File NR G2-29009
WR Doc ID 2222148

DEPARTMENT OF ECOLOGY
State of Washington

State of Washington
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

PRIORITY DATE	WATER RIGHT NUMBER
1/26/1994	G2-29009

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
COWLITZ RIVER ESTATES 228 RIVENDELL LANE KELSO WA 98626	

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
60	GPM	3.6

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE ADDITIVE	WITHDRAWAL OR DIVERSION RATE NON-ADDITIVE	UNITS	ANNUAL QUANTITY (AF/YR) ADDITIVE	ANNUAL QUANTITY (AF/YR) NON-ADDITIVE	PERIOD OF USE (mm/dd)
Domestic multiple	60		GPM	3.6		01/01 - 12/31

PUBLIC WATER SYSTEM INFORMATION

WATER SYSTEM ID	CONNECTIONS
AB789A	9

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Cowlitz	Groundwater		26-Cowlitz

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Well	631990800	BBP 646	08N	02W	03	NW NW	46.213	-122.908

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)
631990109, 634980208, 631990201, 631990203, 631990801, 631990800, 6319902, 631990202, 631990103, 631990102
LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Tax lots in the Washburn Donation Land Claim/J F Stock Donation Land Claim, described as follows:
In Section 3, T 8 N, R 2 WWM:

- 7A-TB, 7A-8B/ 2J-1;
- 2J-1A,2J-5A/ -7A-2A,7A-8A

Tax lots in the J F Stock Donation Land Claim, described as follows:

In Section 3, T 8 N, R 2 WWM:

- 7A-6
- 7A-1,7A-1A-1, including 7A-1A-1 (Auditors File 3335378)
- 7A-7, Except 7A-6 (Auditors File 950105056)

In Section 34, T 9 N, R 2 WWM:

- 7A-6A
- 7A-1A Except 7A-1A-1 (Auditors File 3335378)
- 7A-4
- 7A-3

Proposed Works

A well, 6- inches in diameter and 119 feet deep, equipped with one submersible 5 h.p. pump, and a 3 h.p. back up pump feeds to 3-inch diameter PVC main lines. Distribution lines diverge both east and west along Sakari Lane.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	Completed	March 1, 2022

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm or cfs)

Provisions

Wells, Well Logs and Well Construction Standards
All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

Measurements, Monitoring, Metering and Reporting
An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Department of Health Requirements
Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030.

Proof of Appropriation
The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Findings of Facts
Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. G2-29009 subject to existing rights and the provisions specified above.

Signed at Olympia, Washington, this 4th day of January 2012.

Michael J. Gallagher

Michael J. Gallagher, Section Manager

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Mailing Addresses	Street Addresses
Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903	**Pollution Control Hearings Board** 1111 Israel RD SW Ste 301 Tumwater, WA 98501
Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608	**Department of Ecology** Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503

For additional information visit the Environmental Hearings Office
Website: http://www.eho.wa.gov. To find laws and agency rules visit the Washington State Legislature
Website: http://www1.leg.wa.gov/CodeReviser.

BACKGROUND

On January 26, 1994, Mark D. Selby, representing Cowlitz River Estates filed *Water Right Application* G2-29009 requesting 60 gallons per minute (gpm) and enough annual quantity to serve 10 homes. This project is located in Water Resources Inventory Area 27, the Cowlitz River Basin.

Attributes of Application

Table 1 Application Summary

Name	***Cowlitz River Estates***
Priority Date	1/26/1994
Instantaneous Rate	60 gpm
Annual Quantity	3.6 af/yr
Purpose(s) of Use	Multiple Domestic Supply
Period of Use	Continuous use
Place(s) of Use	Parcels 631990109, 634980208, 631990201, 631990203, 631990801, 631990800, 6319902, 631990202, 631990103, 631990102

Table 2 Proposed Point of Withdrawal

Source Name	***Parcel***	***WellTag***	***Twp***	***Rng***	***Sec***	***QQ Q***	***Latitude***	***Longitude***
Well	631990800	BBP646	08N	02W	03	NE NE	46.213	-122.908

Legal Requirements for Approval of Appropriation of Water

RCWs 90.03 and 90.44 authorizes the appropriation of public water for beneficial use and describes the process for obtaining water rights. Laws governing the water right permitting process are addressed in RCW 90.03.250 through 90.03.340 and RCW 90.44.050. In accordance with RCW 90.03.290, Ecology must make determinations on these four criteria in order to approve an application for water rights:

- Water must be available for appropriation.
- There must be no impairment of existing rights.
- The water use must be a beneficial use.
- Approving the application must not be detrimental to the public interest.

This report serves as the written findings of fact concerning all things investigated regarding Water Right Application Number G2-29009.

Public Notice

The applicant published public notice for this project proposal in *The Daily News* of Cowlitz County once a week for two consecutive weeks beginning on April 14 and ending April 21, 1994. No protests or letters of concern in response to this notice.

State Environmental Policy Act (SEPA)

A SEPA determination evaluates if a proposed withdrawal will cause significant adverse environmental impacts. A SEPA threshold determination is required for:

1) Surface water applications for more than 1 cubic feet per second (cfs). For agricultural irrigation, the threshold increases to 50 cfs, if the project isn't receiving public subsidies.
2) Groundwater applications requesting more than 2,250 gpm.
3) Projects with several water right applications where the combined withdrawals meet the conditions listed above.
4) Projects subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA).
5) Applications that are part of several exempt actions that collectively trigger SEPA under WAC 197-11-305.

This application does not meet any of these conditions and is categorically exempt from SEPA.

INVESTIGATION

The material reviewed in support of this application included the following:

- The State Surface Water Codes, administrative rules, and policies.
- Department of Ecology's Water Right Tracking System (WRTS) database.
- Topographic and local area maps.
- Notes from a site visit on October 26, 2011.
- The Draft WRIA 26 Watershed Plan.
- Hydrogeologic memorandum written by Tammy Hall, licensed hydrogeologist, with Water Resources Southwest Regional Office, dated November 18, 2011.
- Email correspondences from Brad Caldwell (Ecology) and Hal Beecher (Washington Dept of Fish and Wildlife, WDFW).

Project Description

The project is located in the Cowlitz River Water Resource Inventory Area (WRIA) 26.

Cowlitz River Estates is a small subdivision situated about two miles north of the Longview-Kelso area, in Cowlitz County. The development consists of large lots ranging from 2 ½ to 5 acres in size, situated on the alluvial flood plain on the east bank of the Cowlitz River, at about River Mile (RM) 10.

Cowlitz River Estates revised this request to serve nine homes. The original application requested service to ten homes; however, one lot is being served by a shared well and is not connected to the system.

Proposed Use and Basis of Water Demand

Cowlitz River Estates Water System (ID AB789A) currently serves six homes as a permit exempt Group B system. Cowlitz River Estates filed this application to request an additional three connections for a total of nine connections at full build out.

Average daily demand per Equivalent Residential Unit (ERU) is calculated using Washington Department of Health (WDOH) guidelines and the following mathematical equation:

$$ADD = \left(\frac{8000}{AAR}\right) + 200$$

Where: ***ADD*** = *Average Day Demand, (gallons-per-day/ERU)*

AAR = *Average Annual Rainfall, (inches-per-year)*

Using climate information for Kelso, the average daily demand for 9 ERUs should not exceed 360 gallons per day per ERU. The total water demand for this project should not exceed 3.6 ac-ft per year. This calculation assumes an annual water usage of 0.4 ac-ft per ERU.

Consultation with the Department of Fish and Wildlife

The Department must give notice to the Department of Fish and Wildlife (DFW) of applications to divert, withdraw or store water (RCW 77.57.020). DFW representatives and Ecology's fish biologist, Brad Caldwell were consulted about this application. Both concurred that approving this application is consistent with Ecology's and DFW's recommendations for a flow rule for the lower Cowlitz River (Caldwell, 2011; Beecher, 2011a, Beecher 2011b).

The primary concern is juvenile rearing and fish passage because there is no gravel for spawning. Both DFW and Ecology do not see a reason to close the mainstem of the Cowlitz River up to the Toutle River confluence at RM 20.1. A flow model available for this section of the Cowlitz River shows very low flows would be enough for passage and rearing. The lower Cowlitz has a low flow of around 3,000 cubic feet per second (cfs). (Caldwell, 2011)

Hydrologic/Hydrogeologic Evaluation

General Area Hydrogeology

The primary aquifer in the project area is the alluvial aquifer filling the lower Cowlitz River valley. The hydraulic characteristics of the alluvial deposits are highly variable and dependent on the geologic source of the sediments, mode of deposition, and thickness.

In the lower Cowlitz River basin, the alluvial deposits are primarily of Cascade volcanic arc origin. The alluvium was supplied to the river system both from erosion and from geologically recent volcanic activity from Mt St. Helens, Mt. Rainier, and Mt. Adams. The clay-rich volcanic lahars and debris flows deposited in the floodplain have little or no permeability and often act as aquitards. The aquifers consist of highly permeable sands and/or gravels directly deposited, or reworked, by normal fluvial channel processes. Because these permeable zones were deposited in stream channels that often migrated, the extent of these aquifers is highly variable. Although the alluvial aquifer is primarily

unconfined, some water level data suggest that semi-confined conditions also exist in localized areas. (Weigle and Foxworthy, 1962; Myers, 1970).

Recharge to the alluvial aquifer is from direct infiltration from precipitation, recharge from stream runoff during high flow periods, and direct discharge of groundwater from bedrock aquifers (Weigle and Foxworthy, 1962; Myers, 1970). Myers (1970, p. 17) noted that groundwater levels in wells completed in alluvial units in Cowlitz County generally rise from October through March, coinciding with the months when rainfall is highest. (Weigle and Foxworthy, 1962; Myers, 1970).

Because the alluvial aquifers are near streams, aquifers and streams are expected to be hydraulically connected.

Site Conditions

The Cowlitz River Estates well is located at 230 Sakari Lane.

See Attachment #1

There is no well report available; however, based on anecdotal information, the Cowlitz River Estates well is 119-ft deep. A query of Ecology's well log database, showed other domestic wells nearby range from 78 to 120 feet deep. The well reports for these wells describe alternating layers of sand and gravel. The static water levels are around 10 feet below ground surface and draw water from the alluvial aquifer.

Table 5. Construction details of Cowlitz River Estates well

Well Id	***Well 1***
Well Tag	BBP-646
Date Drilled	Unknown
Well elevation (ft above mean sea level, msl)	10
Well diameter (inches, in)	6
Completed depth (ft below ground surface, bgs)	119
Pumping capacity (gpm)	90

Impairment Considerations

Impacts to Area Users

This proposed new water right will authorize 60 gpm and 3.4 ac- ft for multiple domestic supply for the Cowlitz River Estates residential development. New water rights have the greatest potential to affect wells completed in the same aquifer near the new point of withdrawal.

The area surrounding the Cowlitz River Estates water system is supplied water by exempt wells likely at about the same depth and completed in the same aquifer as the Cowlitz River Estates well. The nearest exempt well is about 500 feet away.

Withdrawals from the Cowlitz River Estates well are relatively small and should not affect area water users. The Cowlitz River Estates well has been operating since about 1994 as an exempt well, serving six homes. Although the annual quantity authorized by this approval will increase over what is currently being used, the instantaneous rate (gpm) will not increase. The Cowlitz River Estates well will continue to be pumped at 60 gpm.

A query of Ecology's water right (WRTS) database revealed the following in roughly a one-mile radius:

- Two surface water certificates authorizing 0.26 cfs and 51 ac-ft per year for domestic supply and irrigation of 25 acres.
- Two groundwater certificates totaling 20 gpm and 2 ac-ft per year for domestic supply.
- Seventeen surface water and groundwater claims are registered for domestic supply, irrigation, and stockwater. The validity and exact location of wells under these claims is not known.
- Thirty-eight well reports are on file in Ecology's database.
    - Twenty are less than 100 feet deep.
    - Fourteen are between 100 and 200 feet deep.
    - Four are between 200 and 340 feet deep.

Impacts to Surface Water

The Watershed Plan for the Grays-Elochoman and Cowlitz River basins (WRIAs 25 and 26) was adopted July 2006. The Plan acknowledges the hydraulic connection between surface water and groundwater withdrawals, especially in alluvial aquifers, but considers the Cowlitz River as a significant regional resource. Due to the abundant water supply in the mainstem Cowlitz River, the Planning Unit recommends it be considered over other water resources tributary to the Columbia River to meet future water supply needs. (HDR & EES, 2006).

The Plan acknowledges the difference between free-flowing and tidally influenced reaches and recommends focusing new withdrawals in areas under tidal influence (HDR & EES, 2006). The Draft Rule (WAC 173-526) allows groundwater withdrawals below River Mile (RM) 6.7, in this zone of tidal influence.

Implementation of the rule is under suspension as per the Governor's order on December 8, 2010; therefore the Plan is still considered draft form and subject to change. The watershed planning group is revisiting elements of its plan, and Ecology is working closely with this team to ultimately revise the draft rules. Based on recommendations of DFW and Ecology, the Rule will likely be revised to allow new withdrawals from the mainstem of the Cowlitz River to the confluence with the Toutle River, at RM 20.1.

Public Interest Considerations

Approving G2-29009 is not detrimental to the public interest and consistent with RCW 90.54.

Consideration of Protests and Comments

No protests were filed against this application.

FINDINGS AND CONCLUSIONS

This application requests water for multiple domestic supply. Based on my evaluation, I find that:

- The use of water for Multiple Domestic Supply is defined in statute as a beneficial use (RCW 90.54.020(1)).
- Water is available in sufficient quantities to provide a reliable source for multiple domestic supply, based on well and pump information.
- Approving this new appropriation is consistent with the recommendations of the Draft Watershed Plan for the Grays-Elochoman and Cowlitz River Basins (WRIAs 25 and 26).
- The issuance of this water right will not impair any senior water right holders.
- Approving this appropriation is not detrimental to the public interest.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and in the limitations listed below and subject to the provisions listed above.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

- 60 gpm
- 3.6 ac-ft per year
- Multiple Domestic Supply

Point of Withdrawal:

- NE¼, NE¼, Section 3, Township 8 North, Range 2 W.W.M.

Place of Use:

- As described on Page 1 of this Report of Examination.

Tammy Hall 1/5/2012

Tammy Hall *Date*

If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

References:

Beecher, Hal, 2011a, email correspondence, August 9, 2011.

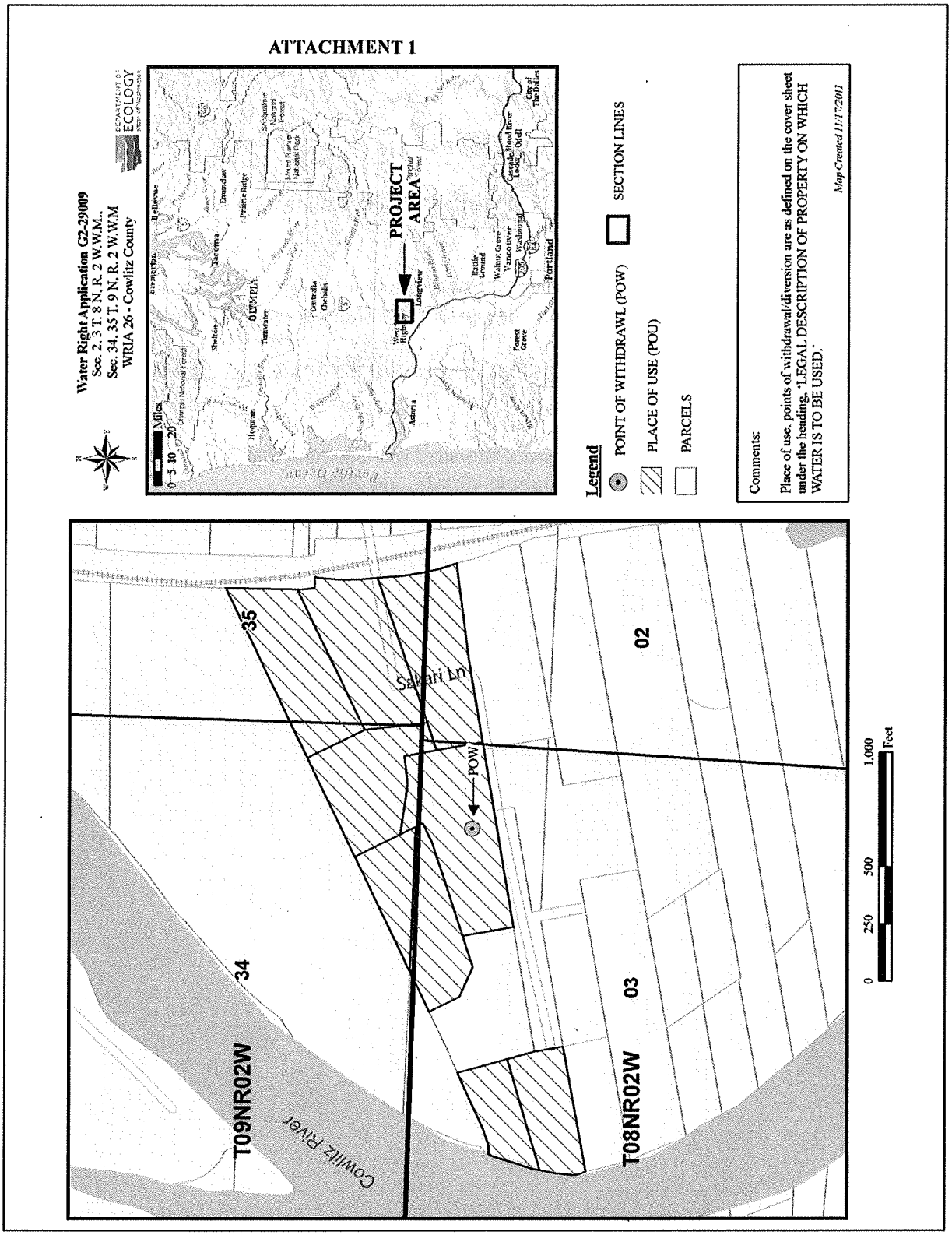
Beecher, Hal, 2011b email correspondence, October 25, 2011.

Caldwell, Brad, 2011, email correspondence, October 25, 2011.

Myers, D.A.,1970, Availability of Ground Water in Western Cowlitz County, Washington, Department of Ecology Water Supply Bulletin No. 35, 72 p.

Weigle, J.M. and Foxworthy, B.L., 1962. Geology and ground-water resources of west-central Lewis County, Washington. Washington Division of Water Resources, Water Supply Bulletin No. 17. 78 p.

EES (Economic and Engineering Services, Inc.). 2001. Level 1 Technical Assessment for WRIA 25/26. July 2001.

HDR & EES, 2006, Grays-Elochoman and Cowlitz Watershed Management Plan WRIAs 25 and 26, Lower Columbia Fish Recovery Board WA Ecology Grant #9900028, July 2006,

ATTACHMENT 1