

EXHIBIT E – ENVIRONMENTAL REPORT

SUBPART E.9 LAND USE

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E.9.1 INTRODUCTION

Enloe Dam is located on the Similkameen River, approximately 3.5 miles northwest of Oroville, Washington and about two miles south of the Canadian border (Figure E.9-1).

This report describes the existing uses of the proposed Project lands and adjacent property, and those land uses that would occur if the Project is constructed. Some of this information was synthesized from reports and information available for this area.

Additional information was gathered in consultation with applicable state and federal agencies in accordance with Title 18, Part 4, Section 41 of the Code of Federal Regulations (18 CFR 4.41): Application for Major Modified Project-Existing Dam.

The description of existing land use includes an overview of land use in the vicinity of the proposed Project, and descriptions of land ownership and existing development in the Project Area. It also addresses wetlands, floodlands, and prime and unique farmlands.

Proposed land uses, including proposed new uses associated with rehabilitating the Enloe Hydroelectric Project and uses that will not change, are described in Section 9.3 below.

Terms used in this report include:

- *Project Area*: the land and water areas within the Project Boundary; shown in the Enloe Hydroelectric Project Location Map, Exhibit G, Maps G-2 and G-3.
- *Project Vicinity*: generally defined as the Similkameen River corridor from the trestle bridge located about two river miles downstream of Enloe Dam to Similkameen Camp, located about five river miles upstream of the dam (see Exhibit G, Map G-1).

FERC PROJECT BOUNDARY

With one exception, the FERC Project Boundary is generally defined by the 1055 foot elevation contour, as shown in Exhibit G, Map 2 and described below. The FERC boundary extends one-quarter (0.25) mile downstream from Enloe Dam, following the 1055 foot elevation contour to include Similkameen Falls and the site of the proposed powerhouse, tailrace, and associated facilities.

The FERC boundary deviates from the 1055 foot elevation contour to accommodate rehabilitation of the OTID Ditch Road (see Exhibit A for a detailed description of proposed access road improvements). In that area, the FERC boundary has been set 100 feet landward of the OTID Ditch Road upper leg (Segment C as described in Exhibit A); it does not maintain a specific elevation.

CONSULTING PARTIES

This report was prepared in consultation with the following agencies:

- The Bureau of Land Management of the U. S. Department of the Interior
- The Colville Confederated Tribes
- The Washington State Department of Ecology
- The Washington State Department of Natural Resources
- Okanogan County
- The City of Oroville
- The Oroville-Tonasket Irrigation District

COMPREHENSIVE PLANS

Chapter 18 CFR §4.38(f)(6) requires “An explanation of how and why the project would, would not, or should not, comply with any relevant comprehensive plan as defined in § 2.19” of the chapter...” No conflict was found between the proposed project and the following relevant comprehensive plans:

Interagency Committee for Outdoor Recreation. 1991. Washington State trails plan” policy and action document. Tumwater, Washington.

Interagency Committee for Outdoor Recreation. 1995. State of Washington outdoor recreation and habitat: Assessment and policy plan 1995-2001. Olympia, Washington.

Interagency Committee for Outdoor Recreation. 2002. An assessment of outdoor recreation in Washington State: A Statewide Comprehensive Outdoor Recreation Planning (SCORP) Document: 2002-2007. Olympia, Washington.

National Park Service. 1982. The nationwide rivers inventory. Department of the Interior, Washington, D.C.

Northwest Power and Conservation Council. 2000. Columbia River Basin fish and wildlife program. Portland, OR. Council Document 2000-19.

Northwest Power and Conservation Council. 2005. The Fifth Northwest electric power and conservation plan. Portland, OR. Council Document 2005-07.

State of Washington. 1977. Statute establishing the State scenic river system, chapter 79.72 RCW. Olympia, WA.

U.S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American waterfowl management plan. Department of the Interior. Environment Canada.

U.S. Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C..

Washington State Department of Community Development. Office of Archaeology and Historic Preservation. 1987. A resource protection planning process identification of prehistoric archaeological resources in the lower Columbia study unit. Olympia, WA.

Washington State Department of Community Development. Office of Archaeology and Historic Preservation. 1987. Resource protection planning process—Paleoindian study unit. Olympia, WA.

Washington State Department of Community Development. Office of Archaeology and Historic Preservation. 1987. Resource protection planning process—mid-Columbia study unit. Olympia, WA.

Washington State Department of Community Development. Office of Archaeology and Historic Preservation. 1987. A resource protection planning process identification component for the eastern Washington protohistoric study unit. Olympia, WA.

Washington State Department of Community Development. Office of Archaeology and Historic Preservation. 1987. Resource protection planning process—study unit transportation. Olympia, WA.

Washington State Department of Ecology. 1978. Water resources management program—Okanogan River Basin. Olympia, WA.

Washington State Department of Ecology. 1994. State wetlands integration strategy. Olympia, WA.

Washington State Department of Ecology. 1982. Instream resource protection program for the main stem Columbia River in Washington State. Olympia, WA.

Washington State Department of Fisheries. 1987. Hydroelectric Project Assessment Guidelines. Olympia, WA.

Washington State Department of Game. 1987. Strategies for Washington's wildlife. Olympia, WA.

Washington State Department of Natural Resources. 1987. State of Washington natural heritage plan. Olympia, WA.

Washington State Department of Natural Resources. 1997. Final habitat conservation plan. Olympia, WA.

Washington State Energy Office. 1992. Washington State hydropower development/resource protection plan. Olympia, WA.

Washington State Parks and Recreation Commission. 1988. Washington State scenic river assessment. Olympia, WA.

Washington State Parks and Recreation Commission. 1988. Scenic river program—report. Olympia, WA.

[Figure E.9-1]

E.9.2 EXISTING LAND USE

This section of Exhibit E.9 describes current land use in the Project Vicinity, followed by descriptions of land ownership and existing development in the Project Area. It identifies wetlands, floodlands, and prime and unique farmlands in the Project Area.

PROJECT VICINITY

Horticulture, grazing, and recreation are the primary land uses in the Project Vicinity. A number of orchards, vineyards, and a public golf course are located on the Loomis-Oroville Road. The federal lands in the immediate vicinity of the Project are generally leased for grazing. The bulk of the private land in the Project Vicinity, including that in closest proximity to the Project Area, is owned by a livestock company. There are a few residences in the Project Vicinity, mainly along the Loomis-Oroville Road. Most active land uses are some distance from the Project Area, with the nearest located about one mile downstream.

Mining was once a dominant land use in the region. However, commercial mining activity in the Similkameen Valley in Washington has been very limited during the past 25 to 35 years. Several small individual mining claims exist on U.S. Bureau of Land Management (BLM) lands in the Project Vicinity. Recreational gold prospecting (small-scale placer mining; conducted primarily with motorized suction dredges) is popular within the river corridor, as discussed in Exhibit E.7.

One of the largest mines in the area was the Kaaba-Texas Mine, located several miles upstream of the Project Area, near the community of Nighthawk. The mine operated from the late 1890's until 1951, and discharged tailings directly into the Similkameen River until 1946. Sediment contaminants in the reservoir behind Enloe Dam are discussed in Section E.2.6. In 1999, the EPA removed and disposed of approximately 81,000 cubic yards of contaminated mine tailings from the mine site.

PROJECT AREA

Land Ownership

The FERC Project Boundary encompasses approximately 136.4 acres including the Enloe reservoir, the area in which the District proposes to build a new access road, and the river corridor extending downstream from the dam one-quarter mile.

Land ownership within the Project Boundary is shown in Table E.9-1 and Figure E.9-2, below. The majority of the land in the Project Vicinity is owned and managed by public agencies, with the exception of a portion of a single parcel (comprising about 0.15 percent of the area within the FERC boundary) held privately.

Table E.9-1: Ownership of Land within FERC Project Boundary

Ownership	Acres	Percent
BLM	35.47	26.00%
WDNR (bedlands and pre-inundation shorelands)	100.76	73.85%
Private	0.20	0.15%
TOTAL	136.43	100.00%

The BLM is the major landowner in the lower Similkameen Valley and owns most of the land above the ordinary high water mark (OHWM) within the FERC boundary, as well as most of the land in the Project Vicinity.

Washington State owns, and the WDNR manages, the bed and shorelands of the Similkameen River to the original (pre-inundation) mean or OHWM. The WDNR also manages all of Section 16, T40N R26E, approximately two miles upstream from Shanker's Bend and one mile south of the river, for the State. The high percentage of land ownership shown for WDNR in Table E.9-1 is due to the relatively narrow canyon topography of the Project Area, such that much of the land area lies within the boundary of the OHWM and is subject to the WDNR.

A small amount of private land adjoins the Similkameen River within the Project Area. That land is located at the upstream end of the Project Area and would not be affected by any project-related activities, including construction, staging, or inundation. Much of the land in the Similkameen River canyon downstream from the Project Area is privately owned; ranching and horticulture are the dominant land uses. The Oroville Golf Club is located one mile downstream of Enloe Dam. BLM staff have stated that all lands in the Project Vicinity that are now private were federally owned prior to patenting by the General Land Office.

A defunct railroad grade runs from Oroville to Nighthawk, generally following the Similkameen River along much of its length. Most of the former railroad right-of-way crosses lands owned by the BLM, private landowners, or the District. In December of 1989, the District obtained a Quitclaim Deed from the Burlington Northern Railroad Company for a portion of the old rail grade right-of-way.

The BLM issued a right-of-way grant to the District in 1989 as an interim measure to authorize the existing facilities at Enloe Dam. The right-of-way covers approximately 49 acres of land within portions of Lots 1-7, Section 12, and portions of Lots 1-7, Section 13, Township 40 North, Range 26 East, Willamette Meridian. The right-of-way was renewed for five years on April 3, 2001, and expired in 2006. In October, 2007, the right-of-way was renewed for five years, eight months. The effective date of the renewal was April 3, 2006; it will expire on December 31, 2011. If the District succeeds in licensing the Enloe Hydroelectric Project, the right-of-way grant will need to be amended to authorize the new improvements on BLM lands.

[Figure E.9-2]

Land Use

Hydropower generation was the primary land use in the Project Area from 1906 until 1958. A hydropower facility was first constructed at the falls on the east bank of the Similkameen River, across from the present powerhouse, in 1906. That facility was replaced by the existing dam and power plant, which began construction in 1916 and was completed in 1923. The facility ceased operations in 1958 for economic reasons. Most of the project structures, including the dam, the powerhouse, one of two penstocks, and the power line, still exist. Portions of the foundation of the original power house are still extant, as well.

At one time the OTID transported irrigation water through the Project Area via a system of canals and flumes; some of the structures remain in place within the Project Area. That system has been replaced by a pressurized distribution system, and the point of withdrawal has been transferred from the Similkameen River, seven river miles upstream of the dam, to Lake Osoyoos, 3.5 miles southeast of the Project Area. With the exception of the golf course facilities described below, no irrigation facilities in the Project Area are currently in use and there are no other water rights on the Similkameen River.

Access

Highway access to the Enloe Dam area is via County Road #9425 (the Loomis-Oroville Road). Located in a remote rural area, the road carries little traffic. Traffic counts for Loomis-Oroville Road (County Road #9425) average between 112 and 166 Average Daily Trips (ADT) according to 2005 traffic counts by Okanogan County.¹

Two access roads (the Enloe Dam Road and the OTID Ditch Road, described in Exhibit A), connect the Loomis-Oroville Road to the dam site. Neither is maintained for use by passenger vehicles, although the OTID Ditch Road is passable to automobiles, depending on weather.

The Enloe Dam Road is a steep County road that is unsafe for passenger vehicles. It is partially within the Project Boundary. The "OTID ditch road" currently provides access for Oroville Golf Club personnel to reach an irrigation diversion upstream of Enloe Dam, as well as informal access to the river corridor and the reservoir shore for recreationists, rancher, agencies, and tribes. (See Exhibit E.7 for additional detail regarding the roads and their use and value as a recreational resource.)

Grazing

The Project Area is unfenced open range; cattle graze within the FERC boundary.

¹ ADT means the average number of vehicles that cross a given surface during a specified 24-hour time period

Irrigation Withdrawal

The Oroville Golf Club maintains a pumping station and pipeline within the Project Area to provide irrigation water for the course.

Recreation

Lands and waters within the Project Area are used informally for recreational activities. Recreational use is described in detail in Exhibit E.7.

Wetlands

There are 13.8 acres of wetlands within the Project Area, including 2.9 acres of Riparian Forested wetland, 7.4 acres of Riparian Shrub wetland, and 3.5 acres of Herbaceous wetland.

Wetlands within and adjacent to the Project Area are described in greater detail in Exhibit E.3. Impacts of the Project on those wetlands, and the strategies proposed to mitigate those impacts, are also described in Exhibit E.3.

Floodlands

FEMA has not performed a detailed study of the Similkameen River corridor upstream of the community of Oroville. However, the Project Area is mapped as Flood Zone A and therefore is regulated under the Okanogan County Flood Damage Prevention Ordinance. Okanogan County completed a Comprehensive Flood Hazard Management Plan (CFHMP) for the Okanogan River in 2007, and intends to prepare a CFHMP for tributaries, including the Similkameen River, in 2008 and 2009.

Prime and Unique Farmlands

There are no lands designated as prime or unique farmlands within the FERC boundary.

E.9.3 PROPOSED LAND USE

This section describes proposed land uses within and abutting the Project Boundary that would occur as a result of development and operation of the Project. No other land use changes are proposed by the District. Neither the BLM nor the WDNR has announced plans to change the use or management of lands in the Project Vicinity in the foreseeable future.

HYDROPOWER GENERATION

The District proposes to rehabilitate the Enloe Dam Project by building a new intake structure, intake canal, penstocks, powerhouse, appurtenant distribution line, and tailrace. The facilities are described in greater detail in Exhibits A and F. The Project would be operated with 5-foot crest gates from approximately mid-July through mid-April

of each year. The crest gates would result in permanent inundation of land that is currently seasonally inundated, including 5.1 acres of wetlands (0.2 acres of Riparian Forested wetland, 2.8 acres of Riparian Shrub wetland, and 2.1 acres of Herbaceous wetland). With the proposed crest gates, the reservoir surface area would increase by about 12.2 acres during low flow (approximately mid-July through mid-April). Figure E.9-3 shows the reservoir inundation zone with and without crest gates. The area that would be inundated during the spring and early summer high-flow period would not change.

The District proposes to connect to its existing power distribution line immediately east of the proposed new power generation facilities. See Exhibit G, Map G-1 for the location of the existing power line.

Grazing

The District proposes to fence, for security purposes, areas adjoining the power generating facilities in the immediate vicinity of the dam and lower reaches of the reservoir. The District may also fence riparian areas to protect wetlands and wetland mitigation sites. Grazing would continue to be allowed in unfenced areas. A Fencing Plan that provides additional details is provided as Appendix E.3.7.

Irrigation Withdrawal

No change in irrigation withdrawal is proposed.

Recreation

For reasons of public safety and security of the power generation facilities, the District proposes to restrict public access to some areas in the immediate vicinity of the dam and the new power generating facilities. Those areas are now accessible. Development of compensatory recreation amenities is proposed; the District's proposal is presented in Exhibit E.7 of this application, "Report on Recreational Resources."

Okanogan County is in the process of developing a multi-use non-motorized recreation trail on the abandoned railroad grade on the west bank of the Similkameen River. The first phase of that project will involve trail construction from Oroville to a point just below the District's FERC Project Boundary². The County plans to extend the trail along the railroad grade adjacent to the Project Area in the future. The trail project is also described in Exhibit E.7 of this application.

Access

The District will work with Okanogan County to vacate the Enloe Dam Road to public use, and will install a locked gate at the Loomis-Oroville Road to provide secure access to the Enloe hydropower facility for District personnel, construction, and for

² Personal communication – Perry Huston, Okanogan County Office of Planning and Development, April 10, 2008.

maintenance of the existing and proposed facilities. Enloe Dam Road will serve no other purpose.

As described in Exhibit A, the District proposes to realign part of the OTID Ditch Road by reconstructing a segment of the abandoned OTID irrigation canal (Segment C as shown on Figure A.2). The alignment of the road would be moved upslope, to the east, to protect wetlands, reduce impacts to cultural resources, and make the road more accessible during spring, summer and fall months to all users. The segment of the road that would be reconstructed over the abandoned irrigation canal is within the Project FERC boundary.

The OTID Ditch Road serves both project and non-project uses. Most of the non-project uses occur prior to entering the Project Boundary with the exception of the Oroville Golf Club irrigation facilities (shown in Figure E.7-2). Other uses that lie outside the Project Boundary include cattle ranching, recreation activities (primarily hunting and recreational mining) and landowner/agency functions.

The OTID Ditch Road within the Project FERC boundary would be improved as a single-lane gravel road with turnouts to allow vehicles traveling in opposite directions to pass. The new road segment (Segment C) is approximately 2,000 feet long and 1.8 acres in areal extent. The segment of the OTID Ditch Road that is to be closed (Segment B) would be blocked at both ends with rocks to restrict access. Existing spur roads that will not be used would also be blocked with rocks to restrict access. The OTID ditch road outside the Project Boundary (Segment A) would not need to be reconstructed but may need routine maintenance from time to time.

The OTID Ditch Road would be used for construction access. After construction, the road would provide the sole access for recreational users on the east bank in the vicinity of the project. It would also provide access to the hydropower generation facilities for District personnel, access to the Oroville Golf Club irrigation facilities for golf club personnel, and, as needed, access to the site for law enforcement and emergency service personnel. The road would not be gated. However, the District would open the road for winter access only when District personnel needed to reach the project for maintenance. Other users would be able to use the road whenever it is not closed by weather or during construction.

The District also proposes to retain access to facilities on the west bank of the river via the existing trestle bridge (located about 2 river miles downstream of Enloe Dam) and the railroad grade.

[Figure E.9-3]

E.9.4 PROTECTION, MITIGATION & ENHANCEMENT MEASURES

No PM&Es are associated with land use effects; however the District will obtain and maintain current all appropriate Federal, State, and County permits and or lease agreements throughout the life of the Project. A summary of Project PM&Es is provided in Appendix D.1.

BUREAU OF LAND MANAGEMENT

As described above, the BLM has extended the right-of-way grant for existing facilities at the Enloe site through 2011. Once the Final License Application has been filed, the District will apply to amend the right-of-way grant to authorize the new improvements located on the BLM lands. BLM staff have indicated that the application to amend the right-of-way grant would be processed concurrent with FERC's review of the license application. The District plans on yearly consultation with the BLM to review progress in implementing the PM&Es included as articles of the Project license and to resolve issues as the District and BLM determine is necessary. Amendment of the right-of-way is expected to cost \$25,000. The annual consultation is expected to cost \$5,000. Actions that would follow from the consultation have not been costed.

WASHINGTON DEPARTMENT OF NATURAL RESOURCES

If the Project is licensed, the District will apply to the WDNR for an Aquatic Use Authorization for aquatic lands affected by the Project. The District proposes that the WDNR treat the Project as a renovation with accompanying restoration of wetlands and shoreline habitat. The cost of implementing the agreement will be determined in consultation with the WDNR after the licensing decision.

OROVILLE-TONASKET IRRIGATION DISTRICT

The District plans to construct an access road in a portion of the OTID right-of-way and will need to negotiate with the OTID for release of its interest in the right-of-way and unused irrigation facilities. The OTID has expressed willingness to release its interest. The agreement will be negotiated after the licensing decision. (Because the BLM owns the land on which the road would be constructed, a request for construction and use of an access road along the abandoned canal will be included in the District's application to the BLM for amendment of the right-of-way grant described above under the heading "Bureau of Land Management.")

E.9.5 CONSULTATION SUMMARY

Consultation requirements related to land use are addressed in Title 18 CFR, Part 4.41(f)(9). That paragraph describes the requirements for a report on land use, which

“must be prepared following consultation with local and state zoning or land management authorities, and any Federal or state agency with managerial responsibility for the proposed project or abutting lands.”

Following the initial outreach and follow-on technical meetings described above, early consultation was continued via informal communications with key stakeholders.

The United States owns and the BLM manages the project lands landward of the pre-inundation ordinary high water mark. The District received ICD comments related to land use from the BLM. Following receipt of those comments, informal communications with BLM staff were held throughout the LA preparation process.

In addition to communicating informally, District staff and members of the consulting team held consultation meetings with BLM staff at the BLM's Wenatchee Resource Area Office on February 15, 2007 and January 16, 2008. The purpose of the first session was to provide BLM staff with updated information about the proposed facility design and the outcomes of technical studies; and to discuss matters of particular interest to the BLM, identify issues of interest to the agency, and solicit BLM staff's views about project proposals. The second session, in 2008, was for the purpose of addressing any concerns with the DLA that might otherwise have been submitted as written comments.

BLM staff also participated in the Meeting to Resolve Disagreements held in Okanogan on April 24, 2008.

The State of Washington owns the bedlands and pre-inundation shorelands of the Similkameen River, and the WDNR manages those lands. The District did not receive ICD comments from the WDNR. District staff and members of the consulting team communicated informally with WDNR staff during preparation of the LA, and WDNR staff attended one of the District's informational meetings, on February 1, 2007. WDNR staff have not finalized a request to the District regarding use of the State's lands.

The Okanogan County Office of Planning and Development is the local land-management authority. Informal communications with County staff were held throughout the LA preparation period, and District staff and members of the consulting team briefed the Board of Okanogan County Commissioners and the County Planning Commission about the proposed hydroelectric project. County staff attended one of two informational meetings hosted by the District early in 2007 for the purpose of updating and consulting with stakeholders about the proposed hydroelectric project. In addition, members of the consulting team held a consultation meeting with County staff on March 1, 2007.