly delineate those lands necessary for operation and maintenance of the project and other project purposes, such as recreation, shoreline control, or protection of environmental resources. The Rocky Reach Project Boundary contains approximately 1,500 acres of land. Approximately 135 acres within the Project Boundary are owned by federal agencies. Chelan PUD owns approximately 724 acres within the Project Boundary and has flowage easements for the remainder of the lands. There are no tribal lands within the Project Boundary. All Project



facilities including the dam, the powerhouse, the reservoir, fish passage and rearing facilities, and the seven Project recreation facilities, are located within the Project Boundary.

## 1.2 PROJECT LICENSING HISTORY

FERC issued a new 43-year License for Chelan PUD's Rocky Reach Project on February 19, 2009. The new License incorporates a Settlement Agreement submitted to FERC on March 17, 2006 between Chelan PUD and stakeholders that include local, state and federal agencies, Tribes, and environmental groups.

In developing its Settlement Agreement, Chelan PUD identified and detailed requirements for the following management plans that are now conditions of the Project License.

- Shoreline Erosion Management Plan.
- Water Quality Management Plan.
- Aquatic Invasive Species Monitoring and Control Plan.
- White Sturgeon Management Plan.
- Bull Trout Management Plan.
- Pacific Lamprey Management Plan.
- Resident Fish Management Plan.
- Rocky Reach Wildlife Management Plan.
- Ute Ladies Tresses (*Spiranthes diluvialia*) Management Plan
- Rocky Reach Historic Properties and Cultural Resources Management Plan.
- Recreation Resources Management Plan.
- Anadromous Fish Agreement and Habitat Conservation Plan (HCP Agreement).<sup>(3)</sup>

Recently, Chelan PUD determined that developing a Land

Management Program Guide specific to use of lands and shorelines within the Project Boundary provides a way to document and communicate its processes for reviewing Non-Project uses to ensure they are appropriate relative to environmental resources and Project operational requirements.

## 1.3 FERC REGULATORY SETTING, REQUIREMENTS, AND AUTHORIZATIONS

FERC, under the authority of the Federal Power Act (FPA), issues licenses for the construction, operation, and maintenance of non-federal hydroelectric developments. In granting a license to construct and/or operate a hydroelectric facility, FERC is required to make a determination that the Project is best adapted to a comprehensive plan for improving or developing a waterway on behalf of beneficial public uses. The License and the FERC-approved Settlement Agreement govern all future License related activities (of the Licensee and third parties) within that Project Boundary. Chelan PUD is responsible for operating and maintaining its licensed Projects in accordance with License requirements and Project purposes (i.e., public recreation, environmental protection, etc.). Consistent with these License responsibilities, Chelan PUD may authorize specific uses and occupancies of lands and shorelines within the Project Boundary unrelated to hydroelectric power production or other Project purposes (Non-Project uses).<sup>(4)</sup>

There are two License articles included in the Rocky Reach Project License that relate directly to land management planning, Standard Article 5 and the Land Use Article 410 (see Appendix B). Standard Article 5 requires Chelan PUD to acquire and retain fee title or hold the rights to use in perpetuity all property necessary or appropriate to construct, maintain, and operate the Project. Land Use Article 410,

(3) *The HCP is a collaborative approach Chelan PUD, fisheries agencies, and tribes developed to reduce Project effects on salmon and steelhead.*

(4) *FERC Guidance for Shoreline Management Planning at Hydropower Projects, July 2012.*

referenced more often throughout this Land Management Program Guide, gives Chelan PUD the authority to grant permission to applicants for specific Non-Project uses (subject to specific License and operating conditions), and provides guidelines for Non-Project uses that require FERC approval.

In general, Land Use Article 410 directs Chelan PUD to oversee land use activities and take action to prevent unauthorized uses of lands and shorelines within the Project Boundary. The Article authorizes Chelan PUD to administer and enforce a permit system for regulating Non-Project uses within the Project Boundary. The article further allows Chelan PUD to grant easements, rights of way, leases, and fee interests in lands and shorelines within the Project Boundary in limited situations.

The Land Use Article 410 also requires Chelan PUD to monitor and remedy any unauthorized use of lands and shorelines within the Project Boundary. Unauthorized use of lands and shorelines within the Project Boundary may be considered an encroachment and a Licensee may need to take legal or regulatory action to correct the violation. This may include revocation of permission to use lands and shorelines within the Project Boundary and removal of non-complying structures and facilities at the owner's expense. While generally not mandated by FERC, the Commission also encourages Licensees to develop a permitting program to support and enforce its Land Management Program. Chelan PUD's failure to comply with its License can result in FERC issuing License violations and, in some cases fines.

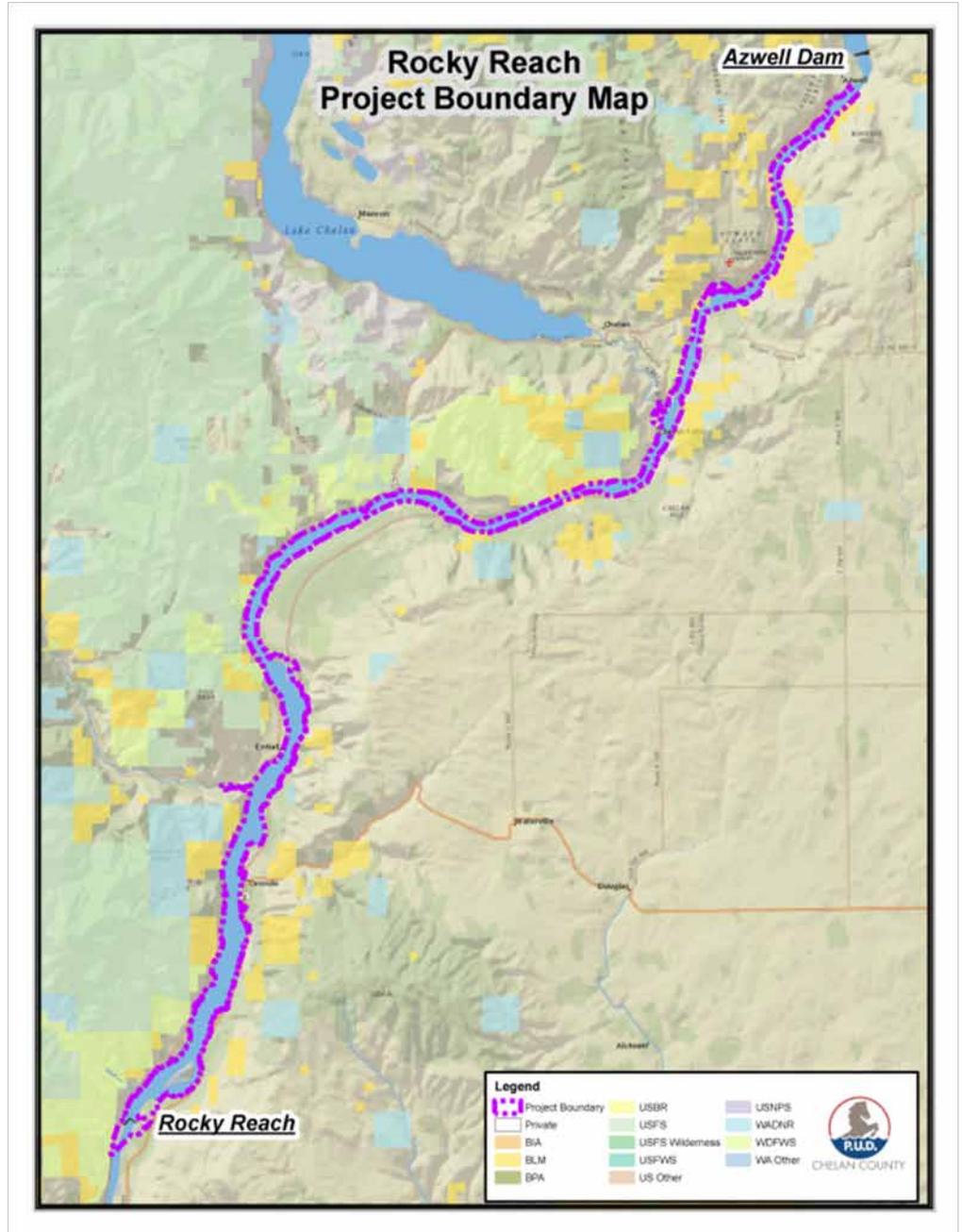
Some proposed uses or activities within the Project Boundary that are outside Chelan PUD's authority to grant permission will require review and approval from FERC.

#### **1.4 OTHER REGULATORY JURISDICTIONS AND MANAGEMENT INITIATIVES**

There are a number of applicable local, state, and federal jurisdictions and regulations within the Project Boundary. Chelan PUD coordinates and contributes information in the review and approval process of the other regulatory jurisdictions associated with the Project Boundary. Section 4 of this document discusses applicable local, state, and federal regulations in more detail. Chelan PUD's Land Management Program does not negate existing state and federal regulations. It provides details regarding what resources, existing management responsibilities, and Project operation requirements Chelan PUD must consider when providing input to jurisdictional agencies regarding the review and authorization of uses and activities within the Project Boundary. In any instance where there are two or more regulations or FERC License requirements related to a particular use, the most stringent regulation will apply.

All municipalities, counties, towns, and Licensees near or within the Project Boundary have or are developing management plans that may be relevant to Chelan PUD's Land Management Program. These programs address shoreline development within a 200-foot buffer zone upland of the ordinary high water (OHW) line on non-federal lands. For more information and contacts associated with these jurisdictional agencies see Section 4.1.1 of this document. Chelan PUD implements the Rocky Reach Land Management Program in a manner that compliments and is consistent with these plans. In some instances, the Land Management Program policies and requirements differ from other existing management plans because they are specific to lands within the Rocky Reach Project Boundary and must consider License mandated activities and resource management goals.

**FIGURE 1:** PROJECT LOCATION AND PROJECT BOUNDARY





## **2 PURPOSE, GOALS AND OBJECTIVES**

The intent of Chelan PUD’s Land Management Program is to be consistent with Project License requirements and to protect and enhance the scenic, recreational, and environmental values of the Project, while affording reasonable public access and use of lands and shorelines within the Project Boundary. Chelan PUD works to ensure these values are protected by reviewing and approving land and shoreline uses within the Project Boundary that consider FERC regulations and guidelines, FERC mandated License compliance actions, the License Settlement Agreement, other relevant local, state, and federal plans, and the comments received from agencies, stakeholders, and property owners. If there is a conflict between the Land Management Program, a Non-Project use request, and the Project License, the Project License will take priority. Chelan PUD’s Land Management Program does not supersede or change the Standard Land Use Article or other Project License requirements.

### **2.1 CHELAN PUD’S LAND MANAGEMENT PROGRAM GOALS AND OBJECTIVES**

The Land Management Program provides a mechanism for managing the multiple resources and uses of lands and shorelines within the Project Boundary consistent with License requirements while anticipating future land and water uses. In particular, Chelan PUD recognizes that future development within the Project Boundary has the potential to affect existing aquatic and near shore resources. However, carefully balanced and consistently managed land use activity is appropriate within the Project Boundary if it does not adversely affect protected or sensitive natural or cultural resources and/or public access. Additionally, present or future land and water use proposals cannot adversely affect Chelan PUD’s ability to operate the Project. The Land Management Program serves as a tool to consolidate the

numerous resource management responsibilities and locations Chelan PUD is required to implement and protect as part of the Project License. It provides guidance to both Chelan PUD staff and Non-Project use proponents regarding the environmental resources that could be impacted, permitting required to pursue land development activities, and the processes for gaining approvals. The objectives of the Rocky Reach Project Land Management Program are to:

- Comply with FERC License and Settlement Agreement requirements.
- Identify and clarify Chelan PUD’s role in the permitting process.
- Comply with and/or complement other regulatory laws and regulations.
- Provide support and rationale for Chelan PUD’s land and shoreline use authorizations and decisions.
- Acknowledge and support Hydroelectric Project operations.
- Protect environmental, cultural, recreation, and aesthetic resources.
- Provide safe and equitable access to and use of public lands and shorelines within the Project Boundary.

### **2.2 LAND MANAGEMENT PROGRAM SCOPE**

Policies and procedures set forth in this Land Management Program are applicable only to shorelines and lands within the Project Boundary. The Rocky Reach Project Boundary delineates those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental and cultural resources. The Project Boundary includes all Lands and Waters as identified on maps that are approved by FERC and part of the License.

### **2.3 CHELAN'S RESPONSIBILITIES AND RIGHTS TO AUTHORIZE NON-PROJECT USES**

Chelan PUD has a responsibility to ensure that development activities that occur within the Project Boundary are consistent with Project License requirements, purposes, and operations (Project Uses). As provided by Land Use Article 410, Chelan PUD may allow proposed uses that it deems appropriate and permissible as long as the proposed use is consistent with the Project's purposes and scenic, recreational, and environmental values. Chelan PUD must also ensure that its land use review and approval is consistent with other, resource specific management plans for the Project. Proposed uses that are outside the scope of Land Use Article 410 may require review and approval from FERC (refer to Land Use Article 410 in Appendix B).

### **2.4 PUBLIC OUTREACH AND AGENCY CONSULTATION**

Public outreach and consultation with local, state, and federal jurisdictional agencies was an important component in developing this Land Management Program document. Ensuring the Land Management Program serves as a forward-looking guidance document for Non-Project use of lands and shorelines within the Project Boundary required seeking input from jurisdictional agencies, the public, and private landowners. Details associated with the public outreach and consultation completed during the development of this document is attached as Appendix C.



## **3 CHELAN PUD'S LAND MANAGEMENT PROGRAM**

This section provides information related to Chelan PUD's process for reviewing and approving land and shoreline uses and includes the following:

- Step-by-step guide for applicants seeking Chelan PUD approval through the permitting process.
- Description of the types of projects that require Chelan PUD and/or FERC approval.
- Description of the criteria used by Chelan PUD in reviewing a proposal, including the resource land management classifications.
- Criteria for determining if FERC approval is necessary.
- Explanation of grandfathering and prior existing uses.
- Discussion of temporary activity approvals.
- Description and definition of "project uses".

Chelan PUD will not provide a Permit for any land or shoreline use without proof of receipt of all other relevant permits. Chelan PUD recommends contacting Chelan PUD's Real Estate Services Department for pre-application consultation to assess the feasibility of a proposal before entering into the permit process. Jurisdictional agencies and state permitting guidelines are discussed in Section 4 of this document.

Chelan PUD reviews and approves potential uses of lands and shorelines on a case by case basis taking into consideration Chelan PUD's land ownership and flowage easement rights. Some types of uses will require the FERC review and approval prior to Chelan PUD issuing approval. In these instances, Chelan PUD is required to review the proposal and regulatory permits received, consult with other

agencies as appropriate, and provide application to FERC for final approval. In these cases, Chelan PUD will review the proposal, work with the project applicant, and prepare the FERC submittal to verify the proposed action complies with the Project License and does not have the potential to adversely affect Chelan PUD's environmental and cultural resource management mandates.

Section 6 of this document summarizes the multiple protected and/or sensitive species and resources on lands and shorelines within the Project Boundary. Chelan PUD is actively managing these resources as part of the Project License. In some instances, multiple resources may occur in the same area. Some areas may have fewer protected or managed resources. In most cases, there are other applicable local, state, or federal regulations to protect these species and approve construction or use activities. With the exception of some temporary, passive uses of lands and shorelines within the Project Boundary, almost all activities that occur within 200 feet of a shoreline require some level of approval from local, state, and/or federal agencies.

### **3.1 STEPS FOR SEEKING CHELAN PUD APPROVAL WITHIN THE PERMITTING PROCESS**

Applying for regulatory approvals to complete a land or shoreline project can be challenging. To help simplify the permitting process, the State of Washington has a single application form that is mutually accepted by the jurisdictional agencies, called the Joint Aquatic Resource Permit Application (JARPA). To begin the permitting process, Chelan PUD encourages applicants to contact their local City or County office for pre-application consultation, as well as, other potential jurisdictional agencies to assess the feasibility of their proposed project before beginning the permitting process. The JARPA process is outlined more fully in Section 4 of this document and is available on-line at [www.epermitting.wa.gov/](http://www.epermitting.wa.gov/). Chelan PUD Real Estate Services staff is also available to discuss Project specific considerations.

See Appendix D for a list of Chelan PUD contacts.

The steps listed in Table 3-1, below, outline how an applicant might move through the permitting process, including review and approvals by Chelan PUD.

**TABLE 3-1: STEPS FOR SEEKING CHELAN PUD APPROVAL FOR A PROPOSED PROJECT**

<b>Step 1</b> <i>Applicant</i>	Applicant provides proposed project or use to jurisdictional County or City and completes application forms using the JARPA process (see Section 4 of this document). Forms can be obtained online or from the County or City.
<b>Step 2</b> <i>City or County</i>	The respective city or county will determine if the proposed project is within the Project Boundary. If so, it alerts Chelan PUD by forwarding the application material to Chelan PUD's Real Estate Services Department.
<b>Step 3</b> <i>Chelan PUD</i>	Chelan PUD is notified of the proposed project or use by the City or County (and or the Applicant). Chelan PUD will then initiate review of the proposal. If it is determined the action will require FERC approval, Chelan PUD will work with the applicant to outline the documents needed and discuss the potential timelines associated with a FERC approval process. Chelan PUD will review the proposed action to determine if it is consistent with License requirements and does not have the potential to adversely affect environmental, recreation, or cultural resources (see Sections 3.2 and 3.3 below for more detail).

<b>Step 4</b> <i>Chelan PUD and Jurisdictional Agencies</i>	Upon completion of its review, Chelan PUD will provide written comment to the County or City related to its review, including any findings of potential impacts or known resource areas of concern. Chelan PUD will also alert other local, state, and federal agencies of its findings, as appropriate. Under the JARPA process, the jurisdictional agencies will complete their processes to permit the proposed project.
<b>Step 5</b> <i>Applicant</i>	The Applicant receives agency permits, including any related resource protection and mitigation requirements. The Applicant then provides proof of all permits obtained to Chelan PUD.
<b>Step 6</b> <i>Chelan PUD and Applicant</i>	<p>If the proposed project or use does not require FERC approval and all permits from jurisdictional agencies have been received, Chelan PUD will issue its approval through a permit or license.</p> <p>If the proposed project or use requires FERC approval, Chelan PUD will work with the Applicant to prepare the documents necessary for a FERC submittal and discuss the potential timeline associated with this process. Completing the FERC submittal can be facilitated by initiating document preparation in Step 2, so that the documents are ready to be filed with the FERC once the jurisdictional permits have been received. The FERC will provide notification to Chelan PUD that the application has been received and assigned for review by FERC staff. In some cases, FERC staff may request additional information. The FERC review process generally takes from 3 to 6 months to complete, depending on the complexity of the submittal and thoroughness of the application.</p>



### **3.2 PROJECTS THAT REQUIRE CHELAN PUD AND/OR FERC APPROVAL**

Land uses within the Project Boundary other than for Rocky Reach Project operations (e.g. dam structures, Chelan PUD parks, hatchery facilities, wildlife reserves, etc.) are called “Non-Project uses”. The FERC is ultimately responsible for regulating Non-Project uses. However, the FERC has delegated primary regulatory responsibilities at the Rocky Reach Project to Chelan PUD. Chelan PUD fulfills this responsibility using the following mechanisms:

- Chelan PUD Land Management Program (granting permissions as allowed by FERC);
- Application to FERC for approval of Non-Project uses of project lands (within the Project Boundary), when required.

FERC has given Chelan PUD the authority to approve certain Non-Project uses of land and shoreline within the Project Boundary without FERC approval. Chelan PUD may review and allow other potential land or shoreline uses not listed on a case-by-case basis.

In general, Chelan PUD will review and allow Non-Project uses within the Project Boundary that are consistent with ownership and flowage easement rights, the requirements of the Project License and other relevant management plans, meet local, state or federal ordinances and/or regulations, and for which the owner/proponent has received all necessary permits from jurisdictional agencies. The land and shoreline uses Chelan PUD can approve are specified in Standard Land Use Article (see Appendix B) within the License and are summarized in Table 3-2 below.

**TABLE 3-2: LAND AND SHORELINE USE APPROVALS  
(LAND USE ARTICLE 410)**

CHELAN PUD HAS AUTHORITY TO APPROVE	REQUIRES ANNUAL REPORT TO FERC	REQUIRES PRIOR FERC APPROVAL
Boat docks or similar structures that can accommodate no more than 10 watercraft at a time and intended to serve a single family dwelling	Water intake or pumping facilities that do not extract more than one million gallons per day from the project impoundment	Private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina
Non-commercial piers	Sewers that do not discharge into Project waters	Sewer or effluent lines that discharge into Project waters
Landings	Storm drains and water mains	Other pipelines that cross project lands or waters but do not discharge into Project waters
Landscape plantings	Minor access roads, replacement, expansion, realignment, or maintenance of bridges and roads	Recreational development consistent with an approved report on recreational resources
Embankments, bulkheads, retaining walls, or similar structures for erosion control	Telephone, gas, and electric utility distribution lines	Construction of new bridges or roads
Food plots and other wildlife enhancements	Non-Project overhead electric transmission lines that do not require erection of support structures within the Project Boundary	Non-Project overhead electric transmission lines that require erection of support structures within the Project Boundary
	Submarine, overhead, or underground major telephone distribution cables or major electric distribution lines	Other uses if: the amount of land conveyed is 5 acres or less; are at least 75 feet from the water

### 3.3 CHELAN PUD REVIEW PROCESS

When Chelan PUD receives a completed application for a proposed land or shoreline use within the Project Boundary, Chelan PUD will review the proposal to identify if:

- The proposal will comply with the specific agreements contained in the Chelan PUD flowage easement for the property, and
- The proposal is consistent with the purpose of protecting and enhancing the cultural resources (as described in the Historic Properties Management Plan) of the Project,
- The proposal is consistent with the purpose of protecting and enhancing the scenic, recreational, and other environmental values of the Project and the Land Management Program,
- The proposal is consistent with applicable License management plans for the Project, such as the Recreation Resources Management Plan,
- The applicant has received all permits required by jurisdictional agencies (e.g. Clean Water Act 404 permit).

Chelan PUD may impose conditions upon the Permit in order to ensure that the use as permitted satisfies the above criteria. An applicant who accepts a Chelan PUD land use Permit agrees to abide by the terms and conditions contained in the Permit.

#### 3.3.1 APPLICATION FOR A NON-PROJECT USE OF PROJECT LANDS AND FERC APPROVAL

Some shoreline uses fall outside of Chelan PUD's authority to issue a Land Use Permit. These are typically larger projects or those that would have greater environmental impact. Requests that fall outside of Chelan PUD's authority may only be authorized by the FERC. Requests for permits for Non-Project uses require Chelan PUD to file a

request for a license amendment with the FERC. If a land or shoreline use proponent requests Chelan PUD pursue a license amendment, the proponent must; 1) obtain Chelan PUD's agreement on the proposed use, 2) comply with all of FERC's rules regarding the content and process for the amendment, 3) be responsible for the costs of any analysis, studies, or other documentation, and 4) provide Chelan PUD with a copy of all required permits for the proposed use.

#### 3.3.1.1 AGENCY CONSULTATION FOR PROPOSED USES REQUIRING FERC APPROVAL

Shoreline uses requiring FERC approval typically have the potential for greater environmental, cultural, and or recreational resource impacts. Chelan PUD will consult with local, state, and federal agencies (as appropriate), the SHPO, and other stakeholders as required in its License and consider the remarks when reviewing a proposed land or shoreline use and provide the comments to the FERC in the Non-Project use license amendment. Applicants may be required to provide additional information requested by the consulted agencies or Chelan PUD.

#### 3.3.2 LAND MANAGEMENT CLASSIFICATIONS

To help differentiate between shoreline lands considered essential for Project operations, necessary for environmental protection, and those likely appropriate for most private and commercial uses, Chelan PUD has mapped lands within the Project Boundary using three classifications, Integrated Use, Resource Management, and Project Operations. These are defined below and summarized in Table 3-3. To protect resources, classification may change over time. Additional information and access to current Classification Maps is explained in Appendix A.

**TABLE 3-3: RESOURCE LAND MANAGEMENT CLASSIFICATION SUMMARY**

INTEGRATED USE AREA	RESOURCE MANAGEMENT AREA	PROJECT OPERATIONS AREA
<p>No known significant environmental/cultural resources or associated resource management goals that would preclude Chelan PUD's approval.</p> <p>Most appropriate for the widest range of private, non-residential, and commercial uses.</p> <p>Acknowledges existing uses.</p> <p>Includes some currently undeveloped areas that may be appropriate for future uses.</p>	<p>Has known significant environmental/cultural resources or associated resource management goals, as identified in Settlement Agreement and subsequent resource management plans.</p> <p>Created to monitor and protect environmental and cultural resources.</p>	<p>Includes infrastructure essential to license mandated operations or those facilities, structures, and sites required by the FERC license.</p> <p>Includes dams, powerhouses and appurtenant structures.</p> <p>Includes areas restricted to public access due to safety, security, operational, or other constraints.</p> <p>Includes license related recreational sites.</p>

*Classifications are color coded for identification on map (see Appendix A, Resource Maps)*

**3.3.2.1 INTEGRATED USE AREA**

Chelan PUD applies the Integrated Use Land Management Classification to areas within the Project Boundary with no known significant environmental/cultural resources or associated resource management goals that would preclude Chelan PUD's approval of Non-Project uses as part of the JARPA process. While any development or use can incur unwanted or adverse effects on the environment, these Land Management Classification areas are those most appropriate for the widest range of private, non-residential, and commercial uses. The Integrated Use Land Management Classification acknowledges existing uses, and anticipates future Non-Project uses by including within this designation some currently undeveloped areas within the Project Boundary that may be appropriate for future uses.

Assignment of this Land Management Classification to particular areas does not ensure there are no protected or sensitive resources present, although the likelihood of them occurring is believed to be lower than other classifications. As such, Chelan PUD strongly encourages proponents of Non-Project uses in the Integrated Land Management Classification to consult with County permitting and Chelan PUD Real Estate Services Department staff before moving forward with significant project planning. Additionally, Chelan PUD's Integrated Use Land Management Classification does not preclude the need for jurisdictional agency review and approval. Section 4 identifies these agencies and the regulations and laws they enforce.

**3.3.2.2 RESOURCE MANAGEMENT AREA**

Protection of fish and wildlife, their associated habitat, and the preservation of cultural areas are ongoing objectives of the Project License and Settlement Agreement. Chelan PUD classifies Project land areas known to support or contain a variety of sensitive or protected resources or designated for specific resource management, species protection, and environmental purposes as Resource Management.

The primary objective for the Resource Management area is to protect environmental and cultural resources. This Land Management Classification includes areas within the Project Boundary identified in the Settlement Agreement process and subsequent resource management plans, as areas that merit special protection and/or ongoing monitoring. Some of Chelan PUD owned lands within the Project Boundary have also been set aside for terrestrial and aquatic habitat management.

A majority of Chelan PUD or publicly owned land within this classification is available for low impact day uses such as hiking or hunting. Other locations are available for uses such as dispersed camping and public recreation facilities, such as parks. Chelan PUD's Recreation Management Plan identifies the locations and management strategies for these areas.

Any proposed permanent Non-Project use in a Resource Management area is subject to consultation and approval processes involving local, state, and federal resource agencies that have jurisdiction to regulate the proposed use (see Section 4). Typically, Resource Management areas require extensive environmental review, permitting, and mitigation and/or may be prohibited pursuant to local, state, or federal law. The permitting process may involve development of an Environmental Assessment (EA) or Environmental Impact Statement (EIS) by Non-Project use proponents as well as completion of other required state or federal environmental analyses, such as a Biological Evaluation (BE) or Biological Assessment (BA) and subsequent Biological Opinion for Endangered Species Act (ESA) consultation.

Chelan PUD will consider new Non-Project use(s) within the Resource Management areas if the proposed action has minimal effect on environmental/cultural resources, does not impede Project License and resource management plan requirements, or if other jurisdictional

agencies approve mitigation plans to offset resource impacts as part of the JARPA review process. Chelan PUD may require Project specific mitigation in some instances.

The proponent of a Non-Project use is required to develop and submit appropriate materials and support the action throughout the review process. Chelan PUD will not issue its Permits/Licenses unless JARPA applicants can provide proof of consultation, and where appropriate, receipt of permits from other jurisdictional agencies. Chelan PUD recommends that any proponent of a Non-Project use contact Chelan PUD's Real Estate Services Department for pre-application consultation. This will help Non-Project use proponents assess the feasibility of their proposals before entering into the JARPA process.

### **3.3.2.3 PROJECT OPERATIONS AREA**

The Project Operations Land Management Classification includes those infrastructures that are essential to License mandated operations or those facilities, structures, and sites required by the FERC License. These can include dams, powerhouses and appurtenant structures. Due to safety, security, operational, or other constraints, Chelan PUD must maintain strict control of these facilities and sites and may restrict public access to them. Chelan PUD includes License related public recreational sites within this Land Management Classification.

For facilities associated with hydroelectric power production or for other appurtenant operations (e.g. fish production and rearing facilities), uses are strictly limited to those necessary for operation and maintenance. Chelan PUD has established site-specific regulations for recreational facilities, public information and education sites.

### 3.3.3 PRIOR EXISTING USE REVIEW

Prior Existing Uses are Non-Project uses established before Chelan PUD's Land Management Program development. Chelan PUD will work cooperatively with Chelan and/or Douglas County or local government entity permitting staff to identify Non-Project uses that have not received approval through the JARPA process. Local, state, or federal jurisdictional authorities may take enforcement actions such as imposing fines and/or requiring removal of unauthorized structures or uses.

In some instances, Chelan PUD will both notify the local jurisdictional agency and contact Non-Project use owners if it determines that the proponent has not applied for and received appropriate authorization from Chelan PUD to occupy Project lands or waters. Once notified, proponents/owners of unpermitted structures should initiate consultation with the respective local jurisdictional agency to apply for required permits, which will also initiate Chelan PUD's review of the unpermitted Non-Project use. Chelan PUD may approve Prior Existing Uses under the JARPA review process if it determines the Non-Project use:

- will not interfere with Project purposes or operations,
- is adequately maintained and does not pose an undue hazard to persons or property,
- received the necessary permits from the applicable jurisdictional agencies, and
- is consistent with the intent of the Land Management Program.

Chelan PUD considers Prior Existing Use permitting or "grandfathering" on a case-by-case basis if otherwise approved/ permitted by city, county, or other jurisdictional agencies. It is not obligated to grandfather a Prior Existing Use and this Land Management Program does not require it to do so. Chelan PUD's ability to grandfather an existing use does not create, and is not intended to create, an opportunity to automatically allow or continue Prior Existing Uses. Chelan PUD recognizes that some Non-Project uses may have been installed or constructed before local, state or federal regulations applied to such. It also recognizes that owners of older structures and/or those that have transferred ownership multiple times may have difficulty providing proof of construction authorization. Chelan PUD recommends that owners in this situation first contact the respective local authority to determine if permits or authorizations are on file. Chelan PUD will address these situations on a case-by-case basis.

A decision by Chelan PUD to grandfather an existing use is not intended to override or nullify the terms of existing lease agreements between Chelan PUD and other parties. Chelan PUD will not grandfather Non-Project uses that are in violation of the terms of existing leases or agreements with Chelan PUD or its authorized agents, except as those agreements may be replaced or otherwise changed, with Chelan PUD's consent, to allow for the existing use in question.<sup>(5)</sup>

---

(5) *Changes in leases or other agreements may also require prior FERC notification and/or approval.*

### **3.3.4 TEMPORARY ACTIVITY PERMITS**

Chelan PUD may permit a temporary, Non-Project use if it 1) does not interfere with Project operations; 2) does not require any form of construction; 3) does not establish a long-term use; and 4) does not result in any significant adverse effect on a sensitive or protected Project resource. Some examples of temporary activities that Chelan PUD may allow include one-time outdoor events, educational projects, and other non-commercial programs associated with schools, universities, service clubs, or youth organizations. Local, state, and/or federal review and permits, if required, may be necessary depending on the nature of the use or activity.

### **3.3.5 LICENSE IMPLEMENTATION MEASURES AND PROJECT OPERATIONS**

Chelan PUD's use of lands and shorelines within the Project Boundary for operational purposes, including implementation of its FERC License, Settlement Agreement, and resource management plans (by Chelan PUD or third parties operating on behalf of Chelan PUD) are Project Uses. Those uses are subject to FERC requirements and permits from jurisdictional agencies may be required for such activities.





## 4 WASHINGTON STATE PERMITTING PROCESS

### 4.1 JOINT AQUATIC RESOURCE PERMIT APPLICATION (JARPA)

Most proposed uses within the shoreline environment in Washington State will require review and approval by city/county permitting staff, the WDOE, WDFW, and the ACOE. Any project involving work below the Ordinary High Water Lines will require ESA consultation, which may incur significant additional time and cost to the project. Chelan and Douglas counties and area municipalities participate in a program developed to reduce the number of forms needed for shoreline development permit applications and for complying with environmental laws that have redundant purpose and authority. The combined application form that is mutually accepted by the jurisdictional agencies is the JARPA. A complete guide to the JARPA process can be found at [www.epermitting.wa.gov/](http://www.epermitting.wa.gov/).

The JARPA is used to process permits for:

- Shoreline Substantial Development, Variance, or Conditional Use Permit issued by local government. (Note that some local agencies require completion of their own forms.)
- Temporary Modification of Water Quality Criteria issued by the WDOE.
- Hydraulic Project Approval (HPA) issued by the WDFW.
- Section 401 Water Quality Certification issued by WDOE.
- Aquatic Use Authorization issued by Washington Department of Natural Resources (DNR)
- ACOE Section 404 and Section 10 Permits (which may include ESA consultation).

As discussed in Section 3.2 of this document, all Non-Project uses within the Project Boundary require review and approval by Chelan PUD, and in some instances FERC. Additionally, Chelan PUD requires that all Non-Project uses within the Project Boundary receive all necessary permits and authorizations from applicable jurisdictional agencies. Chelan PUD will not authorize Non-Project uses without proof of receipt of all required jurisdictional agencies' permits. The following Section describes the general jurisdictional agencies whose permit approvals are required for most shoreline activities and that accept the JARPA for application. Chelan PUD recommends contacting city/county permitting staff for pre-application consultation as well as the contacts listed below for local, state and federal jurisdictional agencies. This will assist Non-Project use proponents in assessing the feasibility of their proposals before entering into the permitting process. Chelan PUD Real Estate Services staff is also available to discuss Project specific considerations.

#### 4.1.1 LOCAL GOVERNMENT

The Shoreline Management Act and associated city and county Shoreline Master Programs regulate development within 200 feet of the Ordinary High Water line, or within the 100-year floodplain, in most cases. Accordingly, any new proposed uses require review and approval by local and/or county regulatory staff with subsequent review by the WDOE. Typically, a county or city will review a proposed use to determine if the use qualifies as a Shoreline Substantial Development Permit, Conditional Use Permit, Variance Permit, or Exemption.

Local government also reviews shoreline uses in frequently flooded areas, geologically hazardous areas, wildlife habitats, aquifer recharge areas, and wetlands and may require application for Floodplain Management Permits and/or compliance with local critical areas ordinances.

**Chelan County Department of Community Development**  
316 Washington Street, Suite 301  
Wenatchee, WA 98801  
(509) 667-6225

**Douglas County Planning Commission**  
140 19th Street NW  
East Wenatchee, WA 98802  
(509) 884-7173

**City of Entiat**  
**Planning and Building Department**  
14070 Kinzel Street  
PO Box 228  
Entiat, WA 98822  
(509) 784-1500

#### **4.1.2 STATE GOVERNMENT**

##### **4.1.2.1 WASHINGTON STATE DEPARTMENT OF ECOLOGY (WDOE)**

The WDOE exercises jurisdiction under several state and federal statutory authorities. WDOE is responsible for certifying that construction activities meet Section 401 of the Clean Water Act. This “water quality certification” is required when a project requires federal approval (ACOE, FERC, etc.). WDOE also exercises jurisdiction under the Washington State Shoreline Management Act. The Shoreline Management Act establishes a cooperative program of shoreline management between local government and the state. Local government has the primary responsibility for initiating the planning required by this chapter and administering the regulatory program consistent with the policy and provisions of the Shoreline Management Act. All Non-Project use applicants will deal directly with the respective city or county planning staff and permitting agents. Specific to this

Land Management Program, applicants must coordinate with local government planning staff (see Local Government Section above).

For further information, Non-Project use proponents may contact the WDOE at:

**Washington State Department of Ecology**  
**Central Regional Office**  
15 West Yakima Avenue, Suite 200  
Yakima, WA 98902-3452  
(509) 575-2490

WDOE also provides guidance regarding the Washington State Environmental Policy Act (SEPA) process. SEPA provides a means to identify potential environmental impacts that could result from government decisions regarding, among other things, issuance of permits for private projects. If a proposed Non-Project use requires SEPA review, an applicant must fill out a checklist regarding the proposed Non-Project use and its potential impacts to the environment. This checklist allows lead permitting agency staff to make decisions on the significance of the proposed Non-Project use and issue a determination of non-significance, mitigated determination of non-significance, or a determination of significance which will require the applicant to prepare an EIS evaluating alternatives and measures to eliminate or minimize the potential effects of the Non-Project use. SEPA gives agencies authority to condition a proposal if the EIS identifies specific adverse impacts. In some cases, an agency may deny a proposal based on the findings of the EIS.

For further information, proponents of Non-Project uses may contact the WDOE at:

**Washington State Department of Ecology**

**Central Regional Office**

15 West Yakima Ave. Suite 200  
Yakima, WA 98902-3452  
(509) 575-2490

**4.1.2.2 WASHINGTON STATE DEPARTMENT OF FISH AND WILDLIFE (WDFW)**

A Hydraulic Project Approval (HPA) from the WDFW is required if a proposed shoreline use includes construction or other work that will use, divert, obstruct, or change the natural flow or bed of any fresh or salt water of the state. This includes all construction or other work waterward and over the OHW line and may include uses landward of the OHW line, if the proposed use has the potential to affect fish, wildlife and habitat. In general, most construction, installation, and, often, maintenance of any structure in or over the water requires this permit.

For further information, Non-Project use proponents may contact WDFW at:

**WDFW - Wenatchee District Office**

3860 Chelan Hwy N  
Wenatchee, WA 98801  
(509) 662-0452

**WDFW – Headquarters**

**Natural Resources Building**

(physical address) 1111 Washington Street SE  
Olympia, WA 98501  
(360) 902-2534  
(mailing address) 600 Capitol Way North  
Olympia, WA 98501-1091

**WDFW – North Central - Region 2**

1550 Alder Street NW  
Ephrata, WA 98823-9699  
(509) 754-4624

**4.1.2.3 WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES (WDNR)**

An Aquatic Resource Use Authorization (Aquatic lease) is required if a proposed shoreline use is on, crosses, or impacts the bedlands, tidelands, or shorelands of a navigable water.

For further information, Non-Project use proponents may contact WDNR at:

Washington State Department of Natural Resources  
Southeast Region  
713 Bowers Road  
Ellensburg, WA 98926-9301  
(509) 925-8510  
*southeast.region@dnr.wa.gov*

**4.1.2.4 WASHINGTON STATE DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION/STATE HISTORIC PRESERVATION OFFICER (SHPO)**

Proposed Non-Project uses within the Project Boundary may require review and comment from the SHPO through the JARPA review process discussed below. Additionally, Chelan PUD staff will review all proposed new uses consistent with procedures defined in the Cultural Resources Management Plan, regardless of the Land Management Classification in which they occur, to determine whether the activity has the potential to affect cultural resources. Early identification of proposed Non-Project uses, as well as identification of activities requiring permit applications and those that do not, will be key to minimizing problems for Non-Project use proponents. Chelan PUD

will review the permit application and supporting information to ensure that the permit applicant provides the appropriate information. Chelan PUD may assist permit applicants in determining whether the proposed action is subject to Washington state cultural resource laws and regulations and if consultation with the SHPO is required.

Chelan PUD may require proponents of ground-disturbing activities within the Project Boundary to undertake the appropriate level of cultural resource investigations, mitigation measures, and/or monitoring measures consistent with the level of resource protection measures outlined in the HPMP. Chelan PUD will determine the need for a cultural resource investigation based on the submitted application material. For proposed uses that require a cultural resource investigation, the Applicant is required to reimburse Chelan PUD for the cost of the investigation. Chelan PUD will notify Applicants when cultural resource investigations are required. The results of the cultural resource investigation will identify if there is a need for mitigation or monitoring.

For further information, Non-Project use proponents may contact:

**State Historic Preservation Officer (SHPO)**

**Gretchen Kaehler**

**Assistant State Archaeologist, Local Governments**

**Department of Archaeology and Historic Preservation**

Olympia

Phone: (360) 586-3088

Cell: (360) 628-2755

#### **4.1.2.5 FEDERAL GOVERNMENT - U.S. ARMY CORPS OF ENGINEERS (ACOE)**

Under Section 404 of the Clean Water Act, the United States Congress directs the ACOE to regulate the discharge of dredged and fill material into all waters of the United States, including their adjacent wetlands.

The intent of this law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain the chemical, physical, and biological integrity of those waters. Typical activities requiring permits include, but are not limited to, boat ramps, docks, bulkheads/retaining walls, ditches, dams, dikes, weirs, dredging, filling, intake structures, outfall structures, rip-rap, and similar activities.

Additionally, Section 10 of the Rivers and Harbors Act of 1899 requires a permit prior to the accomplishment of any work in, over, or under navigable waters of the United States, or which affects the course, location, condition or capacity of such waters. Typical activities requiring Section 10 permits include, but are not limited to, construction or installation of piers, bulkheads, marinas, ramps, floats, overhanging decks, buoys, boat lifts, jet ski lifts, intake structures, outfall pipes, and dredging and excavation.

The ACOE solicits review from other federal agencies such as the NMFS<sup>(6)</sup>, United States Fish and Wildlife Service (FWS), and the Environmental Protection Agency (EPA). Depending upon the scope of the proposed activities, consultation under the Endangered Species Act (ESA) with NMFS and USFWS may be required as part of the ACOE review process. They may also require an applicant provide proof that a proposed Non-Project use poses no adverse effect to historic and cultural resources. Penalties for violations can range from being required to remove the structures and material to substantial fines or even imprisonment. If a proposed use includes any of the above activities, or it is uncertain if an activity requires a permit, contact the ACOE Seattle District Office Regulatory Branch at:

---

(6) *National Oceanic and Atmospheric Administration (NOAA) Fisheries.*

U.S. Army Corps of Engineers, Seattle District  
Regulatory Branch  
P.O. Box 3755  
Seattle, WA 98124-2255  
(206) 764-3495

#### 4.2 JARPA GUIDELINES

Chelan PUD provides the following excerpt from the State of Washington's Environmental Permitting Information website<sup>(7)</sup> regarding the JARPA and permitting process. All Non-Project use proponents are encouraged to review the website for complete, detailed information, guidance, and additional resource links, and meet with city and county permitting staff for a more detailed explanation of permit application requirements.

Before you start:

- Make sure you have a clear plan in mind for your project. Just like when you apply for a building permit, you must know what you plan to do before you start to fill out the application. This may include drawings with dimensions, maps, pictures, etc.
- Always download the JARPA form from [www.epermitting.wa.gov](http://www.epermitting.wa.gov) to make sure you have the most current version of the JARPA. It is important you have the most current version.
- Contact the local city or county government. Use the Summary of Questions to Ask Local Government link; it may save you from needing to make multiple phone calls to your local government.
- Contact your local planning department. Find out if your

project falls under the jurisdiction of the Critical Areas Ordinances, the National Flood Insurance Program and Shoreline Master Program. If it does, you may be able to use a JARPA.

- The State Environmental Policy Act (SEPA) Checklist link may be required for your project. SEPA analyzes the environmental impacts of a project. SEPA must be completed before local and state permits can be issued.
- Contact each permitting agency. Agencies may require more information or materials not specifically required in JARPA. Early coordination with all of the agencies may prevent delays in the processing of your application.
- Work with the local Fish and Wildlife Area Habitat Biologist early in the process. They will help you identify any special constraints, habitat guidelines, or issues that may crop up during fish habitat and aquatic permit projects. A list of Biologists names and phone numbers is available online at <http://wdfw.wa.gov/conservation/habitat/ahb/>.

When you fill in the JARPA:

- Make sure to check the box next to each permit you think you will need. You will need to send an original signed copy of the application to all the agencies associated with the boxes you checked.
- Be very detailed and specific; more information is better than less.
- Make sure your site maps and drawings are consistent with the written description you give on the application.
- Check out the state's online glossary for definitions of words that are new to you. [http://www.epermitting.wa.gov/site/alias\\_resourcecenter/resources\\_glossary/2485/glossary.aspx](http://www.epermitting.wa.gov/site/alias_resourcecenter/resources_glossary/2485/glossary.aspx)

---

(7) [http://www.epermitting.wa.gov/site/alias\\_resourcecenter/jarpa\\_process\\_overview/9979/process\\_overview.aspx#Before\\_You\\_Start\\_](http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_process_overview/9979/process_overview.aspx#Before_You_Start_)

- Put N/A in any questions that do not apply to your project. Don't just leave it blank.
- You need to have original signatures on the applications you submit to each agency. This means you must first make copies of the application then sign each copy with your original signature. Agencies will not accept applications with a copied signature.
- Understand that when you sign the application, you give permission to the agencies that you are applying for a permit from the right to enter the property where your project is located. This is to inspect the proposed, in-progress, or completed work. You also agree to start work **ONLY** after you get all of the necessary permits.

#### **4.3 BEST MANAGEMENT PRACTICES**

Best Management Practices (BMPs) are actions implemented to lessen the potential effects of the direct or indirect use of a resource. Some BMPs will be mandatory and if so, will be noted in the permits. Other BMPs are suggested to the owner/proponent to assist in conserving and protecting valuable land and shoreline resources and to help reduce potential adverse effects to environmental resources and water quality. For example, if property owners wish to cut or remove vegetation from their property to improve access or the view and have received all applicable regulatory approvals, they should consider conducting selective clearings and/or replanting low-lying vegetation that will help maintain soil stability rather than to remove all vegetation. Selective clearing and replanting are considered BMPs because they lessen the potential effects of the clearing.

Chelan PUD encourages adjacent property owners to adopt the BMPs suggested below voluntarily, as well as any other BMPs promoted by local, state, or federal agencies. Chelan PUD also recommends

Non-Project use proponents follow established guidelines presented in the Integrated Streambank Protection Guidelines published by the Washington State Aquatic Habitat Guidelines Program (2003). As discussed below, some activities and Non-Project uses within the Project Boundary may have additional requirements. Chelan PUD is dedicated to employing BMPs when managing its properties, both within and outside the Project Boundary. With assistance of interested parties, Chelan PUD supports public education efforts to encourage property owners to adopt the BMPs suggested below, as well as any other BMPs promoted by local, state, or federal agencies.

In some cases, specific BMPs may be a requirement of permits issued by Chelan PUD or other jurisdictional agencies and those BMPs shall be mandatory. Within the Project's Boundary, BMPs are required when implementing any land management measures on all Chelan PUD owned lands and generally within the Resource Management areas. Chelan PUD does not mandate the use of BMPs on non-Chelan PUD lands.

##### **4.3.1 BMP - SHORELINE BUFFER ZONES**

Vegetated shorelines are an important component of a healthy aquatic ecosystem. Naturally vegetated shorelines act as natural filters, facilitating the absorption and processing of runoff pollutants. This filtering ultimately reduces the amount of potentially harmful contaminants that enter a water body and that contribute to water quality degradation. In addition to filtering potentially harmful pollutants, the root systems of naturally vegetated shorelines provide a structure that helps maintain shoreline integrity and reduces excessive erosion that reduces water quality and in some cases adversely affects aquatic habitat. While limited planting of natural grasses can be an aspect of maintaining buffers, especially when used to stabilize disturbed soils, mowed lawns and non-native grass may not provide adequate contaminant filtering or long-term erosion control. Naturally

vegetated shorelines improve the aesthetic integrity of the water body and provide preferred aquatic and terrestrial habitat. BMPs that promote naturally vegetated shorelines are an integral part of efforts to maintain and improve water quality, shoreline stabilization, aesthetics, and wildlife habitat within the Project.

BMPs that support natural vegetation preservation or establishment along the shoreline include practices that:

- Minimize clearing of native trees and vegetation.
- Minimize the removal of large trees along shorelines or other steep and erodible areas.
- Provide temporary soil protection in disturbed areas through planting low maintenance, native grasses or other groundcovers recommended for site-specific conditions.
- Avoid dumping leaves or yard debris on or near the shoreline (no dumping of yard waste or debris is allowed within the Project Boundary including along any portion of the shoreline).

#### **4.3.2 BMP - VEGETATION MANAGEMENT**

Anyone considering removal of trees or other vegetation within 200 feet of OHW should be aware that other local, state, and federal regulatory approval may be required. Activities involving clearing, removing, or mowing vegetation or planning to plant or landscape with vegetation or other materials requires consultation with local governmental permitting staff and may involve consultation with Chelan PUD staff if the proposed activity occurs within the Project Boundary as such actions may interfere with local zoning and Project-specific resource management requirements. Special circumstances, such as the presence of wetlands, may result in a requirement for mitigation or alternative vegetation management practices through the permitting process. Chelan PUD will allow removal of vegetation if

a jurisdictional agency or Project-related management plan prescribes the practice for habitat enhancement or if otherwise approved through the JARPA process. It is a Douglas County requirement that a habitat management mitigation plan be acquired for riparian vegetation disturbance.

#### **4.3.3 BMP - EROSION CONTROL**

There are a variety of physical and biological control measures available to address erosion depending on the dynamics of each situation. Proposed erosion control measures will be evaluated on a case-by-case basis depending on shoreline characteristics and classification as part of the JARPA. In general, construction techniques and methods to minimize adverse effects to the riparian environment are the preferred methodology. While biotechnical stabilization methods are highly recommended, other erosion control measures will be considered, including riprap. Bulkheads are the least preferable method of shoreline stabilization. Certification from a geotechnical professional verifying the need for such structures is required prior to Chelan PUD approval.

Chelan PUD will provide public access to two erosion control demonstration sites at Entiat Park and on Entiatqua Trail south of Entiat Park in 2015. Information will be provided on an interpretive sign at each location detailing the methods used and how to access more information regarding additional erosion correction and control methods. Erosion control information is available on Chelan PUD's website: [www.chelanpud.org](http://www.chelanpud.org).



## **5 COMPLIANCE AND ENFORCEMENT**

Land Use Article 410 directs Chelan PUD to oversee Non-Project uses and take action to prevent unauthorized, non-complying uses of lands and shorelines within the Project Boundary. As referenced in other portions of this document, all proposed Non-Project uses that affect lands and shorelines within the Project Boundary are subject to Chelan PUD's review and, in some instances, approval. Pursuant to the authority granted Chelan PUD under the Project License, Chelan PUD retains the right to review all proposed and existing uses and occupancies of lands and shorelines within the Project Boundary for consistency with its Project License and resource management requirements.

All Non-Project uses on Chelan PUD owned land and approved by Chelan PUD through its permitting process are subject to inspection by Chelan PUD staff. Should an inspection reveal that these uses deviate from the approved plans, Chelan PUD will require that the property owner correct the discrepancy and/or remove the encroachment from the lands and shorelines within the Project Boundary. Chelan PUD must approve any alterations, additions, relocation, or other physical changes to an existing, permitted use prior to such changes. Local, state, and federal review and approval is also required. In an effort to ensure the goals and objectives of the Land Management Program as well as all License requirements are met, Chelan PUD reserves the right to revoke a Permit/License as provided in the permit. Chelan PUD may take any legal measures necessary to prohibit unauthorized use of Chelan PUD owned lands and require removal of structures and the restoration of these lands or waters to their original condition, if permit conditions and Land Management Program requirements are not followed.

All Non-Project uses on non-PUD lands are subject to the conditions

of the permits issued by and enforcement of jurisdictional agencies. Where appropriate Chelan PUD may make Project specific recommendations to these agencies to ensure the proposed Non-Project use does not affect Chelan PUD's ability to comply with the Project License and mandated resource management activities.

### **5.1 LAND MANAGEMENT PROGRAM UPDATE PROCESS**

Chelan PUD is committed to the long-term stewardship of the Project's lands, water, and environmental, recreational, and socioeconomic values. Chelan PUD recognizes that the region is a popular tourist destination and residential area, and that Non-Project uses change over time. Additionally, the Project area provides habitat to species that are naturally transient and for which Chelan PUD is actively implementing mitigation and protection measures. While changes in use may occur slowly, they may also result in patterns that necessitate reassessment of the Land Management Program.

To assure that the Land Management Program continues to serve its intended purpose and remains relevant during the Project License term, Chelan PUD has instituted processes to periodically review and, if necessary, amend the plan. Chelan PUD coordinates review of the Land Management Program with submittal of recreation reports to FERC (FERC Form 80 Reports), which occur every six years. The six-year period allows Chelan PUD to assess new issues that may arise because of development around the reservoirs in addition to reviewing the need for any Land Management Program changes as it relates to public access and recreational use. The following Section describes how Chelan PUD will accomplish this review, with whom Chelan PUD intends to consult during various reviews, what actions Chelan PUD considers appropriate to take without amendment to the Plan, and what triggers may warrant both agency and FERC consultation and/or amendment to the Land Management Program.

## 5.2 PROGRAM MONITORING AND REVIEW

Chelan PUD will review the Land Management Program, Land Management Classification mapping, and permitting activities for the purposes of tracking uses and noting any minor changes in use on an annual basis. This will provide long-term data useful in identifying areas experiencing change and augment periodic Land Management Program review. During the review of Project mapping, Chelan PUD will note minor changes such as changes in recreational uses, new Non-Project facilities, and minor modifications to Project maps. These types of incremental changes do not warrant amendments to the Land Management Program.

In the event that a major modification is proposed to be made to the Land Management Program Guide, Chelan PUD will publicly notice the proposed change and provide a public listening meeting. This will allow Chelan PUD to solicit feedback on, and advise the public of, the proposed change. It will also provide an opportunity for the public to meet with Chelan PUD staff and discuss issues of community interest.

Chelan PUD's primary means of tracking and monitoring Non-Project uses is through its permitting programs. Chelan PUD will track new Non-Project use applications and existing permits. With the data already in place for the Land Management Classifications, Chelan PUD will use the global positioning satellite (GPS) coordinates of any new permit application to determine the applicable Land Management Classification. Chelan PUD will review the number and location of permits it has processed within each Land Management Classification on an ongoing basis to assess overall land use and the effectiveness of the Land Management Program in managing these uses.

Chelan PUD performs periodic on-site reservoir monitoring. Chelan PUD Real Estate Services staff survey the Project reservoir by boat monthly (weather permitting) and note any new land uses or facilities within the Project Boundary. Staff then confers with respective local



jurisdictional agency permitting staff to confirm that the observed activities are in receipt of all valid permits.

Chelan PUD maintains regular contact with local government permitting staff to remain current on regional development adjacent to the reservoirs that may be relevant to the Land Management Program.

Table 5-1 provides examples of the various types of shoreline and land uses, alterations, and water quality issues monitored by Chelan PUD. Chelan PUD may coordinate with County or other enforcement agencies to determine if regulatory approvals were received or needed for the specific use, alteration, or water quality issue.

**TABLE 5-1: EXAMPLES OF SHORELINE AND LAND USES, ALTERATIONS AND WATER QUALITY ISSUES**

SHORELINE ALTERATIONS	OVER/IN-WATER STRUCTURES	POLLUTION ISSUES
Extraction	Docks	Illegal dumping
Mining	Pumping infrastructure	Oil spills
Gravel pits	(Surface water intakes)	Wastewater effluent (public\private) - pharmaceuticals
Vegetation alterations	Boat ramps	Pesticides, herbicides, fertilizers and other nutrients
Noxious weed/vegetation control	Underwater utilities	Storm water runoff
Agricultural uses	Power, water, wastewater, telecom	Irrigation withdrawals and returns
Livestock grazing	Buoys	Boats & other water craft (fuel, oil and other spills and discharges)
Landscape plantings	Bridges	Invasive species
Riparian vegetation removal	Buildings (overwater houses and boat houses)	Total dissolved gas (TDG)
Large woody debris	Boat lifts	Temperature
Utilities	Pilings	Noise and vibrations
Electrical facilities (PUD and others)	Swim platforms	Legacy chemicals and other toxins
Water intakes	Discharge lines	
Pumping facilities	Net pens	
Outfalls (surface and seepage)	Fishing platforms	
Structures and facilities	Habitat enhancements / modifications	
Docks	Footings	
Marinas		
Retaining walls		
Bulkheads		
Roads		
Stairways and steps		
Foot bridges		
Fencing		
Signs		
Dredging		
Fueling stations and storage		
Fill		
Off site run-on		
Bank stabilization		
Erosion control		
Swim beaches		
Adjacent trails		
Illegal fill		

### **5.2.1 MINOR MODIFICATIONS**

If, during annual review of issued permits, discussions with local government planning or permitting staff reveals increased demand for Non-Project uses in a particular location, changes in development patterns or other land use issues that may be relevant to the Land Management Program arise, Chelan PUD will note the location and monitor such developments. As long as resource and use criteria established by this Land Management Program do not change, Chelan PUD will not seek additional review by stakeholders.

Chelan PUD also anticipates the potential need to make site-specific changes in the location of Land Management Classifications to reflect on-the-ground conditions that were not anticipated or observed when it developed the classification mapping. This will most likely involve minor relocation of classification boundaries or site-specific waivers dependent on field observations. Unless a Land Management Classification is entirely removed or modified to an extent that requires remapping the entire location, Chelan PUD does not intend to amend the Land Management Program. During the review of Project mapping, minor changes, such as new development within an existing subdivision adjacent to the reservoirs or changes in recreational uses, will be noted in the Chelan PUD land use database and on the Project maps but are not anticipated to warrant amendments to the Land Management Program. These changes will be captured in Chelan PUD's monitoring and tracking system. Updated maps will be made available on Chelan PUD's web site or by hard copy, if requested.

### **5.2.2 POTENTIAL LAND MANAGEMENT PROGRAM AMENDMENTS**

Major changes within the Project Boundary may change goals and assumptions presented in this Land Management Program. Chelan PUD established the following criteria that may indicate the need to consider a Land Management Program amendment:

**New Residential Uses, Pressures, or Development Opportunities:** These may include county-approved modifications to existing zoning, new housing developments, infrastructure improvements that could lead to new development, or socioeconomic changes affecting the influx, and out-migration of populations.

**Major Commercial Upgrades or New Uses:** Land adjacent to the Project reservoir may experience commercial growth or development. This could change over the lifetime of the Land Management Program and may necessitate reconsideration of Chelan PUD's management policies. Chelan PUD will continue to monitor this type of Non-Project use and compile data that may be useful in the event a Land Management Program amendment becomes necessary during the review period.

**Large Parcel Land Sales/Major Changes in Land Ownership:** In the event that major parcels of previously undeveloped land change ownership, with an identifiable purchaser and new intent for use, Chelan PUD may review the Land Management Classification designation to determine if amendments to the Land Management Program are warranted.

**Changes within the Management Classifications:** The Land Management Classifications identified in this Land Management Program are based on environmental, cultural, and aesthetic resources. Some of these classifications are dynamic by nature. It is possible that within the review period new concerns such as nuisance aquatic vegetation or wetland habitat may change, therefore necessitating the re-evaluation and possible amendment of both management classifications as well as the allowed uses within them. Chelan PUD also acknowledges the possibility that mapping of the classifications may require site-specific modification. It will, during its six-year review of the Land Management Program, compare the original mapping with mapping it has updated in the interim between Land Management Program implementation and review period to assess

any changes in classification locations over time. If this change has resulted in significant modification of a particular Land Management Classification area, Chelan PUD will consider the need to amend the Land Management Program.

### **5.2.3 AMENDMENT PROCESS**

Chelan PUD will update Project and resource maps on an ongoing basis to assure they reflect field conditions. As long as Land Management Program-established resource and use criteria do not change, Chelan PUD will not seek additional review or consultation with the public or jurisdictional agencies. If it appears there may be major impacts on the Land.

Management Program's effectiveness, Chelan PUD will initiate agency and public review of Land Management Program language and/or assessment of the overall document. Chelan PUD will invite stakeholder reviewers (who may include representatives from various coordinating committees, county planning staff, and other interested stakeholders) to assess if any changes need to be made to the Land Management Program. If, after this consultation, Chelan PUD determines that an amendment to the plan is necessary, Chelan PUD will develop and provide draft language to interested parties, and implement such changes, as approved. These changes may include revising Land Management Classification definitions, or permitting process changes. Chelan PUD will continue to coordinate and consult with jurisdictional agencies, tribal representatives, stakeholders, and local government planning staff throughout the Land Management Program revision or redrafting process and will supply a final revised document to these entities as well as on its Project website.





## **6 RESOURCES WITHIN THE PROJECT BOUNDARY**

This Section provides a general overview of Project resource considerations specific to the Land Management Program. Chelan PUD is implementing resource-specific management activities within the Project Boundary which are detailed in FERC-approved Management Plans. These Management Plans and several existing FERC licensing documents provide descriptions and analysis of the Project's aquatic and terrestrial species and habitats, land use, cultural resources, recreation, and aesthetics.

### **6.1 REGIONAL SETTING**

The Rocky Reach Hydroelectric Project reservoir extends along the Columbia River about 43 miles to Douglas County PUD's Wells Dam (FERC No. 2149). Numerous dams and impoundments developed for hydropower and flood control alter the natural flow in the Columbia River Basin. The two most significant tributaries within the Rocky Reach Hydroelectric Project area are the Entiat and Chelan rivers, which enter the Columbia River at approximately river miles 483 and 503, respectively.

Located approximately seven miles downstream, the City of Wenatchee (located in Chelan County) is currently the largest city in north central Washington, drawing people from all over the region for its temperate climate, moderate housing prices, and recreational opportunities. The area experienced its largest population increase between 1990 and 2000, growing by more than 6,000 to a population of 27,856. 2010-census information indicates additional growth of approximately 10,000 residents (US Census, 2010). Also downstream of the Rocky Reach Project, the City of East Wenatchee is the largest community in Douglas County, with a 2012 population of 13,280 (MRSC, 2012a). Entiat is the largest community on the Project reservoir with a 2012 population of 1,135 (MRSC, 2012b).

### **6.2 GEOLOGY AND SOILS**

The Columbia River in the Project area incises through several types of soil deposits, many of which are remnants of glacial processes in the area. These deposits include, terrace deposits of coarse gravels, eolian (wind) deposits, alluvial fans, and some deposits of clay lake sediments. Steep, rocky upper slopes characterize both sides of the river valley at the Project. The bedrock consists of gneiss and gneiss capped by basalt. In most areas talus or other soil deposits cover bedrock on the lower slopes; however, bedrock slopes extend to the reservoir level in several areas (FERC, 2004; NMFS, 2002).

Upstream hydroelectric development limits the supply of bedload sediment into the Rocky Reach reservoir. Currently, the main source of sediment into the reservoir is the Entiat River. Sand and gravel deposits occur near the mouth of the tributary, with silt and sand deposited in the reservoir further away from the tributary input (FERC, 2004).

Shoreline erosion occurs in some locations around the Project reservoir. Most of the features that provide evidence of erosion predate the Project. Project operations may influence erosion in some instances by exposing parts of the shoreline above the pre-Project normal high water line to the effects of waves and current; however, overall the water levels fluctuate less due to the Project's presence, making it likely that erosion is less severe now than it was under pre-Project conditions (FERC, 2004). Run-of-river operations also provide more stabilized management of reservoir elevations compared with peaking hydroelectric operations.

Chelan PUD is currently monitoring and assessing erosion within the Project Boundary as part of its FERC approved Shoreline Erosion Management Plan. Chelan PUD has completed a helpful guide available to the public for erosion control techniques and has implemented the techniques at several park sites for demonstration purposes. Further information about the erosion control techniques

and the location of the demonstration sites can be found on Chelan PUD's web site at [www.chelanpud.org](http://www.chelanpud.org).

### **6.3 WATER QUALITY**

Under the 2006 State Water Quality Standards, the Columbia River at the Project includes designated uses for spawning/rearing (aquatic life), primary contact recreation, and other water supply and miscellaneous uses. Numeric criteria that support the protection of these designated uses consist of various physical, chemical, and biological parameters including total dissolved gas (TDG), temperature, dissolved oxygen (DO), turbidity, pH, and toxins.

The Washington Department Ecology (WDOE) 2012 Water Quality Assessment, used to identify statewide water quality concerns, recognizes three water quality concerns within the Project area waters. Currently, the segment of the Columbia River that includes the Rocky Reach Hydroelectric Project has sites that are listed for TDG, temperature, and breakdown products of the legacy pesticide, DDT.

Chelan PUD, in coordination with the U.S. Army Corps of Engineers (ACOE) and other Columbia River hydroelectric project operators, has been spilling water for downstream fish passage at the Project since 1976 to improve anadromous salmonid survival during downstream migration. Spill can also occur when high stream flows exceed the hydraulic capacity of the powerhouse or, occasionally, when energy demand is low and river flows are high. TDG levels in the forebay and tailrace of the Project vary throughout the spring and summer, likely due to changing spill volumes and upstream TDG levels associated with upstream projects' spill. TDG monitoring results have not demonstrated a strong causal relationship between spill volume at the Project and TDG levels in the forebay of Rock Island Dam. The level of TDG arriving at the Rocky Reach Project has a greater influence on TDG levels reaching the Rock Island forebay.

Water temperature in Rocky Reach Hydroelectric Project reservoir begins warming in March and reaches peak annual temperatures in late July through early September. Temperatures cool to a 3°C to 4°C (37.4°F to 39.2°F) average range during the fall and winter months. Daily average water temperatures in the Project forebay generally exceed WDOE criterion for several days in July and historically for approximately 44 percent of the days in August and September (1993 to 1998). The reservoir is not known to stratify (Chelan PUD, 1991; Johnstone and Mih, 1987) which is likely attributable to the Project's run-of-river operation resulting in a rapid reservoir turnover rate.

Dissolved oxygen is another important indicator of aquatic eutrophication and a major determinant of cold-water fisheries viability. Cold-water salmonids are less tolerant of depressed oxygen levels and generally require minimum levels of 7-9 mg/l DO, while warm water species can tolerate DO levels as low as 3-4 mg/l (EPRI, 1990). As mentioned earlier, the Rocky Reach Hydroelectric Project reservoir does not stratify. DO levels in the reservoir are favorable for salmonids and provide a healthy aquatic environment throughout the year.

The Columbia River generally has low turbidity. The Project area consists of igneous and metamorphic rock at the base of the Cascade Mountains to the west, basaltic material from the lava flows that created the Waterville Plateau to the east, and glacial outwash materials from the deep carving of the river valley itself. The tributaries that feed the mid-Columbia are glacially carved primarily. The result is very low sediment loads. Turbidity does increase significantly during periods of high inflow from the tributaries.

Chelan PUD is actively monitoring and managing water quality as detailed in its FERC approved Water Quality Management Plan.

### 6.3.1 AQUATIC INVASIVE SPECIES MONITORING AND CONTROL PLAN

The WDOE issued a Final 401 Water Quality Certification (401 Certification) on April 4, 2006, for the operation of the Project. Under Section 5.6(2) of the 401 Certification, Chelan PUD is required, in consultation with the Rocky Reach Fish Forum (RRFF), to develop and implement an Aquatic Invasive Species (AIS) Monitoring and Control Plan (Monitoring Plan) within one year of effective date of the new License.

The Monitoring Plan, completed in 2010 and approved by both the WDOE and FERC, contains education, monitoring, and control components intended to meet the requirements of the 401 Certification. The educational components include placement of informational materials at Project boat launches, as well as voluntary boater surveys. These efforts help inform the public about the risks of AIS transport and ways they can help or reduce those risks. Additionally, boater surveys provide Chelan PUD with information related to the level of risk of AIS transport into the Project, and may help to guide monitoring and response efforts.

The monitoring component includes annual zebra/quagga mussel monitoring, annual plant surveys at Project boat launches, and biennial Project-wide shoreline surveys. These monitoring efforts are intended to help provide identification of new AIS introduced into the Project, and may also provide an opportunity to respond to such an introduction prior to the species becoming established. Monitoring will also provide tracking information related to potential control/eradication efforts for a given AIS.

Currently, the only known AIS plants established within the Project area are Eurasian water milfoil and curly-leaf pondweed. Zebra mussels, quagga mussels, and New Zealand mudsnail are the AIS animals of interest addressed in the Monitoring Plan.

### 6.4 AQUATIC RESOURCES

#### 6.4.1 RESIDENT FISH SPECIES

Approximately 41 species of fish occur within the Project reservoir (BioAnalysts, 2000a). Of the identified fish in the Project area, 15 are cold-water species, 18 are cool-water species, and 8 are warm-water species. Most of these species are native to the Rocky Reach area, but others are introduced species. Eleven of the identified 15 cold-water species and 14 of the 18 cool-water species are native to the area. The four cold-water species that have been introduced to the Project area include brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), lake whitefish (*Coregonus clupeaformis*), and Atlantic salmon (*Salmo salar*). The four introduced cool-water species include pumpkinseed (*Lepomis gibbosus*), walleye (*Stizostedion vitreum*), yellow perch (*Perca flavescens*), and smallmouth bass (*Micropterus dolomieu*). All warm-water species that currently exist in the Project area are exotics.

Chelan PUD is currently implementing a Resident Fish Management Plan (RFMP), as part of the Rocky Reach License. The goal of the RFMP is to "... protect and enhance resident fish and habitat in the Rocky Reach Reservoir (Reservoir), and to enhance recreational fishing opportunities."

Consistent with the RFMP, Chelan PUD has: 1) provided funding to produce catchable-sized trout annually for stocking in local area lakes; 2) provided funding for resident fish enhancement measures; 3) provided funding to conduct a study in the Reservoir to determine whether a new species can be introduced to enhance recreational fishing opportunities; and 4) conducted resident fish monitoring in the Reservoir, with initial focus on predatory fish, to monitor changes in relative abundance or species composition in resident fish populations. Chelan PUD conducted the first resident fish monitoring survey in Rocky Reach Reservoir in 2012. A final report will be available on the Chelan PUD Rocky Reach implementation webpage under Resident Fish in 2013.

## 6.4.2 ANADROMOUS FISH SPECIES

The anadromous fish species that occur in the Project area include: Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*, re-introduced), sockeye salmon (*O. nerka*), steelhead (*O. mykiss*), Pacific lamprey (*Entosphenus tridentatus*), and the semi-anadromous white sturgeon (*Acipenser transmontanus*). With the exception of coho salmon and white sturgeon, which is discussed in greater detail below, all of the above referenced species are federally protected and discussed in Section 6.4.3. Coho salmon and white sturgeon are State listed as priority species (See Section 6.4.4).

### 6.4.2.1 COHO SALMON

Historically, coho salmon spawned in tributaries above the Project dam, migrating through the project area. This species became extinct in the area in the early 1900s. During the 1980s, Chelan PUD produced coho salmon at its hatchery, but adult returns were not robust enough to establish a population of the species. The Yakama Nation began a hatchery program using coho salmon from lower Columbia River broodstock which were released into the Wenatchee and Methow River basins. Between 2000 and 2004, adult passage at Rocky Reach dam has ranged from 550 to 1,628 fish (FERC, 2006).

Chelan PUD has entered a voluntary agreement where, in consultation with federal, tribal, state and county stakeholders, the Anadromous Fish Agreement and Habitat Conservation Plan (HCP), Rocky Reach Hydroelectric Project was developed. The HCP sets forth a long-term adaptive management plan for species identified in the plan including coho salmon and their habitat as affected by the Project. The HCP is discussed in greater detail in Section 6.4.3.

### 6.4.2.2 WHITE STURGEON

White sturgeon is a long-lived, primitive fish species that forages primarily along the river bottom of large river systems in the Pacific Northwest. They occur throughout the basin and are thought to be successfully reproducing in some of the mainstem Columbia River reservoirs (Setter and Brannon, 1992). Adult fishway passage counts at mainstem Columbia River dams demonstrate that white sturgeon use fishways rarely for upstream passage. Therefore, white sturgeon populations have become small, isolated, and diminishing populations between mainstem dams. Fishery managers have recommended that some level of supplementation be conducted by dam operators and owners in order to rebuild white sturgeon population levels in the Columbia River.

Chelan PUD is currently implementing the White Sturgeon Management Plan (WSMP) as part of the Rocky Reach License. The goal of the WSMP is to "...promote white sturgeon population growth in the Reservoir to a level commensurate with the available habitat based on monitoring results."

Consistent with the WSMP, Chelan PUD has 1) prepared broodstock collection planning; 2) implemented a supplementation program by stocking juvenile white sturgeon into the Reservoir; 3) initiated implementing a monitoring and evaluation program to determine the efficacy of the stocking program; and 4) compiled information on other white sturgeon programs in the region.

### 6.4.3 FEDERALLY LISTED SPECIES

Three fish species federally-listed under the Endangered Species Act (ESA) as threatened and endangered and one as a species of concern occur in the Project area. These are the upper Columbia River bull trout (*Salvelinus confluentus*) (1998 listed as threatened by U.S. Fish and Wildlife Service (USFWS)), upper Columbia River summer

steelhead (1997 listed as endangered by National Marine Fisheries Service (NMFS; reclassified 2009 as threatened)), upper Columbia River spring-run Chinook salmon (1999 listed as endangered by NMFS), and Pacific lamprey (a federal species of concern by the USFWS). Bull trout are considered both a resident fish species and a migratory fish species.

Chelan PUD has entered a voluntary agreement where, in consultation with federal, tribal, state and county stakeholders, the Anadromous Fish Agreement and Habitat Conservation Plan (HCP), Rocky Reach Hydroelectric Project was developed. The goal of the Rocky Reach HCP is to achieve No Net Impact (NNI) for each species affected by the Project. Per the Rocky Reach HCP, “NNI consists of two components: (1) 91% Combined Adult and Juvenile Project Survival achieved by project improvement measures implemented within the geographic area of the Project (2) 9% compensation for Unavoidable Project Mortality provided through hatchery and tributary programs, with 7% compensation provided through hatchery programs and 2% compensation through tributary programs.” (Chelan PUD, 2002)

The HCP sets forth a long-term adaptive management plan for Plan Species identified in the plan and their habitat as affected by the Project. Plan Species are defined as spring, summer, and fall Chinook salmon, sockeye salmon, coho salmon, and steelhead.

As of 2013, monitoring results for the Rock Island HCP demonstrate that NNI, Phase III, Standards Achieved, has been accomplished for spring-run Chinook salmon, sockeye salmon, and steelhead at Rock Island Dam. Work is continuing for investigating achieving NNI for summer/fall-run Chinook salmon.

#### **6.4.3.1 BULL TROUT**

Bull trout pass the mid-Columbia dams between May and October, with the majority passing during May through July. All mainstem dams

within the proposed critical habitat reach are equipped with passage facilities for upstream passage of adult anadromous salmonids and provide for downstream passage of juvenile anadromous salmonids through bypass facilities. Bull trout move upstream and downstream between dams and tributaries in the upper Columbia without affecting their ability to reach spawning grounds (USFWS, 2002). The mainstem Columbia River including the various project reservoirs provides an abundant food source for migratory bull trout during the fall, winter and spring. Bull trout populations have been identified in the Wenatchee, Entiat and Methow rivers, while they are thought to be extirpated from the Okanogan River. This species was likely never abundant in the mainstem Columbia River (Mongillo, 1993). The USFWS designated the Columbia River, including the Rocky Reach Hydroelectric Project reservoir, as critical habitat for bull trout in 2010.

Chelan PUD is currently implementing its Comprehensive Bull Trout Management Plan (BTMP) as part of the Rocky Reach License. The goal of the BTMP is to monitor and minimize potential adverse effects to this species related to on-going Project operations in a manner consistent with the USFWS draft Bull Trout Recovery Plan.

Consistent with the BTMP, Chelan PUD has: 1) conducted video monitoring (counts) of upstream passing adult bull trout in the fishways at both Rock Island and Rocky Reach; 2) conducted extensive radio-telemetry monitoring of adult bull trout passage and movement in the mid-Columbia River between Rock Island and Wells dams; 3) investigated potential for stranding and entrapping sub-adult bull trout in Rocky Reach Reservoir; 4) provided PIT-tags for tagging sub-adult bull trout at smolt traps attempting to assess sub-adult movement past Rocky Reach Dam; 5) collected and funded genetic analysis of bull trout tissue samples; and 6) participated in USFWS recovery planning.

#### **6.4.3.2 STEELHEAD**

Summer steelhead use the Project area as a corridor for juvenile and adult migration. The majority of summer steelhead returning to the mid-Columbia River is of hatchery origin, but some natural production occurs in the Entiat River (Chapman, et al., 1994). Summer steelhead adults pass the Project dam from early July through early November (FPC, 1995). Juvenile steelhead (from both hatchery and natural tributary origins) appears to migrate actively in the Project reservoir. Residence time in the reservoir is limited to a period of days (Chelan PUD, 1991).

Pursuant to the Project License, Chelan PUD continues implementation of the Rocky Reach Habitat Conservation Plan (HCP), which provides a programmatic approach to reducing effects of ongoing Project operations on steelhead and salmon. To date, Chelan PUD has achieved HCP adult and juvenile passage survival standards for steelhead, spring-run Chinook and sockeye salmon.

#### **6.4.3.3 CHINOOK SALMON**

Spring-run Chinook salmon were recorded in areas of the Project reservoir during relicensing. This species was most prevalent in the upper section of the reservoir and declined with increasing distance downstream. Spring-run Chinook salmon use the Project waters as a primary migration corridor during their upstream and downstream movements. Adult spring-run Chinook salmon pass the Project dam on their way to spawning grounds in upstream tributaries, including the Entiat and Methow Rivers (Peven, 1992). This typically occurs from late April to late June (Stuehrenberg, et al., 1995), with the highest rate of passage (90 percent of all fish passed) occurring from May through the beginning of June (FPC, 1995). Observations suggest that the residence time of juvenile spring-run, termed stream-type, Chinook in the Project reservoir is no more than a few days to a week because these fish only use the Columbia River as a navigation route, not rearing

habitat (Chelan PUD, 1991). Accordingly, it is assumed that stream-type Chinook juveniles are not using the Project reservoir for extended rearing but are migrating actively while in the reservoir.

As discussed above, Chelan PUD continues implementation of the HCP including achievement of passage survival standards for spring Chinook. Efforts are continuing to determine what, if any, study methods can be developed to assess passage survival for summer-run, subyearling Chinook salmon, the one remaining Plan Species covered under the HCP.

Most adult summer/fall-run Chinook salmon enter the Columbia River from late May to early July and pass the Mid-Columbia River dams from late June through October, after spending 3 or 4 years in the ocean. Although these two groups of fish are considered part of the same Evolutionarily Significant Unit (ESU) and are characterized as ocean-type fish, they spawn in different areas of the basin. Fall-run Chinook salmon are known to spawn in the tailraces of Priest Rapids, Wanapum, Chelan Falls, Wells and Chief Joseph dams, and possibly below Rocky Reach and Rock Island dams. Fall-run Chinook salmon spawning also occurs in the Priest Rapids reservoir, Rock Island reservoir, Rocky Reach reservoir, and upstream of Wells Dam, where suitable water velocities and substrate conditions occur. However, the extent and magnitude of this spawning activity is unknown. Juveniles emerge in April and May and move downstream within a few days to a few weeks. Summer/fall Chinook juveniles, termed, ocean-type juveniles; generally migrate to the ocean as age-0 subyearlings in late summer and early fall months, passing the Mid-Columbia River dams between June and August. The Columbia River is designated as critical habitat for Chinook salmon by the NMFS.

#### **6.4.3.4 PACIFIC LAMPREY**

The juvenile and adult migration life stages of Pacific lamprey occur in most tributaries to, and in the mainstem of, the Columbia River. They

have cultural, utilitarian and ecological significance in the basin since Native American Indian tribes have historically harvested them for subsistence, ceremonial and medicinal purposes (BioAnalysts, 2000b). The amount of information about the life history and status of lamprey in the mid-Columbia River watersheds has increased greatly over the past several years. Adults generally spawn in low-gradient stream reaches in the tail areas of pools and in riffles over gravel substrate (Jackson, et al., 1996) and subsequently die. After hatching, the larvae burrow into soft substrate for an extended larval period, during which they feed by filtering particulate matter from the water column (Meeuwig, et al., 2002). The larvae undergo a metamorphosis between three and seven years after hatching, and migrate from their parent streams to the ocean from March to July, peaking in April.

Chelan PUD is currently implementing the Pacific Lamprey Management Plan (PLMP) as part of the Rocky Reach Project License. The goal of the PLMP is to "...provide safe, timely, and effective passage for adult and juvenile Pacific lamprey; and where unavoidable Project impacts are measured, then provide appropriate and reasonable Protection, Mitigation, and Enhancement measures (PMEs) that achieve an overall No Net Impact (NNI) on this population."

Consistent with the PLMP, Chelan PUD has: 1) provided upstream and downstream passage through the Project's upstream fishway and downstream bypass system; 2) conducted adult passage counts in the fishway; 3) monitored juvenile Pacific lamprey impingement (negligible) on turbine intake screens; 4) investigated juvenile lamprey presence and relative abundance in the Reservoir; 5) made modifications to the existing Rocky Reach fishway to improve adult lamprey passage; and 6) installed and operated monitoring equipment to evaluate the efficacy of passage improvement measures and document adult Pacific lamprey upstream passage through the fishway.

#### **6.4.4 STATE LISTED FISH**

One state-listed species of fish, pygmy whitefish, occurs within the Project vicinity but occur rarely, if at all, within the Project reservoir. River lamprey (*Lampetra ayresi*), lake chub (*Couesius plumbeus*), leopard dace (*Phinichthys falcatus*), and mountain sucker (*Catostomus platyrhynchus*) are candidates for State listing and occur in the Project area. Coho salmon, kokanee, white sturgeon, channel catfish (*ictalurus punctatus*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*M. dolomieu*), and walleye (*Stizostedion vitreum*) are State listed as priority species with recreational, commercial, and/or Tribal importance and likewise occur in the Project area.

##### **6.4.4.1 PYGMY WHITEFISH**

Pygmy whitefish are a native species, currently found in relic populations in western North America. The WDFW lists this species as sensitive. Pygmy whitefish are not found in the Project area. The only known population adjacent to the Project area is in Lake Chelan (Hallock and Mongillo, 1998).

#### **6.5 AQUATIC HABITAT**

The lower section of the reservoir (Rocky Reach dam to Entiat River) consists of deeper water habitat. The upper section (Beebe Bridge to Wells dam) has higher water velocities and generally well-armored banks with bedrock, cobble and sandy soil shorelines. The middle section of the reservoir (Entiat River to Beebe Bridge) is a transition zone between the predominantly slower-moving, deeper habitat in the lower section and the more riverine habitat in the upper section of the reservoir. The middle section includes the confluences of the Entiat River and the Lake Chelan Hydroelectric Project tailrace (See Appendix A).

The abundance and success of the wide array of fish species that occur within the Project reservoir relate closely to the aquatic habitat and benthic food sources that are present there. Aquatic habitat in the reservoir, consisting of aquatic macrophyte beds and habitat containing emergent and wetland plant species, are defined as those wetland and deepwater zones dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years (Cowardin, et al., 1979). Aquatic habitat includes areas dominated by algae or aquatic mosses, as well as rooted or vascular plants. Such habitat provides escapement and rearing habitat for numerous fish species.

Macrophyte beds can provide numerous benefits to an aquatic system. As they develop, they increase the production of benthic food organisms, as well as provide additional surface area for algae and invertebrates. They may also provide cover for rearing juvenile anadromous salmonids and other fish species. Given the steep bathymetry of the reservoirs, it is not likely that the density of submerged macrophytes would become a problem for fish rearing. Therefore, it is reasonable to conclude that continued development of macrophyte beds in the reservoirs should improve aquatic productivity in the reservoir and benefit shallow-water fish rearing.

Chelan PUD conducted the first phase of a habitat and predator species study in 2012-2013. The focus of the study was to determine the relative abundance of predatory fish, primarily smallmouth bass that prey on juvenile salmon and steelhead, and whether smallmouth bass were using docks located in the reservoir as “ambush” habitat. The initial study results, conducted fall 2012, indicated that the relative abundance of smallmouth bass in the Reservoir is very low, even in areas with numerous docks. Additional sampling is planned for spring and summer 2013 to determine whether there are seasonal changes in smallmouth bass relative abundance in the reservoir.

Eurasian watermilfoil is the most abundant aquatic plant species

in the reservoir, and is not native to the area. Leafy pondweed (*Potamogeton foliosus*), a native species, and Curly-leaved pondweed (*Potamogeton crispus*), a non-native species, are the second and third most abundant species occurring throughout the Project reservoir. Coontail (*Ceratophyllum demersum*) and American waterweed (*Elodea canadensis*) are two native species common to the Project reservoir.

Benthic invertebrates are an important component of fisheries habitat. Some species provide an important food source to trout and salmon. Other species incorporate fish as host-species during their life cycle. A study for benthic macroinvertebrates conducted in the reservoir in 1999 found seventy-two different taxonomic groups of benthic macroinvertebrates. The study identified three species of bivalves and five species of gastropods within the Project area. Bivalves occurred at every study site except one, and gastropods were found at seven of the 12 surveyed sites. No Washington State priority or candidate species were encountered (DES et al., 2000).

## **6.6 TERRESTRIAL**

### **6.6.1 FEDERALLY LISTED SPECIES**

Wildlife species that use various habitats along the present-day reservoir include large and small terrestrial mammals, birds, amphibians and reptiles. However, there are no federally listed (Threatened or Endangered) bird or mammal species within or immediately adjacent to the Project Boundary.

Ute Ladies’ Tresses (*Spiranthes diluvialis*) is the only federally listed plant species within the Project Boundary. Ute ladies’ tresses were discovered along the Project in 2000 during a rare plant survey (Calypso Consulting, 2000) and have been monitored since that time.

Pursuant to Project License requirements (Article 404), Chelan PUD is currently implementing a Ute Ladies’ Tresses Management Plan (ULTMP). The purpose of the plan is “... to identify threats

to documented populations, outline protection, mitigation, and enhancement measures for populations, and update baseline site information to include newly discovered populations.”

Consistent with the ULTMP, Chelan PUD has: 1) assessed the level of risk (i.e., weeds and land use) to each population within the Rocky Reach Project Boundary; 2) assisted permitting agencies with restricting land use activities near existing populations; 3) conducted noxious weed control; 4) acquired a conservation easement on private land where Ute ladies’ tresses occurs; 5) conducted Ute ladies’ tresses population monitoring and reporting; and 6) developed a Ute Ladies’ Tresses Integrated Terrestrial Invasive Plant Control Plan

The ULTMP includes annual review of documented species locations and survey for additional, new populations. Implementation of the ULTMP has been and will be conducted in consultation with the signatories of the Settlement Agreement.

### **6.6.2 STATE LISTED SPECIES**

According to the 2012 WDFW Priority Habitat Species occurrence data, six state listed (threatened, candidate, and sensitive) animal species occur within or immediately adjacent to the Project Boundary, including one state threatened species, western gray squirrel (*Sciurus griseus*), two candidate species, the golden eagle (*Aquila chrysaetos*) and western toad (*Anaxyrus boreas*) and three sensitive species, the bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinum*), and Common loon (*Gavia immer*).

Similarly, nine state listed plant species are found in or adjacent to the Project Boundary according to the Washington State Natural Heritage Program 2012 database, including two endangered species, Chelan rockmat (*Petrophyton cinerascens*) and Ute ladies’ tresses, four threatened species, little bluestem (*Schizachyrium scoparium*), Thompson’s clover (*Trifolium thompsonii*), strick blue-eyes grass

(*Sisyrinchium montanum*), and Adder’s tongue (*Ophioglossum pusillum*), and three sensitive species, longsepal globe mallow (*Illiamna longisepala*), Whited’s penstemon (*Penstemon eriantherus* var. *whiedii*) and chaffweed (*Anagallis minima*).

### **6.6.3 HABITAT**

Located in the rain shadow of the Cascade Range, the mid-Columbia region is classified as arid to semi-arid and experiences dry summers with warm to hot temperatures and relatively cold winters. Some marine influences are still felt, but continental-type climate conditions prevail. Most of the Columbia basin receives less than 20 inches of precipitation annually, with much of this precipitation occurring in winter. Deep snow may accumulate over the mountainous areas, where water is held as natural storage until spring runoff.

Much of the area surrounding the Project has been cultivated with a variety of crops or is grazed by livestock. Irrigated cropland and orchards dominate the river corridor around the Project and reservoir. Subsequent to inundation of the reservoir, new riparian and aquatic plant communities have developed on the present day shoreline. There are also some areas of riparian vegetation along streams or rivers and some wetland communities in the Project area. In addition, there are some habitats with distinct vegetation communities. These include areas with gravelly or sandy soils, shallow and/or stony sites, and sand dunes near the Columbia River (Franklin and Dyrness, 1973).

There is a diverse array of avian habitat within the Project area and surrounding vicinity. The Project reservoir provides limited habitat for breeding waterfowl. Small mammals, upland game birds, and songbirds use areas along the Project shoreline and raptors nest near the Project reservoir.

Chelan PUD is currently implementing the Rocky Reach Wildlife Habitat Management Plan (WHMP). The goal of the WHMP is to

protect and enhance wildlife habitats within and immediately adjacent to the Project reservoir.

Consistent with the WHMP, Chelan PUD has: 1) provided funding for habitat restoration efforts; 2) secured rights and protective measures for riparian habitats; 3) implemented a noxious weed control program; and 4) conducted annual wildlife surveys as required in the WHMP.

## **6.7 LAND USE**

Development adjacent to the reservoir is low-intensity and rural in nature, with the exception of the city of Entiat and two unincorporated towns, Chelan Falls and Orondo. Residential and industrial development results in the conversion and permanent loss of native wildlife habitats. There are significant pieces of private holdings around the Project reservoir. As these holdings are being developed, Chelan PUD is experiencing increased pressure to provide access to the Project for both private use (from adjacent landowners) and for public use. Accessories to these land uses occur frequently within the Project Boundary. Irrigation pumps pump houses, and fruit-producing trees are often located on agricultural lands. Docks, buoys, boat ramps, boatlifts and camping sites are often associated with residential development and parks. There are also two wastewater outfalls from the cities of Chelan and Entiat.

The remaining lands surrounding the reservoir are undeveloped dry lands.

They include shrub steppe and grasslands vegetation with patches of exposed rock. Much of the undeveloped shoreline lies in areas where the reservoir shoreline is in close proximity to transportation right-of-ways.

These include a small, private railroad and State Route 97A on the west side of the Project reservoir, and State Route 97 on the east side. Narrow strips of riparian vegetation, including wetland areas, are present along those areas of the reservoir where the shoreline slopes are relatively gentle.

## **6.8 CULTURAL RESOURCES**

Archaeological survey and small-scale excavations have been carried out along the Rocky Reach since the mid-20th century. The relicensing effort resulted in intensive archaeological survey and some testing of archaeological sites within the area of potential effect (APE). This work also included historic-era cultural resource and traditional cultural properties studies. In total, the archaeological investigations during relicensing recorded approximately 77 sites within the (APE), some of which occur within the Project Boundary. Of the sites identified, 10 have been recommended by the Lake Chelan/Rocky Reach Cultural Forum (LC/RRCF) as eligible for listing on the National Register of Historic Places (NRHP). Chelan PUD in consultation with the LC/RRCF has developed a monitoring program and conducted site treatment for sites within the Project Boundary and or affected by Project operation.

The Project's Historic Properties and Cultural Resources Management Plan (HPCRMP) was developed by Chelan PUD from initial cultural resource studies conducted along the Rocky Reach Reservoir and in consultation with the Cultural Resources Working Group. The plan is an attachment to the Programmatic Agreement developed by FERC and includes a variety of conservation and protection strategies for cultural resources and protocols for ground disturbance within the Project Boundary.

## **6.9 RECREATION**

### **6.9.1 PUBLIC FACILITIES<sup>(8)</sup>**

Public access to the lands and shorelines within the Project Boundary is widely available. Since its construction, the Project has provided

---

(8) *Information for this section is derived from the Rocky Reach Recreation Resources Management and Implementation Plan (February 12, 2010.)*

the region a variety of developed recreation opportunities, including camping, picnicking, swimming, fishing, boating and water skiing, among other recreational activities.

Chelan PUD developed seven public parks and recreation facilities located in the Project area. Combined, the seven recreation facilities occupy 392 acres of public land along the reservoir and provide widely available public access to the lands and shorelines within the Project Boundary. A variety of amenities are available at these facilities, such as RV and tent camp sites, restrooms with showers, RV sewage dump stations, boat launches and docks, picnic shelters with power, amphitheaters, landscaping and lawns, swimming beaches, athletic fields, and concession buildings.

Five out of the seven recreation sites in the study area have camping facilities. These include Lincoln Rock State Park, Orondo River Park, Entiat Park, Daroga State Park and Beebe Bridge Park. These sites have a total of 249 campsites and two group sites.

Six out of the seven parks in the Project area have public boating facilities including 12 launch lanes, 19 boat tie-up docks and 274 boat trailer parking spaces. Orondo River Park also has a marina with marine gas available. Rocky Reach Hydroelectric Project dam and visitor center is the only recreation site that does not have boating facilities.

All seven public recreation sites in the Project area have day-use facilities. Currently, 963 day-use parking spaces, about 442 picnic tables, a total of 2,235 linear feet of swimming beaches, and approximately seven miles of developed trails/walkways are provided at Project recreation sites.

Six of the seven Project recreation sites currently provide playground equipment. Orondo Park playground equipment was removed in the early 2000s. Additional facilities such as horseshoe pits, baseball fields, volleyball courts, tennis courts, basketball courts and open court areas are also provided at all sites, although available facilities vary from site

to site.

The Rocky Reach Hydroelectric Project dam site has a visitor center and history and interpretive museum, and provides concessions, tours of the dam and a fish bypass system and fish viewing. A historical museum is located at the north end of Entiat Park.

Chelan PUD's ongoing Recreation Resource Management Plan (RRMP) implementation includes a variety of recreation site improvements, trail construction, shoreline habitat restoration at recreation sites, informational signage installation, and accessibility improvements.

### **6.9.2 PRIVATE FACILITIES<sup>(9)</sup>**

Few private recreation sites are available on the Rocky Reach Reservoir and none of the private facilities that are available are open to the general public. The Wenatchee Boat Club is located on the west bank of the reservoir, upstream of the Rocky Reach Dam. The marina is open to club members only. Sun Cove, located on the east side of the reservoir on US 97 between Daroga State Park and Beebe Bridge Park has boat moorage and a boat launch for use by property owners in the subdivision. The McDonald subdivision, north of Entiat has a dock for use by subdivision property owners. The Beebe Ranch moorage facilities are located north of Beebe Bridge and are available for use by residents of the adjacent Beebe Ranch residential community. There are approximately 204 private docks and 61 private boat ramps within the Project area.

---

(9) *Private facility information derived from Chelan PUD's Recreation Resources Inventory Report (September 21, 2001); Private dock and boat ramp information obtained from Chelan PUD's Real Estate Services Department using GPS, GIS, and high resolution aerial photography (2012); Beebe Ranch information derived from FERC letter approving additional moorage facilities (May 17, 2012).*

### **6.10 AESTHETICS**

A broad river valley surrounds the Rocky Reach Hydroelectric Project dam, with extensive fruit orchards along both sides of the Columbia River. Private residences, a residential subdivision, some commercial uses and several parks are also part of the visual setting of the area. The land surrounding the Project reservoir is generally rural in character, with approximately half of the land being undeveloped shrub-steppe, grasslands or exposed rock. The other half is developed for agriculture, recreation and residential uses. The several parks and agricultural land intermixed with the non-irrigated shrub-steppe hills provide an impression of a desert and oasis setting, outside of the winter months.

The Project dam, like other dams on the Columbia River, is an established component of the landscape. The Project dam, the visitor center, the reservoir, and the area surroundings are viewable from State Highway 97A on the west side of the Columbia River and State Highway 97 on the east side. Five sets of 230-kV transmission lines convey power from the powerhouse to the switchyard, which is located on the Project's east abutment. These lines are part of the Project, while the transmission lines beyond the switchyard are not part of the Project.



## 7 LITERATURE CITED

- BioAnalysts, Inc. (BioAnalysts). 2000a. Fish community structure and the effects of resident predators on anadromous fish in the Rocky Reach Project area - final, Rocky Reach Hydroelectric Project No. 2145. Prepared by BioAnalysts, Inc., Boise Idaho, for Chelan PUD. December 15, 2000. 32 pp.*
- BioAnalysts. 2000b. Status of Pacific lamprey in the mid-Columbia region - final, Rocky Reach Hydroelectric Project No. 2145. Prepared by BioAnalysts, Inc., Boise, Idaho, for Chelan PUD. December 15, 2000. 38 pp.*
- Calypso Consulting. 2000. A rare plant survey of the Rocky Reach reservoir -final, Rocky Reach Hydroelectric Project No. 2145. Prepared by Calypso Consulting, Bellingham, Washington, for Chelan PUD. December 15, 2000. 49 pp.*
- Chapman, D., M. Peven, T. Hillman, A. Giorgi and F. Utter. 1994. Status of summer steelhead in the mid-Columbia River. Don Chapman Consultants, Boise, Idaho. 235 pp.*
- Chelan PUD. 1991. Application for raising pool elevation from 707' to 710', Rocky Reach Hydroelectric Project No. 2145. Chelan PUD, Wenatchee, Washington. Appendices.*
- Chelan PUD. 2001. Recreation Resources Inventory Report. September 21, 2001.*
- Cowardin, L. M., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. USFWS. 103 pp.*
- City of Wenatchee. 2012. History and Culture. [Online]. URL: <http://www.wenatcheewa.gov/index.aspx?page=21>. Accessed August 5, 2012.*

- Duke Engineering and Services (DES). 2001. Rocky Reach aquatic habitat mapping - final, Rocky Reach Hydroelectric Project No. 2145. Prepared by Duke Engineering & Services, Inc., Bellingham, Washington, for Chelan PUD. June 1, 2001. 39 pp.*
- Duke Engineering & Services, Inc. (DES), and RL&L Environmental Services Ltd. (RL&L). 2000. Benthic macroinvertebrate survey 1999 - final, Rocky Reach Hydroelectric Project No. 2145. Prepared by DES, Bellingham, Washington, in association with RL&L, Edmonton, Alberta, British Columbia, for Chelan PUD. December 15, 2000. 63 pp.*
- Electrical Power Research Institute (EPRI). 1990. Assessment and guide for meeting dissolved oxygen water quality standards for hydroelectric plant discharges, report GS-7001. November 1990. 668 pp.*
- Federal Regulatory Energy Commission (FERC). 2012. Order Modifying and Approving Non-Project Use of Project Lands and Waters. Project No. 2145-109. May 17, 2012.*
- Federal Regulatory Energy Commission (FERC). 2004. Preliminary Draft Environmental Assessment Final. For Hydropower License Rocky Reach Hydroelectric Project FERC Project No. 2145. June 30, 2004.*
- Federal Regulatory Energy Commission (FERC). 2001. Shoreline Management Guide. April 2001*
- Fish Passage Center (FPC). 1995. Electronic data sent to Tim Fisher (Beak). Portland, Oregon.*
- Franklin, J. F., and C. T. Dyrness. 1973. Natural vegetation of Oregon and Washington. USDA For. Serv. Gen. Tech. Rep. PNW 8. USFS, Portland.*
- Hallock M. and P. E. Mongillo. 1998. Washington State status report for the pygmy whitefish. Washington Department of Fish and Wildlife, Olympia, Washington.*

- Jackson, A., P. Kissner, D. Hatch, B. Parker, M. Fitzpatrick, D. Close, and H. Li. 1996. *Pacific lamprey research and restoration. 1996 Annual Report to the U.S. Department of Energy, Bonneville Power Administration, Contract 95BI39067, Project 94-026, Portland, OR.*
- Johnstone, D and W. Mih. 1987. *Water quality and hydraulic conditions at Daroga Park, Washington. Washington State University, Department of Civil and Environmental Engineering, Pullman, Washington. March 23, 1997.*
- Meeuwig, M. H., J. M. Bayer, J. G. Seelye, and R. A. Reiche. 2002. *Identification of larval Pacific lampreys (*Lampetra tridentata*), river lampreys (*L. ayresi*), and western brook lampreys (*L. richardsoni*) and thermal requirements of early life history stages of lampreys. Report by U.S. Geologic Survey, Western Fisheries Resources Discipline, Columbia River Research Laboratory to the Bonneville Power Administration, Project No. 2000-029.*
- Mongillo, P. E. 1993. *The distribution and status of bull trout/Dolly Varden in Washington State, June 1992. Washington Department of Wildlife, Fisheries Management Division, Olympia, Washington.*
- Municipal Research and Services Center of Washington (MRSC). 2012a. *City of East Wenatchee Profile. [Online] URL: <http://www.mrsc.org/cityprofiles/cityprofile.aspx?id=61>. Accessed March 5, 2013.*
- Municipal Research and Services Center of Washington (MRSC). 2012b. *City of Entiat Profile. [Online] URL: <http://www.mrsc.org/cityprofiles/cityprofile.aspx?id=69>. Accessed February 12, 2013.*
- National Marine Fisheries Service (NMFS). 2002. *Final Environmental Impact Statement for the Wells, Rocky Reach, and Rock Island Hydroelectric Projects. Volume 1. FEIS. Anadromous Fish Agreements and Habitat Conservation Plans. December 2002.*
- Peven, C.M. 1992. *Population status of selected stocks of salmonids from the mid-Columbia River basin. Chelan PUD Fish and Wildlife Operations, Wenatchee, Washington. 52 pp.*
- Setter, A. and E. Brannon. 1992. *A summary of stock identification research on white sturgeon of the Columbia River (1985-1990). Report to Bonneville Power Administration, Portland, Oregon, Contract DE AI79 89BP97298.*
- Stuehrenberg, L. C., G. A. Swan, L. K. Timme, P. A. Ocker, M. B. Eppard, R.N. Iwamoto, B. L. Iverson and B. P. Sandford. 1995. *Migrational characteristics of adult spring, summer and fall Chinook passing through reservoirs and dams of the mid-Columbia River, final report. Funded by the Mid-Columbia PUDs and Coastal Zone and Estuarine Studies. Coastal Zone and Estuarine Studies Division, NMFS, Seattle, Washington.*
- U.S. Census. 2010. *American Fact Finder; 2010 Census; Wenatchee, Wisconsin. [Online] URL: [http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml). Accessed March 5, 2013.*
- U. S. Fish and Wildlife Service (USFWS). 2002. *Draft Proposed Critical Habitat for bull trout in the Columbia River Basin.*
- Washington State Department of Ecology (WDOE). 2002. *Focus Washington State Environmental Policy Act. Publication # 02-06-013. May, 2002*
- Wydoski, R. and R. Whitney. 1979. *Inland fishes of Washington. University of Seattle Press, Seattle, Washington.*

## **ACRONYMS AND ABBREVIATIONS LIST**

<b>ACOE</b>	U. S. Army Corps of Engineers	<b>NEPA</b>	National Environmental Policy Act
<b>AIS</b>	Aquatic Invasive Species	<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>APE</b>	Area of Potential Effect	<b>NMFS</b>	National Marine Fisheries Service or NOAA Fisheries
<b>Chelan PUD</b>	Public Utility District No. 1 of Chelan County	<b>OHW</b>	Ordinary High Water
<b>EA</b>	Environmental Assessment	<b>RTE</b>	Rare, Threatened and Endangered Species
<b>EIS</b>	Environmental Impact Statement	<b>SEPA</b>	Washington's State Environmental Policy Act
<b>FERC or Commission</b>	Federal Energy Regulatory Commission	<b>SHPO</b>	State Historic Preservation Officer
<b>FPA</b>	Federal Power Act	<b>SMA</b>	Washington State Shoreline Management Act of 1971
<b>FPC</b>	Federal Power Commission	<b>USDA</b>	U.S. Department of Agriculture
<b>GIS</b>	Geographic Information Systems	<b>USDA-FS</b>	U.S. Forest Service
<b>GPS</b>	Global Positioning System	<b>USFWS</b>	U.S. Fish & Wildlife Service
<b>JARPA</b>	Joint Aquatic Resource Permit Application	<b>WDFW</b>	Washington Department of Fish & Wildlife
<b>HCP</b>	Habitat Conservation Plan	<b>WDOE</b>	Washington Department of Ecology
<b>HPMP</b>	Historic Properties Management Plan	<b>WDOT</b>	Washington Department of Transportation
<b>MSL</b>	Mean Sea Level	<b>WDNR</b>	Washington Department of Natural Resources



**STANDARD TERMS LIST**

**Allowable** Use A Non-Project use or activity that may be approved to occur on land within the Project Boundary but for which a written approval in the form of a Permit or License from Chelan PUD and/or a governmental entity may be required.

**Applicant** A proponent of a Non-Project use applying for approval from Chelan PUD.

**Aquatic Invasive Species<sup>(10)</sup>** Any prohibited, regulated, unregulated, or unlisted aquatic animal or plant species, any aquatic weed on the state noxious weed control list<sup>(11)</sup> any nonnative aquatic plant or animal species<sup>(12)</sup> that threatens the diversity or abundance of native species, the ecological stability of infested waters, or commercial, agricultural, or recreational activities dependent on such waters.

**Chelan PUD** Public Utility District No. 1 of Chelan County, the Licensee for the Rocky Reach Hydroelectric Project (FERC No. 2145)

**Contiguous/upland Property Owner** Property owners immediately adjacent to Chelan PUD property with no intervening ownership or public right-of-way

**Federal Energy Regulatory Commission/FERC** Federal regulatory agency responsible for issuing hydroelectric generation license(s) and mandating/conditioning such licenses to accommodate Project operations, environmental and cultural resource protection, and public access (aka the Commission).

**Federal Power Act** Passed by Congress in 1920, vesting

authority in the Federal Power Commission (now the FERC) to regulate the development and operation of nonfederal hydroelectric projects.

**FERC Form 80 Report to FERC** for periodic review of recreation use (every six years).

**FERC License** The License issued by FERC for a Project, setting forth the rights, privileges, and responsibilities of Licensees and others using lands and shorelines within the Project Boundary.

**Jurisdictional Agency** Local, state, and federal agencies having regulatory jurisdiction with respect to Lands and Waters within the Project Boundary and/or with respect to proposed uses.

**Land Management** An area the Land Management Program designates within the Project Boundary that depicts License conditions and management objective considerations.

**Land Management Program A program describing how Chelan PUD will manage and regulate** Non-Project uses of Lands and Waters within the reservoirs at the Project.

**Licensee** Holder of a FERC License (i.e. Chelan PUD)

**Non-Project Use** Uses of lands and shorelines within the Project Boundary other than for Project operations. Any activity or structure(s) within the Project Boundary not related to Project operations.

**Ordinary High Water** A designated elevation intended to correspond to the actual high water line around a Project reservoir during normal operation (aka “normal high water line”).

**PUD Permit/License** Written approvals conditionally granted by Chelan PUD for Non-Project use approvals within the Project Boundary.

(10) defined by RCW 77.08.010

(11) RCW 17.10.080, RCW 77.60.130(1)

(12) RCW 77.60.130(1)

**Project** The Rocky Reach Hydroelectric Project (FERC No. 2145) as defined in its FERC License.

**Project Boundary** As recognized by FERC, an administrative marker to clearly delineate those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources. The Project Boundary includes all Lands and Waters as identified on Exhibit G maps of the FERC License.

**Project Lands and Waters** Lands and shorelines located within the Project Boundary.

**Project Operations** Any use of lands and shorelines within the Project Boundary (including operation of the reservoir, maintenance, studies, and other actions) by Chelan PUD or its agent undertaken pursuant to, or in conformance with, the Project License.

**Settlement Agreement** The collaborative agreement filed with FERC (and incorporated into the Project License on February 19, 2009) to resolve the relicensing of the Project.

**Shoreline** The area of interface between a river, stream or reservoir and uplands.

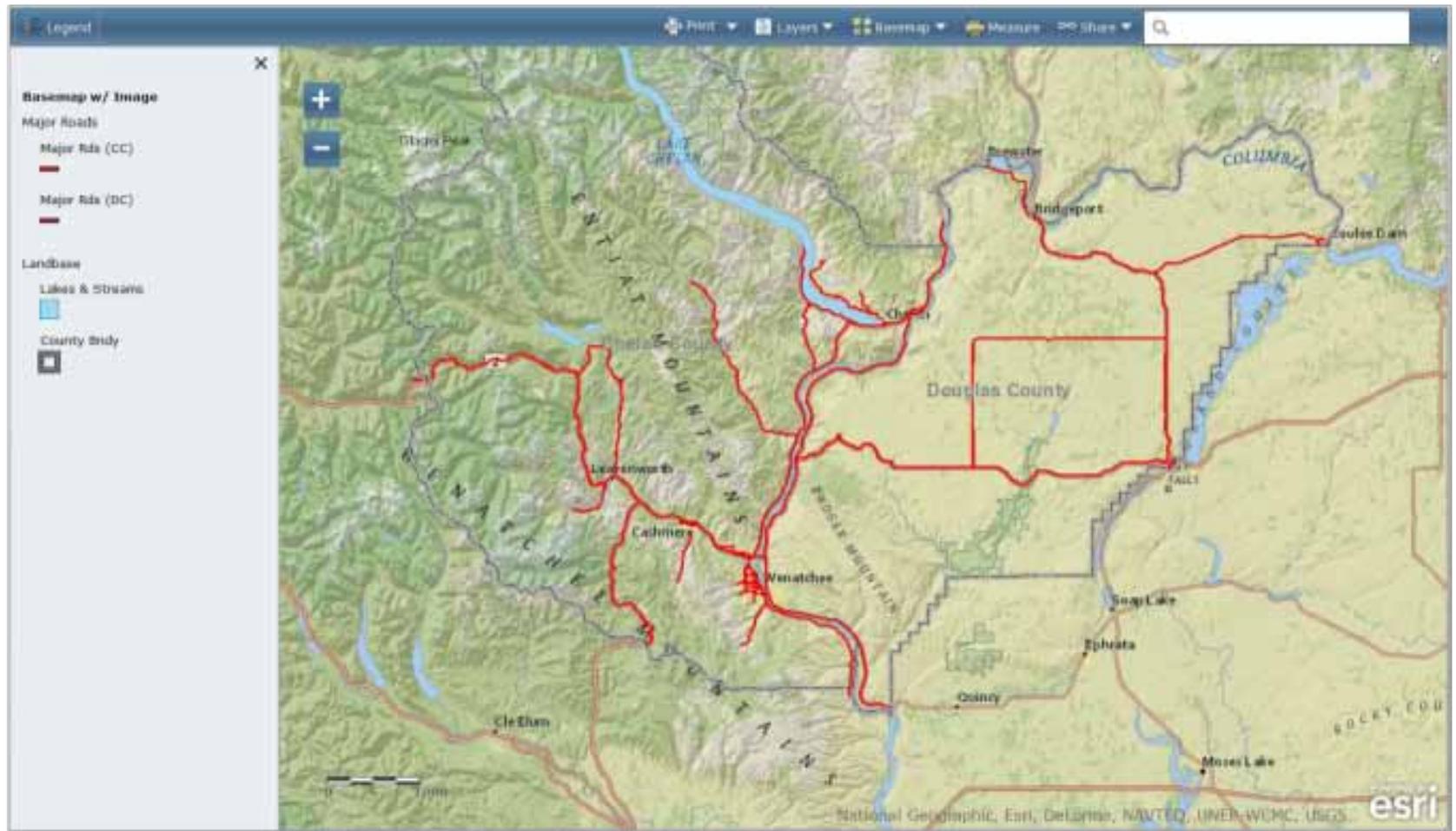
**Stakeholders** The public, tribes, federal, state, and local agencies, non-governmental organizations, and other parties interested in the operations of the Project.

**Tailrace** Area immediately downstream of a dam through which water is discharged from the powerhouse turbines.

**APPENDIX A: RESOURCE MAPS**

A link to maps of both the Rocky Reach and Rock Island Reservoirs is available on Chelan PUD’s Land Management Program website, <http://www.chelanpud.org/10962.html>. Clicking on the link you will see an aerial photo where you will be able to focus in on your property.

You will also be able to find your property on the map by entering your complete address in the search field (example 327 So Wenatchee Ave, Wenatchee, WA). The maps show the shoreline classifications, which are defined in Section 3.3.2 of this document.



EXAMPLE OF A PROPERTY VIEW



**APPENDIX B: LAND USE ARTICLE 410 AND ARTICLE 5,  
ROCKY REACH HYDROELECTRIC PROJECT LICENSE #2145**

**LAND USE ARTICLE 410**

**Use and Occupancy.** (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancy, for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) (2) (3); and (4) To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The

licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the impoundment shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) Non-Project overhead electric transmission lines that do not require erection of support structures within the Project Boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project impoundment. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior

calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed. If no conveyance was made during the prior calendar year, the licensee shall so inform the Commission in writing no later than January 31 of each year.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) Non-Project overhead electric transmission lines that require erection of support structures within the Project Boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Energy Projects, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires

the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

1. Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.
2. Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E; or, if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value.
3. The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.
4. The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G drawings (Project Boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that

the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the Project Boundary.

## **ARTICLE 5**

The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission.

The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made there under, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.



**APPENDIX C: PUBLIC OUTREACH AND AGENCY CONSULTATION**

**July 9, 2013**

**Land Management Public Meeting** — 30 people in attendance

An open house to provide the public an opportunity to pick up a printed copy of the draft Land Management Plans for the Rocky Reach and Rock Island reservoirs, view classification maps and provide comments to the Chelan PUD staff regarding the Plans.

**June 20, 2013**

**Land Management Meeting** — Communication and outreach meeting with Grant County PUD to share Chelan PUD's Land Management Plans, discuss Grant County's plan and talk about ways we can continue to work together. We also talked about lessons learned through the planning process and asked for comments.

**May 16, 2013**

**Land Management Meeting** — Communication and outreach meeting with the National Marine Fisheries Service (NOAA), U.S. Army Corp of Engineers and Washington State Department of Ecology to explain Chelan PUD's role in land management and permitting, reasons for developing land management plans, and a request for their comments.

**May 9, 2013**

**Land Management Meeting** — Communication and outreach meeting with U.S. Fish And Wildlife Service to explain Chelan PUD's role in land management and permitting, reasons for developing land management plans, and a request for their comments.

**May 7, 2013**

**Land Management Meeting** — Communication and outreach meeting with Washington State Department of Fish and Wildlife to explain Chelan PUD's role in land management and permitting, reasons for developing land management plans, and a request for their comments.

**April 17, 2013**

**Land Management Meeting** — Communication and outreach meeting with the Chelan County and City of East Wenatchee to explain Chelan PUD's role in land management and permitting, reasons for developing land management plans, and a request for their comments.

**April 9, 2013**

**Land Management Meeting** — Communication and outreach meeting with the City of Wenatchee, Entiat, and Rock Island, and Douglas County to explain Chelan PUD's role in land management and permitting, reasons for developing land management plans, and a request for their comments.

**December 11, 2012**

**Land Management Public Meeting** — 80 people in attendance  
To explain Chelan PUD's role in land management and permitting, reasons for developing land management plans, and provide opportunity for the public to ask questions and provide input.

**Comments received:**

Comments were received Dec, 2012 through Aug, 2013 from the City of Entiat, US Fish and Wildlife Service, Chelan County, Douglas County, Washington Department of Fish and Wildlife Service and National Marine Fisheries Service (NOAA).

Comments centered on clarification/correction to the process outlined in the plan, Chelan PUD's responsibilities under its FERC licenses, shoreline classifications and Chelan PUD's role under the JARPA process.

- All comments were reviewed and incorporated as appropriate and complete answers are outlined in the Frequently Asked Questions that follow.

## FREQUENTLY ASKED QUESTIONS

### What is a land management plan?

In general, land management plans (LMPs) acknowledge where important and/or protected natural and cultural resources exist, denote where facilities and uses occur, and identify the process for considering new facilities and uses. Specific to hydroelectric projects, LMPs apply to land within project boundaries, which are lands a licensee and the Federal Energy Regulatory Commission (FERC) have identified as necessary to protect natural/cultural resources, provide public access and operate the project. LMPs for the Rocky Reach and Rock Island hydro projects will ensure Chelan PUD manages lands within the project boundaries to meet FERC license requirements and project operational needs. The LMPs will help the public understand the application/review process for new facilities and uses and explain what Chelan PUD must consider in order to meet its FERC license and operational requirements. The intent of the plans is to provide the best balance for public and private access while protecting the river's natural resources.

### What is Chelan PUD's responsibility for shoreline and land management under its FERC licenses?

Chelan PUD is responsible for reviewing uses of project lands and waters, in cooperation with local, federal and state agencies, to assure compatibility with Federal Energy Regulatory Commission (FERC) license terms and conditions and other relevant regulations. Chelan PUD's role in the permitting process is to ensure consistency with project purposes (e.g. dam operations and implementation of various natural resource and cultural plans required by the FERC License), including safety, environmental concerns and aesthetics. Chelan PUD also encourages consistency with local and county management

plans and zoning. Chelan PUD administers a Shoreline Development Tracking System as a means of ensuring that structures built within project lands and waters have minimal environmental or visual effects.

### Did FERC require Land Management Plan development, and what is their role in this?

Federal Energy Regulatory Commission (FERC) did not require land management plans (LMPs) development as part of the Rocky Reach or Rock Island project licenses. Chelan PUD is developing the LMPs voluntarily to provide consistent, coordinated and long-term management and stewardship of the Rocky Reach and Rock Island reservoirs and to provide more comprehensive and clear guidance to the public when they want to use shoreline lands. As part of the relicensing process for the Rocky Reach Project, Chelan PUD submitted a Land Management Study report to the FERC on May 30, 2003. The new land management plans use that information, and Chelan PUD has updated and expanded that information to include current land use review processes and practices. FERC may choose to use the LMPs during review of certain land use applications that require FERC approval and/or to ensure Chelan PUD has sufficient shoreline and land use management processes in place to assure consistency with license requirements.

### Who will use the Rocky Reach or Rock Island land management plans?

The land management plans (LMPs) can be used by the public, by permitting agencies, by other regulatory agencies, by Chelan PUD and by Federal Energy Regulatory Commission (FERC) as a guide to evaluating land use activities within the boundaries of the Rocky Reach and Rock Island hydro projects and to explain Chelan PUD's review process for all land use applications.

**Does this change how Chelan PUD reviews applications?**

Two important additions will streamline and improve the process. A shoreline and land use classification tool has been added to provide consistent review and approval of various shoreline development proposals. The tool has a set of maps showing various types and uses of the lands and shorelines within the project boundaries, including areas with greater protection requirements for environmental or habitat values, areas containing project works (e.g. dams, parks, hatcheries, etc.) and areas of existing development. In addition, the final land management plans (LMPs) will be publicly available with valuable links and contact information to help landowners make sure all activities within the project reservoirs will be consistent with Chelan PUD license requirements.

**Will I be able to have a say during development of the land management plans?**

Regular communication, public meetings and a website will provide opportunities for the public and agencies to comment on the plans as they are developed. All information will be provided on Chelan PUD's website <http://www.chelanpud.org/10960.html> and by mail, as requested.

**How often will Chelan PUD update the plans?**

Chelan PUD will review and, if necessary, update the land management plans (LMPs) every five years. Should local, state or federal regulations change, the LMPs will be updated (for example, new endangered species or new critical habitat that warrants protection). Changes in the LMPs will be highlighted on Chelan PUD's website <http://www.chelanpud.org/10960.html> and through other means such as newspaper notices and direct mailings to a stakeholder list.

**Will the new land management plans affect recreational opportunities on the Rocky Reach and Rock Island reservoirs?**

The land management plans (LMPs) proactively consider public recreation needs and access to the river, resource conservation and protection, and the interests of property owners adjacent to the shoreline. They will not change the recreational opportunities now provided by Chelan PUD on either the Rocky Reach or Rock Island reservoirs.

**What is the project boundary?**

The project boundary is an administrative marker to clearly delineate those lands necessary for operations and maintenance of the hydroelectric project and for other project purposes such as recreation, shoreline control or protection of environmental resources. The project boundary depends on the topography of the land and includes some upland property such as campgrounds, parks, hatcheries and wildlife lands.

**Does Chelan PUD own all of the land within the project boundary?**

No. For additional information on a specific shoreline area, contact the Real Estate Department at Chelan County PUD (509) 661-4240 or refer to the interactive map in the Land Management Plan.

**What are shoreline classifications, and are they different from those used by Chelan County and Douglas County?**

Chelan PUD is ultimately responsible for managing project shorelines consistent with project purposes and license obligations. The land management plans (LMPs) identify land use classifications along the Rocky Reach and Rock Island shorelines that reflect Chelan PUD's resource and operational obligations under its licenses for both the Rocky Reach and Rock Island hydroelectric projects. The classifications are specific to the lands within Chelan PUD's project boundaries. The

classifications are independent of any adjacent state or county land use designations or zoning; however, they are generally consistent with these. Chelan PUD uses this land use classification system to evaluate land use requests within the project boundaries. The system acknowledges where sensitive natural resources exist and where project facilities and uses occur. The system alerts Chelan PUD staff and the public to considerations and potential resource protection that might be needed if permits for construction activities are to be issued.

#### What are Chelan PUD's shoreline classifications?

The shoreline classifications provide the public with important information that can be used in making development, purchase and/or construction decisions on shoreline lands. Chelan PUD's three land use classifications that have been assigned to lands within the project boundary are explained below:

- **Project operations:** Denote areas within the project boundary occupied by project works such as dams, powerhouses and other structures, as well as any areas necessary to meet any requirements of the Federal Energy Regulatory Commission (FERC) license such as recreational and fish production facilities. Land use requests within these areas are generally prohibited.
- **Resource management:** Denotes areas within the project boundary with specific resource management, species protection and environmental or cultural purposes. Typically these areas require extensive environmental review, permitting and mitigation and activities may be prohibited.
- **Integrated use:** Denotes areas within the project boundary where shorelines have no known significant environmental or cultural resources or associated resource management goals that would preclude existing or future shoreline uses.

For more detailed information refer to Section 3.0 of the Rock Island and Rocky Reach Land Management Plans.

#### Will maps be available?

Maps showing the shoreline classification areas along the Rocky Reach and Rock Island reservoirs are available on Chelan PUD's website <http://www.chelanpud.org/10960.html>.

#### What is the JARPA process?

JARPA stands for Joint Aquatic Resource Permit Application. The JARPA consolidates federal, state and local permit forms into one convenient application. The process begins when a property owner or project proponent completes the JARPA, which includes describing the proposed project, its potential effects on regulated resources (e.g. wetlands, waterways, shorelines) and proposed construction methods. The JARPA is then submitted to local jurisdictional offices. The county then distributes the JARPA to the following agencies for review under specific regulations:

Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW)

- Water Quality Certifications from the Washington Department of Ecology (DOE)
- Aquatic Resources Use Authorizations from the Washington Department of Natural Resources (DNR)
- Shoreline Management Act permits from participating city or county agencies
- The U.S. Army Corps of Engineers (Corps)

**How does Chelan PUD work with Chelan County and Douglas County on permit applications?**

Chelan PUD is part of the Joint Aquatic Resource Permit Application (JARPA) process. The respective county distributes the JARPA to Chelan PUD when construction or uses within the Rocky Reach or Rock Island project boundaries are proposed. Chelan PUD then reviews the proposed action within the project boundaries for consistency with Federal Energy Regulatory Commission (FERC) license requirements and resource management plans and provides input to the county. In some instances, Chelan PUD will consult with other permitting agencies. Depending on the nature, size and location of the proposed project, Chelan PUD may also be required to seek FERC approval of the proposed activity.

After all JARPA reviews are completed and permits received, including FERC approval if required, Chelan PUD will issue a “license/permit to occupy” project lands.

**Where do I get information on the steps to take to build a dock or a shoreline structure?**

Contacting either Chelan County or Douglas County is a good place to start. The links below should also be helpful resources.

**Washington State Office of Regulatory Assistance**  
[www.ora.wa.gov/resources/permitting.asp](http://www.ora.wa.gov/resources/permitting.asp)

**US Army Corps of Engineers Permit Guidebook**  
[www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook.aspx](http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook.aspx)

**Chelan County Current Planning**  
[www.co.chelan.wa.us/bl/bl\\_current\\_planning.htm](http://www.co.chelan.wa.us/bl/bl_current_planning.htm)

**Douglas County Information Brochures/Checklists**  
[www.douglascountywa.net/departments/tls/permits/info.asp](http://www.douglascountywa.net/departments/tls/permits/info.asp)

**Is it still possible to apply for a dock permit?**

Yes. Contact either Chelan County or Douglas County, who will initiate the Joint Aquatic Resource Permit Application (JARPA) process. The JARPA consolidates application forms for federal, state and local permits.

**Who sets the dock design criteria?**

The U.S. Army Corps of Engineers has design criteria, based on guidance from the federal agencies who implement the Endangered Species Act (ESA). The following links should also be helpful:

**Chelan County Dock Standards:**  
[www.co.chelan.wa.us/bl/data/dockstds.pdf](http://www.co.chelan.wa.us/bl/data/dockstds.pdf)

**Douglas County Regional Shoreline Master Program, includes design standards for docks/marinas in Chapter 5, Sections 3 and 10:**  
[www.douglascountywa.net/departments/tls/growth/pdf/Chapter\\_1-9\\_Final\\_8-27-09.pdf](http://www.douglascountywa.net/departments/tls/growth/pdf/Chapter_1-9_Final_8-27-09.pdf)

**What if a dock owner has no proof that his/her dock was built before permits were required? Is there a grandfather clause?**

This is a permitting question to discuss with either Chelan County or Douglas County. If the dock was installed on Chelan PUD-owned land, generally, Chelan PUD would issue a land-use permit (or license) as long as all other agency permits are in order.

**Will the development of the land management plan jeopardize existing docks or shoreline structures?**

Chelan PUD’s land management plan (LMP) development and implementation will not change currently approved structures or uses.

**Does Chelan PUD monitor the shoreline?**

In partnership with Chelan County and Douglas County, Chelan PUD does monitor the shoreline along both Rocky Reach and Rock Island reservoirs approximately 20 times per year. If a violation is observed, it is reported to the appropriate county office and/or agency.

**As a shoreline property owner, will this program limit my existing property rights?**

No. Chelan PUD's rights are limited to those rights granted in the flowage easement associated with the Project Boundary.



**APPENDIX D: CHELAN PUD CONTACTS**

**Tim Larson**

**Real Estate Services Manager**

327 N. Wenatchee Avenue

Wenatchee, WA 98801

(509) 661-4240

*tim.larson@chelanpud.org*

**Michelle Smith**

**License and Environmental Compliance Manager**

327 N. Wenatchee Avenue

Wenatchee, WA 98801

(509) 661-4180

*michelle.smith@chelanpud.org*

**Chelan PUD Web Site**

*www.chelanpud.org*





# LAND MANAGEMENT PROGRAM

*A guide to Chelan PUD's program for  
managing the lands and shorelines within the  
Rocky Reach Hydroelectric Project Boundary*

**ROCKY REACH HYDROELECTRIC PROJECT  
FERC Project No. 2145**



**Public Utility District No. 1 of Chelan County**  
Wenatchee, Washington

Prepared with assistance from  
Kleinschmidt Associates  
Gresham, Oregon

*December 2013*