STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
September 30, 2008	S2-30493		

NAME
Portac, Inc.

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
4215 State Route 509 North Frontage Road	Tacoma	WA	98421-3998

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Lake Pleasant

TRIBUTARY OF (IF SURFACE WATERS)
Lake Creek

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
3.34		0.09

QUANTITY, TYPE OF USE, PERIOD OF USE
0.09 Acre-feet per year Fire Protection Year-round, as needed

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL
Approximately 1,550 feet west and 420 feet north of the center of Section 35

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SW1/4 NW1/4	35	30	13 W	20	Clallam

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
25	1	Bloedel Donovan Lumber Mills, Lake Pleasant Subdivision of Tyee

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Lot 1 and Lots 12 to 33, including, Block 1, Bloedel-Donovan Lumber Mills, lake Pleasant Subdivision of Tyee and the unplatted portion of NW1/4SW1/4 Section 35, Township 30 North, Range 13 West, W.M., lying and being northerly of the Olympic Highway, exception therefrom the right of way for the railroad known as the Clallam Bay and Southern Railway Company.

If you require this publication in an alternate format, please contact Water Resources at (360) 407-6300, or TTY (for the speech or hearing impaired) 711 or 800-833-6388.

DESCRIPTION OF PROPOSED WORKS

Portac, Inc. has applied for an appropriation of public surface water from Lake Pleasant for purposes of fire protection of the Beaver Lumber Mill. The point of diversion consists of a submerged concrete vault located on the shoreline, with fish screens across the intakes. Two 12-inch pipes convey water from the vault to the adjacent pump house. The pump house contains a primary 125 horsepower (hp) electric pump rated at 1,500 gpm, a 25 hp booster pump to maintain a constant system pressure of 80 pounds per square inch (psi), and a backup 1,500 gpm diesel pump. A 12-inch underground main conveys water from the pump house to 5 sprinkler systems and 4 fire hydrants located throughout the facility grounds.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Complete	Complete	November 2015

REPORT

BACKGROUND:

On September 30, 2008, Gary Takahashi on behalf of Portac, Inc. filed an Application for Permit (S2-30493) with the Washington State Department of Ecology (Ecology) for a water right permit to appropriate public surface water. The applicant requested authorization for an instantaneous diversion (Qi) of 1,500 gallons per minute (gpm) – or 3.34 cubic feet per second (cfs) – and a specified annual quantity (Qa) of 30,000 gallons, or approximately 0.09 acre-feet per year (afy).

Planned use of the appropriation is for fire protection, which includes charging, testing, flushing, and maintaining the fire protection system for the Beaver lumber mill property.

The mill site is located on the southwestern bank of Lake Pleasant, just outside of the Town of Beaver, within the state's Water Resource Inventory Area (WRIA) 20. Notice of the proposed appropriation was published in the *Peninsula Daily News* of Port Angeles, Washington, on July 17 and 24, 2009. No protests were received by Ecology.

Based on the provisions of RCW 43.21A.690 and RCW 90.03.265, this application has been processed by Aspect Consulting, LLC (Aspect Consulting) under Ecology Cost-Reimbursement Assignment No. ASP16 (master contract No. C0500006).

INVESTIGATION:

In consideration of this application, Aspect Consulting reviewed available documents pertaining to the application's site conditions, historical water use, projected water demand, and the potential effect on existing water right holders. This included the information submitted by the applicant and pertinent Ecology records including well logs, water rights records, and well construction reports. The review also included reports from multiple investigations characterizing the hydrogeology and water quality of the Sol Duc River valley, as well as the documents produced under the watershed planning process, including the *Watershed Management Plan* (Golder 2008).

A site visit was performed on June 11, 2009. Tyson Carlson of Aspect Consulting visited the site, including inspection of the point of diversion and place of use and an interview with the applicant.

Using this information, Aspect Consulting evaluated water availability and potential effects of the proposed appropriation on existing groundwater and surface water rights. Each of the four requirements specified in RCW 90.03.290 were individually examined and are presented below.

Project Description

The Application for Permit for Portac, Inc. seeks a water right to divert from Lake Pleasant. The proposed purpose of use is for fire protection of the lumber mill.

Portac acquired the mill in the late 1980s, when the operation was little more than a wood chip producing facility. In 1994 the sawmill was completed. Rough lumber was then trucked to Chehalis where a subcontractor planed and dried the material for shipment. However, to reduce costs, Portac later completed the Fork operation in 1995. The Forks operation took the rough cut lumber from the Beaver lumber mill, planed it into finished lumber, kiln dried it, and shipped it directly to customers. Together the two operations produced an average of 137,000 linear board feet annually and employed an average of 97 full time employees.

Portac recently sold the Beaver lumber mill facility to Interfor Pacific, Inc. Processing of the subject water right application under the Cost Reimbursement Program fulfills obligations specified in the sale agreement.

Site Description

The proposed point of diversion is located just outside of the Town of Beaver, in the southwest quarter of the northwest quarter of Section 35 in Township 30 North, Range 13 West Willamette Meridian.

The point of diversion consists of a submerged concrete vault located on the shoreline, with fish screens across the intakes. Two 12-inch pipes convey water from the vault to the adjacent pump house. The pump house contains a primary 125 horsepower (hp) electric pump rated at 1,500 gpm, a 25 hp booster pump to maintain a constant system pressure of 80 pounds per square inch (psi), and a backup 1,500 gpm diesel pump. A 12-inch underground main conveys water from the pump house to 5 sprinkler systems and 4 fire hydrants located throughout the facility grounds.

Water will be used to charge, flush, maintain, and test the fire protection system which includes:

- An annual flow test of fire pumps (approximately 1,500 gpm for 2-3 minutes each);
- Quarterly hydrant testing (approximately 1,500 gpm for 2-3 minutes each);
- Quarterly sprinkler trip testing (approximately 25 gpm);
- A weekly alarm test (approximately 25 gpm); and
- A 5-year flush (approximately 1,500 gpm).

Other Appurtenant Water Rights

Ecology (2008) has issued a temporary permit authorizing the beneficial use of 1,500 gpm (Qi) and 0.09 afy (Qa) for operation and maintenance of the facility's fire protection system.

Additional fire protection, or the ongoing use of water to reduce fire risks as well as other uses associated with the facility's operation (i.e. dust control, etc) also requires a water right authorization. The mill currently withdraws groundwater for use in fire protection (and other general industrial purposes) from a well under Water Right Claim No. G2-111416CL (originally issued to Peninsula Plywood Corporation). An additional surface water claim (S2-111415CL) is also issued to Peninsula Plywood Corporation. The extent and validity of claims were not evaluated as part of this investigation.

Hydrogeologic/Hydrologic Assessment

The hydrogeology of the Sol Duc River valley is dominated by thick glacial sediments forming a broad valley overlying Miocene and Eocene bedrock (sandstone, shale, and conglomerate). The bedrock structure is the result of northeast trending high-angle strike-slip faults and continued rapid tectonic uplift of the Olympic Mountains. Thick layers of sediment were subsequently deposited in the structural basin by multiple glacier advances and retreats, with the last glaciation retreating approximately 15,000 years ago. It is reported that the valley bottoms along the western side of the Olympic Mountains in WRIA 20 are inundated with several hundred feet of glacial outwash and glaciolacustrine silt deposits (Golder 2008). Since the last glaciation, the Sol Duc River has established a meandering channel across the valley floor, becoming entrenched along several reaches.

WRIA 20 has the highest annual rainfall of any basin in the state, with an average ranging from 80 inches near the coast to 240 inches in the higher elevations of the Olympic Mountains. Flow in the Sol Duc River originates from a combination of snowmelt and rainfall.

Habitat

The mainstem of the Sol Duc River hosts salmonids from the mouth to Sol Duc Falls, nearly 60 miles upstream, with 89 percent of the streams in the watershed providing habitat for anadromous and resident fish species, including Lake Creek. In total, 11 distinct salmonid stocks have been identified in the basin. The health of Sol Duc salmon runs are generally considered to be healthy (Golder 2008).

WDFW operate two fish hatcheries on the Sol Duc River – one at RM 30 (in cooperation with the Quileute Tribe) and another at the Snider Creek confluence (RM 44) in corporation with the Olympic Peninsula Guides Association.

Lake Pleasant

The subject application seeks a permit to divert water from Lake Pleasant. Lake Pleasant is located adjacent to the Sol Duc River at approximate river mile (RM) 30, just outside the town of Beaver, Washington. The lake is perched on the north side of the Sol Duc River valley, just below the prominent ridgeline bounding the valley to the north.

The primary inflow to Lake Pleasant is Upper Lake Creek, originating in the drainage basin located to the northeast. Lower Lake Creek drains Lake Pleasant and flows southwesterly several miles to the confluence with the Sol Duc River. Multiple small unnamed tributaries also contribute water to both Lake Pleasant and Lake Creek.

Lake Pleasant is approximately 499 acres in size, with a maximum depth of 50 feet, impounding nearly 16,000 acre feet of water at a typical stage elevation of 390 feet mean sea level (msl; Wolcott 1973). The approximate elevation of the adjacent reach of the Sol Duc River is 350 feet msl.

Well logs surrounding Lake Pleasant indicate that Lake Pleasant is perched on a thick sequence of silt- and clay-bound sand and gravel. Shallow, perched groundwater is present adjacent to and is likely in continuity with lake. Due to the shallow depth, limited saturated thickness, and relatively fine-grained nature of the soils near the lake, the perched groundwater is not considered a suitable source of water supply. The uppermost groundwater-bearing unit encountered below the lake is approximately 120 feet below ground surface (bgs). Static groundwater levels in this unit are approximately 110 feet bgs or elevation 280 feet msl.

Instream Flow Requirements

No formal instream flow rule has been implemented for WRIA 20. However, surface water source limitations (SWSLs) have been established for the both the Sol Duc River and Lake Pleasant based on letters from Washington Department of Fish and Wildlife (WDFW). In total, two letters have been written for reaches of the Sol Duc River and one for Lake Pleasant.

In addition to SWSLs, several reaches of the Sol Duc River are on the State's 303(d) list as being impaired for temperature, while Lake Creek is listed as being impaired for temperature and dissolved oxygen.

Consultation was completed with both the Quileute Tribe and WDFW. WDFW recommends approval of the subject application, while the Quileute tribe did not comment.

APPLICATION EVALUATION:

This Report of Examination (ROE) evaluates the application based on the conceptual model presented above. To approve the application, Ecology must issue written findings of fact and determine that each of the following four requirements of RCW 90.03.290 has been satisfied:

(1) The proposed appropriation would be put to a beneficial use;
(2) Water is available for appropriation;
(3) The proposed appropriation would not impair existing water rights; and
(4) The proposed appropriation would not be detrimental to the public welfare.

This ROE addresses these subjects in the above referenced order. Fulfillment of the four requirements determines the decision of Ecology.

Beneficial Use

In accordance with RCW 90.54.020(3), the proposed appropriation for fire protection represents a beneficial use of water. This proposed appropriation is the only available source of water for fire protection (and fire fighting) to the facility. As detailed on the Application for Permit, the point of diversion is supported by the necessary infrastructure to deliver water to the facility at the fully requested rate.

Availability

No administrative or regulatory closures are identified that affect the availability of water requested under this application. In addition, no formal instream flow restrictions or closures are present in the basin and diversion of surface water from Lake Pleasant will not have a measureable effect on instream flows in the Lake Creek or the Sol Duc River.

Based on this rationale, we conclude that the quantity of water requested for use in this application is available for appropriation.

Potential for Impairment

RCW 90.03.290 and RCW 90.44.060 require a determination that a new appropriation will not impair existing rights. Lake Pleasant is perched on top of a thick sequence of clay-bound sand and gravel underlying the lake, which provides an effective barrier to hydraulic flow between Lake Pleasant surface water (perched) and surrounding groundwater. As such, groundwater can be considered a different source of water from the lake water. However, based on the continuity of surface water within the lake, all diversion from Lake Pleasant must be considered in the impairment evaluation.

Five surface water right permits and certificates authorize diversions from Lake Pleasant. The water rights are for relatively small quantities, with four being equal to or less than 0.5 afy. The fifth one is for 15 afy supporting an adjacent shingle mill. Table 1 lists the water rights and describes the water quantities allocated as well as the location of the point of diversion.

Water Right Number	Name	Purpose	Priority Date	Qa in afy	Point of Diversion
S2-20292CWRIS	Smith Shingle Co	DM FR PQ	02/20/1976	15	T30N R13W Section 26
S2-28181	Santman, Jim	DS	08/11/1992	0.5	SW1/4 NE1/4, T30N R13W Section 35
S2-28618	Leppell, Jim	DS	08/17/1994	0.34	T30N R13W Section 35
S2-28619	Hendershot, Warren	DS	08/17/1993	0.34	SW1/4 NE1/4,T30N R13W Section 35
S2-28725	Soha, Louis	DS	08/17/1993	0.34	SW1/4 NE1/4,T30N R13W Section 35

Table 1. Surface Water Right Permits and Certificates for Lake Pleasant.

In addition, a total of 1 claim to a vested water right was identified on Lake Pleasant (belonging to Portac, Inc.).

The limited annual quantity requested (compared to the storage volume of Lake Pleasant) will not have a measurable effect on the stage of Lake Pleasant. It is also noted that water used in hydrant testing is placed on the ground to either runoff or infiltrate (primarily return flow). Moreover, the entire facility is graded to capture storm water runoff. All storm water is directed toward to a series of cascading settling ponds and an oil-water separator, prior to being discharged to the wetland complex on the south side of the lake. The net consumptive quantity of this appropriation is small.

Based on the collective information, impairment of existing rights is not anticipated with full use of the requested quantity.

Public Welfare

No protests to the application were received. The proposed appropriation will support the industrial economy of the area, and no detriment to the public welfare was identified.

CONCLUSIONS:

The conclusions based on the above investigation are as follow:

1. The proposed appropriation for fire protection is a beneficial use of water.
2. The quantity of water requested for use in this application is available for appropriation.
3. The proposed appropriation will not impair senior water rights.
4. The proposed appropriation will not be detrimental to the public interest.

RECOMMENDATIONS:

I recommend an approval of application S2-30493 and issuance of a permit to allow appropriation of surface water from Lake Pleasant at a maximum instantaneous withdrawal rate (Qi) of 3.34 cfs and a specified annual quantity (Qa) of 0.09 afy. The period of use for fire protection will be year round, as needed.

The amount of water granted is a maximum limit that shall not be exceeded and the water user shall be entitled only to that amount of water within the specified limit that is beneficially used and required.

The permit shall be subject to existing rights and the following provisions:

An approved measuring device shall be installed and maintained for the source identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded annually and maintained by the property owner for a minimum of five years, and shall be promptly submitted to Ecology upon request.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

The permit is issued subject to Washington Department of Fish and Wildlife screening criteria as outlined in a hydraulic project approval. Please contact the Department of Fish and Wildlife, 600 Capital Way North, Olympia, Washington, 98501-1091, Attention: Habitat Management Division, (360) 902-2534, to obtain specific requirements for your project.

The Permittee is advised that notice of Proof of Appropriation of water (under which the final certificate of water right is issued) should not be filed until the permanent distribution system has been constructed and that quantity of water allocated by the permit to the extent water is required, has been put to beneficial use.

This authorization shall in no way excuse the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology and those administered by local agencies.

Report prepared by Tyson D. Carlson, LHG, Aspect Consulting, LLC.

REVIEWED BY: Phil Crane Date: 11/23/09
Phil Crane

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I find water is available for appropriation and the appropriation as recommended is a beneficial use and will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER a permit be issued under Surface Water Application Number S2-30493, subject to existing rights and indicated provisions, to allow appropriation of public surface water for the amount and uses specified in the foregoing report.

Signed at Olympia, Washington, this 24th day of November, 2009.

Thomas Loranger

Thomas Loranger
Water Resources Supervisor
Southwest Regional Office

CITATIONS:

Golder Associates, 2008, Water Resource Inventory Area (WRIA) 20 Watershed Management Plan, August 20, 2008.

Wolcott, E. E, 1973, Water Supply Bulletin No. 14. Lakes of Washington, Volume I, Western Washington, 1973.

Washington State Department of Ecology 2008. Temporary Permit for Water Right Application No. S2-30493. Issued to Portac, Inc. November 13, 2008.