



WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2}

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received: _____

Agency reference #: _____

Tax Parcel #(s): _____

Part 1–Project Identification

1. Project Name (A name for your project that you create. Examples: Smith’s Dock or Seabrook Lane Development) [help]
Wolverine Fire Log Boom

Part 2–Applicant

The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle)			
Grover Wier, Kari			
2b. Organization (If applicable)			
Chelan Ranger District, Okanogan-Wenatchee National Forest			
2c. Mailing Address (Street or PO Box)			
428 West Woodin Avenue			
2d. City, State, Zip			
Chelan, WA 98816			
2e. Phone (1)	2f. Phone (2)	2g. Fax	2h. E-mail
(509) 682-4900	() 	(509) 682-9004	kgroverwier@fs.fed.us

¹Additional forms may be required for the following permits:

- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at <http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/EndangeredSpecies.aspx>.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [help] screens, go to http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor’s Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@ora.wa.gov.

Part 3—Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [\[help\]](#)

3a. Name (Last, First, Middle)			
Willard, Paul			
3b. Organization (If applicable)			
Chelan Ranger District, Okanogan-Wenatchee National Forest			
3c. Mailing Address (Street or PO Box)			
428 Woodin Avenue			
3d. City, State, Zip			
Chelan, WA 98816			
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail
(509) 682-4960	(509-699-9690)	(509) 682-9004	pwillard@fs.fed.us

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [\[help\]](#)

- Same as applicant. (Skip to Part 5.)
- Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)
- There are multiple upland property owners. Complete the section below and fill out [JARPA Attachment A](#) for each additional property owner.
- Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete [JARPA Attachment E](#) to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
Niles, Matt			
4b. Organization (If applicable)			
Washington DNR, Aquatic Division, Rivers District,			
4c. Mailing Address (Street or PO Box)			
P.O. Box 280			
4d. City, State, Zip			
Castle Rock, WA 98611-0280			
4e. Phone (1)	4f. Phone (2)	4g. Fax	4h. E-mail
(509-740-6812)	()	(360) 748-2387	matt.niles@dnr.wa.gov

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [\[help\]](#)

- There are multiple project locations (e.g. linear projects). Complete the section below and use [JARPA Attachment B](#) for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [help]			
<input type="checkbox"/> Private <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Publicly owned (state, county, city, special districts like schools, ports, etc.) <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)			
5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]			
See 5p			
5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]			
Chelan, WA 98816			
5d. County [help]			
Chelan			
5e. Provide the section, township, and range for the project location. [help]			
¼ Section	Section	Township	Range
Railroad Creek NW 1/4	10	T31N	R18E
5f. Provide the latitude and longitude of the project location. [help]			
<ul style="list-style-type: none"> Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83) 			
Railroad Creek/Lake Chelan: 48.202152 N Latitude -120.597025 W Longitude – NAD 83			
5g. List the tax parcel number(s) for the project location. [help]			
<ul style="list-style-type: none"> The local county assessor's office can provide this information. 			
N/A – Location is on National Forest Lands and State of Washington Lands (DNR) (See Appendix A (pg. 25) & Appendix D (pg. 44) for documentation of land status from Leland Fischer, PLS.)			
5h. Contact information for all adjoining property owners. (If you need more space, use JARPA Attachment C.) [help]			
Name	Mailing Address	Tax Parcel # (if known)	
See 4a. Matt Niles, WA DNR	P.O. Box 280	N/A – State DNR lands	
	Castle Rock, WA 98611-0280		
Brenda Clark Getty Trustee	Lake Chelan Boating Club INC Treasurer PO Box 325 Chelan, WA 98816	Prop ID: 51920 Geo ID: 311810200050	

5i. List all wetlands on or adjacent to the project location. [\[help\]](#)

Two small wetlands were identified adjacent to the project area during previous investigations for a barge ramp constructed by Rio Tinto for the Holden Mine Remediation Project. The wetlands, located east of the project area, will not be impacted by the current log boom proposal.

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [\[help\]](#)

The project is located on Lake Chelan at the mouth of Railroad Creek.

5k. Is any part of the project area within a 100-year floodplain? [\[help\]](#)

Yes No Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

- **Lake bed substrate at this location does not support aquatic vegetation.**
- **The habitat for the boom is primarily lacustrine as the boom will float and/or rest on the lake bed depending on the lake level.**
- **The upland vegetation consists primarily of Ponderosa Pine, Douglas Fir and native grass, forbes, and shrubs. Boom anchors would be located within this vegetative community.**

5m. Describe how the property is currently used. [\[help\]](#)

The property can generally be broken into two use categories. The majority of the area near the mouth of Railroad Creek is open water and may be used by boats depending on current lake level. The area at Driftwood Bay includes floating docks, a walkway, and rock breakwater located on Forest Service lands that are under a Special-Use permit with the Lake Chelan Boating Club.

5n. Describe how the adjacent properties are currently used. [\[help\]](#)

The adjoining Forest Service and Lake Chelan Boating Club leased lands, locally known as Lucerne, accommodate a wide range of uses. The Lake Chelan Boat Club has numerous recreational cabins and moorage facilities that are used by club members primarily from spring through the fall. The Forest Service has two small campgrounds, one functional guard station, Lucerne Landing (public ferry facility), heli-spot, and service roads. Holden Village operates a cabin and maintenance facility/parking lot under a special-use-permit from the Forest Service. Holden Mine remediation contractors constructed a barge ramp adjacent to the public ferry facility. At this time Lucerne Landing is primarily a ferry stop for Holden Mine remediation personnel and Holden Village Staff and a barge landing for transport of materials/supplies/equipment associated with the Holden Mine remediation.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [\[help\]](#)

The only structures on the property are located on Forest Service lands under special-use permit with the Lake Chelan Boating Club. The structures include 209 lineal feet of dock, a 16 foot walkway, and rock breakwater. The structures are used for recreational boat moorage. The condition of the facilities is rated as functional.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

The site is only accessible by boat or plane and is approximately 36 miles northwest of the city of Chelan, WA. From Chelan travel 36 miles 'uplake' on Lake Chelan. The project is located on Lake Chelan at the mouth of Railroad Creek.

Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [\[help\]](#)

The project involves installation and maintenance of a woody debris retention boom (“log boom”) across the mouth of Railroad Creek. Additionally, an approximately 400 foot section of boom will be staged on shore at Lucerne and deployed via boat to collect wood from nearby drainages if they have a significant blowout. Log booms will be constructed using brown/orange TUFFBOOM barriers that are made with an impact resistant polyethylene outer shell with a closed cell foam interior. Each TUFFBOOM section is 10’ long, 16” diameter and weights 141 lbs. Sections are connected with heavy steel hardware. The log booms, which are currently stored at Lucerne Landing, will be assembled on site.

Work below the OHWM: Floating log boom will be installed as shown in plans (See Attachment A, Sheets 4-6). The estimated finished boom length is 1,200’, which includes placement of 12 ecology block anchors on the lake bottom (State owned aquatic Lands) at 100’ intervals for intermediate anchor points. Each intermediate anchor will measure 2’x2’x4’ and weigh 2400 pounds. Anchors will be attached to the log booms with 5/8” steel cable secured at ends with 5/8” cable clamps. Anchors will be placed in a stable position on the lake bottom using a crane and barge.

Work shoreward of OHWM: Ecology block anchors for log booms will be placed as shown in plans. Work includes burial of a single ecology block anchor to serve as a “dead man” anchor for each end of the boom. The anchor will be buried 2 feet below the ground surface and 10 to 20 feet shoreward of OHWM using a backhoe or small excavator. Each bank anchor will measure 2’x2’x6’ and will weigh 3600 pounds. The anchors will be attached to the boom by means of 1” cable and boom chain.

Maintenance of for all log boom appurtenances including anchors, cables, tuff boom attachments will be completed for up to five years. Log Booms will be monitored and inspected to insure the structure remains operational. At the end of the 5-year period all log boom infrastructure will be removed.

Logs will be removed from the boom using a barge and excavator with a ‘thumb’.

6b. Describe the purpose of the project and why you want or need to perform it. [\[help\]](#)

The purpose of these debris booms is to retain floating woody debris that is transported out of the Railroad Creek watershed during spring runoff and storm events. As a result of the Wolverine Fire, increased amounts of woody debris are expected to be flushed from Railroad Creek over the next five years. Debris booms have successfully been used to collect and retain floating debris on Lake Chelan multiple times. The specific objectives of this emergency burned area rehabilitation project are as follows:

- 1) To reduce both the safety hazards to lake users and the risk of damage to public and private facilities posed by the floating woody debris by constructing and maintaining a debris retention boom on Railroad Creek.
- 2) To improve lakeshore and aquatic habitat conditions by promoting use of woody debris collected in the booms in future projects targeted at reducing shoreline erosion and providing habitat structures for aquatic life.

6c. Indicate the project category. (Check all that apply) [\[help\]](#)

- Commercial Residential Institutional Transportation Recreational
 Maintenance Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [\[help\]](#)

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Aquaculture | <input type="checkbox"/> Culvert | <input type="checkbox"/> Float | <input type="checkbox"/> Retaining Wall (upland) |
| <input type="checkbox"/> Bank Stabilization | <input type="checkbox"/> Dam / Weir | <input type="checkbox"/> Floating Home | <input type="checkbox"/> Road |
| <input type="checkbox"/> Boat House | <input type="checkbox"/> Dike / Levee / Jetty | <input type="checkbox"/> Geotechnical Survey | <input type="checkbox"/> Scientific Measurement Device |
| <input type="checkbox"/> Boat Launch | <input type="checkbox"/> Ditch | <input type="checkbox"/> Land Clearing | <input type="checkbox"/> Stairs |
| <input type="checkbox"/> Boat Lift | <input type="checkbox"/> Dock / Pier | <input type="checkbox"/> Marina / Moorage | <input type="checkbox"/> Stormwater facility |
| <input type="checkbox"/> Bridge | <input type="checkbox"/> Dredging | <input type="checkbox"/> Mining | <input type="checkbox"/> Swimming Pool |
| <input type="checkbox"/> Bulkhead | <input type="checkbox"/> Fence | <input type="checkbox"/> Outfall Structure | <input type="checkbox"/> Utility Line |
| <input type="checkbox"/> Buoy | <input type="checkbox"/> Ferry Terminal | <input type="checkbox"/> Piling/Dolphin | |
| <input type="checkbox"/> Channel Modification | <input type="checkbox"/> Fishway | <input type="checkbox"/> Raft | |

Other: Woody debris retention boom ("log boom")

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [\[help\]](#)

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

The log booms will be assembled on-site using steel connector hardware between boom sections. This work will be done with hand and small power tools. The fully assembled floating log boom will be placed in Lake Chelan at the mouth of Railroad Creek.

The log boom will be anchored to the bank with concrete ecology blocks that measure 2’x2’x6’ and weigh 3600 pounds. Hand and small power tools will be use to attach the log booms to the anchors with 1” steel cable/clamps and backup boom chain. Anchors will be buried 10 to 20 feet shoreward of OHWM, 2 feet below the ground surface, and perpendicular to the shoreline. Contractor will use a 4WD backhoe or small excavator to manipulate and bury anchor blocks.

The Intermediate anchors will measure 2’x2’x4’ and weigh 2400 pounds each. These anchors will be attached to the log booms with 5/8” steel cable secured at ends with 5/8” cable clamps. Anchors will be placed in a stable position on the lake bottom using a small crane positioned on a barge.

The deployable boom will be assembled and staged on the Lucerne Bar. This boom will be utilized to capture logs that may enter the lake from blowouts of nearby drainages. The boom will be deployed via boat when needed.

Logs will be removed from the boom using a barge and excavator with a ‘thumb’. All ‘harvested’ logs will be transported to the Prince Creek alluvial fan and piled above the OHWM at a site previously used for this same activity.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [\[help\]](#)

- If the project will be constructed in phases or stages, use [JARPA Attachment D](#) to list the start and end dates of each phase or stage.

Start date: 4/15/2016 End date: 4/30/2016 See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [\[help\]](#)

\$80,000.00

6h. Will any portion of the project receive federal funding? [\[help\]](#)

- If **yes**, list each agency providing funds.

Yes No Don't know

BAER (Burned Area Emergency Response) will be used to fund this project.

Part 7–Wetlands: Impacts and Mitigation

- Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [\[help\]](#)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [\[help\]](#)

Not applicable

7b. Will the project impact wetlands? [\[help\]](#)

Yes No Don't know

7c. Will the project impact wetland buffers? [\[help\]](#)

Yes No Don't know

7d. Has a wetland delineation report been prepared? [\[help\]](#)

- If Yes, submit the report, including data sheets, with the JARPA package.

Yes No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [\[help\]](#)

- If Yes, submit the wetland rating forms and figures with the JARPA package.

Yes No Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [\[help\]](#)

- If Yes, submit the plan with the JARPA package and answer 7g.
- If No, or Not applicable, explain below why a mitigation plan should not be required.

Yes No Not applicable (See explanation in 7G)

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

The project will not impact wetlands. Rio Tinto conducted a wetlands survey in this area prior to the construction of the barge landing adjacent to our current proposed project. That survey identified two small wetlands east of the current project. The floating log boom and anchors are not near the identified wetlands.

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [\[help\]](#)

Activity (fill, drain, excavate, flood, etc.)	Wetland Name ¹	Wetland type and rating category ²	Impact area (sq. ft. or Acres)	Duration of impact ³	Proposed mitigation type ⁴	Wetland mitigation area (sq. ft. or acres)
N/A						

¹ If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.
² Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.
³ Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.
⁴ Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: _____

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [\[help\]](#)

N/A

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [\[help\]](#)

N/A

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, “waterbodies” refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [\[help\]](#)

Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [\[help\]](#)

Not applicable

- The project is temporary
- No ground disturbing work will occur below the OHWM at log boom site.
- Ground disturbance above the OHWM is limited to two small locations to bury deadman anchors. BMP’s (straw bales) will be used to insure all spoils at deadman locations are captured/retained above the OHWM.
- Spill containment requirements will be stipulated in the contract for boom assembly, installation, and log removal from booms.
- Logs harvested in the boom will be stockpiled and utilized as large woody debris in future projects.

8b. Will your project impact a waterbody or the area around a waterbody? [\[help\]](#)

Yes No

8c. Have you prepared a mitigation plan to compensate for the project’s adverse impacts to non-wetland waterbodies? [\[help\]](#)

- **If Yes**, submit the plan with the JARPA package and answer 8d.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

Yes No Not applicable

A mitigation plan has not been prepared because the project will have temporary negligible impacts to non-wetland waterbodies. The boom will float on the lake surface and/or rest on the lakebed when the lake is below full pool. The anchors and deadman will also have very limited impacts. Although a plan is not deemed necessary, any logs captured during flood/debris flow events will be stockpiled at Prince Creek for use as mitigation for future projects.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [\[help\]](#)

N/A

8e. Summarize impact(s) to each waterbody in the table below. [\[help\]](#)

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Floating Boom 1200' x 16 dia"	Lake Chelan	<= OHWL	<=5 Years	None	1600 ft ²
12 - Intermediate Boom Anchors (2'x4' each)	Lake Chelan	Below OHWL	<=5 Years	None	96 ft ²
2 - Shoreline Anchors (2'x6' each)	Adjacent to Lake Chelan	Above OHWL within 100 year floodplain	<=5 Years	None	0 ft ²

¹ If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.

² Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.

³ Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [\[help\]](#)

Twelve ecology block anchors will be temporarily placed on the lake bed surface totaling 13.68 yds³. The floating boom is approximately 78 yds³.

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [\[help\]](#)

No dredging will occur. An excavator/backhoe will be used to bury bank anchors. Prior to excavation four straw bales will be placed end to end between the excavation pit and shoreline. A 2' (W) x 4' (H) x 6' (L) will be excavated. Ecology block will be lowered in the pit. Spoils will be returned to pit and compacted. Straw bales will be spread over disturbed area.

Part 9—Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [\[help\]](#)

Agency Name	Contact Name	Phone	Most Recent Date of Contact
WA DNR	Shane Early	509-925-0960	03/10/2016
WDFW	Graham Simon	509-662-0503	03/16/2016
ACOE	Deborah Knaub	206-258-1371	03/10/2016
WA DOE	Andrea Jedel	509-454-4260	03/10/2016

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of

Ecology's 303(d) List? [\[help\]](#)

- If **Yes**, list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: <http://www.ecy.wa.gov/programs/wq/303d/>.

Yes No

Results for the project site from *Washington Department of Ecology's Water Quality Assessment* map tool.

Latitude: 48.202152 **Longitude:** -120.597025

Datum: NAD83 HARN

Listing ID	Name	Parameter	Medium	Category	Waterbody ID	Lower Address	Upper Address
45367	RAILROAD CREEK	Copper	Water	5	1205917482070	0.31	1.755
45383	RAILROAD CREEK	Mercury	Water	5	1205917482070	0.31	1.755
45356	RAILROAD CREEK	Lead	Water	5	1205917482070	0.31	1.755

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [\[help\]](#)

- Go to <http://cfpub.epa.gov/surf/locate/index.cfm> to help identify the HUC.

USGS Lake Chelan Watershed HUC 17020009

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [\[help\]](#)

- Go to <http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm> to find the WRIA #.

WRIA# 47

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [\[help\]](#)

- Go to <http://www.ecy.wa.gov/programs/wq/swqs/criteria.html> for the standards.

Yes No Not applicable

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [\[help\]](#) **NOT APPLICABLE**

- If you don't know, contact the local planning department.
- For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.

Rural Urban Natural Aquatic Conservancy Other _____

9g. What is the Washington Department of Natural Resources Water Type? [\[help\]](#)

- Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System.

Shoreline Fish Non-Fish Perennial Non-Fish Seasonal

9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [\[help\]](#)

- If **No**, provide the name of the manual your project is designed to meet.

Yes No N/A

Name of manual:

9i. Does the project site have known contaminated sediment? [\[help\]](#)

- If **Yes**, please describe below.

Yes **No**

Investigations of lakebed substrate, associated with the Holden Mine Remediation project, identified arsenic, cadmium, copper, lead, and zinc at various concentrations within the turbidly plum at the mouth of Railroad Creek.

9j. If you know what the property was used for in the past, describe below. [\[help\]](#)

Recent historical use has been the same as current use. The property can generally be broken into two use categories. The majority of the area near the mouth of Railroad Creek is open water and may be used by boats depending on current lake level. The area at Driftwood Bay includes floating docks, a walkway, and rock breakwater located on Forest Service lands that are under a Special-Use permit with the Lake Chelan Boating Club.

9k. Has a cultural resource (archaeological) survey been performed on the project area? [\[help\]](#)

- If Yes, attach it to your JARPA package.

Yes No (No Effect - See Appendix B for Cultural Survey Report and Tribal Scoping Letters)

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [\[help\]](#)

A Biological Assessment (Appendix C) was completed for this project on March 14, 2016. No species listed under the federal Endangered Species Act are known to occur in the vicinity of the project area and there is no potential for those species to be affected by the proposed work. Based on the Biological Assessment:

Fisheries: No effect to listed fish species or their critical habitat. No ESA listed fish species in Lake Chelan.

Plants: No effect to listed plant species or their critical habitat. No ESA listed plant species near the project area.

Wildlife: There will be no effect to listed wildlife species or their critical habitat.

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [\[help\]](#)

There are four PHS listed species for the project area based on data derived from the WDFW PHS mapping website. The following species are listed on the PHS mapping website: Rainbow Trout, Westslope Cutthroat, Kokanee, and Northern Spotted Owl.

Part 10–SEPA Compliance and Permits

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [\[help\]](#)

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

A copy of the SEPA determination or letter of exemption is included with this application.

A SEPA determination is pending with _____ (lead agency). The expected decision date is _____.

I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [\[help\]](#)

This project is exempt (choose type of exemption below).

Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

Other: _____

SEPA IS PRE-EMPTED BY FEDERAL LAW. THIS ACTION FALLS UNDER FOREST SERVICE MANUAL 2500 WATERSHED AND AIR MANAGEMENT, CHAPTER 2520 - WATERSHED PROTECTION AND MANAGEMENT, SECTION 2523.2 EMERGENCY RESPONSE ACTIONS AND IS CONSISTENT WITH 36 CODE OF FEDERAL REGULATIONS 220.4(B)1.

10b. Indicate the permits you are applying for. (Check all that apply.) [\[help\]](#)

LOCAL GOVERNMENT

Local Government Shoreline permits: N/A

- Substantial Development Conditional Use Variance
 Shoreline Exemption Type (explain): _____

Other City/County permits: N/A

- Floodplain Development Permit Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

- Hydraulic Project Approval (HPA)** Fish Habitat Enhancement Exemption – [Attach Exemption Form](#)
USFS/WDFW MOU Appendix A or B

Effective July 10, 2012, you must submit a check for \$150 to Washington Department of Fish and Wildlife, unless your project qualifies for an exemption or alternative payment method below. **Do not send cash.**

Check the appropriate boxes:

- \$150 check enclosed. Check # _____
Attach check made payable to Washington Department of Fish and Wildlife.
- My project is exempt from the application fee. (Check appropriate exemption) _____
- HPA processing is conducted by applicant-funded WDFW staff.
Agreement # _____
 - Mineral prospecting and mining.
 - Project occurs on farm and agricultural land.
(Attach a copy of current land use classification recorded with the county auditor, or other proof of current land use.)
 - Project is a modification of an existing HPA originally applied for, prior to July 10, 2012.
HPA # _____

Washington Department of Natural Resources:

- Aquatic Use Authorization
Complete [JARPA Attachment E](#) and submit a check for \$25 payable to the Washington Department of Natural Resources.
Do not send cash.

Washington Department of Ecology:

- Section 401 Water Quality Certification

FEDERAL GOVERNMENT

United States Department of the Army permits (U.S. Army Corps of Engineers):

- Section 404 (discharges into waters of the U.S.) Section 10 (work in navigable waters)

United States Coast Guard permits:

- Private Aids to Navigation (for non-bridge projects)

Part 11—Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [\[help\]](#)

11a. Applicant Signature (required) [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. **KGW** (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. **KGW** (initial)

Kari Grover Wier	<i>/s/ Kari Grover Wier</i>	March 17, 2016
Applicant Printed Name	Applicant Signature	Date

11b. Authorized Agent Signature [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Paul E. Willard	<i>/s/ Paul E. Willard</i>	March 17, 2016
Authorized Agent Printed Name	Authorized Agent Signature	Date

11c. Property Owner Signature (if not applicant) [\[help\]](#)

Not required if project is on existing rights-of-way or easements.

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

See JARPA Attachment E – DNR Lands Only

Property Owner Printed Name	Property Owner Signature	Date
-----------------------------	--------------------------	------

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ENV-019-09 rev. 08/2013



WASHINGTON STATE
Joint Aquatic Resources Permit
Application (JARPA) [\[help\]](#)



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received: _____

Agency reference #: _____

Tax Parcel #(s): _____

TO BE COMPLETED BY APPLICANT [\[help\]](#)

Project Name: _____

Location Name (if applicable): _____

Attachment B:
For additional project location(s) [\[help\]](#)

Use this attachment only if you have more than one project location.

Use a separate form for each additional location.

Use black or blue ink to enter answers in white spaces below.

1. Indicate the type of ownership of the property. (Check all that apply.) [help]			
<input type="checkbox"/> Private <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Publicly owned (state, county, city, special districts like schools, ports, etc.) <input type="checkbox"/> Tribal <input type="checkbox"/> Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)			
2. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 16) [help]			
See 16			
3. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]			
Chelan, WA 98816			
4. County [help]			
Chelan			
5. Provide the section, township, and range for the project location. [help]			
¼ Section	Section	Township	Range
NE	32	T31N	R19E
6. Provide the latitude and longitude of the project location. [help]			
<ul style="list-style-type: none"> Example: 47.03922 N lat. / -122.89142 W long (Use decimal degrees - NAD 83) 			
48.146102 N lat / -120.497432 W long			
7. List the tax parcel number(s) for the project location. [help]			
<ul style="list-style-type: none"> The local county assessor's office can provide this information. 			
N/A – Federal Land Only (See Appendix D, page 44 for documentation of land status from Leland Fischer, PLS.)			

8. Contact information for all adjoining property owners. (If you need more space, use [JARPA Attachment C.](#)) [\[help\]](#)

Name	Mailing Address	Tax Parcel # (if known)
Washington DNR, Aquatic Division, Rivers District,	P.O. Box 280 Castle Rock, WA 98611-0280	

9. List all wetlands on or adjacent to the project location. [\[help\]](#)

None

10. List all waterbodies (other than wetlands) on or adjacent to the project location. [\[help\]](#)

Lake Chelan, Prince Creek

11. Is any part of the project area within a 100-year flood plain? [\[help\]](#)

Yes No Don't know

12. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

Alluvial fan with scattered confers, cottonwoods, and native grasses, forbes, and shrubs.

13. Describe how the property is currently used. [\[help\]](#)

This area is currently used as Large Woody Debris storage area. The Prince Creek Campground is .125 miles east of the storage area.

14. Describe how the adjacent properties are currently used. [\[help\]](#)

DNR lands are below the 1079' elevation which is the minimum allowable lake level.

15. Describe the structures (above and below ground) on the property, including their purpose(s). [\[help\]](#)

None

16. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

From Chelan travel 30 miles northwest by boat or plane to the Prince Creek alluvial fan log storage site located 0125 miles west of the Prince Creek Campground.

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number ENV 021-09 rev. 09/2015



WASHINGTON STATE
Joint Aquatic Resources Permit
Application (JARPA) [\[help\]](#)

AGENCY USE ONLY

Date received: _____; Town
 Application Fee Received; Fee N/A
 New Application; Renewal Application
Type/Prefix #: _____; NaturE Use Code: _____
LM Initials & BP#: _____
RE Assets Finance BP#: _____
New Application Number: _____
Trust(s): _____; County: _____
AQR Plate #(s): _____
Gov Lot #(s): _____
Tax Parcel #(s): _____

Attachment E:
Aquatic Use Authorization on
Department of Natural Resources
(DNR)-managed aquatic lands [\[help\]](#)

Complete this attachment and submit it with the completed JARPA form only if you are applying for an Aquatic Use Authorization with DNR. Call (360) 902-1100 or visit www.bit.ly/dnr_aquatic_lease for more information.

- DNR recommends you discuss your proposal with a DNR land manager before applying for regulatory permits. Contact your regional land manager for more information on potential permit and survey requirements. You can find your regional land manager by calling (360) 902-1100 or going to http://www.dnr.wa.gov/Publications/aqr_land_manager_map.pdf. [\[help\]](#)
- The applicant may not begin work on DNR-managed aquatic lands until DNR grants an Aquatic Use Authorization.
- Include a \$25 non-refundable application processing fee, payable to the “Washington Department of Natural Resources.” (Contact your Land Manager to determine if and when you are required to pay this fee.) [\[help\]](#)

DNR may reject the application at any time prior to issuing the applicant an Aquatic Use Authorization. [\[help\]](#)

1. Applicant Name (Last, First, Middle)	
Grover Wier, Kari	
2. Phone Number and Email	
509-682-4900 kgroverwier@fs.fed.us	
3. Which of the following applies to Applicant? Check one and, if applicable, attach the written authority – bylaws, power of attorney, etc. [help]	
<input type="checkbox"/> Corporation <input type="checkbox"/> Limited Partnership <input type="checkbox"/> General Partnership <input type="checkbox"/> Limited Liability Company Home State of Registration: _____	<input type="checkbox"/> Individual <input type="checkbox"/> Marital Community (Identify spouse): _____ <input checked="" type="checkbox"/> Government Agency <input type="checkbox"/> Other (Please Explain): _____

4. Washington UBI (Unified Business Identifier) number, if applicable: [help]
5. Are you aware of any existing or previously expired Aquatic Use Authorizations at the project location?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't know If Yes, Authorization number(s):
6. Do you intend to sublease the property to someone else?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No A portion of the project area known as Driftwood Bay is under a special use permit to the Lake Chelan Boat Club from the Okanogan – Wenatchee N.F. However, the Forest Service retains all landowner rights to the property and will temporarily suspend/close use of these facilities to provide for public safety. Location is on National Forest Lands and State of Washington Lands (DNR). (See Appendix A (pg. 25) & Appendix D (pg. 44) for documentation of land status from Leland Fischer, PLS.)
7. If fill material was used previously on DNR-managed aquatic lands, describe below the type of fill material and the purpose for using it. [help]
N/A

To be completed by DNR and a copy returned to the applicant.

Signature for projects on DNR-managed aquatic lands:

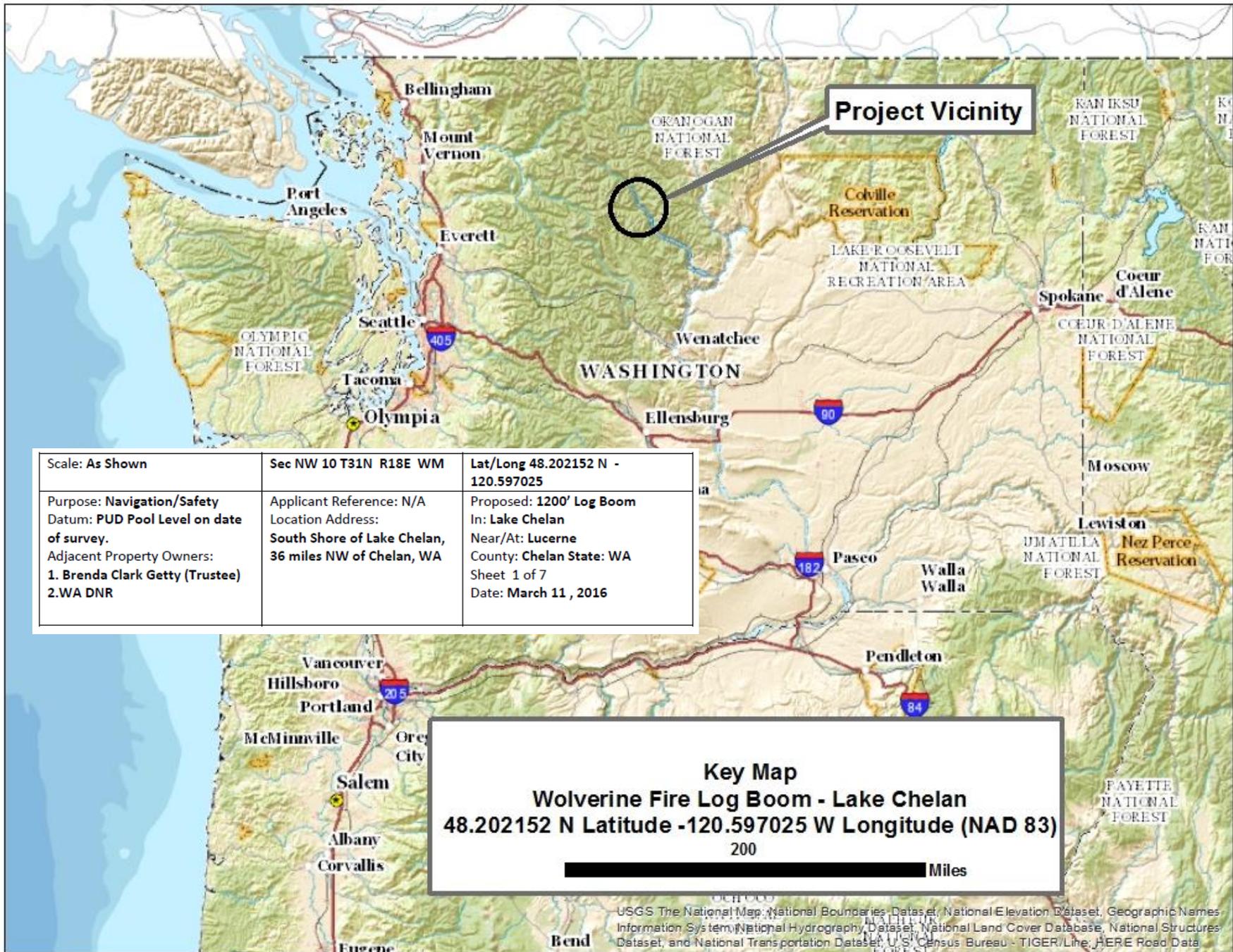
Applicant must obtain the signature of DNR Aquatics District Manager OR Assistant Division Manager if the project is located on DNR-managed aquatic lands.

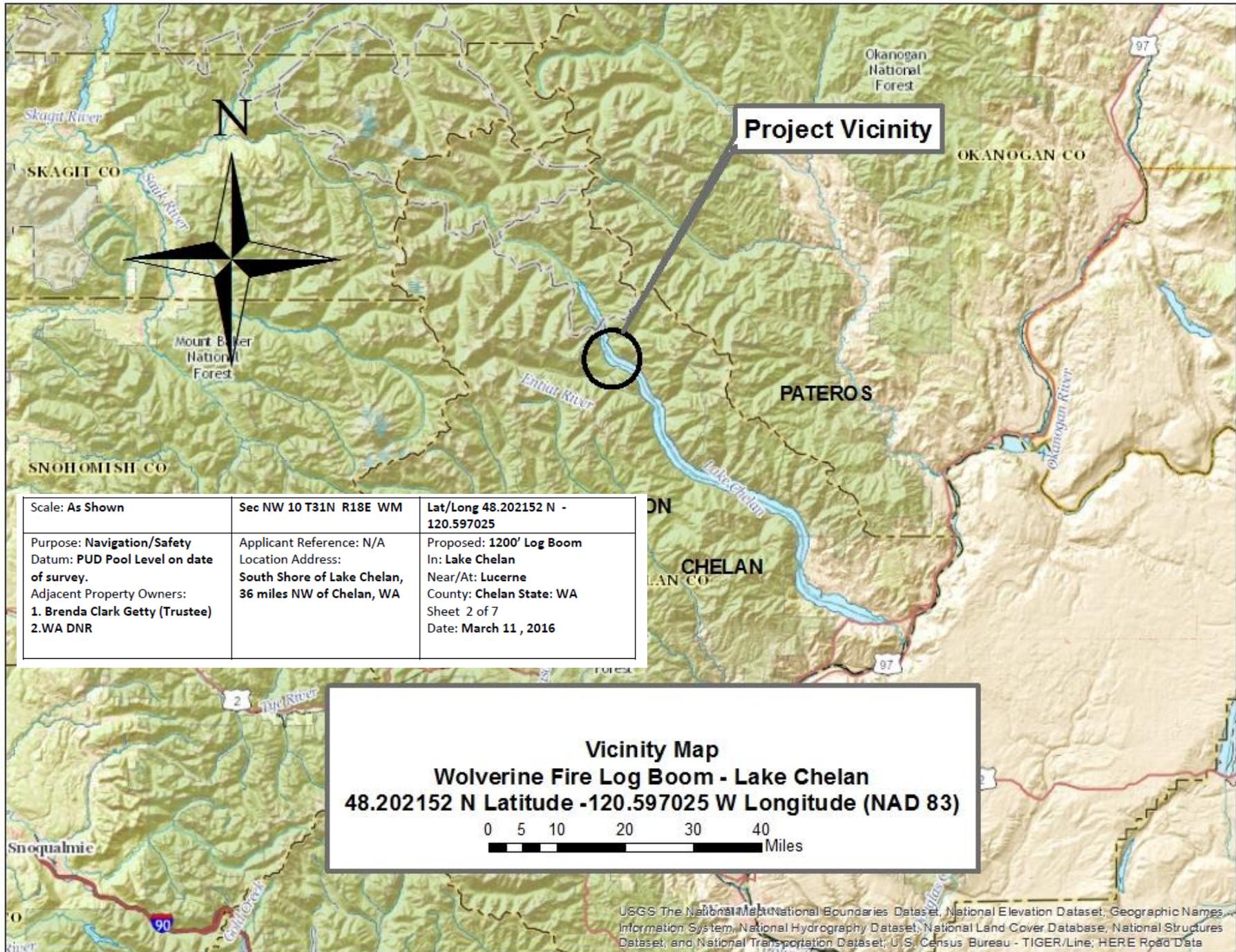
I, a designated representative of the Dept. of Natural Resources, am aware that the project is being proposed on Dept. of Natural Resources-managed aquatic lands and agree that the applicant or his/her representative may pursue the necessary regulatory permits. My signature does not authorize the use of DNR-managed aquatic lands for this project.

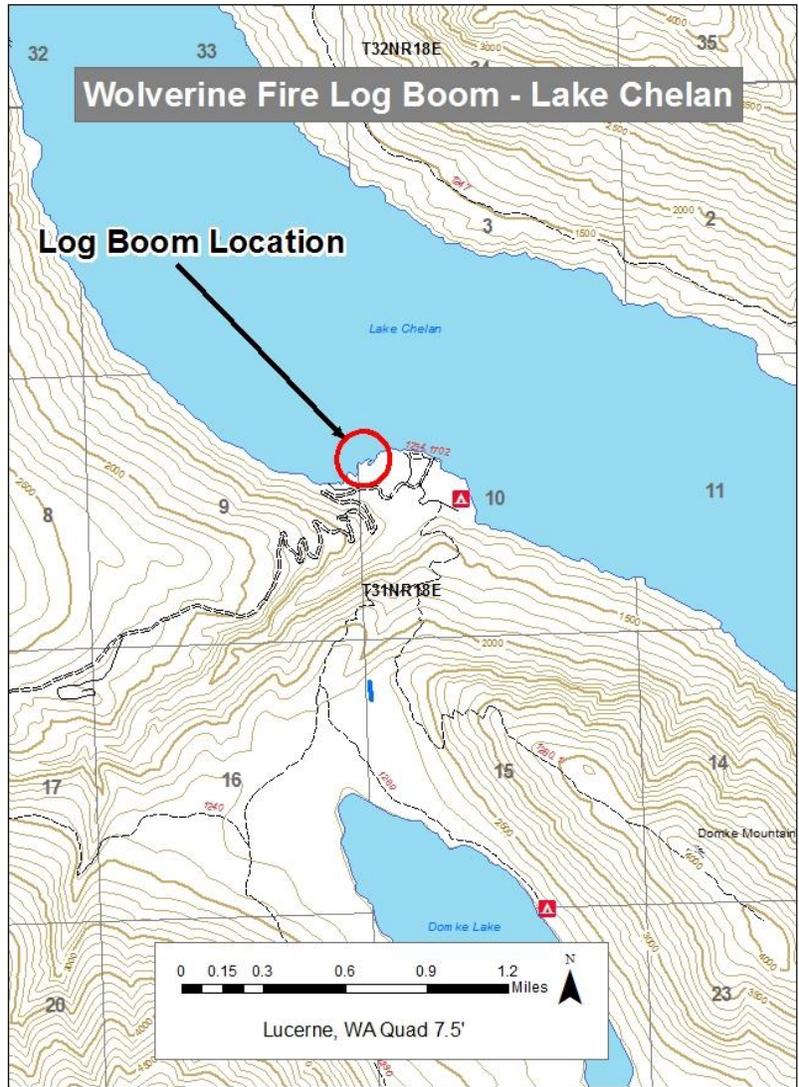
Printed Name	Signature	
Dept. of Natural Resources District Manager or Assistant Division Manager	Dept. of Natural Resources District Manager or Assistant Division Manager	Date

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341.
ORIA Publication ENV-049-12 rev. 08/2013

APPENDIX A: Required Maps & Drawings

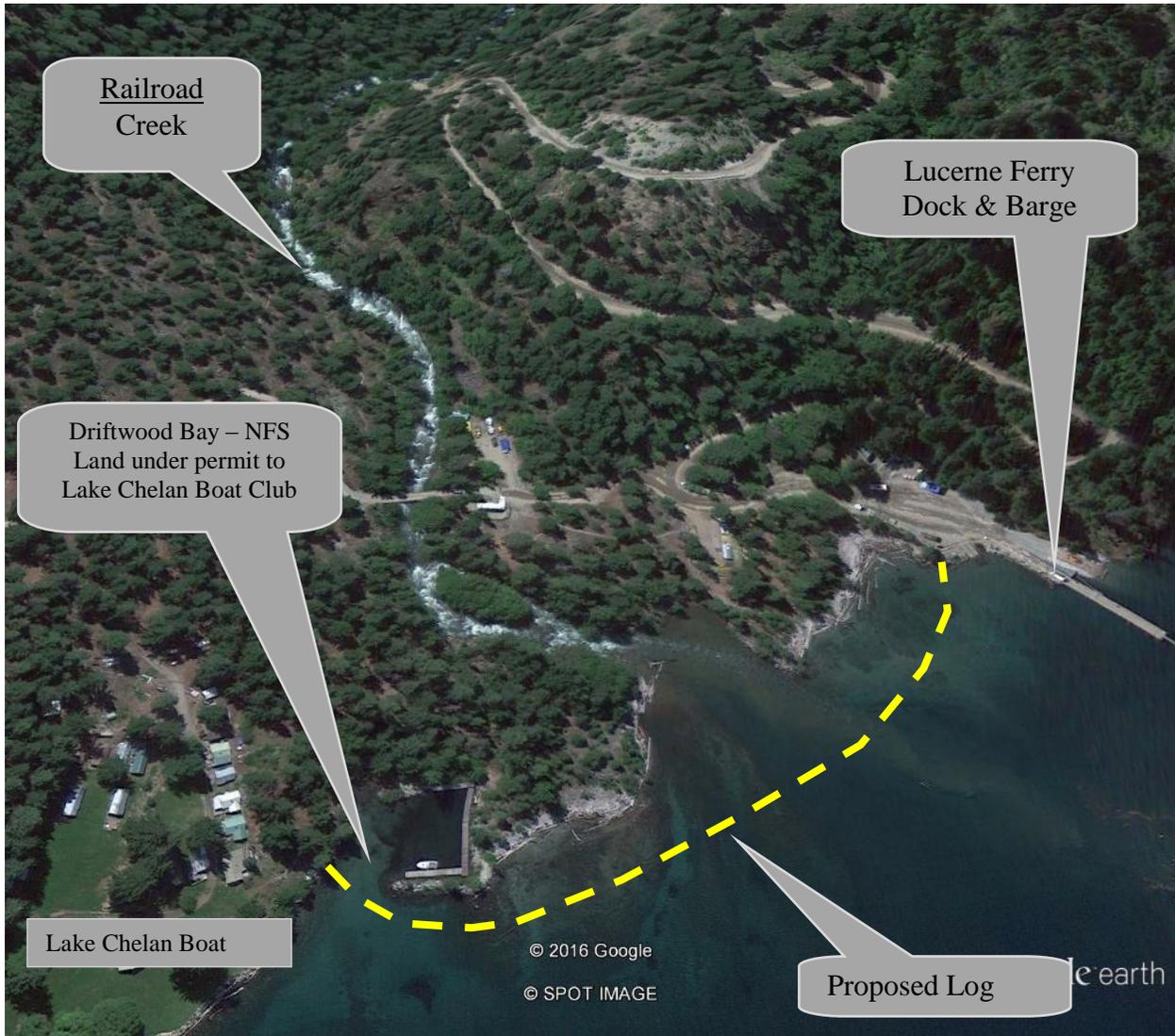






Scale: As Shown	Sec NW 10 T31N R18E WM	Lat/Long 48.202152 N - 120.597025
Purpose: Navigation/Safety Datum: PUD Pool Level on date of survey. Adjacent Property Owners: 1. Brenda Clark Getty (Trustee) 2. WA DNR	Applicant Reference: N/A Location Address: South Shore of Lake Chelan, 36 miles NW of Chelan, WA	Proposed: 1200' Log Boom In: Lake Chelan Near/At: Lucerne County: Chelan State: WA Sheet 3 of 7 Date: March 11, 2016

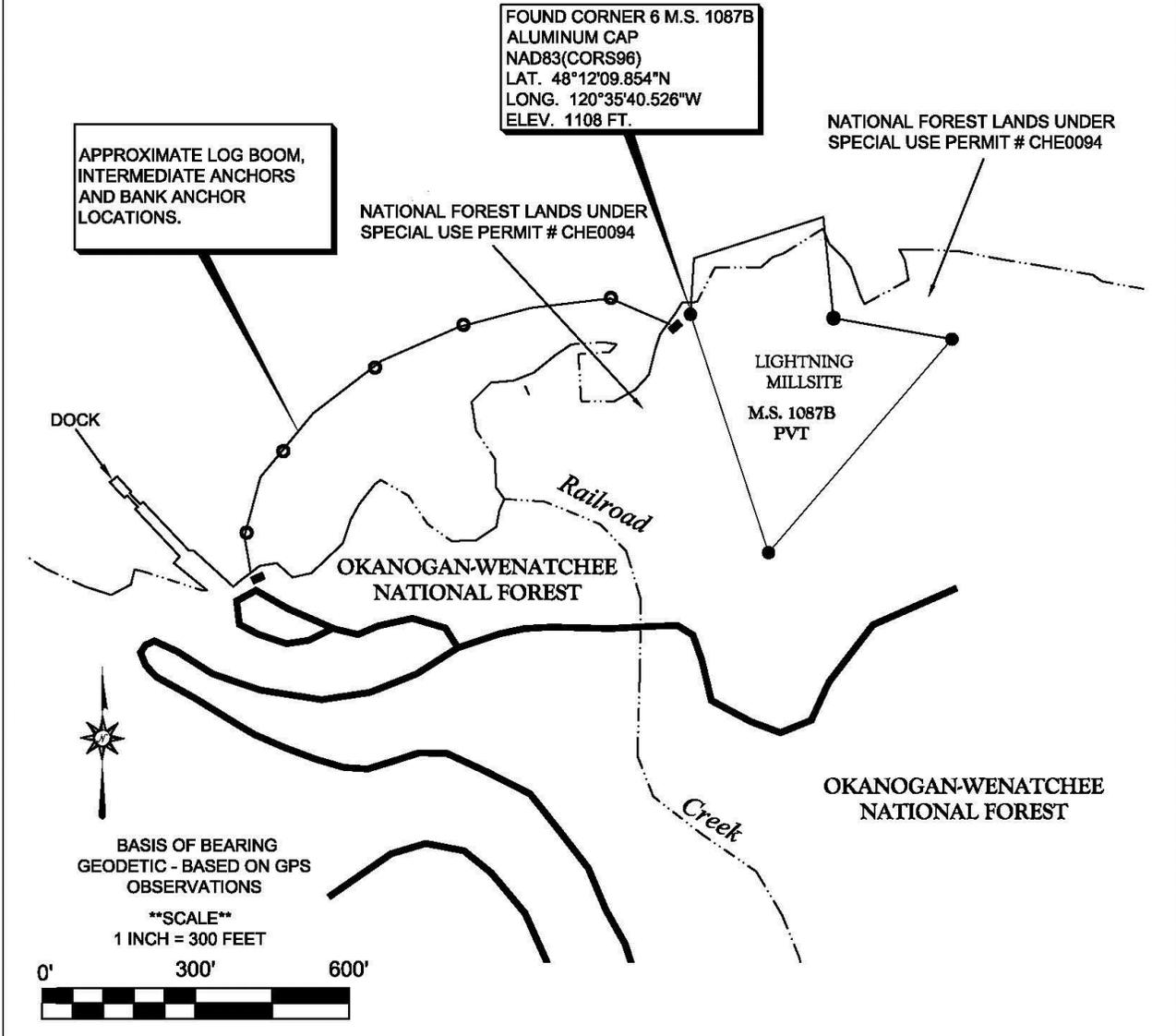
Wolverine Fire Log Boom – Lake Chelan



Aerial View of Project Area

Scale: As Shown	Sec NW 10 T31N R18E WM	Lat/Long 48.202152 N - 120.597025
Purpose: Navigation/Safety Datum: PUD Pool Level on date of survey. Adjacent Property Owners: 1. Brenda Clark Getty (Trustee) 2.WA DNR	Applicant Reference: N/A Location Address: South Shore of Lake Chelan, 36 miles NW of Chelan, WA	Proposed: 1200' Log Boom In: Lake Chelan Near/At: Lucerne County: Chelan State: WA Sheet 4 of 7 Date: March 11 , 2016

RAILROAD CREEK
T. 31 N., R. 18 E., SEC. 10 (PB 44)
TYPICAL SHEET #1



Scale: As Shown	Sec NW 10 T31N R18E WM	Lat/Long 48.202152 N - 120.597025
Purpose: Navigation/Safety Datum: PUD Pool Level on date of survey. Adjacent Property Owners: 1. Brenda Clark Getty (Trustee) 2. WA DNR	Applicant Reference: N/A Location Address: South Shore of Lake Chelan, 36 miles NW of Chelan, WA	Proposed: 1200' Log Boom In: Lake Chelan Near/At: Lucerne County: Chelan State: WA Sheet 5 of 7 Date: March 11, 2016

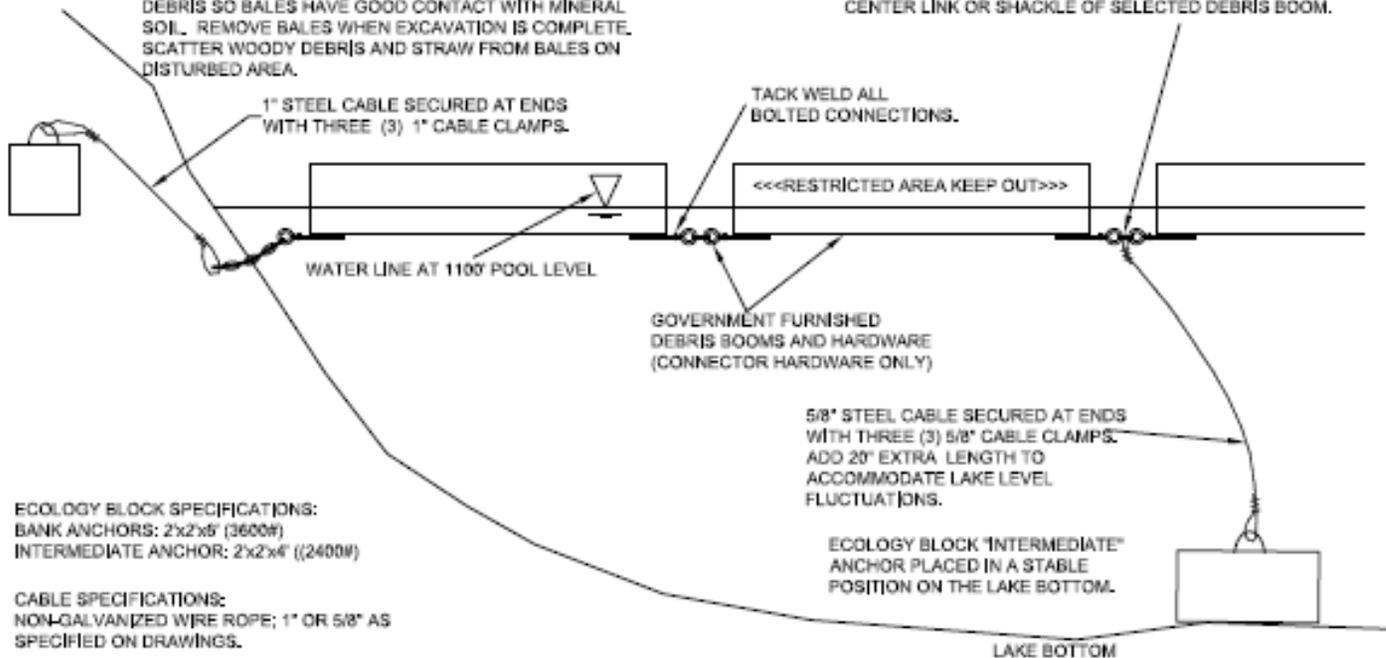
DEBRIS BOOM ANCHORING DETAIL

TYPICAL SHEET # 2

ECOLOGY BLOCK "DEADMAN" BURIED 10' TO 20' LANDWARD OF 1100' ELEVATION. BURY BLOCK 2' DEEP PERPENDICULAR TO SHORELINE. PLACE LARGE BOULDERS ON TOP OF SOIL TO COMPLETE ANCHOR. INSTALL ACTUAL LOCATIONS WILL BE APPROVED BY THE COR PRIOR TO PLACEMENT.

PRIOR TO EXCAVATION PLACE 4 STRAW BALES END TO END BETWEEN EXCAVATION PIT AND SHORELINE TO PREVENT SEDIMENT FROM ENTERING THE LAKE. REMOVE WOODY DEBRIS SO BALES HAVE GOOD CONTACT WITH MINERAL SOIL. REMOVE BALES WHEN EXCAVATION IS COMPLETE. SCATTER WOODY DEBRIS AND STRAW FROM BALES ON DISTURBED AREA.

INTERMEDIATE ANCHORS (ECOLOGY BLOCKS) TIED TO CENTER LINK OR SHACKLE OF SELECTED DEBRIS BOOM.



ECOLOGY BLOCK SPECIFICATIONS:
 BANK ANCHORS: 2x2x5' (3600#)
 INTERMEDIATE ANCHOR: 2x2x4' ((2400#)

CABLE SPECIFICATIONS:
 NON-GALVANIZED WIRE ROPE; 1" OR 5/8" AS SPECIFIED ON DRAWINGS.

5/8" STEEL CABLE SECURED AT ENDS WITH THREE (3) 5/8" CABLE CLAMPS. ADD 20" EXTRA LENGTH TO ACCOMMODATE LAKE LEVEL FLUCTUATIONS.

ECOLOGY BLOCK "INTERMEDIATE" ANCHOR PLACED IN A STABLE POSITION ON THE LAKE BOTTOM.

Scale: As Shown	Sec NW 10 T31N R18E WM	Lat/Long 48.202152 N - 120.597025
Purpose: Navigation/Safety Datum: PUD Pool Level on date of survey. Adjacent Property Owners: 1. Brenda Clark Getty (Trustee) 2. WA DNR	Applicant Reference: N/A Location Address: South Shore of Lake Chelan, 36 miles NW of Chelan, WA	Proposed: 1200' Log Boom In: Lake Chelan Near/At: Lucerne County: Chelan State: WA Sheet 6 of 7 Date: March 11, 2016



Scale: As Shown	Sec NW 32 T31N R18E WM	Lat/Long 48.146102 N - 120.497432
Purpose: Log Storage Datum: PUD Pool Level on date of survey. Adjacent Property Owners: 1. WA DNR	Applicant Reference: N/A Location Address: South Shore of Lake Chelan, 30 miles NW of Chelan, WA	Proposed: Log Storage In: Lake Chelan Near/At: Lucerne County: Chelan State: WA Sheet 7 of 7 Date: March 11 , 2016

**APPENDIX B:
TRIBAL SCOPING, CULTURAL RESOURCE SURVEY
REPORT, NHPA SECTION 106 COMPLIANCE**

File Code: 2360
Date: September 28, 2015

JoDe L. Goudy
Business Council Chairman
Yakama Nation
P.O. Box 151
Toppenish, WA 98948

Dear Chairman Goudy,

The Okanogan-Wenatchee National Forest has endured numerous large and small scale wildland fires on multiple ranger districts this fire season. As a result of these fires, the Forest formed a Burned Area Emergency Response (BAER) team to evaluate the impacts of the fires on forest resources and the risk management needs to protect life and property. This team included resource specialists and Geographic Information Systems specialists. The team recently completed risk management assessments for resources in the Wolverine, First Creek, Black Canyon, Twisp and Limebelt fire perimeters. The team identified effects to forest resources in five "2500-8 Reports" attached to this letter. These 2500-8 reports are initial requests for monetary funding from our Regional Office. This funding will be used for resource protection and mitigation of fire damage identified in those reports. BAER treatments are considered emergency actions so some treatments may begin as soon as funding is approved by our Regional Office.

In accordance with the National Historic Preservation Act (NHPA) of 1966, as amended, and our Programmatic Agreement with the State Historic Preservation Officer regarding the management of cultural resources on National Forests in Washington State (1997), an assessment of fire effects to cultural resources was part of the BAER team analysis. Each Heritage BAER report documents the preliminary rapid assessment of effects to National Register listed, eligible, or unevaluated sites within each fire perimeter. Fortunately, no cultural resources were identified that need BAER treatment. A copy of those reports will be sent to your THPO and to Mr. Meninick.

The value of consultation and collaboration with American Indian Tribes is fully recognized by the Forest Service and affirmed through Executive Order 13175 "Consultation and Coordination with Indian Tribal Governments" (2000). If you have any cultural resource information or concerns regarding the enclosed reports, please contact Powys Gadd, Forest Archacologist at 509-664-9394.

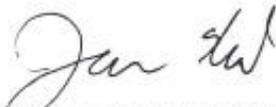


JoDe L. Goudy

2

Please contact me if you would like to meet to discuss our BAER plans further. Because BAER identifies emergency treatments, a timely response to this letter would be appreciated.

Sincerely,



Fo MICHAEL R. WILLIAMS
Forest Supervisor

Enclosures: 2500-8 Reports (5)



United States
Department of
Agriculture

Forest
Service

Okanogan-Wenatchee National Forest

215 Melody Lane
Wenatchee, WA 98801
509-664-9200
FAX: 509-664-9280

File Code: 2360
Date: September 28, 2015

Jim Boyd
Business Council Chairman
Confederated Colville Tribes
P.O. Box 150
Nespelem, WA 99155

Dear Chairman Boyd,

The Okanogan-Wenatchee National Forest has endured numerous large and small scale wildland fires on multiple ranger districts this fire season. As a result of these fires, the Forest formed a Burned Area Emergency Response (BAER) team to evaluate the impacts of the fires on forest resources and the risk management needs to protect life and property. This team included resource specialists and Geographic Information Systems specialists. The team recently completed risk management assessments for resources in the Wolverine, First Creek, Black Canyon, Twisp and Limebelt fire perimeters. The team identified effects to forest resources in five "2500-8 Reports" attached to this letter. These 2500-8 reports are initial requests for monetary funding from our Regional Office. This funding will be used for resource protection and mitigation of fire damage identified in those reports. BAER treatments are considered emergency actions so some treatments may begin as soon as funding is approved by our Regional Office.

In accordance with the National Historic Preservation Act (NHPA) of 1966, as amended, and our Programmatic Agreement with the State Historic Preservation Officer regarding the management of cultural resources on National Forests in Washington State (1997), an assessment of fire effects to cultural resources was part of the BAER team analysis. Each Heritage BAER report documents the preliminary rapid assessment of effects to National Register listed, eligible, or unevaluated sites within each fire perimeter. Fortunately, no cultural resources were identified that need BAER treatment. A copy of those reports will be sent to your THPO.

The value of consultation and collaboration with American Indian Tribes is fully recognized by the Forest Service and affirmed through Executive Order 13175 "Consultation and Coordination with Indian Tribal Governments" (2000). If you have any cultural resource information or concerns regarding the enclosed reports, please contact Powys Gadd, Forest Archaeologist at 509-664-9394.

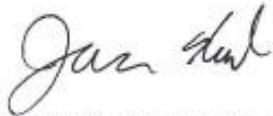


Jim Boyd

2

Please contact me if you would like to meet to discuss our BAER plans further. Because BAER identifies emergency treatments, a timely response to this letter would be appreciated.

Sincerely,



✶ MICHAEL R. WILLIAMS
Forest Supervisor

Enclosures: 2500-8 Reports (5)

R20160617020XX

APPENDIX A
NHPA Section 106 Compliance Documentation
Literature Review or Previous Survey to Current Standard Undertaking Only (No Field Inventory)

Report Number: R20160617020XX
Ranger District: Chelan
County: Chelan
Report Date: 3/10/2016
Author and Title (CRS, CRT): Paul Willard, Resource Assistant and Archaeologist
Project Name/Report Title: Wolverine Fire Log Boom
Primary Purpose or Job Code: H6JU8916

Project Description: The project involves installation and maintenance of a woody debris retention boom ("log boom") across the mouth of Railroad Creek. Additionally, an approximately 400 foot section of boom will be staged on shore at Lucerne and deployed via boat to collect wood from nearby drainages if they have a significant blowout. Log booms will be constructed using brown/orange TUFFBOOM barriers that are made with an impact resistant polyethylene outer shell with a closed cell foam interior. Each TUFFBOOM section is 10' long, 16" diameter and weights 141 lbs. Sections are connected with heavy steel hardware. The log booms, which are currently stored at Lucerne Landing, will be assembled on site.

Work below the OHWM: The estimated finished boom length is 1,200', which includes placement of 12 ecology block anchors on the lake bottom (State owned aquatic Lands) at 100' intervals for intermediate anchor points. Each intermediate anchor will measure 2'x2'x4' and weigh 2400 pounds. Anchors will be attached to the log booms with 5/8" steel cable secured at ends with 5/8" cable clamps. Anchors will be placed in a stable position on the lake bottom.

Work shoreward of OHWM: Work includes burial of a single ecology block anchor to serve as a "dead man" anchor for each end of the boom. The anchor will be buried 2 feet below the ground surface and 10 to 20 feet shoreward of OHWL using a backhoe or small excavator. Each bank anchor will measure 2'x2'x6' and will weigh 3600 pounds. The anchors will be attached to the boom by means of 1" cable and boom chain.

Maintenance of for all log boom appurtenances including anchors, cables, tuff boom attachments will be completed by personnel for up to five years. Log Booms will be monitored and inspected to insure the structure remains operational. At the end of the 5-year period all log boom infrastructure will be removed.

Legal Description:

¼ Section	Section	Township	Range
Railroad Creek NW 1/4	10	T31N	R18E

USDA Forest Service
Okanogan-Wenatchee National Forest

USGS Quadrangle Name: Lucerne

Project Planning Acres: <1

Description of the Area of Potential Effect (APE): The APE is comprised of the two deadman anchor locations and locations that intermediate anchors will be placed on the surface of the lakebed. See attached drawing.

Literature Review (List References Reviewed) and Results:

Report Title: Lake Chelan FERC Erosion Control FY 2010: Domke and Lucerne Bar Report #: R2010061702001
This report, authored by Powys Gadd, provided a comprehensive literature review of cultural resources near the shoreline of Lake Chelan on the Lucerne Bar. Additionally, Forest Archaeologist Powys Gadd visited the proposed boom location in February 2016.

Previously Documented Sites or Isolated Finds Present (Y/N)? Yes

If present, list and describe sites and isolates:

Site 06170200001 –The National Register listed Lucerne Guard Station is located approximately 1/8th of a mile from the project area. The guard station was constructed by the Civilian Conservation Corps in 1938-39. The site consists of a single story, wood frame house and a pump house. The site was listed on the National Register in 1991.

Site 06170200124 – Located just north of the Lucerne Guard Station in the lake shore, this site is a former helispot with historic trash and lithic debitage. Historic artifacts consist largely of building materials and household items. Lithic materials are present within the historic debris scatter and include flakes and a possible scraper. The historic component of the site dates from 1890 to present. The helispot cultural resource site is already partially buffered from the lake by existing riprap.

Sites/Isolates to be Avoided (Y/N)? Yes. All sites will be avoided.
(If No, Contact Forest Archaeologist)

Hours Spent Working on This Project Consultation:

CRT: 2

CRS:

<p>Pursuant to the 1997 Programmatic Agreement regarding The Management of Cultural Resources on National Forests in Washington State, a qualified Forest Cultural Resource Specialist recommends cultural resource clearance for the project with a determination of "NO EFFECT"</p> <p>_____ Yes _____ No _____ Date: _____</p> <p>_____ Cultural Resource Specialist Signature</p> <p>Comments:</p>	
--	--

Report has been submitted to SHPO as a no effect. The project will not proceed until the Forest Service receives concurrence from the Washington State Historic Preservation Office.



United States
Department of
Agriculture

Forest
Service

Pacific
Northwest
Region

P. O. Box 3623
Portland, OR 97208-3623
333 S.W. First Avenue
Portland, OR 97204

File Code: 2360
Route To:

Date: FEB 12 1998

Subject: Programmatic Agreement Regarding Cultural Resource Management on NF's in the State of Washington

To: Forest Supervisors, Washington NF's

Enclosed is a signed copy of the Programmatic Agreement regarding the Management of Cultural Resources on National Forests in the State of Washington. This agreement is a result of negotiation between the Region, Washington State Historic Preservation office, and the Advisory Council on Historic Preservation. It is designed to facilitate timely decision-making on all types of land and resource undertakings, incorporate on-going program shifts within the Heritage Program, and consolidate and expand existing agreements regarding the identification, evaluation, and treatment of cultural resources.

To utilize this agreement, Forests must maintain a "Qualified Program" consisting of a Forest Heritage Specialist (specialist), a current Forest Inventory Design, and a records system that is compatible with SHPO's records system. The agreement specifies what constitutes adequate public and Tribal participation, and the means by which objections to measures taken under the agreement can be addressed by interested persons and Tribes. The agreement was designed, primarily, to provide new direction for the Specialist in the determination of the Area of Potential Effect, eligibility of historic properties, and in the application of the criteria of effect (36 CFR Part 800).

The agreement distinguishes between Standard Case-by-Case Review and Programmatic Review. Standard Review follows the direction found in 36 CFR Part 800, but places more responsibility on the Specialist and SHPO on all findings, save for Determinations of Adverse Effect. Programmatic Review introduces two categories of undertakings (listed in Appendices A and B), that can be subjected to "No Effect" findings with either no additional inventory, or inspection and/or monitoring. The Specialist must make the determination as to whether an undertaking qualifies for programmatic review and must then document that decision. Reports for each programmatically reviewed undertaking will no longer be submitted to SHPO for comment, but a summary will be included in an annual monitoring report. This will enable agency Specialists and SHPO to focus time and energy on undertakings which have a potential to effect heritage resources.

If you have any questions, please contact Jim Keyser, of my staff, (503-808-2405) or J.Keyser:R06c.

fn
Robert W. Keyser
KIMBERLY EVART BOWN
Director of Recreation, Lands, and
Mineral Resources

Enclosure

cc:
RLM (J.Keyser); Umatilla NF (T.Fulgham)



APPENDIX C: BIOLOGICAL ASSESSMENT

Due to the 'no effect' determination there is no letter of concurrence from the USFWS. There was no consultation with NOAA Fisheries because no 'listed' anadromous species are native to Lake Chelan.

Biological Assessment for Selected Forest Management Activities on the Okanogan-Wenatchee National Forest

I. Project Description

Project Title: Railroad Creek Log Boom

Project Description (provide a detailed description, using the space below or attach separately):

The project involves installation and maintenance of a floating woody debris retention boom ("log boom") across the mouth of Railroad Creek. The log boom will be assembled on site. Following installation by contractor, log booms will be maintained by the Forest Service for a period of 5 years after which the structures will be removed. Installation, maintenance and removal of log booms to be performed by contractor using barge and tender with crane and by FS personnel using agency boats and hand tools. Any logs captured in the boom as a result of flooding/debris flows will be retrieved via a barge with an excavator with a "thumb". Harvested logs will be transported to Prince Creek alluvial fan at a previously utilized log storage area.

Work waterward of OHWL:

- Placement of a 1,200' floating log boom as shown in plans.
- Boom sections are impact resistant polyethylene outer shell with closed cell foam interior. Each boom section is 10' long, 16" diameter and weights 141 lbs.
- Placement of 12 ecology blocks on lake bottom at intervals for boom anchor points. Ecology blocks will be lowered from a floating barge. Ecology blocks dimensions are 2'x2'x4' and weigh 2400 lbs. each. Blocks will be attached to the log booms with 5/8" steel cables and clamps.
- Maintain log boom hardware/structure over a five-year period with hand tools/small boats.
- Remove boom structure/ecology blocks at the end of five-year period.

Work shoreward of OHWL:

- Placement of two shoreline anchors for log booms.
- Each anchor includes burial of a single ecology block located 20+/- feet shoreward of OHWL to serve as a "dead man".
- Anchors will be buried two feet below the ground surface via a backhoe or excavator.
- Anchors will measure 2'x2'x6', weigh 3600 lbs., and be attached to the log booms with 1" steel cable and clamps.
- Maintain anchor hardware/structure over a five-year with hand tools.
- Remove anchor structure at the end of five-year period.

Project Information

- Elevation range: 1100 -1110 above sea level Acres treated: .03
- Miles of road: 0 Motorized trail: 0 Non-motorized trail: 0
- Project will result in noise equal to ambient, or X above ambient conditions (intermittent machinery noise, dampened by the noise of Railroad Creek spring run-off and ongoing heavy machinery associated with nearby barge ramp operations).
- Number of structures created 1 (Temporary) and number of danger trees felled 0
- Implementation dates (mm/dd/yy) and duration of project activity:
From: 4/15/2016 – 4/20/2016 Duration: Boom Install estimated at 3-5 total working days.

Project Location (include vicinity map):

District: Chelan Ranger District

Fifth Field Watershed & HUC code: Lake Chelan 1702009002

Lat/Long: 48° 12' 07.07" x 120° 35' 48.39" Datum: N/A

II. Consistency: Indicate project consistency with the General Requirements and Conservation Measures by circling Yes, No, or N/A, and document consistency on a separate page.

1) Are activities lawful?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
2) Are actions consistent with the ONF LRMP or the WNF LRMP, as amended by the NWFP?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
a. Are activities consistent with the ACS?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
b. Have surveys for rare and uncommon species been completed?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
c. If suitable habitat is present in the project area, have surveys for proposed, endangered and threatened plants been conducted prior to the implementation of ground-disturbing activities?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
3) Are activities in LSR and/or MLSA consistent with guidance from the ONF LSRA and the WNF LSRA? Activities are along the Lucerne LSR boundary but will not impact any habitat.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Will activities result in reductions of late-successional security habitat?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
For silvicultural activities, is the project "beneficial to the creation of late-successional forest conditions?" (ROD C-12)	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
For non-silvicultural activities, is the project "neutral or beneficial to the creation and maintenance of late-successional habitat?" (ROD C-16)	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
4) Are activities consistent with:			
a. PACFISH?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
b. INFISH?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
c. Eastside Screens?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
5) Are activities consistent with findings/direction of the applicable watershed BA and environmental baseline?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
6) Are activities consistent with all recovery plans, conservation strategies, agreements and forest direction for listed species?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
a. Conservation Agreement for <i>Delphinium viridescens</i> ?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
b. Canada Lynx Conservation Assessment and Strategy, Conservation Agreement?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
c. North Cascades Ecosystem Grizzly Bear Recovery Plan, including:			
• Activities will maintain the interim management directive of "no net loss" of core area for grizzly bears?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
• Sanitation direction?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
7) Will activities within critical habitat for spotted owl degrade ¹ habitat?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
Will activities alter, remove, or reduce the constituent elements of critical habitat (either NRF or dispersal habitat) to the point where habitat will be downgraded ² or lost?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
Will activities preclude future development of constituent elements in critical habitat?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
8) Have necessary timing restrictions and conservation measures been incorporated into project design (see Tables 2 to 5). There are no spotted owl nests within 0.25 miles or any known dens or rendezvous sites in the vicinity, timing restrictions are unnecessary.	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
9) Will activities result in an increase of human capacity at the site, excluding the time necessary to complete the project?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
10) Has a "Recreation Cumulative Effects Analysis" (Gaines et al. 2003) been completed for the project area?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
11) Do recreational activities authorized by special use permit, such as group events or outfitted and guided recreation, comply with all Forest Orders and Special Orders relating to recreational activity on the OWNFs?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
12) Will activity result in public motorized use of existing closed roads that do not have a history of motorized use?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
13) Will treatment sites along roads designated as permanently closed through the Forest Travel Plan or current EA's be accessed by either walking (if the closure prohibits motorized use), or as determined by current road use policy in the North Cascades Grizzly Bear Recovery Plan?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
14) Will project activities result in a "May Affect, Likely to Adversely Affect" determination through direct, indirect, interrelated/interdependent, or cumulative effects?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A

¹ - A "degrade" of spotted owl habitat reduces habitat quality but retains its function (i.e., habitat classification is unchanged)

² - A "downgrade" of spotted owl habitat reduces quality and function (e.g., habitat previously classified as suitable is downgraded to dispersal)

III. Species Effects Summary

A. Fisheries

List program- and project-specific conservation measures from the Programmatic BA that were applied to this project to avoid and minimize effects:

- **Upper Columbia River Spring Chinook salmon (*Oncorhynchus tshawytscha*) and Upper Columbia River steelhead (*Oncorhynchus mykiss*):** The Chelan Ranger District is the northernmost Ranger District on the Wenatchee National Forest. The land administered by the Chelan Ranger District primarily drains into Lake Chelan. The Lake drains through the Chelan River into the Columbia River. The Chelan River flows through a steep gorge that is a natural barrier to anadromous fish (R2 and IA 2000). The present Chelan Dam was completed in 1928 and raised the normal high water of the Lake approximately 24 feet (Brown 1984). Steelhead and spring Chinook are not native to Lake Chelan (Hillman and Giorgi 2000) and even with the dam removed would not be able to colonize the Lake or its tributary streams.
- **Columbia River Bull trout (*Salvelinus confluentus*):** The USFWS determination of Threatened Status for the Columbia River Distinct Population Segment of Bull Trout final rule (Federal Register/Vol. 63, No. 111/June 10, 1998) stated that bull trout are thought to have been extirpated in 10 streams within the Mid-Columbia River geographical area including Lake Chelan (p. 31651). The most recent Bull Trout Core Area Conservation Status Assessment (USFWS 2005) categorized Chelan subbasin bull trout as "likely extirpated". The Lake Chelan basin is not designated as critical habitat in the January 13, 2010, USFWS proposed critical habitat revision.

If any aquatic habitat effects occur, briefly describe (quantitatively, if possible) project activities and effects within:

Riparian Reserves:

Channel Migration Zones:

Inner Gorges:

Wetted Channels:

The proposed activity will have conservation measures and BMPs in place that will not retard or prevent attainment of ACS objectives.

Aquatic Environmental Baseline and Effects

Most Recent Watershed BA/Environmental Baseline and Date: Fisheries BA for Outfitter Guide Permits on the Chelan Ranger District, February 2006.

Checklist for documenting environmental baseline and effects of proposed action(s) on relevant indicators
(These are the indicators that could be affected in the Forest Programmatic)

DIAGNOSTICS/ PATHWAYS:	POPULATION AND ENVIRONMENTAL BASELIN			EFFECTS OF THE ACTION(S)				
	INDICATORS	Functioning Appropriately	Functioning At Risk	Functioning at Unacceptable Risk	Restore ¹	Maintain ²	Degrade ³	Compliance with ACS
Population Characteristics: population Size	NA-ST,SC,BT							
Growth and Survival	NA-ST,SC,BT							
Life History Diversity/Isolation	NA-ST,SC,BT							
Persistence/Genetic Integrity	NA-ST,SC,BT							
Water Quality: Temperature	X							
Sediment	X							
Chem. Contam./Nutrients	X							
Habitat Access: Physical Barriers	X							

Habitat Elements: Substrate Embeddedness	X						
Large Woody Debris	X						
Off-channel Habitat	X						
Refugia ⁴	X						
Channel Cond. & Dynamics: Streambank Condition	X						
Flow/Hydrology: Change in Peak/Base Flows	X						
Watershed Conditions: Riparian Reserves	X						
Integration of Species and Habitat Conditions	NA						

Overall Effects Determination

	Middle Columbia River Steelhead	Upper Columbia River Steelhead	Upper Columbia River Spring Chinook	Essential Fish Habitat	Bull trout Columbia River DPS
Species, CH ¹ , or EFH potentially affected (check all that apply)	NA	NA	NA	NA	NA
Life stages: egg, fry, juvenile, sub-adult, adult (list all stages that apply)	NA	NA	NA	NA	NA
Life history type: fluvial, migratory	NA	NA	NA	NA	NA
Habitat function (spawning, rearing, holding, migration, overwinter)	NA	NA	NA	NA	NA
Magnitude of effects	NA	NA	NA	NA	NA
Probability of effects	NA	NA	NA	NA	NA
Overall Effects Determination ³	NE	NE	NE	NE	NE

¹ CH = Proposed or designated critical habitat; EFH = Essential Fish Habitat

² Magnitude = Severity and intensity of effects; Probability = Likelihood of occurrence of effect

³ NE (No Effect), MANLAA (May Affect, Not Likely Adversely Affect), MANLAA-BE (May Affect, Not Likely Adversely Affect - Beneficial Effect).

B. Plants

	Showy Stickseed (<i>Hackelia venusta</i>)	Ute Ladies' tresses (<i>Spiranthes diluvisalis</i>)	Water howellia (<i>Howellia aquatilis</i>)	Wenatchee Mountains checker-mallow (<i>Sidalcea oregana</i> var. <i>calva</i>)	Designated Critical Habitat for <i>Sidalcea oregana</i> var. <i>calva</i>
Miles to nearest known occupied habitat (x.x miles)	>10	>10	>10	>10	>10
Potentially suitable habitat in project area? (Y/N)	N	N	N	N	N
Plant surveys conducted? (Y/N)	N	N	N	N	N
Acres of potentially suitable habitat to be disturbed?	0	0	0	0	0
Effects Determination:	NE	NE	NE	NE	NE

Project site is located underwater.

III. Species Effects Summary, Continued
 C. Wildlife

	Circle One or Answer
What is the distance between activity and nearest, a. nest, activity center or unsurveyed suitable habitat for spotted owl? Chelan RD has consistently surveyed this area as part of the Holden Mine Remediation work. No spotted owls have been located. b. nest, activity center or unsurveyed suitable habitat for marbled murrelet?	<400m <input checked="" type="radio"/> <400m <400m <input checked="" type="radio"/> <400m
What is the site number (SO-xxx)/CHU number (WA-xx) within 400m of activity?	na
Project results in habitat degradation only, not a loss of habitat functions	Yes No <input checked="" type="radio"/> NA
Will activity occur within ungulate winter range?	Yes <input checked="" type="radio"/> No
Has an active den or rendezvous site been located?	Yes <input checked="" type="radio"/> No
Will aircraft be used within, a. 1 km of active nest, activity center whose current status is unknown, or any unsurveyed suitable habitat for • spotted owl? • marbled murrelet?	Yes <input checked="" type="radio"/> No Yes <input checked="" type="radio"/> No
Is project in Grizzly Bear Recovery Zone?	<input checked="" type="radio"/> Yes No
Will project Increase/Decrease/Not Affect core area?	I D <input checked="" type="radio"/> NA
Effects Determination: a. Canada lynx b. Gray wolf c. Grizzly bear d. Marbled murrelet e. Spotted owl f. Spotted owl – critical habitat g. wolverine	<input checked="" type="radio"/> NE MANLAA BE <input checked="" type="radio"/> NJ NLJCE BE
Dock repair will result in no effects to habitat. Additionally, ongoing work to install a barge ramp for Holden Mine remediation creates noise that will make it extremely difficult to distinguish the dock repair work. The additional noise is therefore inconsequential and will have no effect.	

Enter the acres of spotted owl habitat degraded by land allocation and CHU: 0

Identify which CHUs and LSR/MLSA are affected: Within (on boundary of) Lucerne LSR. Along boundary of CHU07, Subunit ECN2. No habitat will be affected.

Prepared by: /s/ Emily Johnson Title: Fisheries Biologist Date: 03/11/2016

Prepared by: /s/ Brigitte Ranne Title: Botanist Date: 03/11/2016

Reviewed by: /s/ Jesse McCarty Title: Wildlife Biologist Date: 03/14/2016

APPENDIX D: Additional Information
Log Boom Photo, FS Property Ownership

Worthington | TUFFBOOM

Features (At-A-Glance)

- Heavy-wall impact resistant polyethylene with max. UV resistance.
- Unsinkable solid internal core of non-water absorbing foam fill. Maintains buoyancy even when punctured.
- High load bearing internal steel channel provides strength and ballast, resists horizontal and vertical loads.
- GreenLink™ Hardware for superior connection integrity.
- Zero Gap built in design between units.
- Connections designed for continuous motion and heavy loads.
- Mold-In Graphics™ with standard or customized warnings.
- Exceptional debris load capacity.
- Available in International Orange, Safety Yellow, Log Boom Brown, Forest Green, Black, White, Red, Navy Gray, Sand Tan.
- High Visibility, high buoyancy for maximum freeboard visibility.
- Anchor components designed to site specific conditions.
- Assembles easily with little or no equipment required.
- Thousands of units installed worldwide with proven results.

Quick Specifications

Diameter:	16" (40.6 cm)
Single Float Length:	120 in (3.05m)
Center-Center Length:	136 in (3.45m)
Weight (dry):	141 lbs. (64 kg)
Buoyancy:	700 lbs. (317 kg)
Freeboard:	12" (30.5 cm)
Design Strength:	47 kips
Spacing Between Units:	11" (27.9 cm)



Worthington Products Inc.
3405 Kuemerle CT NE
Canton, OH 44705

Tel: +1.330.452.7400
Fax: +1.330.452.7495
Email: sales@tuffboom.com

GSA Contract Holder

www.tuffboom.com

15 years, 50 countries, *One* Company



Date: March 14, 2016

Subject: Federal Land Ownership Lucerne (Log Boom) and Prince Creek

Lucerne

The Federal Land ownership of Fractional Sections 9 and 10, of un-surveyed Township 31 North, Range 18 East, Willamette Meridian, are National Forest, established from the Forest Reserve Act of 1897 and Executive Order of 1908.

In 1915 a patent (Pat No. 493628) was issued for Mineral Survey 1087B which is situated in a portion of both Sections 9 and 10.

To address the question regarding land ownership in the NE1/4, Section 9 and NW1/4, Section 10, it is determined that this land is National Forest System Land (NFSL), with the exception of the Patented Mineral Survey noted above.

From the information provided to me, I have determine that the proposed debris booms (Log Booms) to be installed at the mouth of Railroad Creek, will be anchored to upland National Forest System Lands (NFSL) and will not encumber the private ownership in the area. Additionally the NFSL ownership extends to the original ordinary water line of Lake Chelan being at an elevation of 1079 ft. The full pool of Lake Chelan is at the elevation of 1100 feet.

Note that the ownership of land below the 1079 ft. elevation of Lake Chelan is assumed and asserted to be Washington State, 1889.

Prince Creek

The log boom storage area at Prince Creek is in Section 32, Township 31 North, Range 19 East, which is a Fractional un-surveyed section in a mostly un-surveyed Township. The ownership of Section 32 is National Forest System land and extends down to the original ordinary water line of Lake Chelan being at an elevation of 1079ft. The ownership below the 1079 ft. elevation is assumed and asserted to be State Lands.

Leland D. Fischer, PLS
Land Surveyor