
RECREATION RESOURCES MANAGEMENT PLAN

Third Draft

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

January 12, 2004



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

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SECTION 1: INTRODUCTION

1.1 Purpose

The plan contained in this Chapter updates the existing Recreation Plan (Exhibit R to the existing License) submitted by Chelan PUD in 1976 in conjunction with the addition of four new generators to the Rocky Reach dam powerhouse in 1968. It describes Chelan PUD's plans for the utilization, design, and development of Project recreation facilities and public access to the Project Area, as required by 18 CFR 4.51(f)(5). The plan was prepared in consultation with appropriate local, state and federal recreation agencies and planning commissions, the National Park Service (NPS) and the USDA Forest Service and other federal and state agencies with land management responsibilities for any part of the Project Area.

1.2 Exhibit R Summary

The 1976 Lake Chelan Project Exhibit R Recreation Plan identified seven sites on the Rocky Reach Project for recreational development. Three were completed by the Chelan PUD and opened to the public in the late 1970s, one in the 1980s and three in the 1990s. These recreation sites represent Chelan PUD's commitment to providing recreational facilities and access to the Rocky Reach Project. Over one million people visit these parks each year. (As-built drawings of these sites are in Appendix A.)

The seven sites are described below. The location of these recreation sites, as well as other public recreation sites in the Project Area are shown on Figure 1.

Rocky Reach Dam Site

Located on the dam site on the west side of the Project, this park provides several educational and interpretative opportunities for visitors. It consists of a four-story Public Information and Tour Center, landscaped grounds, fish viewing rooms and innovative by-pass system, Interpretive History Gallery and turbine exhibit, picnic shelters, restrooms and playground equipment. The park is owned and operated by Chelan PUD.

Orondo Park

Located 15 miles north of Rocky Reach Dam on the east side of the Project, this park was originally developed in the early 1970s. Under Exhibit R, additional lands were acquired and the park was expanded over several years to include irrigated lawns, a gazebo, swimming area, boat launch, day moorage, day use area, restrooms, 14 RV camping sites and tent camping in a grassy area within the park. This park is owned in part by Chelan PUD and owned in part and operated by the Port of Douglas County.

Entiat Park

Entiat Park is located 15 miles north of Rocky Reach dam on the west side of the Project. Built in the 1970s this park was a result of the joining of two existing community parks, Silico Saska and Will Risk Memorial Park. This park provides 4,000 feet of shoreline and includes a day use picnic area, restrooms, boat launch and boat handling facilities. In addition, overnight tent camping is available, RV sites with partial hook-ups and day moorage facilities.

Lincoln Rock State Park (Eastbank)

This park is located at the dam site on the east side of the Project. Beginning as a 17-acre site called Eastbank, this park was later expanded to 60 acres and re-named Lincoln Rock State Park. The park offers 94 campsites with full and partial hookups, three picnic shelters, five restrooms, outdoor activity courts, swim area, boat launch and docking facilities and a multi-use play area. This park is owned by Chelan PUD and operated by Washington State Parks.

Daroga State Park

This park's 140 acres offers facilities consisting of a camp loop with 27 camping units, 17 hike-in or boat-in camp units, and one large group camp area with a capacity of 50 camping units for a total of 94 units to accommodate the public. Partial hookups are provided for recreational vehicles. Other park facilities include three picnic shelters, five restrooms, outdoor activity courts, multi-use sports field, shoreline trails, large landscaped day use areas, wind surfing beach area, swim area, playground area, boat launching and docking facilities. This park is located 25 miles north of the dam on the east side of the Project. This park is owned by Chelan PUD and operated by Washington State Parks.

Chelan Falls/Powerhouse Parks

These parks are located 34 miles north of the dam on the west side of the Project. The development of these sites provides a boat ramp, a boat dock, trails, an extensive day use picnic area, restrooms, irrigated landscaping, two swim beaches and expansive playfields. This park is owned and operated by Chelan PUD.

Beebe Bridge Parks

This park is located 34 miles north of the dam on the east side of the Project. Beebe Bridge Park provides one loop of overnight camping (54 units), full hook-ups for recreational vehicles, restrooms, guest parking, day use and picnic facilities, swim beach, boat ramp, boat docks and irrigated landscaping. This park is owned and operated by Chelan PUD.

Chelan PUD is seeking another new federal License to operate the Project. The planning process began the relicensing process in 1999. The FERC relicensing process regarding recreation issues requires extensive planning, including environmental studies, consultation with relevant agencies, organizations and public involvement. The following are the studies conducted as part of the relicensing process to assess and record recreational use at Project recreation facilities and other related public recreational sites:

- Recreation Use Assessment Study Report, March 2, 2001. This report provides the results of data collection efforts and surveys regarding existing recreational use. It was conducted during the summer and fall of 1999 and spring of 2000.
- Recreation Needs Forecast and Analysis Report, September 21, 2001. This report provides an analysis of the current and future recreation use, demand, and needs at public recreation sites and waters within the Project Area. The study was conducted in late 1999 and early 2000.

The following studies were also used in developing the Recreation Resources Management Plan contained in this Chapter.

- Recreation Resources Inventory, September 21, 2001
- Socioeconomic Study, December 1, 2000
- Project Lands Management Study, May 30, 2003
- Sportsmans Access on the Wenatchee River, December 15, 2000

This Chapter is based on these reports, as well as the extensive consultation effort described in the following subsection. It is also consistent with the relevant recreation management planning documents prepared by federal, state, and other local recreation management agencies.

1.3 Planning Process

This Recreation Resources Management Plan is the result of a five-year planning process undertaken by a Social Sciences Working Group (SSWG) consisting of the USDA Forest Service, National Park Service, Washington Department of Ecology, Washington Department of Fish and Wildlife, Interagency Committee for Outdoor Recreation, Washington Department of Parks and Recreation Commission, Bureau of Land Management, Entiat Focus Group, Entiat School District, Boat Club of Wenatchee, Columbia Breaks Fire Interpretative Center, Entiat Valley Chamber of Commerce, Trout Unlimited, City of Entiat, the People along the Project, Chelan PUD and other interested stakeholders.

The SSWG identified recreation issues, the need for recreation use monitoring, recreation needs analysis, and the identification of recreation enhancement options. Agency and public involvement has been an integral part in the identification of recreation issues, development of study plans, preparation of the Recreation Use Assessment and Recreation Needs Forecast and Analysis studies, and development of this Recreation Resources Management Plan. Over 30 agency, public, and recreation working group meetings (consisting of agency and public representatives) have been held during this process. Numerous meetings were held to identify recreation issues and several versions of draft and final study plans were developed in coordination with Chelan PUD, state, federal, and local agencies, and the public.

Early in the relicensing process, agencies, the public, and Chelan PUD developed an overall Recreation Study Plan to include recreation studies and information needs for the ultimate development of a Recreation Resources Management Plan. Individual study plans, scopes of work and/or outlines were developed for the Recreation Use Assessment, Recreation Needs Forecast and Analysis, and the Recreation Resources Management Plan. Additional meetings, discussions, and reviews continued as studies proceeded. Further information was obtained and study results and reports were prepared.

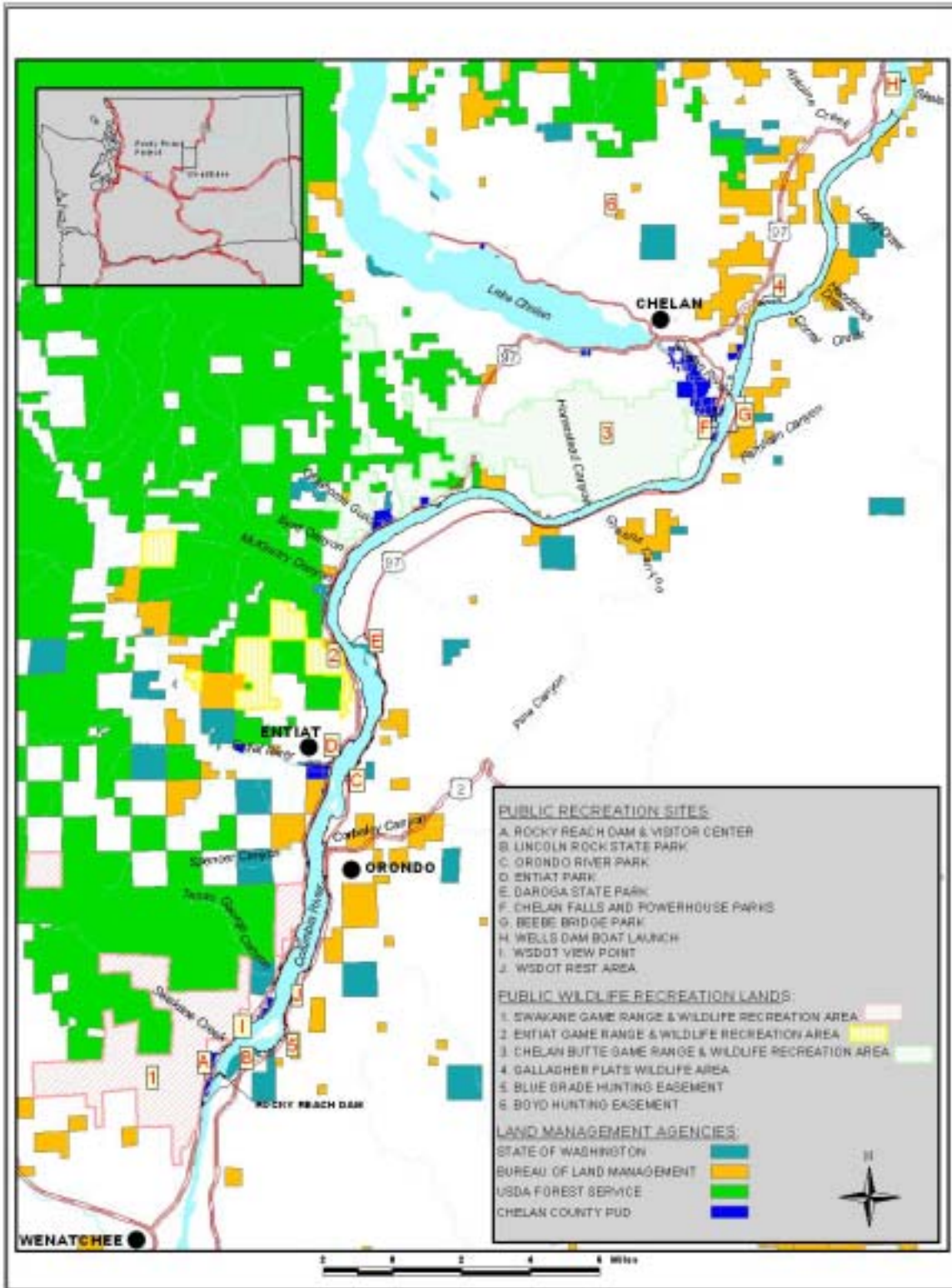


Figure 1: Public Recreation Sites and Designated Wildlife Recreation Lands

SECTION 2: EXISTING CONDITIONS

2.1 Existing Recreation Development and Use

2.1.1 Existing Recreation Facilities

Existing Public Recreation Facilities

For each of the existing public recreation facilities shown on Figure 1, the facilities provided and site acreage is shown in Table 1.

Chelan PUD constructed seven public recreation sites that provide access to the Rocky Reach Project. All seven of these sites are within and adjacent to the Rocky Reach Project Boundary. Upstream of Rocky Reach Project is Douglas County PUD's Wells Dam and Project. Douglas County PUD operates and maintains a boat launch at the tailrace of Wells Dam. This boat launch provides access to the Rocky Reach Project.

All seven of these sites have irrigated lawns, hardened surfaces, paved trails, and flush toilets and can take a high level of use. In addition, each site also offers "natural appearing" landscape character and allows visitors to realize a semi-primitive experience.

In summary, existing facilities on the Rocky Reach Project include 397 acres of developed recreational land, 213 RV sites, 100 tent sites, 4 RV dump sites, 13 picnic shelters, 11 boat launch lanes, 19 boat docks, 250 boat trailer parking spaces, 408 picnic tables, 170 toilets, 1975 linear feet of swimming beaches, 4.69 miles of trails/walkways.

Existing Private Recreation Facilities

Few private recreation sites are available on the Rocky Reach Project and none of the private facilities that are available are open to the general public.

Wenatchee Boat Club

The Wenatchee Boat Club is located on the west bank of the Project, upstream of the Rocky Reach dam and visitor center and across the river from Turtle Rock Island. The marina is open to club members only. The marina has 24 boat moorage slips and 4 day-use boat slips. The marina site also has a boat launch and a small campground with 18 campsites.

Subdivisions

Sun Cove, located on the east side of the Project on US 97 between Daroga State Park and Beebe Bridge Park, has a park, boat launch and boat moorage for use by property owners in the subdivision. The McDonald subdivision, north of Entiat has a dock for use by subdivision property owners.

Many private homes along the Rocky Reach Project have their own private docks. The location of private docks on the Rocky Reach Project has been inventoried and is included in the Inventory of Shoreline Development Map included in the Project Lands Management Study Report.

2.1.2 Public Recreation Sites Adjacent to the Project

Washington State Department of Transportation (WSDOT) has a viewpoint, located on the west side of the Project just north of Rocky Reach Dam, on US 97A. WSDOT also has a rest area, located on the east side of the Project just north of Lincoln Rock State Park, on US 97.

2.1.3 Public Recreation Use Areas

Washington Department of Fish and Wildlife (WDFW), Bureau of Land Management (BLM) as well as the U.S.D.A. Forest Service own lands adjacent to the Rocky Reach Project that are managed for hunting, fishing access and other dispersed recreation. No developed recreation facilities are located on these lands. Recreation Resources Inventory Summary Report (September 21, 2001) discusses designated wildlife recreation areas in the Project area. Chelan PUD owned lands adjacent to the Project that are known to be used for dispersed recreation activities are discussed in this document as well.

2.1.4 Wildlife Areas

The Swakane, Entiat and Chelan Butte Wildlife Areas, managed by WDFW, are located in Chelan County just west and northwest of the Rocky Reach Project. In 1963, Chelan PUD, as mitigation resulting from the Rocky Reach Project, provided funds for the purchase of 17,502 acres of lands for inclusion in the Swakane, Entiat and Chelan Butte Wildlife areas. These are managed by WDFW for hunting and deer and upland bird game habitat. These areas are popular for hunting upland birds, deer and big horn sheep. Wildlife viewing is also possible in these areas.

The Swakane and Entiat Wildlife Areas together cover approximately 19,200 acres. The Swakane Wildlife Area is five miles north of Wenatchee, just west of Rocky Reach dam and extends to the Entiat River. This area has approximately 25 miles of underdeveloped roads; primitive undeveloped campsites and parking areas. Because this area is easily accessible, it is one of the more popular hunting areas. Entiat Wildlife Area is located between the Navarre Coulee Road and Entiat River on US 97A. This area has approximately 35 miles of underdeveloped roads, primitive undeveloped campsites and parking areas. Both areas are important winter range for mule deer and offer year-round habitat for upland game birds. Non-game species including birds and small mammals also inhabit the areas. The 1988 Dinkleman fire burned nearly all of the Swakane and Entiat Wildlife Areas, changing the habitat primarily to grass.

Chelan Butte Wildlife Area is located between 25 Mile Creek Road on US 97A and Chelan Falls and extends to just outside of the town of Chelan on the south-facing slopes of Chelan Butte. The Chelan Butte Wildlife Area covers approximately 8,200 acres. This area has over 20 miles of underdeveloped roads, primitive undeveloped campsites and parking areas. Chelan Butte Wildlife area is also one of the more popular hunting areas. This area contains upland game habitat favorable for game birds including chukar, quail, grouse, and mourning doves. The area was burned in the 1994 Tyee fire.

A 160-acre parcel called Gallagher Flats was purchased by Chelan PUD, as part of the 1963 agreement to mitigate impacts resulting from the Rocky Reach Project. Gallagher Flats, located upstream of Beebe Bridge along the west bank of the Project, is managed by WDFW for hunting.

There is evidence of trash dumping, vehicular traffic and non-designated camping occurring at this site.

Chelan PUD acquired hunting easements on two privately owned areas to be managed by WDFW. These two sites are not located adjacent to the Project but are mentioned here because they were included as part of the 1963 agreement to mitigate impacts resulting from the Rocky Reach Project. The Blue Grade hunting easement is located in Douglas County just east of Lincoln Rock State Park. The Boyd hunting easement is located in Chelan County, west of Rocky Reach Project and north of Lake Chelan. Both of these sites are currently undeveloped.

Lands were purchased by Chelan PUD in the vicinity of the project, as part of the 1963 agreement to mitigate wildlife impacts resulting from the Rocky Reach Project, include 22 easements that provide public stream bank accesses and fishing areas along the Wenatchee River. These areas were created as off-site mitigation for sports fishing access areas inundated by construction of Rocky Reach dam. These easements were deeded to WDFW. These areas are located from the Wenatchee River mouth (located approximately five miles downstream of Rocky Reach dam) upstream to approximately one mile below Leavenworth. Some of these easements include parking and others include only public access across private lands from the road to the shoreline and lands along the shoreline.

2.1.5 Other Chelan PUD Owned Lands Used for Dispersed Recreation

Chelan PUD-owned Turtle Rock Island is a 160-acre island located approximately two miles upstream from the Rocky Reach Dam. A small (less than one acre) sandy beach attracts boat-in visitors to the island. While no recreational facilities are located on the island, boat-in visitors use the beach for swimming and relaxing. Given the small size of the beach area, use is limited by the number of boats (approximately 4-5) the beach can accommodate at one time. The island possesses wildlife habitat value and a Washington State fish hatchery is located on the island.

The Entiat River at its confluence with the Columbia River (the project) is used for dispersed recreation activities, although currently no developed recreation facilities exist in this area. Most of this area is owned by Chelan PUD. Several established trails that lead to the Entiat River provide fishing access. Numerous people have been observed using these trails. People have also been observed visiting the beach and swimming along the Project shoreline adjacent to the mouth of the Entiat River.

2.1.6 Availability of Public Boat Launches on Project

Boat launches that provide public access to the Rocky Reach Project area are summarized below. The times of year that the launches are open to the public is also shown. Entiat locals are given the combination to the Entiat Park gate so that they may access the boat launch year-round.

Rocky Reach Project Public Boat Launches
Boat Launch When Open to General Public (2001)

Lincoln Rock State Park Boat Launch March 12 to October 23
Orondo River Park Boat Launch May 1 to September 30
Entiat Park Boat Launch Mid-April to Mid-October
Daroga State Park Boat Launch March 16 to October 16.
Chelan Falls Boat Launch Open year-round
Beebe Bridge Park Boat Launch Early April to November 1
Douglas Co. PUD Boat Launch Open year-round

2.1.7 Trails In and Near Project Area

Developed designated trails located within and/or adjacent to the Project Boundary are located within public recreation sites developed by Chelan PUD.

Numerous trails exist nearby the project area.

The Columbia Breaks Fire Interpretive Center Foundation has developed a 1/2 mile interpretive trail, "Trail of Fire and Forest", located on the west side of Highway 97A, at the north end of the town of Entiat. The interpretive trail was designed to explain various elements of fire history, fire suppression and fire ecology. The graveled self-guided loop interpretive trail currently passes two historic lookouts and has twelve numbered stations highlighting interpretive messages that are described in the trail brochure. The trail goes through the 18-acre future site of the proposed Columbia Breaks Fire Interpretive Center and amphitheater.

The Apple Capital Recreation Loop Trail (also know as Wenatchee Loop Trail) located in Wenatchee and East Wenatchee, just south of the Project area, traverses more than 10 miles of Columbia River shorelines. The trail has three bridges - two over the Columbia River and one spanning the Wenatchee River. Wenatchee Confluence State Park is located near the northwest end of the Apple Capital Recreation Loop Trail.

Entiat River Valley, located west of the Project area has many multiple use trails that can be accessed from the Entiat Valley Road off of Highway 97A.

Badger Mountain, located several miles east of the Project area, also has many hiking and mountain biking trails.

Trails/Walkways within and/or adjacent to Rocky Reach Project Boundary
Recreation Site Trail/Walkway Length

Rocky Reach Dam Site 0.45 mile
Lincoln Rock State Park 1.3 miles
Daroga State Park 2.5 miles
Chelan Falls and Powerhouse Parks 0.2 mile
Beebe Bridge Park 0.6 mile

2.1.8 Existing Recreation Use Sites near Project Area

During development of the Recreation Inventory Study Plan, the working group decided that the Inventory should include descriptions of public recreation facilities at the lower end of Wells Project, upstream of the Project Boundary, and at the upper end of Rock Island Project, downstream of the Project Boundary. In addition, the U.S. Forest Service requested that the Inventory include descriptions of Forest Service recreation sites in the Entiat River Valley, west of the Rocky Reach Project Boundary. These recreation use sites are described in the Recreation Inventory Study Plan.

2.1.9 Existing Recreational Use

Recreation sites along the Rocky Reach Project provide facilities for a variety of recreation activities including camping, picnicking, boating, launching watercraft, walking, swimming, field sports, tennis, basketball, horseshoes, and playing on playgrounds.

The Recreational Use Assessment Study estimated average daily use by activity at the seven Chelan PUD developed recreation sites in the Project area. Table 2 summarizes the estimated average daily use by activity for the peak-, fall-, and spring- seasons. Field data was collected in the peak-season, from Memorial Day weekend through Labor Day week of 1999 and 2000. Off-season data collection was conducted in the fall months of mid-September through October 1999 and in the spring months of April and May 2000. Data was collected by Chelan PUD, Washington State Parks, Port of Douglas County, City of Entiat and other recreation facility managers within the study area. In addition observation, license plate monitoring and boat counts, on-site interviews and written surveys were used.

During the peak-season monitoring (most peak-season use is during July and August), camping had the greatest use followed by picnicking, walking and boating. During the fall-season monitoring, camping showed the greatest use followed by visits to the dam and the visitor center. Picnicking had the highest visitor use followed by camping during spring-season monitoring. As can be seen from Table 2, significantly more daily visitor use occurred during peak-season monitoring (1999) than during the fall- and spring-season monitoring. More visitor use occurred during fall-season monitoring (1999) than during spring-season monitoring (2000).

2.1.10 Existing Recreation Facilities and Physical Capacity

Rocky Reach Project recreation sites occupy 397 acres of land along the Project. The facilities all have restrooms with showers, and a variety of amenities such as picnic shelters with power, amphitheatres, landscaping and lawns, RV and tent camp sites, RV dump stations and concession buildings. Table 1 summarizes the existing facilities at the recreation sites in the Project study area. With the exception of Orondo Park, Entiat Park, and Lincoln Rock State Park, these facilities were mostly developed during the early 1990s. The following reviews existing camping, boating, and non-boating day-use facilities in the project study area and the physical capacities of these facilities. Further comparisons of visitor use and facility capacity will be provided in the Needs Forecast and Analysis Study.

2.1.11 Camping

Existing facilities

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 292 campsites and 2 group sites (Table 1).

As explained in Recreation Use Assessment Study Report, March 2, 2001, during the 1999 monitoring, the City of Entiat allowed a maximum of 50 tent sites in the day use area; this number is included in the 292 campsite total. Due to limited capacity of the Entiat sewer treatment facility, Entiat Park has reduced the number of tent sites allowed in the day-use area in 2001 to 25.

Physical Capacity

Use estimates of number of people camping at recreation sites were based on the number of campsites occupied multiplied by a factor of 5 people per campsite. The number of occupied group camping areas at Daroga State Park was multiplied by 50 people per group sites, since they each have a capacity of 50 people per site. In this way a direct comparison can be made regarding campsite occupancy whether or not numbers of campsites or numbers of people are used. Using the above multipliers, the capacity of campgrounds at Rocky Reach campgrounds was 1,560 people per day/night in 1999, when peak-season monitoring was conducted. Since the allowed number of tent sites at Entiat Park has been reduced from 50 to 25 tent sites, the current (2001) project area campground capacity is 1,435 people per night.

2.1.12 Boating

Existing Facilities

Six out of the seven parks in the Rocky Reach study area have boating facilities. Rocky Reach Dam and Visitor Center is the only recreation site that does not have boating facilities. There are a total of 11 launch lanes, 19 boat tie up docks, and 250 boat trailer parking spaces at the six recreation sites in the project study area. Orondo Park has a marina with marine gas available (Table 1). Douglas County PUD operates and maintains a boat launch at the tailrace of Wells Dam. This boat launch provides access to the Rocky Reach Project but is located within the Wells Project boundary; therefore it is not evaluated in detail or included in the Recreation Resources Inventory Report. The site consists of a one-lane boat launch and about six boat trailer parking spaces. There is additional parking along the dirt access road. Portable restrooms are placed at the site in the summer. Unlike the other boat launches on the Rocky Reach Project, the Wells Dam boat launch is used mainly by locals and by walleye and steelhead anglers. Due to the swift currents near the site, relatively few other recreation boaters use this launch, although some water skiers have used the launch but need to motor down river. Parking in the designated parking area fills up on some weekends and evenings, but there is generally always additional boat trailer parking space along the dirt access road (pers. comm. G. Brett, Douglas County PUD, March 2001).

Physical Capacity

Using Bureau of Reclamation (BOR) general design standards for boat launches of 40 boats per launch lane per day and 3 persons per boat, project recreation sites have the capacity to

accommodate 440 boats per day or 1,320 people per day. Currently there are 250 boat trailer parking spaces at recreation sites in the project study area.

Using a turnover rate of 2, it can be estimated that approximately 500 vehicles per day can park at publicly owned boat launch facilities. Using an average of 3 people per car, it can be assumed that public boat launch parking can accommodate approximately 1,500 people per day.

2.1.13 Non-Boating Day-Use Activities

All seven public recreation sites in the study area have day use facilities (Table 1). The following summarizes day-use parking, picnic, beach, trails and other day use facilities provided in the project area and discusses the physical capacity of day use facilities.

Parking Facilities

Currently there are 942 day-use parking spaces at project area recreation sites. Currently there is day use parking available in the project area to accommodate approximately 5,400 people per day. This estimate is based on the number of day-use parking spaces multiplied by an average of 3 people per vehicle and a turnover rate of 2 per day minus 250 (the estimated number of Chelan PUD employees that use the Rocky Reach Dam site parking area per day).

Picnic Facilities

Currently there are around 438 picnic tables at project recreation sites. Using general design standards of 4 people per table and a turnover of 2, the existing picnic tables have capacity for approximately 3,504 people per day.

Swimming/Sunbathing (Beach) Facilities

A total of 1,975 linear feet of swimming beaches are provided at project recreation sites. Assuming an average beach width of 50 feet, it is estimated that approximately 2.4 acres of swimming beaches are available at project recreation sites. Using general design standards of 220 people per acre and a turnover of 2 for swimming beaches, the current swimming beaches in the project area have capacity for approximately 1,056 people per day.

Trails

Currently project recreation sites have a total of over 5 miles of developed trails/walkways. Using National Recreation and Park Administration (NRPA) general standards for trails of 90 people per day per mile, it can be assumed that the existing trails/walkways at project recreation sites have the capacity for 450 people per day.

Other Day-Use Facilities

Six out of the seven project recreation sites provide playground equipment. Additional facilities such as horseshoe pits, baseball fields, volleyball courts, tennis courts, basketball courts, and open court areas are provided at all sites, although available facilities vary from site to site (Table 1). The Rocky Reach Dam Site has a visitor center and museum and provides concessions, tours of the dam, fish bypass and fish viewing.

2.1.14 Park Acreage

Within Rocky Reach Project area, the majority of visitors are not from the local region and it would not be logical to plan for parks at Rocky Reach based on the population of the Seattle Metropolitan area. Currently, there are not standards available that provide recommendations related to the number of park acres per number of park visitors.

City and County park planners generally use standards for planning city and regional parks. For instance, NRPA standards for regional parks include 5-10 acres per 1,000 population. However, this is the population of the region that is accommodated by the park.

2.1.15 Social Capacity

Recreation site capacity is based on the physical capacity of existing facilities and design standards as described above, as well as social capacity. Social capacity refers to visitors' perceptions of crowding and conflict, as well as visitor attitudes towards recreation sites and their recreation experience. On-site surveys conducted at project recreation sites in 1999 included questions intended to determine the social capacity of project area recreation sites. Visitors were generally satisfied with the recreation sites along the Project waters and in the activities that they participated in during their visit. Less than 2 percent of those responding indicated that "fewer people" would have made their experience better. Results of the visitor survey are provided in the 1999/2000 Recreational Use Assessment Study Report (Chelan PUD, 2001a). Further evaluation of survey responses in regards to social capacity was conducted as part of the Rocky Reach Project Recreation Needs Analysis Study and is presented in the Recreation Needs Forecast and Analysis Report (Chelan PUD, 2001b).

2.1.16 ADA Accessibility

The Americans with Disabilities Act (ADA) was signed into law in 1990. This legislation mandated that a range of facilities be reasonably accessible to persons with disabilities. In 1991, the ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) were published by the Architectural and Transportation Barriers Compliance Board, which provided guidelines on how to implement the ADA. The Guidelines require that all areas of newly designed or newly constructed buildings and facilities, and altered portions of existing buildings and facilities, provide accessible features as outlined in the Guidelines (ADAAG, 1998). The Guidelines have been revised. Proposed rules were published in July 1999. The proposed rules amend the Guidelines by adding a new special application section for newly constructed and altered recreation facilities that are not adequately addressed by the existing guidelines. Proposed guidelines provide additional accessibility provisions for boating facilities including boat launch ramps and boat slips. ADA accessible facilities exist at all project recreation sites. Projects are currently underway to improve ADA accessibility at Orondo River Park. Additional ADA accessible facilities would also be provided at all project recreation sites as existing facilities are improved or replaced.

Table 1: Existing Facilities at Public Recreation Sites in Project Study Area

Site	Acres	Camping	Picnic & Day-Use Facilities	Boating Facilities	Swimming Beach	Trails/Walkways	Interpretation Facilities	ADA Facilities*
Rocky Reach Dam and Visitor Center	38	No	20 picnic tables, 2 shelters formal gardens, visitor center, museum, playground equipment 2 horseshoe pits 3 restrooms 241 parking spaces	No	No	0.45 mi.	Yes	Yes
Lincoln Rock State Park	65	94 RV/tent spaces RV dump	166 picnic tables, 3 shelters, amphitheater, playground equipment, 1 baseball field 2 volleyball courts 2 tennis courts 2 basketball courts 3 horseshoe pits 1 open court area concession building 6 restrooms/44 toilets/ 12 showers 148 day-use parking spaces	3 launch lanes 6 tie up docks 102 boat trailer parking spaces	175 linear feet	.94 mi.	No	Yes
Orondo River Park	5	14 RV/tent sites Grassy area: 10-15 tents	14 picnic tables, 1 shelter 1 volleyball court 1 horseshoe pit 1 restroom/4 toilets/4 showers 22 day-use parking spaces	1 launch lane 3 tie up docks marina overnight moorage 14 boat trailer parking spaces	225 linear feet	No	No	ADA improvements are in process

Table 1: Existing Facilities at Public Recreation Sites in Project Study Area

Site	Acres	Camping	Picnic & Day-Use Facilities	Boating Facilities	Swimming Beach	Trails/Walkways	Interpretation Facilities	ADA Facilities*
Entiat Park	40	31 RV sites 50 tent sites allowed (1991) in day-use area (25 tents allowed in 2001)	108 picnic tables, 1 shelter playground equipment 1 volleyball court 2 horseshoe pits 3 restrooms/12 toilets/4 showers 43 day-use parking spaces	1 launch lane 2 tie up docks 17 boat trailer parking spaces	250 linear feet	No	Museum	Yes
Daroga State Park	140	28 RV/tent campsites + 17 boat/walk-in tent sites 2 group camping areas (capacity 100 people) RV dump station	75 picnic tables, 3 shelters playground equipment 1 baseball field 1 soccer field tennis courts 2 basketball courts 1 open court area 4 restrooms/38 toilets/12 showers 114 day-use parking spaces	2 launch lanes 3 tie up docks 76 boat trailer parking spaces	475 linear feet	2.5 miles	No	Yes
Chelan Falls and Powerhouse Parks	53	No	11 picnic tables + 16 in 2 shelters playground equipment 2 softball fields 1 soccer field 2 volleyball courts 1 tennis court 1 basketball court 2 horseshoe pits 2 open court areas 3 restrooms/24 toilets/4 showers 178 parking spaces	2 launch lanes 2 tie up docks 25 boat trailer parking spaces	375 linear feet	0.2 mile	No	Yes

Table 1: Existing Facilities at Public Recreation Sites in Project Study Area

Site	Acres	Camping	Picnic & Day-Use Facilities	Boating Facilities	Swimming Beach	Trails/Walkways	Interpretation Facilities	ADA Facilities*
Beebe Bridge Park	56	46 RV/tent sites	14 picnic tables + 14 in 1 shelter playground equipment 1 baseball field 1 soccer field 1 volleyball court 2 tennis courts 1 open court area 3 restrooms/24 toilets/6 showers 196 day-use parking spaces	2 launch lanes 3 tie up docks 16 boat trailer parking spaces	475 linear feet	0.6 mile	No	Yes

* Additional ADA facilities information is available through Chelan PUD Parks Department and Washington State Parks.

Table 2: Estimated Average Daily Use by Activity at Public Recreation Sites

Activity	Peak-Season May 30 – Sept 9 (Avg. # People/Day)	Fall-Season Sept 10 – Oct 31 (Avg. # People/Day)	Spring-Season April 1 – May 26 (Avg. # People/Day)
Camping	863	371	186
Boating	298	34	14
Visiting Dam/Visitor Center	245	231	180
Shore Fishing	2	0	3
Visiting Beach/Sunbathing	117	0	23
Swimming/Wading	99	0	10
Nature Study Photo	3	0	14
Gathering/Collecting	0	0	0
Hang gliding	8	0	8
Walking	336	227	117
Hiking	0	0	0
Backpacking	0	0	0
Skating	5	0	14
Jogging	50	0	0
Picnicking	598	183	261
Off-road vehicle riding	0	11	0
Bicycling on-road	8	5	29
Bicycling off-road	98	40	0
Sightseeing	185	30	13
Using playgrounds	210	13	50
Group Activity	213	0	84
Other Activity	159	356	129
Total:	3497	1501	1135

SECTION 3: RECREATION DEMAND, FACILITY NEEDS AND RESOURCE CAPACITY

Demand for recreation facilities in the Project area is assessed by projecting recreation visitation based on existing conditions and future growth rates. Recreation planning documents and surveys conducted in the Project area also provide information regarding recreation-activity demands and trends. This section provides information regarding existing and projected future recreation use and demands based on field monitoring, population projections, and existing recreation related studies and planning documents.

3.1 Existing Recreation Use at Public Recreation Sites

As discussed in the Recreation Use Assessment Report (Chelan PUD, 2001a), estimated visitor use for Rocky Reach Project area recreation sites was calculated using several types of data. These included observational counts of people and occupied campsites; traffic counter data, counts of vehicles and vehicles with trailers at boat launch sites, and campground fee receipt data, where available. Use of camping facilities was based on fee receipt data, where available, or when not available based on observational counts of the number of campsites occupied. Although the number of people observed camping was also documented during field observations, these numbers were not used when determining visitor use because many people camping may not be at the campsites to count when observations are conducted. Since many boaters are out in the water and not at the boat launches during observational counts, estimated use for boating activities are based on the number of parked vehicles with trailers at recreation sites and observations of type of use. The estimated use for non-boating day-use activities are based on the number of people observed participating in different activities at day-use facilities and traffic counter data. The number of vehicles observed at the Rocky Reach Day-Use area was also reviewed to estimate visitor center use and interview data was also reviewed to estimate hang gliding activity at Project recreation sites.

The following presents visitor use data based on 1999 and 2000 data collection and monitoring efforts. Refer to the Recreation Use Assessment Report (Chelan PUD, 2001a) and the Recreation Needs Forecast and Analysis, September 21, 2001 for further information. Visitor use estimates for each of the seven Rocky Reach recreation sites are provided in Table 3 and visitor use estimates by activity for all recreation sites are summarized Table 4. Average daily, weekday and weekend visitor use estimates are provided for peak-, fall- and spring- seasons. Peak-season monitoring at recreation sites was conducted between May 30 and September 9, 1999. Fall-season monitoring was conducted between September 10 and October 31, 1999 and spring-season monitoring was conducted between April 1 and May 26, 2000. Fall and spring season visitor use estimates are based on only the days/nights that campground and day-use areas were open.

Visitor Use at Recreation Sites

Seven developed public recreation sites were monitored during the summer and fall of 1999 and the spring of 2000. Based on field monitoring and data collection efforts an average of almost 3,500 people per day visited developed recreation sites in the Rocky Reach Project area during

the peak-season. An estimated average of 1,500 people per day visited developed recreation sites in the Rocky Reach Project area during the fall-season, and an estimated average of 1,135 people per day visited developed public recreation sites in the Rocky Reach Project area during the spring-season.

Table 3 shows the estimated visitor use Rocky Reach Project recreation sites based on 1999/2000 monitoring efforts (Chelan PUD, 2001a). Estimated visitor use at each recreation sites is broken out into camping, boating and non-boating activities.

Visitor Use by Activity

Table 4 provides a summary of the estimated average number of people per day that participate in different activity categories at the seven developed public recreation sites in the Project area.

As shown in Table 4, during the peak-season (July and August had the highest use), camping facilities received the most visitor use followed by picnicking. Boating was the third most popular activity on weekends, whereas, on weekdays walking was third and boating had the fourth highest use.

During the fall-season, camping had the highest average use followed by other activity then visiting the dam/visitor center. On fall weekdays, other activity had the highest use followed by camping, whereas on weekends camping had the highest use followed by other activity.

Picnicking had the highest average visitor use followed by camping, then visiting the dam/visitor center during spring-season monitoring. On spring weekdays other activity had the highest use followed by visiting the dam/visitor center and then picnicking, whereas on weekends picnicking had the highest use followed by camping then visiting the dam/visitor center.

3.2 Existing Watercraft Activity and Dispersed Use

Watercraft activity and shoreline activity or dispersed use is described in Section 5.2.1 of the Rocky Reach Project Recreation Use Assessment Report (Chelan PUD, 2001a).

Watercraft Activity

Based on peak-season observations, an average of 42.5 watercraft were observed per day during weekday boat runs and an average of 101.5 watercraft were observed per day during weekend boat runs. Most watercraft activity was spread out between the north end of Turtle Rock Island and Beebe Bridge. Motorized boats made up nearly 70 percent of the peak-season watercraft use in the Rocky Reach Project. Personal watercraft (jetskis) made up 29 percent, non-motorboats made up one percent, and airplanes and windsurfers made up less than one percent of the watercraft use.

No watercraft were observed during fall-season weekday boat runs and only five watercraft were observed during the weekend boat run. Watercraft observed on the weekend boat run were between Orondo Park and Beebe Bridge. All watercraft observed were motorboats.

During the spring-season weekday boat run, only two watercraft were observed, one between the north end of Turtle Rock Island and Orondo River Park and the other between Daroga State Park

and Beebe Bridge. During the spring-season weekend boat run, a total of 12 watercraft were observed. These included three motorized watercraft between Rocky Reach Dam and Turtle Rock Island, eight motorized watercraft, between Orondo River Park and Beebe Bridge, and one non-motorized watercraft between Rocky Reach Dam and the north end of Turtle Rock island. Two out of the 11 motorized watercraft observed were jetskis.

Table 5, below, summarizes the average number of watercraft observed during boat runs on the Rocky Reach Project. As can be expected, most of the watercraft use occurs during peak season weekends and the majority of watercraft observed during all seasons were motorized.

Dispersed Shoreline Use

During peak-season boat runs, an average of 34 people were observed on weekdays and an average of 64.5 people were observed on weekends at undeveloped shorelines along the Rocky Reach Project. Activities observed during peak-season boat runs were mostly swimming/visiting the beach, and some shore angling and other shore activity. Most dispersed shoreline use was observed at a beach on Chelan PUD owned Turtle Rock Island and on mostly private and some state, Chelan PUD and BLM owned undeveloped shorelines between Daroga State Park and Beebe Bridge. A few people were observed on the Entiat River Sandbar, located at the mouth of the Entiat River, and along undeveloped shorelines. Undeveloped shorelines include those privately owned and owned by Chelan PUD and managed by WDFW between Beebe Bridge and Wells Dam.

No people were observed along undeveloped shorelines during 1999 fall-season weekend and weekday boat runs.

During the spring-season, only one person was observed shore angling along undeveloped shorelines between Rocky Reach Dam and the north end of Turtle Rock Island. No people were observed along undeveloped shorelines during spring-season weekend boat runs.

Table 6, below, summarizes the average number of people observed on undeveloped shorelines of Rocky Reach Project. Almost all dispersed shoreline activity occurred during the peak season with most activity on weekends.

3.3 Estimated Growth

National and state studies indicate that as populations grow, demand for recreation opportunities will also grow. Estimated growth in Project-area recreation, based on this premise, can be determined from population forecasts and growth rates for the location of visitors to Project recreation sites. The location of visitors was determined based on the 1999 and 2000 surveys and documentation of vehicle license plate numbers. During surveys at recreation sites, people were asked where they are from. During car runs, observers documented license plate numbers of vehicles at recreation sites and Washington State Department of Licensing provided county of origin for each vehicle license plate number. The percentages of peak-, fall- and spring- season visitors who came from different areas are shown, respectively, on Table 7, Table 8 and Table 9. The annual population growth rates for each area and weighted average based on the percentage of people and the growth rate for each area are also shown.

The following sections provide demand projections for recreation sites and activity based on population growth. In actuality, a number of other factors can influence recreation demand such as demographics and age of populations, economics, technology, etc. For instance, over the last ten years the Hispanic population in the Project area has more than doubled with an increase from 1990 to 1999 of almost 118 percent and 107 percent for Chelan and Douglas counties, respectively. In comparison, Washington State Hispanic population has increased by 66 percent over the same period of time. These increases in the Project area can relate to different use patterns and language barriers. For example, according to a study done by USDA Forest Service research staff member Dr. Deborah Chavez, Hispanics recreate with their immediate and extended families, which require additional group facilities. In addition, Spanish-speaking staff and Spanish signs allow Hispanic visitors to feel more welcome. Aging baby boomers can result in needs for different facilities, such as ADA facilities. Trends toward larger motor homes and boats can have an impact on facility needs. Increases in fuel prices can also impact different types of recreation activity demands. Results of these other factors are not always easy to predict especially for many years out into the future.

3.4 Recreation Sites and Activity in Project Area

Estimated peak-season growth projections for Rocky Reach Project recreation sites are shown on Table 10. Table 11 shows estimated peak-season growth projections for Rocky Reach recreation sites by activity. Growth projections are based on the annual weighted average of 1.54 percent, as calculated in Table 7. Growth projections are shown in 10-year increments from the year 2000 to 2020. Average daily use estimates are shown for all days, for weekdays, and for weekends. During this 20-year period, the total average number of people per day at recreation sites in the Project area during the peak-season is estimated to grow by almost 1,325 additional visits. This is based on the premise that as populations grow, demands for recreation opportunities may grow correspondingly, assuming demand can be met. This demand may grow, however, with an emphasis in different areas. For example, according to IAC, there is a current decrease in camping, fishing and hunting and an increase in walking activities.

Table 12 shows estimated fall-season growth projections for Rocky Reach Project recreation sites and Table 13 shows estimated fall-season growth projections for Rocky Reach Project recreation sites by activity. Growth projections are based on the annual weighted average of 1.48 percent, as calculated in Table 8. During this 20-year period, the total average number of people per day at recreation sites in the Project area during the fall-season is estimated to grow by almost 545 additional visits.

Table 14 shows estimated spring-season growth projections for Rocky Reach Project recreation sites and Table 15 shows estimated spring-season growth projections for Rocky Reach Project recreation sites by activity. Growth projections are based on the annual weighted average of 1.58 percent, as calculated in Table 9. During this 20-year period, the total average number of people per day at recreation sites in the Project area during the spring-season is estimated to grow by almost 420 additional visits.

Estimated physical capacities of recreation sites, based on the number of campsites and parking spaces, are also shown on Table 10, Table 12 and Table 14 for comparison with estimated current and future use.

3.5 Watercraft and Dispersed Shoreline Activity

It is assumed that watercraft activity in Rocky Reach Project and dispersed use along undeveloped shorelines can be expected to grow at about the same rate as other recreation activities in the area. Average annual growth rates of 1.54 percent, 1.48 percent and 1.58 percent, respectively, are used to estimate the growth of peak-, fall- and spring- season watercraft and dispersed shoreline activity (Table 7, Table 8, Table 9).

Watercraft Activity

Table 16 shows the current and projected peak-season weekday and weekend watercraft activity within the Rocky Reach Project. During this 20-year period (2000 to 2020), the average number of peak-season watercraft within the Rocky Reach Project is estimated to grow by an average of 15 additional watercraft on weekdays and 35 additional watercraft on weekends. Table 17 shows the current and projected fall-season watercraft activity within the Rocky Reach Project. During this 20-year period (2000 to 2020), the average number of fall-season watercraft within the Rocky Reach Project is estimated to grow by an average of almost two additional watercraft on weekends. Table 18 shows the current and projected spring-season weekday and weekend watercraft activity within the Rocky Reach Project. During this 20-year period (2000 to 2020), the average number of spring-season watercraft within the Rocky Reach Project is estimated to grow by an average of less than 1 additional watercraft on weekdays and almost 4.5 additional watercraft on weekends.

Dispersed Shoreline Activity

Table 19 shows the current and projected peak-season weekday and weekend activity along undeveloped shorelines. During this 20-year period (2000 to 2020), the average number of peak season dispersed activity along Rocky Reach Project shorelines is estimated to grow by an average of 12 additional people on weekdays and just over 23 additional people on weekends.

No people were observed on undeveloped shorelines during fall-season observations.

During spring-season observations, only one person was observed on undeveloped shorelines during a weekday boat run. Table 20 shows current and projected spring-season activity along undeveloped shorelines. During this 20-year period (2000 to 2020), the average number of spring-season dispersed activity along Rocky Reach Project shorelines is estimated to grow by an average of less than one person.

Population projections, surveys, planning studies and consultation with recreation managers have indicated growth in recreation demand and needs in the Project area. Existing recreation sites and areas could accommodate additional recreation facilities to satisfy recreation demands. Existing planning documents and studies have identified potential recreation development opportunities. Comments were also received during development of the Needs Report related to potential recreation development opportunities in the Rocky Reach Project area. Potential recreation development and expansion opportunities identified in the recreation study area include, campground expansion opportunities, Entiat Park revitalization, trail expansions and/or additions and educational and interpretive sign development.

Table 3: Estimated Average Daily Use Rocky Reach Recreation Sites¹

SITE	Peak-Season (1999) May 30 – Sept 9 Average # People/Day			Fall (1999) Sept 10 – Oct 31 Average # People/Day			Spring (2000) April 1 – May 26 Average # People/Day		
	Avg. Peak	Week-day	Week-end ²	Avg. Peak	Week-day	Week-end ²	Avg. Peak	Week-day	Week-end ²
Rocky Reach Dam Recreation Facilities and Visitor Center (Day-Use):	568	530	660	331	305	390	359	335	425
Lincoln Rock State Park:									
Camping/Overnight:	337	285	455	215	185	285	124	100	170
Boating:	89	72	132	15	0	54	7	0	24
Non-Boating Day-Use:	552	458	773	256	255	256	172	165	196
Orondo River Park:									
Camping/Overnight:	63	50	90	8	5	15	14	10	20
Boating:	20	19	25	2	0	12	0	0	0
Non-Boating Day-Use:	131	101	205	23	10	53	17	15	30
Entiat Park:									
Camping/Overnight ³ :	RV 59 Tent 56	RV 43 Tent 42	RV 92 Tent 88	All 40	All 25	All 80	All 2	All 0	All 5
Boating:	55	42	90	4	0	12	3	0	12
Non-Boating Day-Use:	244	183	390	107	80	163	50	10	153
Daroga State Park:									
Camping/Overnight (Group):	69	55	97	12	0	38	0	0	0
Camping/Overnight (Other):	120	97	175	58	40	95	34	25	49
Boating:	60	54	78	8	6	15	2	0	6
Non-Boating Day-Use:	285	256	352	83	69	110	101	85	149
Chelan Falls/Powerhouse Parks:									
Boating:	6	5	8	0	0	0	1	0	2
Non-Boating Day-Use:	281	250	352	115	100	145	122	115	148
Beebe Bridge Park:									
Camping/Overnight:	159	135	210	38	25	75	12	8	20
Boating:	68	60	90	5	0	21	1	0	2
Non-Boating Day-Use:	275	220	405	181	180	179	114	110	128
TOTAL	3497	2957	4767	1501	1285	1998	1135	978	1539

1 Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)

2 Weekend refers to Friday and Saturday nights for camping/overnight and Saturday and Sunday for day-use.

3 Differentiation between RV and tent camping at Entiat Park during peak-season based on on-site surveys. No data available to separate fall- and spring-season RV and tent camping.

Table 4: Rocky Reach Project Recreation Sites - Estimated Average Daily Use By Activity

Activity	Peak-Season (1999) May 30 – Sept 9 Average # People/Day			Fall (1999) Sept 10 – Oct 31 Average # People/Day			Spring (2000) April 1 – May 26 Average # People/Day		
	All Days*	Weekday	Weekend	All Days*	Week-day	Week-end	All Days*	Week-day	Week-end
	Camping	863	707	1207	371	280	588	186	143
Boating	298	252	423	34	6	114	14	0	46
Visiting Dam/Visitor Center	245	220	302	231	214	273	180	161	234
Shore Fishing	2	3	1	0	0	0	3	2	6
Visiting Beach/Sunbathing	117	90	176	0	0	0	23	10	50
Swimming/Wading	99	67	174	0	0	0	10	4	20
Nature Study/Photography	3	4	0	0	0	0	14	24	0
Hang Gliding	8	4	14	0	0	0	8	0	16
Walking	336	338	330	227	259	162	117	97	159
Skating	5	2	10	0	0	0	14	17	10
Jogging	50	58	34	0	0	0	0	0	0
Picnicking	598	450	945	183	131	260	261	160	498
Off-road vehicle riding	0	0	0	11	15	6	0	0	0
Bicycling on-road	8	8	7	5	2	8	29	17	40
Bicycling off-road	98	94	108	40	34	56	0	0	0
Sightseeing	185	180	200	30	8	76	13	6	20
Using Playgrounds	210	225	175	13	0	44	50	82	30
Group Activity	213	127	415	0	0	0	84	84	83
Other activity	159	128	246	356	336	411	129	171	63
Total:	3497	2957	4767	1501	1285	1998	1135	978	1539
*Based on 1999/2000 data collection and field monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)									

Table 5: Average # Watercraft Observed

Type of Watercraft	Peak-Season (2000) May 30 – Sept 9 Average # Watercraft Observed per Day		Fall (1999) Sept 10 – Oct 31 # Watercraft Observed per Day		Spring (2000) April 1 – May 26 # Watercraft Observed per Day	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Motorboat angling	1.5	6	0	2	0	0
Motorboat skiing/tubing	11.5	34	0	2	0	6
Motorboat other/unidentified	15	32	0	1	2	3
Jetskis	13.5	28	0	0	0	2
Airplanes	0.5	0	0	0	0	0
Non-motorboat angling	0	0	0	0	0	0
Non-motorboat other	0.5	1	0	0	0	1
Windsurfers	0	0.5	0	0	0	0
Total:	42.5	101.5	0	5	2	12

Based on 1999/2000 instantaneous counts by boat. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)

Table 6: Average Dispersed Shoreline Activity Observed

Activity	Peak-Season (2000) May 30 – Sept 9 Average # People Observed per Day		Fall (1999) Sept 10 – Oct 31 # People Observed per Day		Spring (2000) April 1 – May 26 # People Observed per Day	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Angling	0	4.5	0	0	1	0
Swimming/Visiting Beach	34	59.5	0	0	0	0
Other Shore Activity	0	0.5	0	0	0	0
Total:	34	64.5	0	0	1	0

Based on 1999/2000 instantaneous counts by boat. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)

Table 7: Population Weighting Factors for Estimating Recreation-Use Projections (Peak-Season)

Area	% of People from each area (column a)	Annual Growth Rate of Population ¹ (column b)*	Weighted Annual Average (a) x (b)
Chelan/Douglas Counties	21%	1.62	0.34%
Seattle Metro Area ²	61%	1.49	0.91%
Other Washington Counties	17%	1.64	0.27%
Other U.S. States	1%	0.89	0.01%
British Columbia, Canada	0%	1.09	0.00%
Weighted Average			1.54%

¹ Based on 1999-2020 projections provided by Washington OFM
² Includes King, Snohomish, Kitsap, Pierce, and Thurston counties
* Annual population growth rates for each area are based on a weighted average: percentage of people vs the growth rate for each area show.

Table 8: Population Weighting Factors for Estimating Recreation-Use Projections (Fall-Season)

Area	% of People from each area (column a)	Annual Growth Rate of Population ¹ (column b)*	Weighted Annual Average (a) x (b)
Chelan/Douglas Counties	26%	1.69	0.44%
Seattle Metro Area ²	45%	1.4	0.63%
Other Washington Counties	21%	1.58	0.33%
Other U.S. States	6%	0.89	0.05%
British Columbia, Canada	2%	1.09	0.02%
Weighted Average			1.48%

¹ Based on 1999-2020 projections provided by Washington OFM
² Includes King, Snohomish, Kitsap, Pierce, and Thurston counties
* Annual population growth rates for each area are based on a weighted average: percentage of people vs the growth rate for each area show.

Table 9: Population Weighting Factors for Estimating Recreation-Use Projections (Spring-Season)

Area	% of People from each area (column a)	Annual Growth Rate of Population¹ (column b)*	Weighted Annual Average (a) x (b)
Chelan/Douglas Counties	30%	1.73	0.52%
Seattle Metro Area ²	40%	1.55	0.62%
Other Washington Counties	21%	1.71	0.36%
Other U.S. States	5%	0.89	0.04%
British Columbia, Canada	4%	1.09	0.04%
Weighted Average			1.58%
¹ Based on 1999-2020 projections provided by Washington OFM ² Includes King, Snohomish, Kitsap, Pierce, and Thurston counties * Annual population growth rates for each area are based on a weighted average: percentage of people vs the growth rate for each area show.			

Table 10: Projected Peak-Season Visitation at Rocky Reach Project Recreation Sites¹

RECREATION SITES	Est. ² Daily Capacity	Average 1999 # People/Day			Average 2000 # People/Day			Average 2010 # People/Day			Average 2020 # People/Day		
		AD	WD	WE	AD	WD	WE	AD	WD	WE	AD	WD	WE
Rocky Reach Dam Recreation Facilities and Visitor Center (Day-Use):	1,190	568	530	660	577	538	670	672	627	780	782	731	910
Lincoln Rock State Park:													
Camping/Overnight:	470	337	285	455	342	289	462	399	337	538	465	393	627
Boating:	612	89	72	132	90	73	134	105	85	156	123	99	182
Non-Boating Day-Use:	888	552	458	773	561	465	785	653	542	915	761	631	1066
Orondo River Park:													
Camping/Overnight:	130	63	50	90	64	51	91	75	59	106	87	69	124
Boating:	84	20	19	25	20	19	25	24	22	30	28	26	34
Non-Boating Day-Use:	132	131	101	205	133	103	208	155	119	243	181	139	283
Entiat Park:													
Camping/Overnight RV:	155	59	43	92	60	44	94	70	51	109	81	59	127
1999 Tent ³ :	250	56	42	88	57	43	89	66	50	104	77	58	121
2001 Tent ³ :	125												
Boating:	102	55	42	90	56	43	91	65	50	106	76	58	124
Non-Boating Day-Use:	258	244	183	390	248	186	396	289	217	461	336	252	538
Daroga State Park:													
Camping/Overnight (Group):	100	69	55	97	70	56	99	82	65	115	95	76	134
Camping/Overnight (Other):	225	120	97	175	122	98	178	142	115	207	165	134	241
Boating:	456	60	54	78	61	55	79	71	64	92	83	74	108
Non-Boating Day-Use:	684	285	256	352	289	260	358	337	303	416	393	353	485
Chelan Falls/Powerhouse Parks:													
Boating:	150	6	5	8	6	5	8	7	6	9	8	7	11
Non-Boating Day-Use:	1,068	281	250	352	285	254	358	332	296	416	387	345	485
Beebe Bridge Park:													
Camping/Overnight:	230	159	135	210	161	137	213	188	160	248	219	186	289
Boating:	96	68	60	90	69	61	91	80	71	106	94	83	124
Non-Boating Day-Use:	1176	275	220	405	279	223	411	325	260	479	379	303	558
TOTAL	8,581	3497	2957	4767	3550	3003	4840	4137	3499	5636	4820	4076	6571

¹ Based on 1999 Monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)

² Estimated capacity is measure of physical capacity based on number of campsites & parking spaces.

³ During 1999 monitoring, 50 tent sites in the day-use area were allowed. The number of tent sites allowed has been reduced to 25 in the day-use area in 2001.

Legend: AD = All-Days; WD = Weekdays; WE = Weekends

Table 11: Projected Peak-Season Visitation by Activity at Rocky Reach Project Recreation Sites

ACTIVITY	Average 1999 # People/Day			Average 2000 # People/Day			Average 2010 # People/Day			Average 2020 # People/Day		
	AD	WD	WE	AD	WD	WE	AD	WD	WE	AD	WD	WE
Camping	863	707	1207	876	718	1226	1021	836	1428	1190	975	1664
Boating	298	252	423	303	256	430	353	298	500	411	347	583
Visiting Dam/Visitor Center	245	220	302	249	223	307	290	260	357	338	303	416
Shore Fishing	2	3	1	2	3	1	2	4	1	3	4	1
Visiting Beach/Sunbathing	117	90	176	119	91	179	138	106	208	161	124	243
Swimming/Wading	99	67	174	100	68	177	117	79	206	136	92	240
Nature Study/Photography	3	4	0	3	4	0	4	5	0	4	6	0
Hang Gliding	8	4	14	8	4	14	9	5	17	11	6	19
Walking	336	338	330	341	343	335	398	400	390	463	466	455
Skating	5	2	10	5	2	10	6	2	12	7	3	14
Jogging	50	58	34	51	59	34	59	69	40	69	80	47
Picnicking	598	450	945	607	457	959	707	532	1118	824	620	1303
Off-road vehicle riding	0	0	0	0	0	0	0	0	0	0	0	0
Bicycling on-road	8	8	7	8	8	7	9	9	8	11	11	10
Bicycling off-road	98	94	108	100	95	110	116	111	128	135	130	149
Sightseeing	185	180	200	187	183	203	219	213	237	255	248	276
Using Playgrounds	210	225	175	213	228	178	248	266	207	289	310	241
Group Activity	213	127	415	216	129	421	252	150	491	294	175	572
Other activity	159	128	246	161	130	250	188	151	291	219	176	339
Total of All Activities	3497	2957	4767	3549	3001	4841	4136	3496	5639	4820	4076	6572

Based on 1999 Monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)

Legend: AD = All-Days; WD = Weekdays; WE = Weekends

Table 12: Projected Fall-Season Visitation at Rocky Reach Project Recreation Sites¹

RECREATION SITES	Est. ² Daily Capacity	Average 1999 # People/Day			Average 2000 # People/Day			Average 2010 # People/Day			Average 2020 # People/Day		
		AD	WD	WE	AD	WD	WE	AD	WD	WE	AD	WD	WE
Rocky Reach Dam Recreation Facilities & Visitor Center (Day-Use):	1,190	331	305	390	336	310	396	389	358	458	451	415	531
Lincoln Rock State Park:													
Camping/Overnight:	470	215	185	285	218	188	289	253	217	335	293	252	388
Boating:	612	15	0	54	15	0	55	18	0	63	20	0	74
Non-Boating Day-Use:	888	256	255	256	260	259	260	301	300	301	349	347	349
Orondo River Park:													
Camping/Overnight:	130	8	5	15	8	5	15	9	6	18	11	7	20
Boating:	84	2	0	12	2	0	12	2	0	14	3	0	16
Non-Boating Day-Use:	132	23	10	53	23	10	54	27	12	62	31	14	72
Entiat Park:													
Camping/Overnight 1999 ³ :	405	40	25	80	41	25	81	47	29	94	54	34	109
Camping/Overnight 2001 ³ :	280												
Boating:	102	4	0	12	4	0	12	5	0	14	5	0	16
Non-Boating Day-Use:	258	107	80	163	109	81	165	126	94	192	146	109	222
Daroga State Park:													
Camping/Overnight (Group):	100	12	0	38	12	0	39	14	0	45	16	0	52
Camping/Overnight (Other):	225	58	40	95	59	41	96	68	47	112	79	54	129
Boating:	456	8	6	15	8	6	15	9	7	18	11	8	20
Non-Boating Day-Use:	684	83	69	110	84	70	112	98	81	129	113	94	150
Chelan Falls/Powerhouse Parks:													
Boating:	150	0	0	0	0	0	0	0	0	0	0	0	0
Non-Boating Day-Use:	1,068	115	100	145	117	101	147	135	118	170	157	136	197
Beebe Bridge Park:													
Camping/Overnight:	230	38	25	75	39	25	76	45	29	88	52	34	102
Boating:	96	5	0	21	5	0	21	6	0	25	7	0	29
Non-Boating Day-Use:	1176	181	180	179	184	183	182	213	212	210	246	245	244
TOTAL	8,736	1501	1285	1998	1524	1304	2027	1765	1510	2348	2044	1749	2720

1 Based on 1999 Monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)
 2 Estimated capacity is measure of physical capacity based on number of campsites & parking spaces.
 3 During 1999 monitoring, 50 tent sites in the day-use area were allowed. The number of tent sites allowed has been reduced to 25 in the day-use area in 2001.

Legend: AD = All-Days; WD = Weekdays; WE = Weekends

Table 13: Projected Fall-Season Visitation by Activity at Rocky Reach Project Recreation Sites

ACTIVITY	Average 1999 # People/Day			Average 2000 # People/Day			Average 2010 # People/Day			Average 2020 # People/Day		
	AD	WD	WE	AD	WD	WE	AD	WD	WE	AD	WD	WE
Camping	371	280	588	376	284	597	436	329	690	505	381	801
Boating	34	6	114	35	6	116	40	7	134	46	8	155
Visiting Dam/Visitor Center	231	214	273	234	217	277	272	252	321	314	291	372
Shore Fishing	0	0	0	0	0	0	0	0	0	0	0	0
Visiting Beach/Sunbathing	0	0	0	0	0	0	0	0	0	0	0	0
Swimming/Wading	0	0	0	0	0	0	0	0	0	0	0	0
Nature Study/Photography	0	0	0	0	0	0	0	0	0	0	0	0
Hang Gliding	0	0	0	0	0	0	0	0	0	0	0	0
Walking	227	259	162	230	263	164	267	304	190	309	353	221
Skating	0	0	0	0	0	0	0	0	0	0	0	0
Jogging	0	0	0	0	0	0	0	0	0	0	0	0
Picnicking	183	131	260	186	133	264	215	154	306	249	178	354
Off-road vehicle riding	11	15	6	11	15	6	13	18	7	15	20	8
Bicycling on-road	5	2	8	5	2	8	6	2	9	7	3	11
Bicycling off-road	40	34	56	41	35	57	47	40	66	54	46	76
Sightseeing	30	8	76	30	8	77	35	9	89	41	11	103
Using Playgrounds	13	0	44	13	0	45	15	0	52	18	0	60
Group Activity	0	0	0	0	0	0	0	0	0	0	0	0
Other activity	356	336	411	361	341	417	418	395	483	485	457	560
Total of All Activities	1501	1285	1998	1522	1304	2028	1764	1510	2347	2043	1748	2721

Based on 1999 Monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)

Legend: AD = All-Days; WD = Weekdays; WE = Weekends

Table 14: Projected Spring-Season Visitation at Rocky Reach Project Recreation Sites

RECREATION SITES	Est. ² Daily Capacity	Average 2000 # People/Day			Average 2010 # People/Day			Average 2020 # People/Day		
		AD	WD	WE	AD	WD	WE	AD	WD	WE
Rocky Reach Dam Recreation Facilities & Visitor Center (Day-Use):	1,190	359	335	425	420	392	497	491	458	582
Lincoln Rock State Park:										
Camping/Overnight:	470	124	100	170	145	117	199	170	137	233
Boating:	612	7	0	24	8	0	28	10	0	33
Non-Boating Day-Use:	888	172	165	196	201	193	229	235	226	268
Orondo River Park:										
Camping/Overnight:	130	14	10	20	16	12	23	19	14	27
Boating:	84	0	0	0	0	0	0	0	0	0
Non-Boating Day-Use:	132	17	15	30	20	18	35	23	21	41
Entiat Park:										
Camping/Overnight 1999 ³ :	405	2	0	5	2	0	6	3	0	7
Camping/Overnight 2001 ³ :	280									
Boating:	102	3	0	12	4	0	14	4	0	16
Non-Boating Day-Use:	258	50	10	153	58	12	179	68	14	209
Daroga State Park:										
Camping/Overnight (Group):	100	0	0	0	0	0	0	0	0	0
Camping/Overnight (Other):	225	34	25	49	40	29	57	47	34	67
Boating:	456	2	0	6	2	0	7	3	0	8
Non-Boating Day-Use:	684	101	85	149	118	99	174	138	116	204
Chelan Falls/Powerhouse Parks:										
Boating:	150	1	0	2	1	0	2	1	0	3
Non-Boating Day-Use:	1,068	122	115	148	143	135	173	167	157	203
Beebe Bridge Park:										
Camping/Overnight:	230	12	8	20	14	9	23	16	11	27
Boating:	96	1	0	2	1	0	2	1	0	3
Non-Boating Day-Use:	1176	114	110	128	133	129	150	156	151	175
TOTAL	8,736	1135	978	1539	1326	1145	1798	1552	1339	2106
<p>1 Based on 2000 Monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)</p> <p>2 Estimated capacity is measure of physical capacity based on number of campsites & parking spaces.</p> <p>3 During 1999 monitoring, 50 tent sites in the day-use area were allowed. The number of tent sites allowed has been reduced to 25 in the day-use area in 2001.</p> <p>Legend: AD = All-Days; WD = Weekdays; WE = Weekends</p>										

Table 15: Projected Spring-Season Visitation by Activity Rocky Reach Project Recreation Sites

ACTIVITY	Average 2000 # People/Day			Average 2010 # People/Day			Average 2020 # People/Day		
	AD	WD	WE	AD	WD	WE	AD	WD	WE
Camping	186	143	264	218	167	309	254	196	361
Boating	14	0	46	16	0	54	19	0	63
Visiting Dam/Visitor Center	180	161	234	211	188	274	246	220	320
Shore Fishing	3	2	6	4	2	7	4	3	8
Visiting Beach/Sunbathing	23	10	50	27	12	58	31	14	68
Swimming/Wading	10	4	20	12	5	23	14	5	27
Nature Study/Photography	14	24	0	16	28	0	19	33	0
Hang Gliding	8	0	16	9	0	19	11	0	22
Walking	117	97	159	137	113	186	160	133	218
Skating	14	17	10	16	20	12	19	23	14
Jogging	0	0	0	0	0	0	0	0	0
Picnicking	261	160	498	305	187	583	357	219	681
Off-road vehicle riding	0	0	0	0	0	0	0	0	0
Bicycling on-road	29	17	40	34	20	47	40	23	55
Bicycling off-road	0	0	0	0	0	0	0	0	0
Sightseeing	13	6	20	15	7	23	18	8	27
Using Playgrounds	50	82	30	58	96	35	68	112	41
Group Activity	84	84	83	98	98	97	115	115	114
Other activity	129	171	63	151	200	74	177	234	86
Total of All Activities	1135	978	1539	1327	1143	1801	1552	1338	2105
Based on 2000 Monitoring. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)									
Legend: AD = All-Days; WD = Weekdays; WE = Weekends									

Table 16: Projected Peak-Season Watercraft Activity

ACTIVITY	Average 2000 # Watercraft/Day		Average 2010 # Watercraft/Day		Average 2020 # Watercraft/Day	
	WD	WE	WD	WE	WD	WE
Motorboat angling	1.5	6	2	7	2	8
Motorboat skiing/tubing	11.5	34	13	40	16	46
Motorboat other/unidentified	15	32	17	37	20	43
Personal water craft (jetskis)	13.5	28	16	33	18	38
Airplanes	0.5	0	0.6	0	0.7	0
Non-motorboat angling	0	0	0	0	0	0
Non-motorboat other	0.5	1	0.6	1	0.7	1
Windsurfers	0	0.5	0	0.6	0	0.7
Total of All Activities	42.5	101.5	49.2	118.6	57.4	136.7
Based on 2000 boat run observations. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)						
Legend: WD = Weekdays; WE = Weekends						

Table 17: Projected Fall-Season Watercraft Activity

ACTIVITY	Average 1999 # Watercraft/Day		Average 2000 # Watercraft/Day		Average 2010 # Watercraft/Day		Average 2020 # Watercraft/Day	
	WD	WE	WD	WE	WD	WE	WD	WE
Motorboat angling	0	2	0	2	0	2.4	0	2.7
Motorboat skiing/tubing	0	2	0	2	0	2.4	0	2.7
Motorboat other/unidentified	0	1	0	1	0	1.2	0	1.4
Personal water craft (jetskis)	0	0	0	0	0	0	0	0
Airplanes	0	0	0	0	0	0	0	0
Non-motorboat angling	0	0	0	0	0	0	0	0
Non-motorboat other	0	0	0	0	0	0	0	0
Windsurfers	0	0	0	0	0	0	0	0
Total of All Activities	0	5	0	5	0	6	0	6.8
Based on 1999 boat run observations. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)								
Legend: WD = Weekdays; WE = Weekends								

Table 18: Projected Spring-Season Watercraft Activity

ACTIVITY	2000 Average # Watercraft/Day		2010 Average # Watercraft/Day		2020 Average # Watercraft/Day	
	WD	WE	WD	WE	WD	WE
Motorboat angling	0	0	0	0	0	0
Motorboat skiing/tubing	0	6	0	7	0	8
Motorboat other/unidentified	2	3	2.3	4	2.7	4
Personal water craft (jetskis)	0	2	0	2	0	3
Airplanes	0	0	0	0	0	0
Non-motorboat angling	0	0	0	0	0	0
Non-motorboat other	0	1	0	1.2	0	1.4
Windsurfers	0	0	0	0	0	0
Total of All Activities	2	12	2.3	14.2	2.7	16.4

Based on 2000 boat run observations. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)
Legend: WD = Weekdays; WE = Weekends

Table 19: Projected Peak-Season Dispersed Shoreline Activity

ACTIVITY	Average 2000 # People/Day		Average 2010 # People/Day		Average 2020 # People/Day	
	WD	WE	WD	WE	WD	WE
Angling	0	4.5	0	5	0	6
Swimming/Visiting Beach	34	59.5	40	69	46	81
Other Shore Activity	0	0.5	0	0.6	0	0.7
Total of All Activities	34	64.5	40	74.6	46	87.7

Dispersed shoreline activity includes activities along undeveloped shorelines.
 Based on 2000 boat run observations. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)
Legend: WD = Weekdays; WE = Weekends

Table 20: Projected Spring-Season Dispersed Shoreline Activity

ACTIVITY	Average 2000 # People/Day		Average 2010 # People/Day		Average 2020 # People/Day	
	WD	WE	WD	WE	WD	WE
Angling	1	0	1.2	0	1.4	0
Swimming/Visiting Beach	0	0	0	0	0	0
Other Shore Activity	0	0	0	0	0	0
Total of All Activities	1	0	1.2	0	1.4	0

Dispersed shoreline activity includes activities along undeveloped shorelines.
 Based on 2000 boat run observations. Refer to Recreation Use Assessment Report (Chelan PUD, 2001a)
Legend: WD = Weekdays; WE = Weekends

SECTION 4: DEVELOPMENT PLAN AND IMPLEMENTATION SCHEDULE

The Chelan PUD owns and operates three of the seven parks in the Project area. Two parks are owned by the Chelan PUD and operated by Washington State Parks, one is owned in part by the Chelan PUD and Douglas County Port and is operated and maintained by the Port, and one of the parks is owned and maintained in a partnership between the Chelan PUD and the City of Entiat. Chelan PUD, Douglas County Port, the City of Entiat and Washington State Parks provide plans that include policies and guidelines for recreation management and development in the Project Area. Further information regarding recreation needs and demands outlined in recreation plans, studies and surveys is provided in the Recreation Needs Forecast and Analysis Report (DES and Howe Consulting, Inc, 2001)

Based on the efforts of the Social Sciences Working Group (SSWG), this chapter provides for operation and maintenance of existing Project recreation facilities to ensure public access and recreational use of Project lands and waters, as well as additional facilities and access to Project lands. The following describes the proposed recreation development/enhancement actions, and provides costs and a schedule for the implementation of such actions.

4.1 Development of Recreation Enhancement Options

Based on the studies conducted, the SSWG identified project impacts and recreation enhancement measures. The identified recreation measures were prioritized based on five primary considerations:

1. Ongoing Project impacts
2. Consistency with study results
3. Effectiveness of proposed measure
4. Costs (including cost-sharing opportunities)
5. Existence of mandatory conditioning authority

4.2 Recreation Measures and Implementation Schedules

The following are recreational measures to be implemented in this Plan:

1. Operation and maintenance of Rocky Reach Visitor Center and Park, Entiat Park, Chelan Falls Park, Chelan Powerhouse Park, Beebe Bridge Park, Daroga State Park, and Lincoln Rock State Park.
2. Expanded facilities at Lincoln Rock State Park
3. Expanded facilities at Daroga State Park
4. Revitalization of Entiat Park
5. Disposal of approx. 22 shoreline acres in Entiat owned by Chelan PUD
6. Interpretive nature trail on lands adjacent to Project waters (Entiaqua Trail, Interpretive Trails at Daroga and Lincoln Rock State Parks)
7. Trail link from Lincoln Rock State Park to an educational/interpretive trail being developed by Washington State Parks.
8. Recreation Enhancement Fund

9. Recreation Use Study

10. Recreation Resources Monitoring and Evaluation Program

1. Operation and maintenance of Rocky Reach Visitor Center and Park, Entiat Park, Chelan Falls Park, Chelan Powerhouse Park, Beebe Bridge Park, Daroga State Park, and Lincoln Rock State Park.

Concept drawings for each park are provided in Appendix A.

Between 1963 and 1995, Chelan PUD developed seven parks along the Columbia River within the Rocky Reach Project Area including Rocky Reach Visitor Center and Park, Entiat Park, Chelan Falls Park, Chelan Powerhouse Park, Beebe Bridge Park, Daroga State Park, and Lincoln Rock State Park.

Chelan PUD will continue to ensure operation and maintenance of the facilities to provide public access and recreational use of lands and waters within the Project area.

Specific Action

Chelan PUD will continue, for the term of the New License, to own and operate Rocky Reach Visitor Center and Park, Beebe Bridge Park, Chelan Falls Park, and Chelan Powerhouse Park. The cost to Chelan PUD of providing operations and maintenance to these facilities is approximately \$1.7 million per year.

Chelan PUD will continue, for the term of the New License, to ensure ongoing maintenance and operations for Lincoln Rock State Park, Daroga State Park and Entiat Park.

2. Expanded Facilities at Lincoln Rock State Park

Washington State Parks operates and maintains Lincoln Rock State Park through an operating agreement with Chelan PUD. Washington State Parks has identified the potential need for additional camping at Lincoln Rock State Park. Washington State Parks recommended that five years following the acceptance of the New License, an evaluation be conducted to determine the need for added group camping (an area of the park set aside for groups to camp together in tents, RVs) at Lincoln Rock State Park. If the evaluation substantiates the need for additional group camping, Chelan PUD will provide \$1.5 to \$2.5 million for the addition of group camping at Lincoln Rock State Park (see Appendix B).

Specific Action

Five years following acceptance of the New License, an evaluation will be conducted to determine the need for added group camping at Lincoln Rock State Park. If the evaluation substantiates the need for additional group camping, Chelan PUD will provide \$1.5 to \$2.5 million for the addition of group camping at Lincoln Rock State Park. If it is determined that there is not a need in five years, the addition of group camping will be evaluated every five years thereafter throughout the term of the license and implemented when determined appropriate.

3. Expanded Facilities at Daroga State Park

Washington State Parks operates and maintains Daroga State Park through an operating agreement with Chelan PUD. Washington State Parks has identified the potential need for the addition of convenience camping at Daroga State Park. Washington State Parks recommended that five years following the acceptance of the New License, an evaluation be conducted to determine the need for added convenience camping (small cabins with windows, door, sleeping bunks, electricity and no water or sewer) at Daroga State Park. If the evaluation substantiates the need for additional convenience camping, Chelan PUD will provide \$3 to \$4 million for the addition of convenience camping at Daroga State Park (see Appendix C).

Specific Action

Five years following acceptance of the New License, an evaluation will be conducted to determine the need for the addition of convenience camping at Daroga State Park. If the evaluation substantiates the need for the addition of convenience camping, Chelan PUD will provide \$3 to \$4 million for the addition of convenience camping at Daroga State Park. If it is determined that there is not a need in five years, the addition of convenience camping will be evaluated every five years thereafter throughout the term of the license and implemented when determined appropriate. The Chelan PUD would be responsible for infrastructure (roads, electricity, water, sewer, restrooms) and Washington State Parks would provide the cabins.

4. Revitalization of Entiat Park

Chelan PUD met with the City of Entiat along with other stakeholder representatives within the Rocky Reach Relicensing Social Science Working Group from August of 1999 to October 2004.

In the spring of 2002, conversations began with the City of Entiat regarding protection, mitigation, and enhancement issues relating directly to the City of Entiat and its surrounding area. These meetings were held with PUD staff and the City of Entiat steering committee which included city officials, chamber and school district representatives and community members.

In October 2002 the first of four public meetings was held. The purpose of those meetings was to gather input from the community on the creation of a master plan for the City of Entiat, recommendations for park enhancements and for PUD staff to better understand the impacts of the Rocky Reach Project on the City of Entiat.

Working with the community and consulting firm Tom Atkins and Associates, an enhancement plan was created for Entiat Park.

Upon acceptance by Chelan PUD of the license for Rocky Reach Project from the Federal Energy Regulatory Commission, a formal phased implementation plan would begin on the overall restoration of Entiat Park (see Appendix D).

Specific Action

Beginning within one year of the effective date of the New License, Chelan PUD shall begin implementation of a phased restoration of Entiat Park. The restoration will begin on the south end of the Park. When that portion of the park is complete, the boat launch and mid-park phase will begin. The final phase will be the north portion of the park. The total cost of implementation will be \$5.5 to \$6.5 million.

5. Sale of 22 shoreline acres in Entiat

The City of Entiat identified that the community would like the 22 shoreline acres that is owned by the Chelan PUD be sold and be returned to the tax base. This property is located within Entiat City limits, along the waterfront. If this land became part of the City of Entiat and was used for private development, it would provide new tax income to the City. This land was purchased by Chelan PUD when the dam was built and the reservoir filled. There was a concern, at that time, that the shoreline was unstable. Chelan PUD has conducted an erosion/soil study to determine the stability of the 22 shoreline acres. It was determined that the land is stable and could be sold.

Specific Action

A mutually agreed upon solution between Chelan PUD and the City of Entiat for disposal of this land will be negotiated.

6. Interpretive/Nature Trails on lands adjacent to Project waters

Interpretive nature trails were recommended by the SSWG to provide recreation and interpretive opportunities within the Project area. The City of Entiat recommended that Chelan PUD develop a trail that extends from Chelan PUD land owned on the Entiat River, through Entiat Park. It will be built following the completion of the Entiat park revitalization.

Additionally, Washington State Parks recommended that Chelan PUD develop interpretive trails in Daroga and Lincoln Rock State Parks. These trails will be interpretive and educational and will provide opportunities to learn about the dam, fish, wildlife and vegetation.

Specific Action

Upon acceptance of the New License for Rocky Reach Hydroelectric Project, Chelan PUD will incorporate the development of the Entiat trail into the Entiat Park revitalization plan. The Chelan PUD will provide an amount up to \$1 million for the implementation of this project (see Attachment E).

Specific Action

Upon receipt of the New License for Rocky Reach Hydroelectric Project, Chelan PUD will construct interpretive trails/signs in Daroga and Lincoln Rock State Parks. These trails/signs will be interpretive and educational and will provide opportunities to learn about the dam, fish, wildlife and vegetation. These trails will be maintained by Washington State Parks.

Chelan PUD will provide an amount up to \$500,000 for the construction of interpretive trails in Daroga and Lincoln Rock state parks (see Appendix C and Appendix D).

7. Trail link from Lincoln Rock State Park to an Educational/Interpretative Trail Being Developed by Washington State Parks

Washington State Parks has worked with Chelan PUD on the development of a five mile recreational/educational/interpretive trail that will extend from Odabashian Bridge, three miles south of Rocky Reach Hydroelectric Project to Lincoln Rock State Park. Washington State Parks recommended that Chelan PUD provide funds for the completion of the last mile of this trail, ending in Lincoln Rock State Park.

Specific Action

Within 180 days of the effective date of the New License, Chelan PUD shall make available to Washington State Parks \$500,000, for the use by Washington State Parks to develop an approximately one mile trail that extends on Chelan PUD lands and ends at Lincoln Rock State Park. This money would be provided to Washington State Parks upon receipt of permits by Washington State Parks and Douglas County and community member acceptance of the entire five mile plan for the trail and upon acceptance of the New License for the Rocky Reach Hydroelectric Project. Washington State Parks is responsible for building, operating and maintaining the trail in its entirety from Odabashian Bridge to Lincoln Rock State Park.

8. Chelan PUD Recreation Enhancement Fund

A Chelan PUD Recreation Enhancement Fund was developed by Chelan PUD. Research associated with the fund's development included legal analysis, internal review, and public outreach effort to gather ideas and comments and to assure community support.

The purpose of the Recreation Enhancement Fund is to provide public access and recreational enhancements associated with the Rocky Reach Hydroelectric Project. The fund will be used for recreation facilities and recreational and/or environmental education programs in communities adjacent to Project waters along the Columbia River and its tributaries between Rock Island and Wells dams. The Recreation Enhancement Fund will be maintained by the Chelan PUD (see Appendix F).

The goals of the fund follow:

- To encourage new and/or improved public recreational and educational opportunities in the project area.
- To provide public access to the Project waters along the Columbia River and its tributaries between Rock Island and Wells dams.
- To partner with the people in the communities in Chelan County and/or those communities adjacent to project waters to enhance the quality of life for individuals and communities.
- To provide education and communication about the public utility district, stewardship, the environment, and recreation resources.

The Recreation Enhancement Fund will be governed by an Advisory Committee appointed by the Chelan PUD Commissioners.

The first year of the new license, \$1 million will be put into the fund for distribution. Every year thereafter, an amount will be made available based on run-off at Grand Coulee Dam. The fund amount will be variable based on run-off at Grand Coulee Dam into the Rocky Reach Project guaranteeing a minimum of \$50,000 and a maximum of \$500,000 per year.

The overall Recreation Enhancement Fund will be evaluated every six years throughout the term of the license, by the Commissioners, for appropriateness of funding level and the financial strength of Chelan PUD.

The fund will be divided into four equal parts, for Commissioner Districts 1, 2 and 3 and one part for discretionary use by the Advisory Committee throughout Chelan and Douglas Counties.

The fund is available to qualifying non-profit community service organizations or federal, state or local governments including Chelan PUD lands.

The fund must be used to provide public access to the Columbia River/Rocky Reach Project area and be adjacent to Project waters. The following outlines the boundaries:

The Columbia River from Rock Island Dam to Wells Dam including:

- the Wenatchee River from its entry into the Columbia River to the Tumwater Dam;
- the Icicle River from its entry into the Columbia River to the Fish Hatchery;
- the Chelan River to and including all of Lake Chelan; and
- the Entiat River from its entry into the Columbia River to Entiat Falls.

Specific Action

Upon acceptance of the New License for the Rocky Reach Hydroelectric Project, Chelan PUD will implement the Recreation Enhancement Fund. The first year, \$1 million will be made available. Every year thereafter, an amount will be placed in the fund based on water runoff from Grand Coulee Dam. A bottom cap of \$50,000 has been put on the fund and a top cap of \$500,000 per year. Interested parties can apply to the fund for projects that focus on recreational, interpretive and educational opportunities as well as public access to the Project lands and waters.

9. Recreation Use Study

Beginning in the 20th year of the effective date of the New License, and finishing in the 23rd year, Chelan PUD shall conduct a study assessing recreational use and needs within the Rocky Reach Project Reservoir, at an estimated budget of \$100,000.

The purpose of the Recreation Use Study is to define the existing recreational use in the Rocky Reach Project Reservoir including number of visits, recreational activity types, high use locations, and temporal trends. Results from the study will aid resource agencies in

developing continued concepts for the coordinated development and utilization of the lake's recreational resources.

As part of the Recreation Use Study, data will be collected in years 21 and 22 of the New License on recreation use in the Project Area. A Recreation Use Assessment report will be completed in year 23 of the New License. The study area will include all public recreational resources within the Project boundary. The Recreation Use Study methodology may include, but is not limited to:

- Review of existing recreation resources assessment work
- Summary of current management plans and policies of agencies
- Inventory of existing public and private recreation resources
- Analysis of recreational activities and demand for facilities
- Analysis of recreational resource capacity for recreation development
- Recreation resource mapping

10. Recreation Resources Monitoring and Evaluation Program

Chelan PUD will establish a Rocky Reach Recreation Forum to review and evaluate recreation practices, needs, trends and dispersed recreation within the Rocky Reach Hydroelectric Project area for the term of the new license.

Specific Action

Chelan PUD will establish a Rocky Reach Recreation Forum to review and evaluate recreation practices, needs, trends and dispersed recreation within the Rocky Reach Hydroelectric Project area for the term of the new license. The Recreation Resources Advisory Committee will be composed of representatives of federal, state, and local agencies, Chelan PUD, and other interested parties. Chelan PUD will be responsible for convening meetings of the group, including providing adequate notice of scheduled meetings and funding basic administrative services (e.g. copying and meeting room costs). The Recreation Resources Advisory Committee would meet every six years within six months of Chelan PUD's submittal to FERC of the Licensed Hydropower Development Recreation Report (Form 80).

Table 21: Draft Recreation Resources Management Plan Matrix, January 12, 2004

Project	Description	Estimated Costs	Implementation Schedule
1. Management and operation of existing facilities within the Rocky Reach Reservoir including capital improvements and enhancements	Ongoing O & M and capital improvements and enhancements for Rocky Reach Hydroelectric Project Visitor Center and Park, Beebe Bridge Park, Chelan Falls Park, Chelan Powerhouse Park	\$1.5 – 1.7 million per year	Ongoing throughout the life of the license \$1.5 projected costs \$1.7 projected costs if hybrid model with the City of Entiat is adopted.
2. Expanded facilities at Lincoln Rock State Park	The addition of group camping on the southwest portion of the park	\$1.5 – 2.5 million	Implemented 5 years after receipt of the new license (timeline could be adjusted by monitoring and evaluation team based on need)
3. Expanded facilities at Daroga State Park	The addition of convenience camping on the northern ledge above the current park	\$3 – 4 million	Implemented 5 years after receipt of the new license (timeline could be adjusted by monitoring and evaluation team based on need)
4. Revitalization of Entiat Park	Through community input, a revitalized master plan has been developed including park enhancements and capital improvements	\$5.5 – 6.5 million	The implementation would occur in 2 phases – Phase 1 - South End Park within 2 years after receipt of the license Phase 2 – North End Park immediately following completion of Phase 1
5. Disposal of 22 shoreline acres in Entiat	Chelan County PUD owns 22 acres of shoreline land north of Entiat Park.		
6. Interpretative/Nature Trails on lands adjacent to Project waters	Entiaqua trail Trails: * Trail link from Entiat Park to Columbia Breaks Fire Interpretative Center * Interpretative Trail/Signs Daroga State Park * Interpretative Trail/Signs Lincoln Rock State Park	\$1 million \$500,000	Trails/Signs to be completed within the first 10 years of the license
7. Trail link from Lincoln Rock State Park to an education/interpretive trail being developed by Washington State Parks	This trail link is being done in partnership with Washington State Parks. It is 1 mile of the 5-mile trail beginning at Lincoln Rock State Park and continuing just past the	\$500,000	Money will be made available to Washington State Parks when they have completed their planning and permitting process.

Table 21: Draft Recreation Resources Management Plan Matrix, January 12, 2004

Project	Description	Estimated Costs	Implementation Schedule
	dam. This 5-mile trail will end at Odabashian Bridge just north of Wenatchee.		
8. Chelan County PUD Recreation Enhancement Fund	The purpose of the Chelan County PUD Recreation Enhancement Fund is to make funds available for community projects that provide public access and recreational and educational enhancements on lands adjacent to the Rocky Reach Hydroelectric Project and its tributaries.	\$1 million – year 1 Contribute between \$50,000 to \$500,000 every year thereafter throughout the license (amount is based on “above” or “below” average water release from Grand Coulee Dam)	Year 1 of the license: \$1 million awarded Every year thereafter throughout the license: \$50,000 to \$500,000 placed in the fund.
9. Recreation Use Study	The purpose of the Recreation Use Study is to define the existing recreational use in the RR Project Reservoir including number of visits, recreational activity types, high use locations, and temporal trends.	\$100,000	To be conducted beginning in the 20 th year of the effective date of the New License and ending in the 23 rd year.
10. Ongoing monitoring and evaluation	Chelan PUD would establish a Recreation Resources Advisory Committee to review and evaluate recreation practices, needs, trends and dispersed recreation within the RR Hydroelectric Project area for the term of the new license.		The Recreation Resources Advisory Committee would meet within six months of Chelan PUD’s submittal to FERC of the Licensed Hydropower Development Recreation Report (Form 80).

SECTION 5: LITERATURE CITED

- Chelan PUD, 2000. Shoreline Erosion Study Plan - final, Rocky Reach Hydroelectric Project, FERC Project No. 2145. Chelan PUD. January 15, 2000. 13 pp.
- Chelan PUD, 2001. Inventory of Shoreline Erosion, Lake Entiat - final, Rocky Reach Hydroelectric Project, FERC Project No. 2145. Chelan PUD, Wenatchee, Washington. June 1, 2001. 66 pp.
- Chelan PUD, 2001. Recreation Needs Forecast and Analysis – final, Rocky Reach Hydroelectric Project, FERC Project No. 2145. Chelan PUD, Wenatchee, Washington. September 21, 2001.
- Chelan PUD, 2001. 1999/2000 Recreational Use Assessment Study Report – final, Rocky Reach Hydroelectric Project, FERC Project No. 2145. Chelan PUD, Wenatchee, Washington. March 2, 2001.
- Chelan PUD, 2003. Project Lands Management Study – final, Rocky Reach Hydroelectric Project, FERC Project No. 2145, Chelan PUD, Wenatchee, Washington. May 30, 2003.
- Chelan PUD, 2000. Socioeconomic Study – final, Rocky Reach Hydroelectric Project, FERC Project No. 2145, Chelan PUD, Wenatchee, Washington. December 1, 2000.
- Interagency Committee for Outdoor Recreation, 2002. An Assessment of Outdoor Recreation in Washington State, public review draft, Interagency Committee for Outdoor Recreation, Olympia, Washington. March, 2002.