

## SEPA ENVIRONMENTAL CHECKLIST

### ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

### ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

### ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

### ***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## **A. Background**

1. Name of proposed project, if applicable:

**Enloe Dam - Dam Safety Repair and Maintenance Project (Right Bank Dewatering Project), referred to in the responses below as the "Project"**

2. Name of applicant:

**Public Utility District #1 of Okanogan County ("District")**

3. Address and phone number of applicant and contact person:

**Jeri Timm, Director of Regulatory and Environmental Affairs  
Public Utility District #1 of Okanogan County PO Box 912  
Okanogan, WA 98840  
Phone: (509) 422-8425**

4. Date checklist prepared:

**November 1, 2019**

5. Agency requesting checklist:

**Public Utility District #1 of Okanogan County**

6. Proposed timing or schedule (including phasing, if applicable):

**The District and its contractors will begin mobilization and staging for dewatering construction late March 2020 with a completion date estimated by November 2020. No in-water work is anticipated until late summer 2020.**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

**At this time there are no additional future plans for additions or expansions to Enloe Dam ("Dam"). At the District's November 19, 2018 Board Meeting, the Board of Commissioners passed a motion directing staff not to pursue electrification of Enloe Dam, granting staff time to assess all options for owning and managing Enloe Dam, as well as directing staff to proceed with dam safety obligations. In following with that directive and within the scope of the authorization, staff is following through with dam safety obligations as identified in this proposal. This work is needed for public safety regardless of what future policy path is taken with Enloe Dam. District staff and Commissioners continue to study all options for longer term ownership, management or potential disposition of the dam in the longer term.**

**Once completed, this Project will allow for any future dam safety inspections and any required repair and maintenance of the downstream face of the dam by diverting up to 1,000 cubic feet per second ("CFS") of water around the dam, which will allow for necessary dam safety inspections and facilitate any needed repairs to the downstream face of the dam. This bypass will allow for necessary inspections of the dam for compliance with**

**Federal and State dam safety requirements. Once the new gates and replacement penstock are installed, dam safety inspections are anticipated to take two to five days, after which the gates would be closed and water would revert back to overflowing the dam face. After completion, the Project will allow the District to periodically undertake similar safety inspections as needed. Maintenance of the Project after installation will include operating the gates to ensure gate effectiveness and minimize build-up of sediment upstream of the gates. The District anticipates that each gate shall be operated through its full range of motion annually, or more frequently if appropriate.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

**Together with the Federal Energy Regulatory Commission (“FERC”) and other agencies, the District in recent years has conducted extensive environmental analyses of the existing Dam facilities during a now-suspended effort to re-electrify of the Dam. These analyses confirmed the existing Dam’s safety needs that this Project is intended to address.**

**An extensive amount of information was developed during the Districts recent FERC licensing efforts to re-electrify the Enloe Dam and Powerhouse. These analyses included numerous resource studies, a FERC Environmental Assessment of the re-electrification project, and the 2013 FERC License (Enloe Hydroelectric Project No. 12569-001, terminated on September 12, 2019). Additional studies of the Enloe Dam, prepared after the licensing efforts, include a 2017 wetland delineation and Aquatic Invasive Species (AIS) survey. Previous FERC License plans and documents can be found at <https://www.okanoganpud.org/environmental/enloe-dam-project>. Relevant Project information is provided in other permit requests, including a JARPA and HPA.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**The District has requested a new Right-of-Way Grant from the Bureau of Land Management (“BLM”) to upgrade the existing access road that leads to the Project area. This right-of-way is needed to provide access for Project construction, future maintenance and better emergency access to the right abutment of the Dam.**

**BLM is reviewing the ROW Grant request and is anticipated to issue a decision on or before April 2020.**

10. List any government approvals or permits that will be needed for your proposal, if known.

- **Section 404 (United States Army Corps of Engineers) to be submitted under Nationwide Permit (NWP) 3 and 33**
- **Section 401 (Ecology) to review**
- **Aquatic Land Lease or Right of Entry (Washington State Department of Natural Resources)**
- **Hydraulics Project Approval (Washington State Department of Fish and Wildlife)**
- **Construction Stormwater General Permit (Ecology)**

- Shoreline Development Permit may also be required (Okanogan County)

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

**The proposed Dam Safety Repair and Maintenance Project will allow for the District to bypass up to 1,000 cfs around the right bank of Enloe Dam through the replacement of the existing, inoperable gates with new gates and a section of steel penstock. This installation will permit visual safety inspections of the downstream face of the dam, toe of the dam, and both abutments, which are normally inaccessible for inspection since they are beneath the flows over the spillway.**

**In preparing this proposal, District staff assessed several dewatering alternatives at both the left side and right side of Enloe Dam. These included: (i) utilizing flashboards and/or sandbags to partially dewater the dam in sections, (ii) installing temporary siphons to pump water around the dam, (iii) rehabilitating the existing gates system and installing a section of new penstock along the dam's right bank, and (iv) a combination of a flexible aqua dam and siphon/pumping system. The detailed analysis performed on the alternatives included an assessment of safety, environmental impacts, ability to permit, repeatability, likelihood of success, and overall project costs. Based on the results of the evaluation, the District elected to pursue rehabilitating the existing gates system and installing a section of new penstock along the dam's right back. The primary factors leading to this alternative being selected as the preferred option was (a) the ability to safely perform the work and (b) the reliability to repeat the dewatering for future inspections.**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

**The Dam is located in north-central Washington, about two miles south of the Canadian border. It is situated on the Similkameen River (the "River") at river mile 8.8, about 3.5 miles northwest of Oroville, Washington, at Township 40 North, Range 26 East, Section 13. Please see attached Figure 1 (Project Vicinity Map).**

## ***B. Environmental Elements***

### ***1. Earth***

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other \_

**The Dam is located within a steep gorge created by the River, which traverses steep, sparsely vegetated rocky hills.**

b. What is the steepest slope on the site (approximate percent slope)?

**Within the area of construction disturbance, slopes range from approximately 30 percent to 45 percent.**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

**Most of the soils present within or adjacent to the Project site are classified as Nighthawk loam or Nighthawk extremely stony loam. Soils present in the areas of proposed construction consist of 430: Nighthawk gravelly loam, 25-65% slopes, extremely stony.**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

**No studies conducted to date have shown any surface indications of unstable soils in the immediate vicinity of the dam or proposed construction work area. Some of the soils present adjacent to the Similkameen River upstream and downstream of the dam present high to very high erosion potential, however the District is not aware of any signs of recent instability in the immediate vicinity to date.**

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

i. **Excavation.** The Project will be constructed within the existing footprint of the existing facilities from within the existing gates (between the sheet piles placed at the face of the intake and the gates). This material will be placed upland or in sediment basins, then tested for any environmental contaminants and disposed of at an appropriate facility in compliance with applicable regulations.

ii. **Grading.** The Project will require the grading of four 20-foot wide turnouts along the existing access road ROW to the right side (west) of the dam to allow for safe passage of construction equipment, and to provide staging areas along the road where the terrain allows. Use of the existing access road may extend approximately 0.25 miles further north (upstream) of the Dam.

iii. **Fill.** Minimal fill may be utilized to shore up the end points of a temporary bridge over the existing bridge on the access road near the dam (See Attachment 1- Dam Safety Repair and Maintenance Engineering Design Plans). Fill will be brought in if graded soils during construction are not sufficient.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**Limited erosion may occur as a result of construction activities; however, an erosion and sediment management plan will be prepared and implemented to avoid and minimize the potential during clearing and construction activities. Erosion protection Best Management Practices (BMPs) will be installed prior to any ground disturbance and routinely checked to ensure they are working properly.**

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

**There will be no change in the amount of impervious surfaces, as the project is a replacement of an existing structure, including the existing access road. The new penstocks will be supported above the ground. All temporary construction disturbance, including any areas where widening of the existing access road occurred, will be revegetated after construction.**

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

**The District will implement BMPs minimize the potential for erosion. Erosion and sediment controls include establishment of a buffer zone; maintenance of a stable road base and construction work area; placement of temporary sediment barriers; soil stabilization such as mulching, seeding, matting, and dust control; slope protection such as water bars, check dams, surface roughening; and maintenance of existing culverts. All areas of disturbance will be revegetated post construction.**

## **2. Air**

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

**Construction equipment and work vehicles traveling to, from and across the project site will create transient emissions. All construction equipment will meet applicable air quality standards.**

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**No off-site sources of emissions or odor will affect the Project.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**All construction equipment will meet air quality standards.**

## **3. Water**

- a. Surface Water:

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

**The Dam is located on the Similkameen River, 8.8 miles upstream from its confluence with the Okanogan River in Oroville. From Princeton, BC to Palmer Lake, WA (Elevation 1,160 feet), the Similkameen River valley is in a predominately wide, flat-bottomed, low-gradient U-shaped valley reflecting geologically recent glaciation, and dropping approximately 1.5 feet per thousand feet.**

**Downstream of Palmer Lake the River takes an abrupt northward turn into a narrow, steep valley that descends at a gradient of about 2.4 feet per thousand to Shanker's Bend, at the upstream end of the Enloe impoundment. At this point the river channel turns southeast towards the Dam and onwards to Oroville. Prior to construction of the Dam, the river channel narrowed and steepened considerably, to a gradient of approximately 7 feet per thousand (including the drop over Similkameen Falls). Consequently, the resulting impoundment is very narrow, long and sinuous.**

**Below Similkameen Falls, the river descends at a gradient of about 2.8 feet per thousand feet over the lower 8.7 river miles into Oroville.**

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

**Yes. The project involves replacement and maintenance of the existing dam intake gates and penstock which is located on and adjacent to the Similkameen River. Before work on the upstream side of the intake structure begins, a turbidity curtain will be deployed in the forebay to minimize silt transmission over the dam during installation of sheet pile. Flat sheet piling will be driven parallel to the face of the existing intake structure to separate the work area from existing river sediment. The flat sheet piling silt curtain should minimize mixing of the sediment with the general upper pool water upstream of the dam crest. The construction contractor has planned to use an excavator-mounted vibrator hammer to perform this installation ().**

**Dive crews will be utilized to remove silt and rubble from the working area within the intake cell. Material will be loaded out of the area in small loads. The construction contractor has estimated 15 dive shifts to remove this material. The amount of sediment that will be excavated from within the sheet piles placed at the face of the intake is estimated to be approximately 126 cubic yards. This material will be tested for any environmental contaminants and disposed of at an appropriate facility in compliance with any applicable laws.**

**Once the sediment material and debris has been removed from inside of the existing intake structures and the existing bulkhead gate slot is repaired as needed, new fabricated bulkhead gates will be installed in the stoplog slots. A temporary mobile crane may be used to set and remove the bulkhead gates periodically as maintenance requires.**

**After the bulkhead gates are installed in the existing repaired stoplog slots, pumps will be utilized to dewater the intake cell, drying out the area downstream of the new bulkhead gates. With the bulkhead gates installed in the stoplog slots, workers in the dry upstream of the existing gates will remove each existing gate and its track from the upstream side at each conduit.**

**Installation of the new slide gates will occur in the dry, behind the sealed bulkhead gates. Please refer to Attachment 1-Dam Safety Repair and Maintenance Engineering Design Plans.**

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**As described above, an estimated 126 cubic yards of sediment will be excavated and removed from within the existing gate well of the dam in order to access the existing gates. This material will be placed in an upland area adjacent to the dam or placed in sediment basins. Sediment will be tested and disposed of at an appropriate facility. The District does not anticipate any dredging to occur behind the dam. Once the gates are installed, the District has estimated that up to 915 cubic yards of sediment may be transported downstream during the initial gate operation. No fill would occur in wetlands.**

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

**No diversions out of the river will occur during construction activities. Once the Project is complete, the District will be able to divert up to 1,000 cubic feet per second (cfs) of water around the dam, but all diverted water will reenter the River just above the falls, below the dam.**

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

**Yes. The Dam is located on the Similkameen River.**

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

**The Project is not anticipated to result in any discharges of waste materials to surface waters.**

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

**No groundwater will be withdrawn, nor is the Project expected to cause any discharges to groundwater.**

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**No waste material is expected to be discharged into the ground by the Project.**

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**Runoff from slopes to the west of the dam could flow into the construction work area and would require control and disposal. Presently this runoff enters the river. All disturbed areas would maintain erosion control measures to stabilize and cover any exposed soils during construction. The project will obtain a Construction Stormwater General Permit.**

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

**There is potential for general stormwater runoff and erosion, but as described above, the Project will implement a sediment and erosion control plan to minimize the potential for any construction-generated materials from entering surface waters.**

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

**There will be temporary impacts to drainage patterns through BMPs such as water bars and check dams, meant to minimize erosion and the transport of sediment from the construction area. Any dewatering event would be temporary in nature to allow for dam safety inspections and any future repair and maintenance activities.**

- d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

**Areas disturbed by construction of the Project work area will be appropriately graded and graveled to minimize erosion, and revegetated upon completion of the Project. Appropriate flow and sediment controls will be deployed to capture sediments from runoff and minimize any offsite effects. Appropriate sediment control measures will be deployed at the edge of the work area to minimize the potential for any offsite sedimentation.**

#### 4. *Plants*

- a. Check the types of vegetation found on the site:

\_x\_deciduous tree: alder, maple, aspen, other

\_x\_evergreen tree: fir, cedar, pine, other

\_x\_shrubs

\_x\_grass

\_pasture

\_crop or grain

\_Orchards, vineyards or other permanent crops.

\_\_\_\_ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

\_\_\_\_ water plants: water lily, eelgrass, milfoil, other

\_\_\_\_ other types of vegetation

- b. What kind and amount of vegetation will be removed or altered?

**Grass and shrubs may be affected by widening areas along the existing access road; however, any temporary disturbance will be stabilized as needed and revegetated as required by the BLM ROW Grant.**

- c. List threatened and endangered species known to be on or near the site.

**No threatened or endangered plant species are known to be on or near the site. Three years of protocol-level surveys for Utes' ladies tresses have been conducted and accepted by the agencies. No Utes' ladies tresses were found during the surveys.**

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

**All temporary disturbed areas will be revegetated with a BLM-approved seed mix. Areas along the road where widening becomes necessary will be reseeded and maintained back to the existing road base. The seed mix will be provided by the BLM.**

- e. List all noxious weeds and invasive species known to be on or near the site.

**During wetland delineations and AIS survey efforts conducted in 2017, three plant species were documented: the strictly aquatic Eurasian watermilfoil (*Myriophyllum spicatum*), riparian reed canarygrass (*Phalaris arundinaceae*), and terrestrial diffuse knapweed (*Centaurea diffusa*). Reed canarygrass is a Class C noxious weed according to the Washington State Noxious Weed Control Board. Diffuse knapweed is a priority species according to the Washington Invasive Species Council and a prohibited Class B noxious weed according to the Washington State Noxious Weed Control Board. Eurasian watermilfoil was scattered throughout the lotic portion of the Project but its density at all sample locations was generally low and often found mixed with native plants. Cheatgrass also occurs in patches within the project vicinity.**

## **5. Animals**

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

**The reservoir supports waterfowl, aquatic furbearers, and amphibians. Prominent among the waterfowl are mallards (*Anas platyrhynchos*), common mergansers (*Mergus merganser*), and scaups (*Aythya marilla*, *A. affinis*). Canada geese (*Branta canadensis*) are resident in the Project Area and small numbers may nest along the water in the Project Area.**

Rainbow trout, mountain whitefish, large scale and bridgelip suckers, kokanee, largemouth bass, sunfish, burbot, yellow perch, redbreast shiner and longnose dace are found in the reservoir above the dam. Anadromous fish such as Steelhead and Chinook salmon are found below the dam. Pacific lamprey have recently been released downstream of the Similkameen Falls area.

Beaver (*Castor canadensis*) are the most prevalent aquatic furbearer, feeding primarily on willow found in the riparian shrub and tree habitats bordering the reservoir. Amphibian observations have not been reported in the area of the Project, but they are likely present along the reservoir and river.

The riparian habitat supports a number of song birds including the western flycatcher (*Empidonax difficilis*), eastern king bird (*Tyrannus tyrannus*), American robin (*Turdus migratorius*), Bullock's oriole (*Icterus bullockii*), cedar waxwing (*Bombycilla cedrorum*), and various species of warblers, sparrows, and woodpeckers.

The upland area contains habitats dominated by sagebrush, bitterbrush, service berry, and rock outcrops, which support mule deer, yellow-bellied marmot (*Marmota flaviventris*), bats, black-billed magpie (*Pica pica*), and ground-nesting species such as chukar (*Alectoris chukar*) and California quail (*Callipepla californica*). Reptiles are also common in these habitats including western rattlesnakes (*Crotalus viridis*), racers (*Coluber constrictor*), and gopher snakes (*Pituophis melanocephalus*).

Wildlife species that use a wider variety of habitat types in the Project area include swallows, vultures, raptors and coyotes (*Canis latrans*). Common swallow species in the Project Area are barn swallows (*Hirundo rustica*), bank swallows (*Riparia riparia*), and violet-green swallows (*Tachycineta thalassina*). Vultures and raptors are primarily represented by turkey vultures (*Cathartes aura*). American kestrels (*Flaco sparverius*), red-tailed hawks (*Buteo jamaicensis*), sharp-shinned hawks (*Accipiter striatus*), golden eagles (*Aquila chrysaetos*), and bald eagles (*Haliaeetus leucocephalus*) are also present, but in smaller numbers.

b. List any threatened and endangered species known to be on or near the site.

Upper Columbia River (UCR) summer steelhead (*Oncorhynchus mykiss*) are downstream of the dam. No other threatened or endangered species are known in the immediate vicinity of the Project area.

c. Is the site part of a migration route? If so, explain.

No avian migration routes are known to be located on the Project site.

UCR Steelhead have been documented to spawn below Similkameen Falls, which is located approximately 350 feet below the Dam. These falls form a natural barrier impassible to most anadromous fish. Spawning redds have been documented approximately one mile downstream of Similkameen Falls but most spawning records collected over the years are documented in the Okanogan River mainstem and lower Similkameen River near Oroville. No habitat exists in the tailrace area of the dam (between the dam and the falls).

d. Proposed measures to preserve or enhance wildlife, if any:

**Pre-disturbance avian nest surveys prior to any clearing activities. Erosion control measures would be in place to avoid and minimize sediment to entering the river. No in-water work would occur until July, which meets the fish work window for the Similkameen River above the Dam per WAC 220-660-300.**

**Any and dewatering activities would occur at lower flows (less than 1,000 cfs) and occur outside of any spawning, hatching, and emergence period for listed fish which for the Similkameen peaks around mid- to late-April with predicted timing of hatch and emergence in early June.**

e. List any invasive animal species known to be on or near the site.

**No invasive animal species are known to be on or near the site.**

## **6. Energy and Natural Resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**Energy will be required for construction purposes, in order to operate customary tools and heavy equipment. Electricity is provided at the dam and will be utilized as applicable for power tools and other construction purposes. Gas and diesel-powered equipment will be used for heavy equipment such as trucks, excavators, and cranes.**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**The Project will not affect potential solar use.**

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

**No energy conservation features are applicable to this Project.**

## **7. Environmental Health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

**Accidental leaks and spills of fluids (including petroleum-based products) from equipment and machinery, wet concrete, concrete leachate or particulates, or demolition debris in the construction area could potentially occur. To reduce such risks, the project would implement all applicable BMPs outlined in the project specific Erosion & Sediment Control & Construction Sediment Control Plan, and SWPPP and Spill Response Plan.**

1. Describe any known or possible contamination at the site from present or past uses.

**No known contamination is present in the area where the Project proposes to install new gates (within the existing gate wells) and penstock (along the existing penstock Rights-of-Way).**

**Historic surface mining occurred in the region, in both Washington and British Columbia; 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. The historic Kaaba-Texas Mine, located several miles upstream of the Project area, near the community of Nighthawk, was operated from the late 1890's until 1951. This mine discharged tailings directly into the Similkameen River until 1946. In 1999, the Environmental Protection Agency (EPA) removed and disposed of approximately 81,000 cubic yards of contaminated mine tailings from the mine site.**

**Contamination from historical mining operations in the Similkameen River watershed may have resulted in arsenic concentrations exceeding water quality criteria in samples from Chopaka Bridge, British Columbia (RM 36.1) and Oroville, Washington (RM 5.0). Copper also exceeded a CCT Sediment Quality Standard in several samples and cadmium exceeded the standard in one sample. Enloe Dam is located at River Mile 8.8 and the above samples were taken miles upstream and downstream of the dam location.**

**The Enloe Hydroelectric project operated until 1958. Periodically, up until approximately the mid-1990's, the District continued to operate the intake gates. Sediment buildup was allowed to move through the gates during those events.**

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

**None are known to be present in the vicinity of the work.**

3. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

**No hazardous or toxic substances, except vehicle fueling and lubricants, will be utilized for the work on this project.**

4. Describe special emergency services that might be required.

**Based on the scope of the Project, the District anticipates that a worst-case discharge during the Project not exceed 100 gallons of oil. In the event of a spill, the District and its contractors would undertake the following actions, as outlined in the Project Stormwater Pollution Prevention and Spill Response Plan.**

#### **A. Immediate Response Procedures**

**Any employee that observes a leak or spill will immediately respond to the situation by first attempting to stop the source of the leak or spill and turn off any ignition sources in the**

area. The employee will then alert all personnel in the area of the spill and restrict access as needed. On-site personnel, equipment, and materials will be mobilized to clean up the spill. If the spill is too large for an on-site effort, the Construction Superintendent/Operations Manager or designee will immediately contact an Emergency Response Contractor to respond to the spill which is provided in the Stormwater Pollution Prevention and Spill Response Plan.

### **B. Spill Containment and Cleanup—Upland Areas**

Any spill that occurs in upland areas will be cleaned up immediately, with agency oversight and in compliance with state and federal laws and regulations. Materials supplied closest to the spill location will be used to contain the spill and divert any material from entering the nearby waterbodies. Spilled material and contaminated soils will be collected and placed in labeled and sealed drums. The appropriate state and federal Agencies will be notified as soon as possible as indicated in the Stormwater Water Pollution Prevention and Spill Response Plan. All affected areas, equipment, and surfaces that have contacted the spilled material will be decontaminated. The waste generated in cleaning up the spill will be disposed in accordance with all applicable state and federal regulations.

5. Proposed measures to reduce or control environmental health hazards, if any:

**Refueling of construction equipment and vehicles in the staging area would only occur offsite or within a designated, paved, and bermed area where possible spills can be contained.**

#### *b. Noise*

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

**No noise sources exist in this area that are expected to affect the Project.**

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

**Customary vehicle and construction noise would occur during Project construction.**

- 3) Proposed measures to reduce or control noise impacts, if any:

**Equipment will have approved muffler systems to reduce noise. There are no known receptors in the vicinity of the dam.**

### **8. Land and Shoreline Use**

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

**The Project will replace existing structures within their current footprints, and will not change or otherwise affect the current use of the site or adjacent properties.**

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

**None are applicable. This is an existing dam facility.**

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

**No, there are not working farms or forest practices in the immediate project vicinity. The District has a right of way easement across an existing farm that begins the project access. The District will coordinate use with the landowner to ensure right-of-way conditions are met.**

c. Describe any structures on the site.

**Structures on site include the concrete dam, existing penstock and remains of the old powerhouse and surge tanks.**

d. Will any structures be demolished? If so, what?

**The existing gates and a portion of the remaining penstock will be removed and replaced.**

e. What is the current zoning classification of the site?

**The current zoning classification of the Project site is R20. This site is BLM-managed land and coded as Undeveloped Land.**

f. What is the current comprehensive plan designation of the site?

**The Project site is designated as Rural under the Okanogan County Comprehensive Plan.**

g. If applicable, what is the current shoreline master program designation of the site?

**The project is located in a Rural designated area under the Okanogan County Shoreline Master Program.**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

**Okanogan County has designated portions of the Project site as critical area for bald eagle habitat, wetlands considerations, flood hazard areas, slope stability, and riparian buffers.**

i. Approximately how many people would reside or work in the completed project?

**No people will reside onsite after the project is completed.**

j. Approximately how many people would the completed project displace?

**No people are expected to be displaced by the Project.**

k. Proposed measures to avoid or reduce displacement impacts, if any:

**None are applicable. Please see previous question.**

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**This Project will only implement safety dewatering for repair and maintenance of the existing Enloe Dam. Because no new, expanded or changed uses are proposed in connection with the Project, the Project will be compatible with existing and projected land uses.**

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

**None are applicable. Please see response to Item 8b, above.**

### **9. Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

**No housing units will be provided.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**No housing units will be eliminated.**

c. Proposed measures to reduce or control housing impacts, if any:

**None are applicable, as the Project will not cause any housing impacts.**

### **10. Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

**The current concrete dam structure is 54 feet tall. None of the construction or maintenance work will exceed this height.**

b. What views in the immediate vicinity would be altered or obstructed?

**No views in the immediate vicinity are expected to be altered or obstructed.**

c. Proposed measures to reduce or control aesthetic impacts, if any:

**After the Project is complete, periodic use of the Project for required Dam safety inspections and maintenance activities will cause temporary and likely unavoidable impacts on some aesthetic features of the existing Dam, because the purpose of the project is to dewater the downstream face of the dam (stop flow over the dam).**

**Even during these temporary dewatering events, water would be released in the tailrace above Similkameen Falls, so flows over the falls would be unlikely to be impacted. The District would notify the public for any long-term maintenance activities.**

### **11. Light and Glare**

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

**The Project is not expected to produce any light or glare.**

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

**The Project is not expected to create any increased light or glare.**

- c. What existing off-site sources of light or glare may affect your proposal?

**No off-site sources of light or glare are known to exist near the Project area.**

- d. Proposed measures to reduce or control light and glare impacts, if any:

**None are applicable. Please see previous questions.**

### **12. Recreation**

- a. What designated and informal recreational opportunities are in the immediate vicinity?

**BLM lands adjacent to the Project area are used for recreation activities such as camping, hiking, boating, and fishing on the Similkameen River.**

- b. Would the proposed project displace any existing recreational uses? If so, describe.

**Although public use of the existing road/trail would be temporarily closed during construction activities, there will be no permanent displacement of existing recreational uses. Once completed, the Project will enable dam inspections and maintenance activities that are expected to increase safety for downstream users by helping the District to ensure stability of the Dam structure.**

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

**Public access to the right side of the dam (west side of the river) would be limited during construction. Closure signs would be installed alerting the public when construction begins.**

### **13. Historic and cultural preservation**

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

**The dam itself and associated hydroelectric facilities are over fifty years old and are listed on the National Register of Historic Places. Cultural resource surveys have been conducted as part of the previous relicensing project.**

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

**There have been multiple cultural resource surveys and consultations of the project area over that past 11 years. The following surveys and reports were prepared as a result of the Enloe Dam Licensing Project and developed through consultation with the Bureau of Land Management (BLM), Department of Archeology and Historic Preservation (DAHP), and the Confederated Tribes of the Colville Reservation. Additionally, multiple previous cultural resource surveys have occurred in the Project area, which are cited with in the following reports.**

- **On November 30, 2008, a Cultural Resources Section 106 Technical Report was prepared for the Enloe Dam Licensing Project.**
- **On May 2009, a Historic Properties Management Plan was developed in consultation with DAHP, CCT, and BLM.**
- **November 2, 2009, the Enloe Dam Licensing Project Area of Potential Affect was amended.**
- **December 6, 2013, the Enloe Dam Licensing Project Area of Potential Affect was amended.**
- **October 13, 2017, the Enloe Dam Licensing Project Area of Potential Affect was amended.**
- **August 20, 2018, the Enloe Dam Licensing Project Area of Potential Affect was amended.**

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

**The BLM is reviewing the proposed disturbance areas and will conduct any required cultural and historic property surveys. Any findings will be provided to the District and will be avoided during construction. The District will provide mitigation and/or an onsite cultural monitor, if required as part of that review process.**

**The District and BLM have previously consulted with the CCT and the DAHP and the for work in the project area. For this Project, additional consultation will be carried out to determine whether there may be concerns with past Archeological survey data, any required new surveys or any particular mitigation needs.**

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

**The District will follow the recommendations and requirements from BLM, who will consult with the Colville Confederated tribes and the Department of Archeology and Historic Preservation. In addition, an Inadvertent Discovery Plan will be implemented during any ground disturbing activities in compliance with applicable regulations.**

#### **14. Transportation**

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

**Enloe Dam is located about 3.5 miles upstream (northwest) of the town of Oroville, WA. From Oroville to the dam, streets serving the site and providing access include Central Ave W, Loomis-Oroville Rd, Enloe Dam Rd, and Similkameen Dam Rd. Please see site plan sheet.**

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

**The site and affected geographic area are not currently served by public transit. The nearest known transit stop is located in \_\_\_\_\_.**

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

**The Project would neither add nor eliminate parking spaces.**

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

**Yes. The existing access road to the right abutment will need to be widened in places from 10 feet to not more than 30 feet, so that the required crane and other construction equipment can access the Project site to install the Project's safety features. This widening will extend 0.25 mile further north (upstream) beyond the right abutment. During installation of the Project, the District or its contractor will install a temporary bridge across a ravine above the Similkameen River and immediately adjacent to the Right Bank intake, to permit the necessary equipment loads to access the site. This bridge will be removed upon completion of the project.**

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

**The Project will not use water, rail or air transportation..**

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

**After the completion of the Project, the District anticipates that District staff would undertake the equivalent of up to one (1) additional round-trip per day for in order to conduct the inspection, monitoring or repair activities enabled by the Project. District staff historically and currently travel up the access road at least once a month for Dam safety monitoring, and those efforts will continue.**

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

**The Project is not expected to interfere with, affect or be affected by the movement of agricultural or forest products.**

- h. Proposed measures to reduce or control transportation impacts, if any:

**None are applicable, as access to the site is anticipated to remain sufficiently limited such that no impacts will be observed.**

## **15. Public Services**

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

**The Project is not expected to result in any increased need for public services.**

- b. Proposed measures to reduce or control direct impacts on public services, if any.

**None are applicable. Please see previous question.**

## **16. Utilities**

- a. Circle utilities currently available at the site:

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,

other \_\_\_\_\_

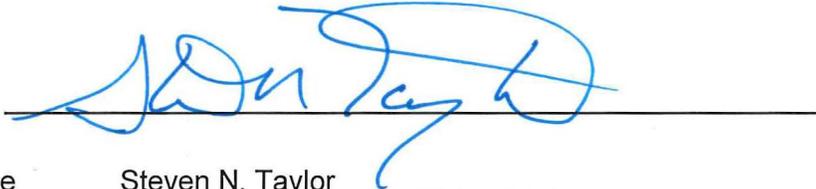
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

**Energy will be required for construction purposes, in order to operate customary tools and heavy equipment. Electricity is provided at the dam and will be utilized as applicable for power tools and other construction purposes. A temporary power pole will be installed just north of the dam to string temporary power, across the reservoir, for use during construction. This temporary line will be removed after construction is complete. The District owns the power lines.**

### C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:

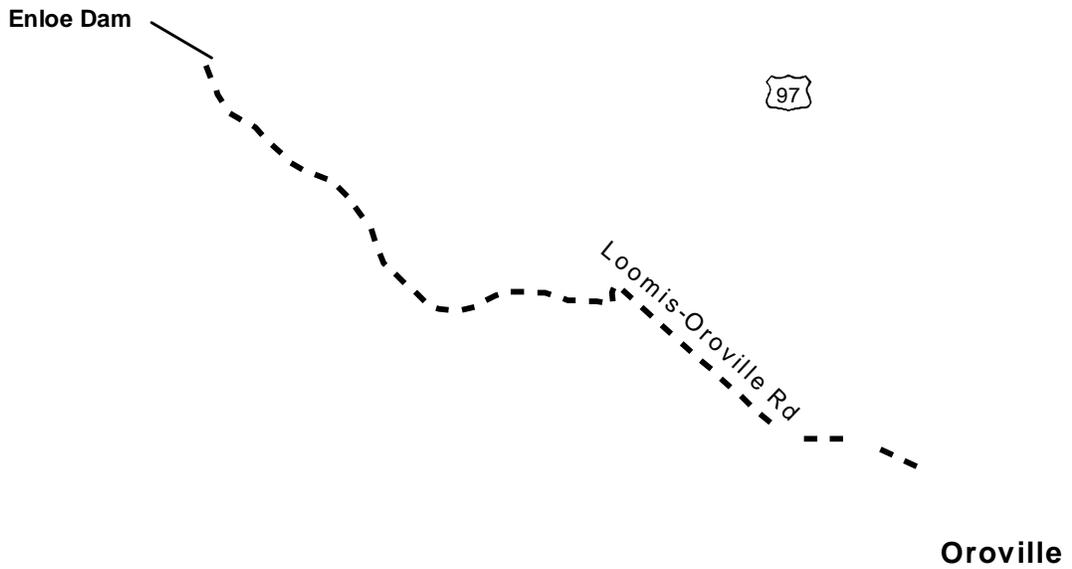


Name of signee Steven N. Taylor

Position and Agency/Organization General Manager, Okanogan PUD

Date Submitted: 11-1-19

**CANADA**  
**UNITED STATES**



- - - Driving Route from Highway 97

**Project Vicinity Map**

