

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

A. INTRODUCTION

The Federal Energy Regulatory Commission (FERC), under the authority of the Federal Power Act, may issue licenses for up to 50 years for the construction, operation, and maintenance of non-federal hydroelectric developments. Public Utility District No.1 of Chelan County (Chelan PUD) intends to file an application for a new license for the Lake Chelan Hydroelectric Project, FERC No. 637 (Lake Chelan Project). The Lake Chelan Project is a major power project with an installed capacity of 48 megawatts (MW) and is currently operating under a license issued by the FERC on May 12, 1981. That license expires on March 31, 2004. Chelan PUD intends to continue to operate and maintain the Lake Chelan Project, which is located approximately 32 miles north of Wenatchee, in Chelan County, Washington. All the power generated by the Lake Chelan Project is currently available to serve the homes and businesses of Chelan County.

Chelan PUD has requested and received approval from the FERC to employ an Alternative Relicensing Process for the Lake Chelan Project, as allowed under FERC's Final Rule issued on October 29, 1997 (Docket No. RM95-16-000: Order No. 596). The Alternative Relicensing Process proposed by Chelan PUD is intended to expedite the licensing process by combining the pre-filing consultation and environmental review processes into a single process, and by improving and facilitating communications among the participants in the licensing process.

As part of the consultation process, Chelan PUD has prepared the Initial Consultation Document (ICD) to be used as a reference document during the relicensing process of the Lake Chelan Project. The ICD contains a detailed description of Lake Chelan Project features and operating measures and serves to document the surrounding environment and resources affected by Project operations.

The primary purpose of the ICD is to help those interested in the relicensing process of the Lake Chelan Project gain a better understanding of the Project, its operation, and related environmental resources.

B. CHELAN PUD

Power generated within Chelan County comes from Chelan PUD, which is a non-profit, community-owned and community-operated utility district and is a municipal corporation under Washington law. This means that all the citizens of our community have a stake in our electric utility. It also means that citizens have an opportunity to participate in making decisions about our energy future, taking into account local needs and values.

Established in 1936, Chelan PUD has been a strong advocate of local ownership and operation of the County's resources. As a result, Chelan PUD has acquired, through purchase and development, the second largest non-federal hydroelectric generating system in the country. Chelan PUD's three hydroelectric generating projects, Lake Chelan, Rocky Reach and Rock

Island, generate a combined total of about 11 billion kilowatt hours of power every year. The hydroelectric projects provide clean, renewable and affordable power that benefits the economy of Chelan County and the Pacific Northwest. Chelan PUD uses 37 percent of its total generating capacity to meet the electrical needs of its Chelan County customers, including a portion of Alcoa's Wenatchee aluminum smelter. The remainder, or about 63 percent of the total generating capacity, is transmitted throughout the Pacific Northwest over a 16,000 mile grid of high voltage transmission lines to four principal power purchasers: Puget Sound Energy, Washington Water Power Company; PacifiCorp, and Portland General Electric Company.

C. THE LAKE CHELAN PROJECT

The 48-megawatt Lake Chelan Project is the smallest of Chelan PUD's three hydroelectric projects. The Lake Chelan Project was purchased from the Washington Water Power Company (WWP) in 1955. Under terms of a 40-year contract, the power produced by the Lake Chelan Project was shared with WWP. That contract expired in June 1995, and power produced at the Project is now being used to meet local energy needs through Chelan PUD's electric distribution system.

The Lake Chelan Project includes a 40-foot-high dam, 2.2-mile-long tunnel and penstock, surge tank, powerhouse and switchyard. The dam is located at the southeasterly end of 50.4-mile-long Lake Chelan. The Project is operated to meet a variety of needs, including power generation, recreation, environmental resources, domestic and irrigation water, and flood control.

Water is delivered from the dam to the powerhouse through a tunnel and penstock. The vertical drop between the dam and powerhouse is nearly 400 feet. The only visible portion of the penstock is a 130-foot high surge tank that's designed to absorb the hydraulic momentum of the falling water, in the event that flow through the powerhouse needs to be stopped. When necessary, or during periods of high runoff, the dam spillgates may be utilized to regulate the lake level as it approaches maximum elevation. Water through the spillgates flows down the 4.1-mile Chelan River Gorge (bypass reach), past the powerhouse and into the Columbia River.

The powerhouse is located along the Columbia River, near the community of Chelan Falls. The powerhouse contains two Francis-type turbines that drive generators rated at 24,000 kilowatts each. Water is discharged into the tailrace on the east side of the powerhouse, where it flows into the Columbia River. Electric energy is transmitted from the powerhouse to an adjacent switchyard, where two main power transformers step up the power from 11,000 volts to 115,000 volts. Five 115,000-volt transmission lines connect the switchyard to the electrical distribution system of Chelan PUD.

D. RESERVOIR OPERATIONS

Lake Chelan is a natural body of water that developed within a broad glacial trough. The lake is approximately 1,486 feet deep. The Chelan drainage basin encompasses approximately 924 square miles, of which almost 50 percent is above 5,500 feet in elevation. The Project utilizes the top 21 feet of Lake Chelan to produce power year round, while taking into account the irrigation,

municipal and domestic water supply, recreation, fish and wildlife, and other beneficial uses of the resources.

The major portion of precipitation in the Chelan basin occurs in the form of snow during the months of November through March. Peak flows into Lake Chelan mostly occur from April 15 to July 15, as the winter snowpack begins to melt. Historically, the annual peak runoff occurs in early June with the melting of snowpack from the higher elevations.

Chelan PUD operates the reservoir between a maximum water elevation of 1,100 feet and minimum elevation of 1,079 feet. The normal maximum surface elevation is at 1,098 feet, which assures the fullest possible utilization of the reservoir for generation of electricity while meeting flood control needs, irrigation requirements and environmental uses of Lake Chelan. The usable reservoir storage capacity within this range of reservoir elevations is 677,400 acre-feet. Chelan PUD regulates the lake level to assure within a 95 percent probability that the reservoir will refill to an elevation of 1,098 feet on or before June 30 each year. This is in consideration of the varied recreational uses of the Lake during the summer months.

Annual regulation of Lake Chelan is heavily dependent on yearly weather conditions. Chelan PUD uses annual snowpack surveys of the Chelan drainage basin system, along with information collected from four snowpack monitoring telemetry sites to determine runoff forecasts. Chelan PUD has been conducting these surveys since 1955. The forecasts are an important factor in assuring that the expected volume of runoff is equal to the volume available in storage. The forecasts are made available to the public and local news media. Over the years, these forecasts have proven to be within five percent of the observed actual inflow.

Typically, Lake Chelan begins to refill during April and May, as warmer temperatures melt the lower snowpack areas and stream flows into the lake increase. Lake Chelan remains between 1,098 and 1,100 feet through the summer months and into September. During October, the elevation begins to drop as streamflows into the lake decline. From October through April, water is released through the power tunnel for power generation, exceeding the amount of water entering the lake from inflows. The lowest, annual lake elevation generally occurs during March or April. The average drawdown of the lake over the past 43 years of operation has been to about 1,084.2 feet. The lake again refills during April and May as the spring runoff exceeds the amount of water needed for power generation.

Operation of the reservoir also serves to protect shoreline property from flooding. During peak runoff periods, water released down the bypass reach is planned by Chelan PUD so that flows do not exceed 12,000 to 15,000 cubic feet per second. Amounts of water higher than these flows could result in erosion of the bypass reach. This erosion results in river channel and riverbank gravel being washed downstream by heavy flows and deposited in the area between the mouth of the bypass reach and the confluence with the Columbia River. Chelan PUD operates the Lake Chelan Project to limit the high inflows through the Chelan River channel, thus limiting erosion damage.

E. LAKE CHELAN

Lake Chelan averages one mile in width and is approximately 50.4 miles long. It has a maximum depth of nearly 1,486 feet when the lake is full, or at elevation 1,100 feet. Lake Chelan is the third deepest lake in the nation, extending nearly 400 feet below sea level. Consistently ranked as one of the most pristine waters in the United States, Lake Chelan is surrounded by a diverse topography consisting of glacial river valleys, hills and snow-capped peaks. Uplake, the terrain is mountainous and rugged, with mountain peaks reaching an elevation of 9,000 feet. In many cases, the steep slopes run directly into the lake with no flat beaches or shoreline. The terrain at the lower end of the lake is much less severe. Except where irrigation has taken place, the hills at the lower end of the lake are filled with grasses and scattered pines. Precipitation in the basin varies from 150 inches per year in the mountainous upper basin to approximately 11 inches per year near the City of Chelan.

The clean, crystal clear blue water of Lake Chelan offers some of the best outdoor recreational opportunities in the country. In addition, surrounding National Forests and National Parks offer many year-round outdoor activities.

F. PROJECT HISTORY

The original 50-year license for the Lake Chelan Project was granted by the Federal Power Commission in 1926, when it was owned and operated by the Washington Water Power Company (WWP). Chelan PUD purchased the Lake Chelan Project from WWP in 1955. Under the terms of a 40-year contract, the power produced by the Project was contractually shared with WWP. That contract expired in June 1995 and the power is now being used to meet the local energy needs through Chelan PUD's electric distribution system.

Chelan PUD was granted a 30-year license by the FERC in May 1981 and made retroactive to 1974. That license will expire on March 31, 2004.

Chelan PUD began the relicensing process for the Lake Chelan Project during the fall of 1997. Chelan PUD conducted surveys of interested parties to determine organization contacts and information needs. Chelan PUD also facilitated a focus group of Chelan residents to help form a communications plan. In general, interested parties (or stakeholders) include federal, state and local resource agencies, Tribes, non-governmental organizations, local businesses, the general public, and the FERC. The communications plan and communications protocol were developed to assure effective and coordinated two-way information sharing mechanisms were in place for all interested parties during the relicensing process.

G. CHELAN PUD'S RELICENSING PROCESS

As discussed in the introduction, Chelan PUD has requested and received approval from the FERC to use the Alternative Relicensing Process for the Lake Chelan Project.

Chelan PUD recognized many advantages in using this new method for relicensing the Lake Chelan Project. First, the process provided a new opportunity for all interested parties to become

involved early on in the process. Second, the alternative method combined the consultation/study phase and the environmental review into a single process conducted during the first stage of the relicensing process. This allows issues to be discussed and resource impacts and mitigation and enhancement proposals to be shared among interested parties and Chelan PUD early in the relicensing process. Third, the alternative method permits decisions concerning the Project and environment to be made at the local, state and regional level. Fourth, the process allows for enhanced communication efforts with the FERC and all interested parties, including settlements when possible, early in the relicensing process.

During 1998, Chelan PUD consulted with interested parties and found a majority to be in favor of using the alternative relicensing process. In July 1998, FERC approved the use of the alternative relicensing method.

January through May 1998, Chelan PUD held a series of informal meetings with resource agencies and the public to identify issues associated with the Lake Chelan Project and to develop management goals and objectives. The meetings also addressed the scope of studies that would be required. With the help of resource agencies and the public, issues were then consolidated and prioritized by importance.

Along with the ICD, which highlights a very detailed picture of how the Lake Chelan Project operates, the National Environmental Policy Act (NEPA) Scoping Document No.1 (SD1) has been published. The SD1 provides a cooperative look at the environmental issues and potential studies for the Lake Chelan Project. Both of these documents assure that the groundwork for recommended studies, mitigation or enhancement measures or changes to current operations are met with mutual understanding and agreement of current conditions at the Lake Chelan Project.

Chelan PUD invites and values input from interested parties on the ICD and SD1. An informal workshop on September 23, 1998 gave agencies and the public an opportunity to discuss the content and offer any additions or changes to the SD1. Final copies of the ICD and SD1 are being distributed to interested parties with this submittal.

On November 18 and 19, Chelan PUD will hold a series of formal agency and public meetings. The first day will focus on the ICD or project description (including a Project site visit) from 10:00 A.M. to 5:00 P.M. at Campbell's Resort in Chelan. A formal public hearing to review and comment on the content of the SD1 will be held at Campbell's Resort on November 18, from 6:00 P.M. to 9:00 P.M. and on November 19, from 10:00 A.M. to 1:00 P.M. Final comments on both documents will be due within 60 days following the meetings in November, or by January 19, 1999.

Following completion of SD1, Chelan PUD will spend the next several years conducting studies. Chelan PUD intends to submit the draft Environmental Assessment and license application for the Lake Chelan Project in 2001. Chelan PUD will submit the final Environmental Assessment and license application for the Lake Chelan Project by March 30, 2002.

H. THE LAKE CHELAN PROJECT ICD—ITS CONTENT AND PURPOSE

The ICD contains a detailed description of Lake Chelan Project and how it is operated. It is divided into six major sections, referred to as Exhibits.

Exhibits A and B describe the Project, and Project operations.

Exhibit C contains the Project's construction history.

Exhibit D will be provided with the draft license application. It will contain the Project's economic information.

Exhibit E contains a detailed environmental report of current resource conditions surrounding the Lake Chelan Project including:

- previous studies completed on water quality resources and existing resource management activities;
- a historical description of fishery resources in the Project vicinity, fisheries management activities and previous studies conducted;
- an overview of the botanical and wildlife resources within the Project area, including existing mitigation, protection and enhancement measures and a rare plant survey that is currently underway;
- an overview of recreational development, use and management within the Project boundary and description of the recreational use survey currently underway;
- a description of existing development and use of Project lands and land management planning.

Exhibits F and G contain project drawings, location map and boundary information.

As mentioned above, the purpose of the ICD is to help those interested in participating in the relicensing of the Project gain a basic understanding of the Project and its operation.

I. TIMELINE

A series of FERC-imposed deadlines begin with the issuance of this ICD. Chelan PUD will also continue monthly agency/public meetings devoted to addressing questions, issues and comments of the relicensing process. Milestones for the relicensing of the Lake Chelan Project include:

October 5, 1998..... Chelan PUD issues ICD and SD1
November 18,19 Formal agency/public meetings to review ICD and SD1
January 19, 1999 Final comments on ICD and SD1 due from interested parties
Summer 1999..... Studies Conducted
Summer 2000..... Studies Conducted
January 2001 Review copies of draft license application and environmental assessment issued
April 2001 Draft license application and preliminary draft environmental assessment issued
December 2001 Review copies of final license application and environmental assessment issued
March 2002..... Final license application and final environmental assessment issued

J. HOW TO GET INVOLVED—PUD CONTACTS

The relicensing process takes years to complete. The process is based on complicated laws and regulations that require years of extensive planning, including environmental studies, agency consensus and public involvement. The process has changed considerably since the Lake Chelan Project's existing license was issued in 1981. The Federal Power Act was amended in 1986 requiring FERC licensees to give equal consideration to water quality, recreation, and other non-generating benefits of the natural resource to that of power generation.

A new federal license for the Lake Chelan has an impact on numerous individuals and groups, including Lake Chelan Valley property owners, private businesses, agriculture, the tourism and recreation industries, resource agencies, environmental groups, government officials, Tribes and citizens of Chelan County. Chelan PUD intends to exceed FERC requirements for public involvement in the relicensing process. To facilitate these efforts, Chelan PUD has developed a series of monthly meetings to provide timely and meaningful information and to give agency representatives and the public an opportunity to openly discuss issues, concerns and goals.

In addition to these meetings, Chelan PUD has developed a quarterly newsletter and a comprehensive Internet Web Site to help keep important dates, correspondence and other relicensing information assessable to interested parties and the public. Chelan PUD also conducts presentations to service clubs, community groups and governmental meetings as requested.

If you have any questions about particular areas, please feel free to contact Chelan PUD relicensing team members. A list of team members is provided at the end of this executive summary (Attachment A).

Written comments on the ICD or on Chelan PUD's relicensing process should be sent to:

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or by email: gregg@chelanpud.org

K. KEY RESOURCE ISSUES

1. Recreation – Lake Chelan is a premier recreation destination for more than 500,000 visitors annually. Consistently ranked as one of the most pristine waters in the United States, Lake Chelan offers some of the best outdoor recreational opportunities in the country. Fishing, boating, water skiing, swimming, kayaking, parasailing, jet skiing, and tubing are just some of the many water based activities available. In addition, the surrounding National Forests, State and National Parks offer backpacking, hiking, camping, skiing and other year-round outdoor activity adventures.

During the relicensing process, Chelan PUD will gather information to better understand existing recreational use within the Lake Chelan Project boundary and evaluate recreation demand in the Lake Chelan area to determine if the demand is currently being met by existing facilities. The information gathered will be used in preparing a Recreation Plan for relicensing the Lake Chelan Project. Chelan PUD is working closely with resource agencies and area recreation providers to assure coordinated management objectives to minimize the chance of conflicting uses.

Three parks in the Lake Chelan Project “Exhibit R” Recreation Plan were completed and opened to the public during the mid-1980s. Completed in 1984, *Old Mill Park*, located near the Community of Manson, is located on nine acres and includes a four-lane boat launch and moorage and day use area. *Manson Bay Park* is located on 6 acres and is located adjacent to the Manson business district. Completed in 1985, this park includes a swimming beach, promenade, three floating boat docks and a boat launch. Spread over 12 acres is *the Chelan Riverwalk Park*. Located both within and adjacent to the Chelan business district, this urban park includes picnic sites, plaza areas, a community playfield, boat launch and dock, day-use area and a mile-long loop trail that stretches along both shorelines of the Chelan River. Manson Bay and Chelan Riverwalk Parks have been honored by the American Society of Landscape Architects.

2. Fish and Wildlife Resources - Chelan PUD has established comprehensive programs at Lake Chelan to enhance basin fish and wildlife resources. Kokanee and chinook salmon populations are monitored through spawning ground surveys. In addition, hatchery capacity and funds to raise 1.5 million kokanee fry, 100,000 rainbow trout and 50,000 cutthroat trout at the Chelan Falls Hatchery are provided every year. Surveys of deer, mountain goat and bald eagle populations are conducted by boat along the reservoir to track their abundance and distribution, as well as the age and sex composition of the animals. Information derived from these surveys is used to manage the level of harvest and assess the condition of the wildlife habitat. Funds are provided for improving mule deer winter forage through prescribed burns and planting forage plants. The PUD also assists wildlife during the winter months by maintaining upland bird feeders and mineral blocks for mule deer and mountain goats.

Chelan PUD is currently sponsoring a botanical survey during the field seasons of 1998 and 1999 to identify and map all state and federally listed rare plants within the Lake Chelan Project area. Through the relicensing process, Chelan PUD is working with federal, state and

local agencies to assure comprehensive and coordinated planning efforts will take place for the fish and wildlife resources well into the future.

3. **Water Quality** – The majority of inflow to Lake Chelan is from two major tributaries. The Stehekin River provides 65 percent of the total input to Lake Chelan, and Railroad Creek provides 9.3 percent of the total input. In addition, some 50 minor tributaries provide 20.7 percent of the total input. Uses of the water resource include irrigation, domestic and municipal water supply, water-related recreation, aesthetic enjoyment, power generation, fisheries production, and transportation. Most consumptive water uses are focused in the lower basin. There are 11,520 acres of irrigated orchards within the lake’s watershed. Approximately 10 to 40 percent of irrigation withdrawals are estimated to return to the lake. The majority of near-shore residents, including the City of Chelan, obtain drinking water directly from the lake. Chelan PUD uses nearly the entire direct outflow from the lake for power generation during average or dryer water years.

Investigations of the water quality conducted by the Washington Department of Ecology in 1989 concluded that the water quality in Lake Chelan was good. A Lake Chelan Water Quality Committee (LCWQC), of which Chelan PUD is a member, has monitored the water quality of the lake since 1995 to provide supplemental data. Analysis of water quality samples collected in 1996 led to the conclusion that water quality in Lake Chelan is excellent. Chelan PUD intends to supplement a \$25,000 5-year grant from the Washington Department of Ecology to the LCWQC for monitoring the lake, Chelan River Gorge and powerhouse tailrace areas.

4. **Cultural and Historical Resources** – There is little known about specific cultural resource sites on Lake Chelan. It is known that several petroglyph areas exist in the upper portion of the lake. Addressing cultural resource issues in relicensing will be a collaborative effort involving the Chelan PUD, Colville Confederated Tribes, U.S. Forest Service, National Park Service, Bureau of Indian Affairs, local historians, and other interested parties. Agreements on the scientific approach will be developed up front. A professional archaeologist will conduct a literature search, interview representatives from each of the collaborative parties, perform a cultural resources survey of the shoreline, and test suspected sites. Traditional cultural properties will also be included in the process. Significant sites will be evaluated regarding National Register eligibility. All eligible sites will be protected. A National Register evaluation will also be conducted for the dam and powerhouse. The powerhouse is already listed on the National Register of Historic Places based upon its architecturally representative style for the time of construction.
5. **Land Management and Aesthetics** – During the previous relicensing of the Lake Chelan Project, considerable input was given regarding public access. Issues addressed included public access to the large federal land holdings covering the upper two-thirds of the lake, access provided by public entities in the downlake area, and lake access available to users of the many resorts and tourist accommodations. As a result of the previous licensing, Chelan PUD developed four public access facilities on the lake providing for swimming, boating, picnicking and other day use activities including hiking.

Private development on the downlake end of Lake Chelan has a long history. The City of Chelan was platted in the late 1800's and many of the lakeshore plats date from the turn of the century. Today, high property values along Lake Chelan are important to the tax base of both the City of Chelan and Chelan County.

Throughout the relicensing process, opportunities to enhance public access will be assessed and evaluated. Chelan PUD will be working with agencies, tribes and the public in planning for enhanced public access.

L. CONCLUSION

Lake Chelan has a long history of dam development since the first dam was completed in 1892. More than a century later, we are setting terms and conditions for a new license that will extend well into the future another 30-50 years. As operator of the Lake Chelan Project since 1955, Chelan PUD will continue its commitment in balancing the many resource values provided by the Lake Chelan Project. Throughout the relicensing process our goals are:

- To keep resource decisions at a local, state and regional level.
- To concentrate efforts on implementation of environmental measures supported by facts.
- To reach settlement agreements.
- To coordinate efforts with all interested parties through open, honest communication and two-way information sharing.

Attachment A

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