



U.S.D.A. FOREST SERVICE
 COLUMBIA RIVER GORGE NATIONAL SCENIC AREA
 902 WASCO AVENUE, SUITE 200
 HOOD RIVER, OR 97031

Telephone: 541-308-1700
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Columbia River Gorge National Scenic Area PROJECT REVIEW APPLICATION

DATE OF APPLICATION:

APPLICANTS	PROPERTY OWNERS
Kris Homel Chum Salmon Reintroduction Coordinator Oregon Department of Fish and Wildlife	U.S.D.A Forest Service
MAILING ADDRESS	MAILING ADDRESS
Oregon Department of Fish and Wildlife Western Region Office 17330 SE Evelyn Street Clackamas, OR 97015	COLUMBIA RIVER GORGE NATIONAL SCENIC AREA 902 WASCO AVENUE, SUITE 200 HOOD RIVER, OR 97031
APPLICANT'S SIGNATURE AND DATE	PROPERTY OWNER'S SIGNATURE AND DATE
<i>Kristen Homel 29 April, 2016</i>	
PHONE: 503 910 3091	PHONE:
E-MAIL: Kristen.m.homel@state.or.us	E-MAIL:
LOCATION OF PROPERTY (Township, Range, Section, Quarter Section and Tax Lot)	PROPERTY ADDRESS (If Applicable)
Location of piezometers and Pit/ pump sites are listed in Table 1. Associated tax lot information is listed in Table 2 and on Figure 5.	NA
PARCEL SIZE (ACRES):0.0094 acres	COUNTY, STATE: Multnomah County, OR
EXISTING LAND USE:	

PROJECT DESCRIPTION: Describe your proposed project, including details (plans, elevations, and/or photos) on structures to be built, location and types of utilities and infrastructure, drainfields, accessory buildings, ground leveling, and filling, or any other relevant activity or mitigation measures proposed. Use additional sheets as necessary:

INTRODUCTION —

In 2014, the Oregon Department of Fish and Wildlife (ODFW) completed a chum salmon reintroduction plan that detailed the specific actions required to rebuild chum salmon populations in the Oregon portion of the Lower Columbia River ESU. In the Lower Gorge Population (from the Sandy River Delta to Bonneville Dam), co-managed with Washington Department of Fish and Wildlife (WDFW), the main objectives are to (1) create a protected spawning channel with the capacity to support spawning by 500 pairs of chum salmon, (2) to improve access to existing habitat, and (3) to implement additional habitat restoration actions. Collectively these actions, in conjunction with similar actions conducted by WDFW on the WA side of the lower gorge, are designed to increase the probability of persistence for the Lower Gorge Population to “Very High.” The first step in this plan for ODFW is to identify if there is a suitable location on the Sandy River Delta for construction of a protected spawning channel. Three potential locations were identified using ground surveys and LIDAR (contributed by the Lower Columbia Estuary Partnership; LCEP). A hydrologic assessment is required to identify which site has the greatest potential to function as a spawning channel. This project proposal covers test pits, pump tests, and groundwater assessments in two channel sites to aid in future development of 30% designs for channel sites. Subsequently, land managers, ODFW, and WDFW will select the most optimal channel location and funding requests will be submitted to generate a 90% design, secure permits, and initiate construction and operation of the spawning channel.

PROJECT GOALS —

This project will determine the hydrological feasibility of constructing a spawning channel for chum salmon. The eventual spawning channel project will result in adding at least 1,000 square meters of high quality habitat capable of supporting spawning by 500 pair of chum salmon.

PROJECT ACTIVITIES —

(1) Groundwater pump tests:

Groundwater pump tests will be performed in order to determine availability and transmissivity of groundwater in order to characterize the potential for upwelling conditions. Pump tests will require access with a small excavator to dig holes necessary for pump testing. Pump test procedures will be conducted based on established protocols and prior Inter-Fluve experience. Groundwater flow at a number of different drawdown elevations will be determined.

- a. A 28,000 lb track excavator (equivalent to Caterpillar 321c) will be used for excavation of the pits. Each pit will measure 4' X 50' and depth will be 2- 15', depending on the level at which groundwater is encountered.

- b. Pit excavation, pump testing, and pit refill (using the same sediments previously excavated) will occur within the same day during October.
- c. Wildlife will be moved from excavator path and dig sites by trained ODFW professionals.
- d. One pit/pump site will be located on an upland site (test pit # 2 on attached map) and the other is on a borderline wetland site (test pit #1). For test pit #1, vegetation and soil data collected in an informal wetland delineation confirm that the site is most likely a wetland and will be treated as 100% wetland.

(2) Water level monitoring wells:

Groundwater level monitoring (piezometers) and surface water stage recorders will be installed as necessary at each site to map the groundwater table and the relationship with surface water (river) stage throughout the year. Continuously recording data loggers (e.g. HOBO U20 loggers) will be installed at each monitoring station. Water level monitoring stations will be surveyed in using a Total Station and/or Survey-Grade GPS equipment. Piezometer data will help determine the potential for upwelling conditions and will also provide valuable design information for future potential design and implementation of these projects.

- a. Piezometers will be installed using the excavator (where piezometer sites are connected by blue lines in Figure 1) or by hand (where sites are connected by an orange line in Figure 1).
- b. Surface water stations will be installed by pounding a t-post into the sediment and affixing a vertical PVC pipe that contains the water height logger.
 - i. The pipe color will be black to minimize the visual impact
- c. Seven piezometer sites (P1, P2, P4-P8) are in wetland areas and the remaining are in upland areas.

WETLAND IMPACTS —

The impacts associated with conducting pit/pump tests and installing and removing piezometers in wetland areas are temporary and will result in no conversion of wetland to upland. The total displacement (removal and fill) in wetland areas may range from 25-60 cubic yards. If the excavation depth in test pit #1 is < 1 yard, the total displacement in wetland areas would be < 50 y³.

VISIBILITY OF PROJECT —

In the scenic area checklist, we noted that this project will be visible from Highway 84 during the 2-3 days when pit/ pump test work occurs. Piezometer locations could also be seen from the Sandy River or the Columbia River. It is unlikely that piezometers would be able to be seen from other locations as they will protrude from the ground at a height below existing vegetation. Anywhere that piezometers

could be seen from the Columbia River or the Sandy River, effort will be taken to disguise the appearance of the piezometer. Options include using black PVC or covering the PVC with camouflage material.

CALCULATING AREA OF IMPACT/ PARCEL AREA —

Total parcel area for this project was calculated by estimating a 1 ft² area of impact for piezometers installed by hand (n = 10), 200 ft² impact for each pit site (n = 2), and 8 ft² for piezometers installed using the excavator (n = 2). Note: piezometer #6 and #9 are installed in the pits as they are being refilled. The total impacted area is 426 ft² which equates to 0.0094 acres.

PROJECT MAPS —

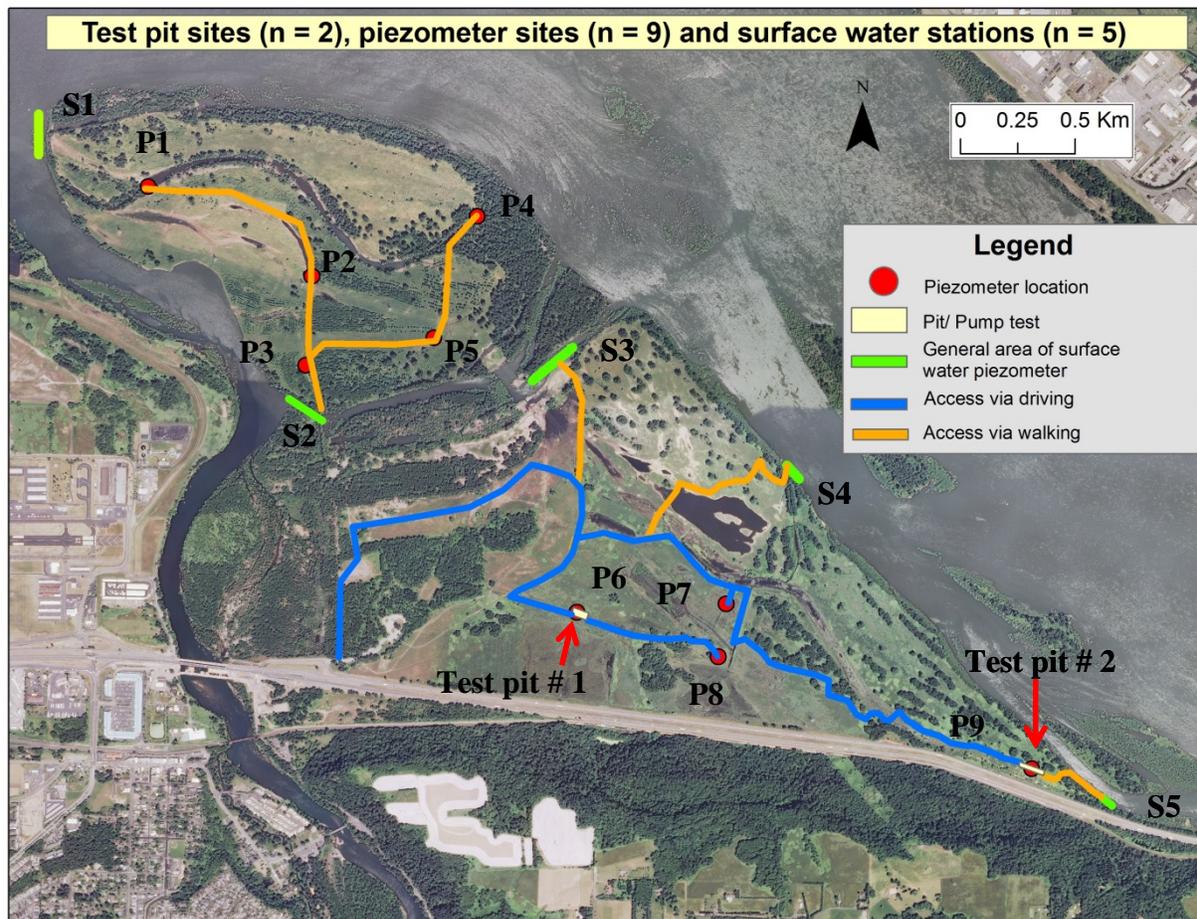


Figure 1. Test pit sites, piezometer sites (p1-p9), surface water stations (s1-s5), and access path for hydrological testing in the Sandy River Delta, OR, 2015.



Figure 2. Piezometer and trench (pit) detail around site 1 Sandy River Delta, OR, 2015.



Figure 3. Piezometer and trench (pit) detail around site 2 Sandy River Delta, OR, 2015.

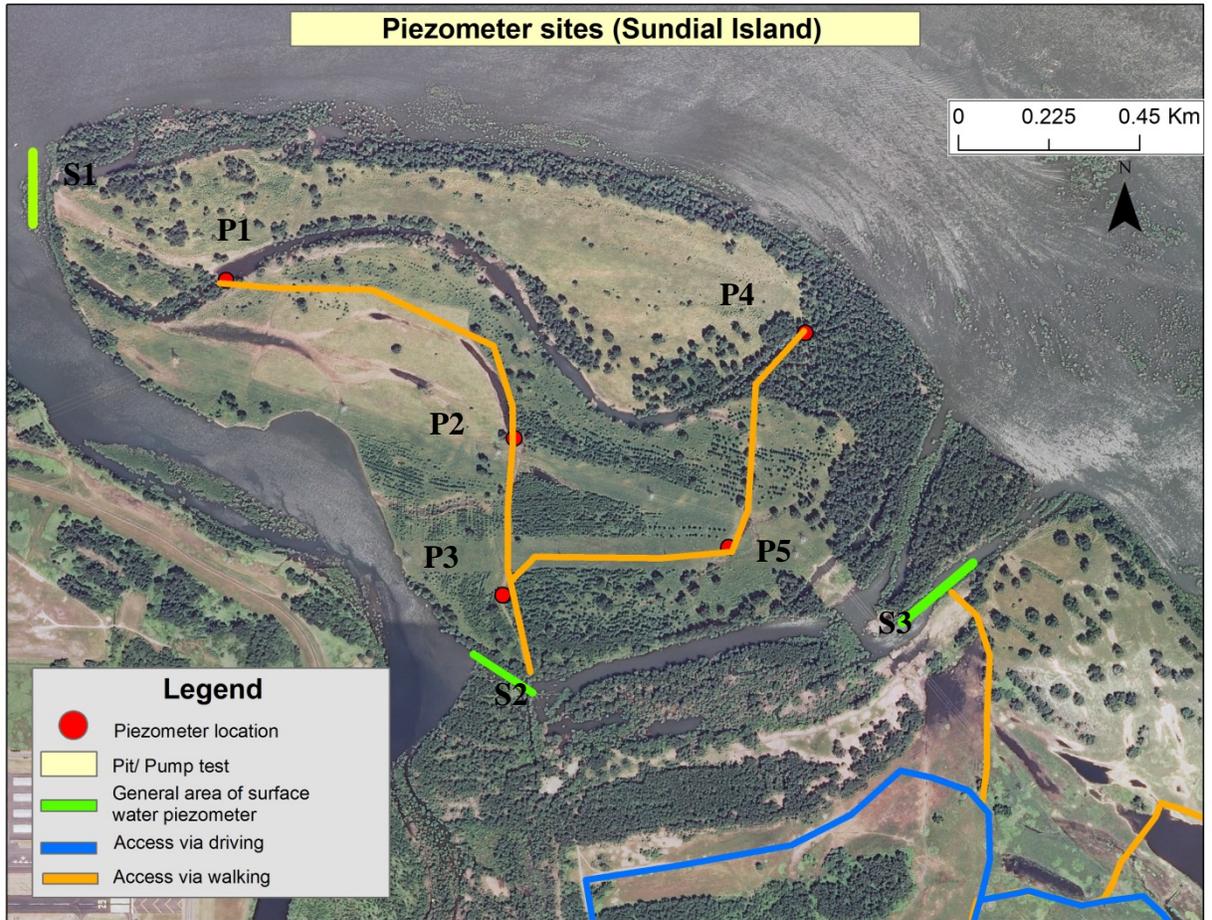


Figure 4. Piezometer sites on Sundial Island, OR 2015.

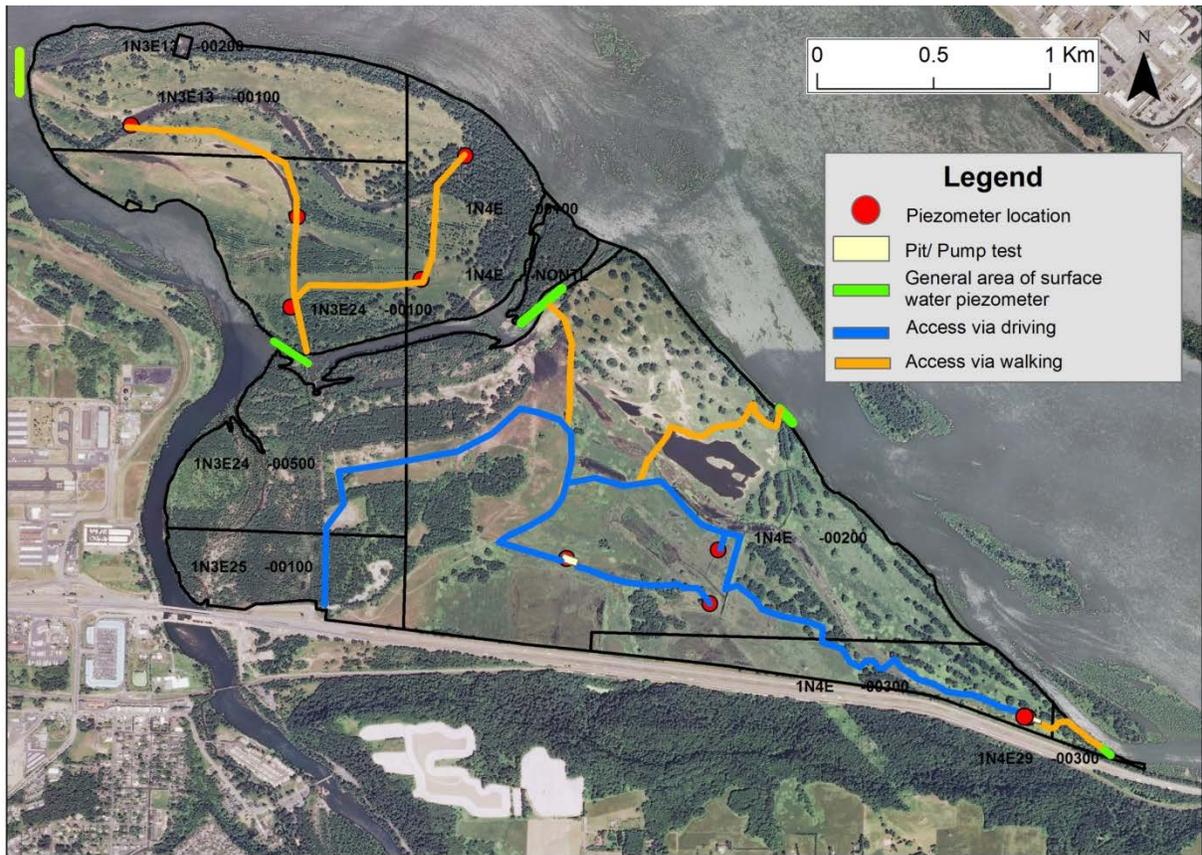


Figure 5. Tax lot map for Sandy River Delta and Sundial Island study area, OR, 2015.

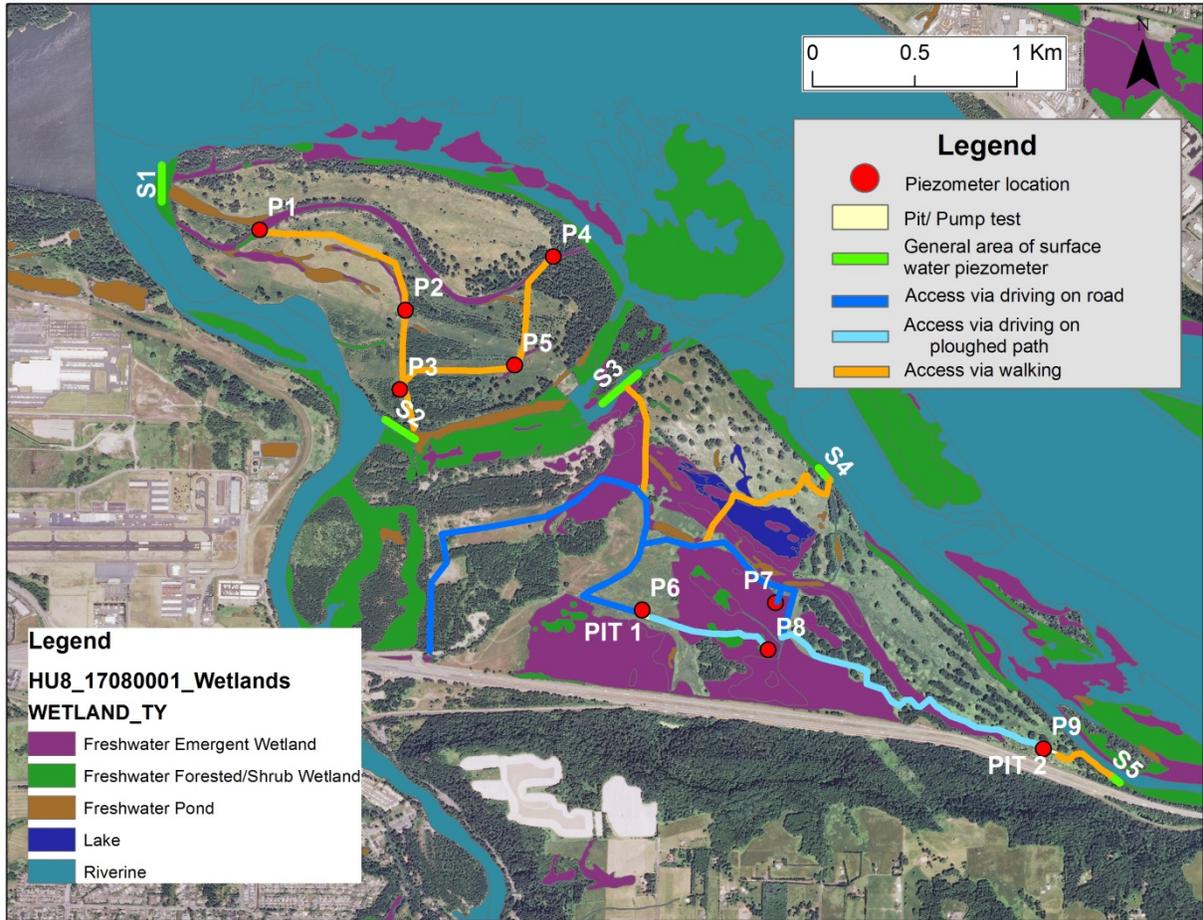


Figure 6. National Wetland Inventory map overlapped with project sites occurring on wetland. Pit site #1 is considered to be on a borderline wetland area. Piezometers 1, 2, 4, 5, 6, 7, and 8 are also on wetlands.

PHOTOS FROM INFORMAL WETLAND DELINEATION —



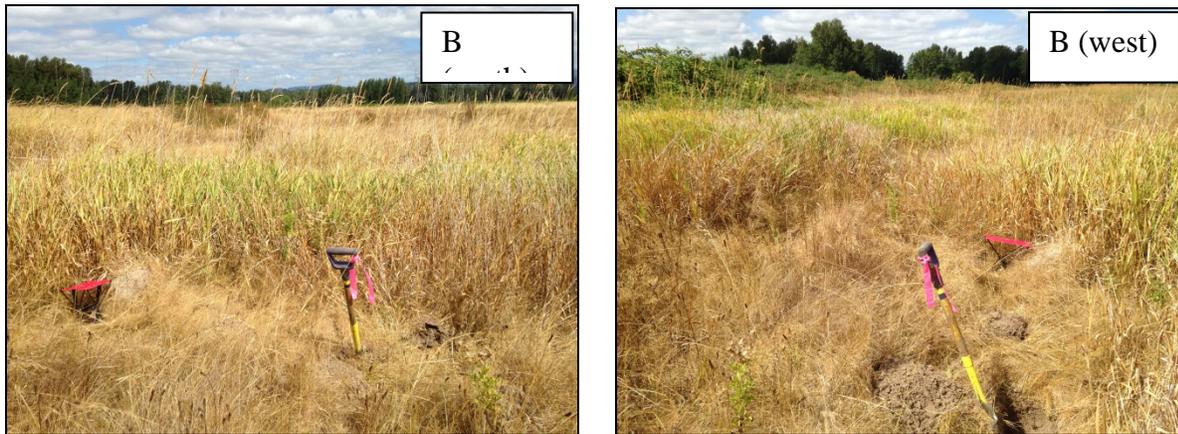


Figure 7. Photos taken at informal wetland delineation plot sites A and B for pit site #1 on the Sandy River Delta, 21 August, 2015. Note: wetland data and photos were taken during abnormally dry conditions.

LOCATION OF PIEZOMETERS, PITS, AND ASSOCIATED TAXLOTS —

Table 1. Coordinates of piezometers, surface water sites, and pit/pump sites in Nad83, zone 10.

Site	Northing (meters)	Easting (meters)
P1	425414	252587
P2	425017	253301
P3	424620	253285
P4	425282	254031
P5	424758	253841
P6/ test pit 1	423557	254465
P7	423583	255100
P8	423340	255084
P9/ test pit 2	422885	256439
S1	425631	252110
S2	424430	253264
S3	424647	254391
S4	424176	255386
S5	422715	256778

Table 2. Tax lots associated with hydrological assessment sites and access

Tax lot	Activities occurring within tax lot
1N3E13-00100	1 sundial island piezometer, 1 surface water level station
1N3E24-00100	2 sundial island piezometers, 1 surface water level station
1N4E -00100	2 sundial island piezometers
1N3E24-00500	Driving excavator on road
1N3E25-00100	Driving excavator on road
1N4E -00200	Trench site 1, 3 piezometers, 2 surface water level stations
1N4E -00300	Trench site 2, 1 piezometer
1N4E29-00300	Walking access to piezometer site

Additional Sheets Attached

APPLICATION CHECKLIST: The following is required to complete your application

- Application form completed and signed by applicant and property owner
- Completed Site Plan
- Key viewing areas checklist (attached)
- Names and addresses of adjacent property owners within 200 feet of parcel
- Any additional information as required:

KEY VIEWING AREAS: Key viewing areas are important public viewpoints and areas that afford opportunities to view the Gorge scenery. Key viewing areas are listed below. Please check those sites which can be seen from your property.

- X Historic Columbia River Highway
- X Sandy River
- Portland Women's Forum State Park
- Crown Point
- Rooster Rock State Park
- Multnomah Falls
- Larch Mountain
- X Highway I-84, including rest stops
- Bonneville Dam Visitor Centers
- Sherrard Point on Larch Mountain
- Rowena Plateau/Nature Conservancy Viewpoint
- Larch Mountain Road
- Wyeth Bench Road
- County Road 1230 (Old WA St. Route 14)
- Washington State Route 14
- Washington State Route 142
- Washington State Route 141
- Cook-Underwood Road
- Dog Mountain Trail
- Beacon Rock
- Cape Horn
- X Columbia River
- Pacific Crest Trail
- Oregon Highway 35

PROJECT SITE PLAN: A plan drawn in black ink at a scale of about 1 inch equal to 200 feet (1:2400) or at a scale providing greater detail must be included with the application.

If the parcel is very large, you may show the project on the portion of the parcel affected by the proposed use. Be sure, however, to show enough of the parcel or some adjacent features, such as roads, so that the reviewers can orient themselves on your map. A small vicinity map showing the subject parcel and surrounding parcels may help.

At a minimum, you must show the following features:

Applicant(s) name

Location and width of existing and proposed roads, driveways, and trails

Scale and north arrow

Location and size of existing and proposed structures

Boundaries of parcel with dimensions and size

Location of existing and proposed services including wells or other water supplies, structures, power and telephone poles and lines and outdoor lighting.

Significant terrain features or landforms

Location and depth of all proposed grading and ditching

Groupings and species of trees or other vegetation on the parcel

Location and species of vegetation that would be removed or planted

Water courses and bodies of water

**ADJACENT PROPERTY OWNERS AND EXISTING LAND USE
ON ADJACENT PARCELS WITHIN 200 FEET OF PROJECT PROPERTY:**

Township, Range, Section, Tax Lot	Name and Address	Existing Land Use
NA		