



**State of Washington  
REPORT OF EXAMINATION  
FOR WATER RIGHT CHANGE**

File NR CG1-083693CL  
WR Doc ID 5965438

Changed Place of Use  
Added Point of Withdrawal

<b>PRIORITY DATE</b> 1915	<b>WATER RIGHT CLAIM NUMBER</b> 083693	<b>WATER RIGHT CHANGE TRACKING NUMBER</b> CG1-083693CL
------------------------------	---	---

<b>MAILING ADDRESS</b> RICHARD HANIKA 21025 STARBIRD ROAD MOUNT VERNON WA 98274	<b>SITE ADDRESS (IF DIFFERENT)</b> Same
--	--

**Total Quantities Authorized for Withdrawal**

<b>WITHDRAWAL RATE</b> 20*	<b>UNIT</b> Gallons per minute (gpm)	<b>ANNUAL QUANTITY IN ACRE-FEET PER YEAR (AF/YR)</b> 3*
-------------------------------	---	--

**Purposes**

PURPOSES	WITHDRAWAL RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNIT	ADDITIVE	NON-ADDITIVE	
Domestic supply & stockwatering**	20		gpm	3		01/01 - 12/31

\*The total instantaneous withdrawal rate from wells DW-1 and DW-3 cannot exceed 20 gpm under Water Right Claim 083693. The total annual withdrawal volume cannot exceed 5.0 acre-feet per year under Water Right Claims 083693 and 083694. \*\*Parcels P17761 & P17781 can have no more than 30 head of cattle total at any time.

**Source Location**

<b>COUNTY</b> SKAGIT	<b>WATERBODY</b> GROUNDWATER	<b>WATER RESOURCE INVENTORY AREA</b> 3 - LOWER SKAGIT-SAMISH (within the Fisher Creek basin)
-------------------------	---------------------------------	--

SOURCES	PARCEL NUMBERS	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
DW-1	P17781	BHN409	33N	04E	34	NWNW	48.309340	-122.290730
DW-3	P17761	BAB504	33N	04E	34	NWNE	48.310835	-122.275917

Datum: NAD83/WGS84

**Place of Use (See Attached Map)**

**LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE**

Skagit County parcel number P17781 within the North ½ of the Northwest ¼ of Section 34, Township 33 North, Range 4 East, W.M. and Skagit County parcel number P17761 within the Northwest ¼ of the Northeast ¼ of Section 34, Township 33 North, Range 4 East, W.M.

### Proposed Works

Mr. Hanika is proposing to utilize two wells (DW-1 & DW-3) for domestic supply and stockwatering on two separate parcels (P17781 & P17761) he currently owns.

### Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Begun	January 1, 2016	January 1, 2018

### Measurement of Water Use

How often must water use be measured?	Bi-weekly*
How often must water use data be reported to Ecology?	Annually (by January 31)
What volume should be reported?	Total annual volume from all wells
What rate should be reported?	Peak withdrawal (gpm) from DW-1 & DW-3

\*Bi-weekly means every two weeks

### Provisions

#### Measurements, Monitoring, Metering and Reporting

An approved measuring device must 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, which 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.

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Northwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Northwest Regional Office for forms to submit your water use data.

#### Proof of Appropriation

The water right holder must file the notice of Proof of Appropriation of water (under which the certificate of change 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 of change will reflect the extent of the project perfected within the limitations of the water right. Elements of a proof inspection may include, as appropriate, the sources, system instantaneous capacity, beneficial uses, annual quantity, places of use, and satisfaction of provisions.

#### Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, 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 the subject water

right claim is eligible for change, the additional well taps the same body of public groundwater as the original well; there will be no impairment of existing rights; the combined total withdrawal from the original and the additional well will not enlarge the right; and there will be no detriment to the public interest. Therefore, I ORDER approval of Application for Change CG1-083693CL, subject to existing rights and the provisions specified above.

### Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings 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).

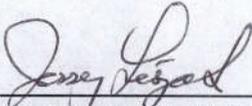
To appeal you must do the following within 30 days of the date of receipt of the Order.

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.

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

Signed at Bellevue, Washington, this 23<sup>rd</sup> day of September 2014.

  
\_\_\_\_\_  
Jerry Lyszak, Acting Section Manager

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>.

# INVESTIGATOR'S REPORT

Buck Smith, Department of Ecology

Water Right Control Number CG1-083693CL

RICHARD HANIKA

## BACKGROUND

This report serves as the written findings of fact for Application for Change of Water Right Claim 083693 (application tracking number CG1-083693CL).

The applicant (Mr. Richard Hanika) currently appropriates water under two water right claims (083693 and 083694) for domestic and stockwatering purposes that are appurtenant to tax parcel P17781 (Starbird Farm Adult Family Home). The Starbird Adult Family Home (a brain-injury patient care facility) is located immediately northeast of the intersection of Bulson and Starbird Roads in Skagit County. The current point of withdrawal for Claim 083693 (the subject of this report) is a domestic well (DW-1) that has a Washington State Department of Ecology (Ecology) unique well tag number of BHN409 and is located approximately 300 feet north of Starbird Road on tax parcel P17781. The current point of withdrawal (DW-2) for claim 083694 has an Ecology tag number of BHN410 and is also located on parcel P17781, roughly 50 feet east of Bulson Road.

Mr. Hanika is in the process of building a single-family residence on tax parcel P17761, which is located immediately east and adjacent to tax parcel P17781. In April 2011, Mr. Hanika contracted the drilling and installation of a permit exempt domestic well (DW-3, well tag # BAB504) on parcel P17761. His intent was to use that well as the source of domestic water for the new residence. However, the existing Skagit River Instream Flow Rule (Washington Administrative Code [WAC] 173-503) requires that any new consumptive water uses put to beneficial use after April 14, 2001, including permit exempt wells, are subject to interruption when the minimum instream flow in the Skagit River is not being met. Therefore, to acquire uninterrupted domestic water for his new residence, Mr. Hanika applied to Ecology to make the following changes to claim 083693: 1) adding DW-3 as an additional point of withdrawal, and 2) changing the place of use to be appurtenant to both parcel P11781 and P17761.

### EXISTING Attributes of Claim 083693

<b>Water Right Claim Owner:</b>	Richard Hanika (the claim was filed by Frank & Loretta Carlin on April 22, 1974)
<b>Claimed Priority Date:</b>	Unknown - over 20 years as of April 22, 1974 (probable use began in 1915)
<b>Place of Use</b>	N½ of the NW¼ of Section 34, Township 33 North, Range 4 East, W.M., except roads

County	Source	WRIA
Skagit	Groundwater	3-Lower Skagit-Samish

Purposes	Rate	Unit	Acre-feet/yr	Begin Season	End Season
Domestic supply & cattle (stockwatering)	20	gpm	3	January 1	December 31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
DW-1	P17781	BHN409	33N	04E	34	N½ NW¼	48.309340	-122.290730

### REQUESTED Water Right Attributes

<b>Name:</b>	Richard Hanika
<b>Date of Application:</b>	10/28/2013
<b>Place of Use</b>	Skagit County parcel number P17781 within the North ½ of the Northwest ¼ of Section 34, Township 33 North, Range 4 East, W.M. and Skagit County parcel number P17761 within the Northwest ¼ of the Northeast ¼ of Section 34, Township 33 North, Range 4 East, W.M.

<b>County</b>	<b>Waterbody</b>	<b>WRIA</b>
Skagit	Groundwater	3-Lower Skagit-Samish

<b>Purposes</b>	<b>Rate</b>	<b>Unit</b>	<b>Acre-feet/yr</b>	<b>Begin Season</b>	<b>End Season</b>
Domestic supply & stockwatering	20	gpm	3	January 1	December 31

Source Names	Parcels	Well Tags	Twp	Rng	Sec	QQ Q	Latitude	Longitude
DW-1	P17781	BHN409	33N	04E	34	NW NW	48.309340	-122.290730
DW-3	P17761	BAB504	33N	04E	34	NW NE	48.310835	-122.275917

#### Legal Requirements for the Requested Change

The following is a list of requirements that must be met prior to processing this request for an additional point of withdrawal and a change in place of use.

#### *Public Notice*

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be withdrawn and used. Notice of this application was published in the Skagit Valley Herald on February 13 and February 20, 2014. Based on this public notice, no protests or comments were received.

#### *Consultation with the Department of Fish and Wildlife*

Ecology must give notice to the Department of Fish and Wildlife (WDFW) of applications to divert, withdraw, or store water. On May 2, 2014, Steve Boessow, WDFW Water Rights Specialist, was notified of the subject application for change. (Mr. Boessow offered to provide comments during the draft posting of this report on Ecology's Internet site.)

#### *State Environmental Policy Act (SEPA)*

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies.
- It is a groundwater right application for more than 2,250 gallons per minute.

- It is an application that, in combination with other water right applications for the same project, collectively exceeds the above amounts.
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA).
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

#### *Water Resources Statutes and Case Law*

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion (withdrawal) and place of use may be changed if it would not result in harm or injury to other water rights.

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. For a groundwater claim to be considered to be a vested (pre-code) right it must have been put to beneficial use prior to the enactment of RCW 90.44 on June 6, 1945. *R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp*.

RCW 90.44.100 authorizes Ecology to amend a ground water right to allow the right holder to construct an additional well at a new location outside of the location of the original well and to change the place of use of the water, if:

- The additional well taps the same body of public ground water as the original well. RCW 90.44.100(2)(a);
- Where an additional well is constructed, the user may continue to use the original well, but the combined total withdrawal from all wells shall not enlarge the right. RCW 90.44.100(2)(c); and
- Other existing rights will not be impaired. RCW 90.44.100(2)(d).

When adding points of withdrawal to groundwater rights (RCW 90.44.100), the wells must draw from the *same body of public groundwater*. Indicators that wells tap the *same body of public groundwater* include:

- Hydraulic connectivity
- Common recharge (catchment) area
- Common flow regime
- Geologic materials that allow for storage and flow, with recognizable boundaries or effective barriers to flow

## **INVESTIGATION**

---

On March 19, 2014, I met Mr. Hanika at his property located at 21025 Starbird Road. We went over his application request and toured the subject property (tax parcel P17781) and adjoining property (tax parcel P17761) where Mr. Hanika is currently constructing a new home. We also visited each of his three wells.

### **Other Rights Appurtenant to the Existing Place of Use**

---

As mentioned previously, in addition to the subject claim (083693), Mr. Hanika also owns Water Right Claim 083694. This claim is also appurtenant to tax parcel P17781. It was submitted by Frank & Loretta Carlin on April 26, 1974. It is for 20 gallons per minute and 3 acre-feet per year for domestic supply and cattle (stockwatering). It is for a well (DW-2) located in the N½ NW¼ of Section 34, Township 33 North, Range 4 East.

Mr. Hanika also owns Ground Water Certificate (GWC) 3508. GWC 3508 was issued to Don Volle with a priority date of July 28, 1959. This certificate is also appurtenant to the N½ NW¼ of Section 34, Township 33 North, Range 4 East. It issued for 150 gallons per minute and 80 acre-feet per year for the irrigation of 40 acres. The authorized point of withdrawal (an infiltration trench) is located within the N½ NW¼ NW¼ of Section 34, Township 33 North, Range 4 East. As part of an application to donate a portion of this right to the Trust Water Rights Program, Mr. Hanika attested to the beneficial use of up to 150 gallons per minute and 40 acre-feet per year. Of this amount, Mr. Hanika temporarily donated 20 acre-feet per year to the Trust Program, where it currently resides. He retained the remainder for irrigation supply on parcel P17781.

### **History of Water Use**

---

Mr. Hanika currently utilizes water right claims 083693 and 083694 to serve domestic supply water to his existing home and the Starbird Adult Family Home. Water is also used for watering beef cattle. Mr. Hanika keeps the cattle on his property so his patients can care for them as part of their therapy and recovery.

The place of use of both claims (and GWC 3508) includes approximately 40 acres owned by Scott & Sandra Kelly (tax parcels P17782, P17779, & P101063) and by Gregory & Kathleen Carpenter (tax parcel 17780). Neither the Kelly's nor the Carpenter's claim ownership or partial ownership of these rights. These parcels are to be removed from the authorized place of use as part of the application for change process.

#### *Sworn Affidavits of Current and Historical Water Use*

According to an affidavit supplied by Mr. Hanika, water use for dairy production on parcel P17781 began as early as 1915. In recent years, Mr. Hanika has had more than 60 head of cattle on the property. And, prior to that, David Hanika (property owner from 1990-1998) kept over 100 dairy replacement cows on the property.

A sworn affidavit supplied by Leota Van Wieringen attested to her knowledge of the property dating back to 1942. Ms. Van Wieringen was born in 1930. She grew up nearby and attended school at the schoolhouse on Bulson Road. She knew the Volle family (parents and three children), who owned and

farmed the subject property in the 1940s. Ms. Van Wieringen remembers a large-scale dairy, hay growing, and irrigation as early as 1942-1944. An older barn existed in the 1940s and was replaced by the current existing barn. She remembers a small house built in 1915. The Volle's had this house moved and had the existing house built in 1942. A large personal garden which required water and sprinkling was maintained as early as 1942.

Marvin Talley also submitted a sworn affidavit. Mr. Talley attested to selling Rick Hanika 32 cows in June 2005, of which 15 were pregnant. He also attested to helping Mr. Hanika purchase 15 cows at the Marysville auction in 2005 and to his knowledge of Mr. Hanika maintaining a herd of up to 60 cows over the past eight years.

In addition, Danielle Leavell provided a sworn affidavit that Mr. Hanika has had over 60 cows on the property over the past five years.

#### *Aerial Photography*

A 1937 Army Corps of Engineers photo of the area shows four structures in the southwest corner of what is now parcel P17781, this seems to corroborate Ms. Van Wieringen's affidavit and Mr. Hanika's belief that the property was occupied prior to the enactment of RCW 90.44 (the 1945 groundwater code).

#### *Estimated Use of Water*

None of Mr. Hanika's (nor any previous owner's) water use has been metered. The following table was provided by Mr. Charles S. Lindsay L.G., L.E.G., L.Hg., Senior Principal Hydrogeologist at Associated Earth Sciences, Incorporated (AESI). Mr. Lindsay did an analysis (under AESI project number EH110425A) of Mr. Hanika's total water use for domestic supply (including lawn & garden) and stockwatering under Water Right Claims 083693 and 083694.

**Domestic and Stock Water Use - Starbird Farm Adult Family Home**

Claims G1-083693CL and G1-083694CL

Home	Indoor Use			Outdoor Use			Total Water Use (ac-ft)	Consumptive Water Use (ac-ft)	Domestic Consumptive (%)	
	Occupants	Daily Use per Capita (gal) <sup>1</sup>	Annual Water Use (ac-ft)	Lawn Grass <sup>2</sup> (ac)	Annual Water Use (in) <sup>3</sup>	Annual Water Use (ac-ft)			Indoor <sup>4</sup>	Outdoor <sup>5</sup>
1	6	69.3	0.47	0.50	12.94	0.54	1.00	0.69	50.00	85.00
2	2	69.3	0.16	0.50	12.94	0.54	0.69	0.54		
3	2	69.3	0.16	0.50	12.94	0.54	0.69	0.54		
Rec Center <sup>6</sup>	1	69.3	0.08	0.00	0.00	0.00	0.08	0.04		
<b>Total</b>	<b>11</b>	<b>69.3</b>	<b>0.85</b>	<b>1.50</b>			<b>2.47</b>	<b>1.80</b>		

<sup>1</sup> Indoor water use estimate is based on *Residential End Uses of Water*, AWWA Research Foundation, 1999.

<sup>2</sup> Lawn grass area is estimated based on land use shown on the August 25, 2011 aerial photo of the Starbird Farm area, available on Google.

<sup>3</sup> Outdoor water use estimate was limited to lawn grass average water needs, which was estimated using Blaney-Criddle Methods for

<sup>4</sup> Indoor consumptive use assumed to be 50% based on existing Fisher-Carpenter Creek Agreement.

<sup>5</sup> Outdoor consumptive percentage based on hand-line sprinkler efficiency (75%) with 10% evaporation losses.

<sup>6</sup> Rec Center is used daily by all occupants at the farm. Assumed to be equivalent to one full time occupant.

**Stock Water Use - Drinking**

Year	No. Livestock <sup>1</sup>	Daily Use per Head (gal) <sup>2</sup>	Annual Water Use (ac-ft)	Consumptive Use (ac-ft)
2007	39	12.0	0.52	0.52
2008	64	12.0	0.86	0.86
2009	64	12.0	0.86	0.86
2010	60	12.0	0.81	0.81
2011	40	12.0	0.54	0.54

<sup>1</sup> 2007 (3-horses, 5-sheep, 35 beef cattle), 2008 and 2009 (3 horses, 5-sheep, 60 beef cattle), 2010 and 2011 (beef cattle).

<sup>2</sup> Stock water daily use for horses, sheep and beef cattle from *Manual of Individual and Non-Public Water Supply Systems*, US EPA, May 1991.

Total Water Use for Claims G1-083693 and G1-083694	
Annual Water Use (ac-ft) <sup>1</sup>	Consumptive Use (ac-ft) <sup>1</sup>
5.00	4.33

<sup>1</sup> Assumes average of two stock highest use years.

Stock Consumptive %	
Drinking	Misting
100.00	100.00

**Stock Water Use - Misting**

Month	Misting Schedule <sup>1</sup>			Consumptive Use (ac-ft)
	Days	Hours/Day	Rate (gpm)	
May	4	8	10	0.06
June	10	10	10	0.18
July	28	12	10	0.62
August	28	12	10	0.62
September	10	10	10	0.18
<b>Total</b>	<b>80</b>			<b>1.66</b>

<sup>1</sup> Misting schedule is based on information provided by Mr. Rick Hanika regarding typical stock operations at the Starbird Farm.

Water Claim Information		
Quantities	G1-083693CL	G1-083694CL
Qj (gpm)	20	20
Qa (ac-ft)	3	3

Based on the affidavits that were submitted, available aerial photography, and estimates of water use, it appears the subject claim has been historically and beneficially used since prior to the enactment of RCW 90.44 in 1945 and without any five year lapses of beneficial use as per RCW 90.14.160. Therefore, it appears the subject claim can be tentatively determined to eligible for change.

**Proposed Use**

Mr. Hanika applied to Ecology to make the following changes to claim 083693:

- Adding DW-3 as an additional point of withdrawal. Therefore, having an authorized point of withdrawal (DW-1) within parcel P17781 and another authorized point of withdrawal (DW-3) within parcel P17761.
- Changing the place of use to include both parcel P17781 (existing) and parcel P17761 (new).

Through the application for change process, a water right cannot be enlarged. In other words, the perfected instantaneous rate and annual volume cannot be increased. According to Mr. Lindsay, and

corroborated in Table 3 of the EPA Manual of Individual and Nonpublic Water Supply Systems (May 1991), beef cattle on average consume 12 gallons of water per day. My review of the available information provided by Mr. Lindsay and Mr. Hanika indicates within the most recent five years, the highest number of cattle located on Mr. Hanika's property was in 2010. In that year 60 head of cattle consumed 0.81 acre-feet of water (based on 12 gallons per day per head times 365 days per year). Mr. Hanika is proposing to limit the number of cattle located on his property to 30 head in order to free up enough perfected water (approximately 0.405 acre-feet per year) to supply his proposed new domestic connection on parcel P17761. Ecology's Northwest Regional Office typically assumes 350 gallons per day (0.39 acre-feet per year) needs to be available for each domestic unit in the Skagit River basin. In this case, the amount of stockwater to be reduced exceeds the amount of domestic water supply to be increased. Mr. Hanika's new domestic unit will be on a septic system, so much of his water use will be returned to the groundwater system.

The current instantaneous pumping rate of DW-1 is 20 gpm. In order to not increase the perfected instantaneous rate allowed under Water Right Claim 083693, Mr. Hanika will need to limit his pumping from DW-1 and DW-3 to a total of no more than 20 gpm. Mr. Hanika will also need to limit his annual volume to no more than 3.0 acre-feet per year under Water Right Claim 083693 and a total of no more than 5.0 acre-feet per year under Water Right Claims 083693 and 083694. The 5.0 acre-feet per year maximum is based on the total water use calculated by Mr. Lindsay as shown in the above table.

## Hydrologic/Hydrogeologic Evaluation

---

In order for Ecology to allow an additional point of withdrawal, the existing well and the proposed new well must tap the same body of public groundwater. The following (italicized) Hydrologic/Hydrogeologic Evaluation was produced by Mr. Lindsay as part of the supporting documentation for the subject application for change. This evaluation is part of a technical memorandum dated April 9, 2014, under AESI project number EH110425A.

### *Geologic Setting*

*The Hanika properties (tax parcels P17761 and P17781) are located within the Fisher Creek basin. The geologic/hydrogeologic conditions in and around the Fisher Creek basin briefly described below are based primarily on: 1) work by Dragovich and others (2002) and the USGS (2009a, 2009b), 2) a review of selected water well reports for the area in the immediate vicinity of the Hanika property, and 3) our review of regional geologic maps, technical documents previously prepared by AESI, and other published technical documents.*

*AESI recently completed a Ground Water Recharge Suitability Assessment – Draft Technical Report for the Fisher Basin, dated March 12, 2014. A generalize geologic map of the basin (Figure 5 [see Ecology Attachment 2]) and geologic cross sections A-A' and B-B' (Figure 7A [see Ecology Attachment 3]) prepared for our March report are attached to this memorandum for background information. It should be noted that Hanika's well DW-3 is shown as well 33N04E-34C01 on the geologic map and is located near the eastern end of geologic cross section B-B'. Wells DW-1 and DW-2, while not specifically shown on Figures 5 and 7A, are located approximately 3,000 feet west of DW-3 directly along the line of cross section B-B'.*

The project area is located within the Puget Lowland in Skagit and Snohomish Counties. The regional geology of the Puget Lowland consists of a complex series of sediments deposited during the repeated advance and retreat of continental glaciers, and alluvial sand and gravel deposits associated with the present and ancient Skagit River. The glacial and alluvial sediments are generally underlain by bedrock consisting of sedimentary units, metamorphic and igneous rocks. The eastern roughly 25 percent of the Fisher Creek basin is underlain at the ground surface predominately by bedrock (Oligocene- to Eocene-aged sedimentary rocks - **OEcb**). The rest of the basin is dominated by glacial and nonglacial pre-Fraser sediments, and by glacial sediments deposited during the Vashon Stade and Everson Interstade of the Fraser Glaciation.

The three most common surficial glacial units in the immediate vicinity of the Hanika properties are Holocene peat (**Qp**), Everson glaciomarine outwash (**Qgom<sub>e</sub>**), and Vashon till (**Qgt<sub>v</sub>**). The Vashon till and Everson glaciomarine outwash are underlain by Vashon advance outwash (**Qga<sub>v</sub>**) near wells DW-1 and DW-2 but the Vashon outwash appears to thin and disappear to the east near DW-3, where the till is immediately underlain by bedrock. The stratigraphic relationship between the primary geologic units in the vicinity of the Hanika properties is shown on the attached geologic cross section (Figures 7A). A description of the pertinent geologic units located in the immediate vicinity of the Hanika properties is briefly reviewed below from oldest to youngest.

The Oligocene to Eocene sedimentary bedrock (**OEcb**) is referred to as the rocks of Bulson Creek by Dragovich and others (2002). This unit has been divided into a lower conglomerate lithofacies and an upper finer-grained lithofacies. The lower lithofacies consists of pebble and cobble conglomerate with minor interbeds. The upper facies consists of well-sorted, coarse- to medium-grained sandstone with interbeds of conglomerate, pebbly sandstone, siltstone, fossiliferous siltstone, coal, and shale. Where fractured, the bedrock can contain ground water that is usable for domestic purposes. Well DW-3 appears to be completed within the upper fractured portion of the **OEcb**.

The **OEcb** bedrock is typically overlain by a complex sequence of glacial and nonglacial deposits (**Qc<sub>w</sub>**, **Qot**, **Qoo**, **Qc<sub>s</sub>**) that consist mostly of sand with interbeds of gravel, silt, clay, sandy clay, silty clay and some organic material. Where these sediments are absent the bedrock is generally overlain by Vashon advance outwash and/or Vashon glacial till (Figure 7A). The older glacial/nonglacial sediments have a high degree of heterogeneity and can contain localized aquifers and aquitard (confining units).

The Vashon advance outwash (**Qga<sub>v</sub>**) deposits consist of primarily medium and coarse sand and gravel deposited in the high-energy glacial fluvial environment in front of the advancing glaciers. The **Qga<sub>v</sub>** is moderately well sorted and is commonly overlain by till (**Qgt<sub>v</sub>**) along a relatively sharp contact. The Vashon advance outwash is a regionally extensive aquifer in the Fisher Creek basin. Although no well logs are available for DW-1 and DW-2, their reported depths indicate that they are both likely completed within the Vashon advance outwash sediments. The Vashon advance outwash is located stratigraphically above the older glacial/nonglacial sediments and/or bedrock were those sediments are absent.

The Vashon glacial till (**Qgt<sub>v</sub>**) is composed of a non-stratified, unsorted mixture of clay, silt, and gravel in various proportions, scattered cobbles and boulders and rare lenses of sand or gravel (Dragovich and others, 2002). Till is deposited directly under advancing or retreating glaciers, which results in a very dense sediment that typically has extremely low permeabilities and does not typically yield sufficient quantities of water for domestic use. The **Qgt<sub>v</sub>** appears to underlie the **Qp** and **Qgom<sub>e</sub>** in the immediate vicinity of the Hanika properties. The till overlies the Vashon advance outwash near DW-1 and DW-2 and

directly overlies the bedrock near DW-3 where the advance outwash is thin and/or absent (Figures 5 and 7A).

Everson glaciomarine outwash (**Qgom<sub>e</sub>**) is widespread throughout the western portion of the basin in relatively thin and discontinuous layers (Figure 5). The **Qgom<sub>e</sub>** typically consists of loose sand, gravel, and silt, with occasional silt beds. The **Qgom<sub>e</sub>** is typically underlain by Vashon glacial till. Seasonal thin layers of perched ground water can form in Everson outwash. There appears to be a relatively thin surficial layer of **Qgom<sub>e</sub>** in the immediate vicinity of DW-1 and DW-2 (Figure 5).

The Holocene peat consists of mostly poorly stratified, brown to black, soft fibrous to woody peat and muck that is located stratigraphic on top of the **Qgt<sub>v</sub>**, and very locally the **Qgom<sub>e</sub>** (Figures 5 and 7A). Much of the peat is typically saturated and can yield useable quantities of ground water for domestic use.

### *Hydrogeologic Setting*

As previously discussed, the saturated portions of the Vashon advance outwash and the water-bearing fractures of the **OEcb** bedrock form significant regionally extensive aquifers. The USGS technical reports (2009a, 2009b and 2011) indicate that ground water flow within the Vashon advance outwash and bedrock aquifers is generally toward the west in the immediate vicinity of the Hanika properties. Recharge to the Vashon advance outwash aquifer in the immediate vicinity of the Hanika properties is primarily from the slow vertical migration of precipitation through the overlying low permeability glacial till and through lateral flow from water-bearing zones in the **OEcb** bedrock located near DW-3 (Figure 7A). Recharge to the **OEcb** bedrock aquifer is generally from the direct infiltration of precipitation in to the fractures where the rock is exposed at the ground surface in the eastern portion of the Fisher Creek basin.

The Vashon advance outwash aquifer likely discharges to streams, springs and seeps located in the western portion of the Fisher Creek basin and to shallow aquifers located in the Skagit River valley to the west of the basin. The deep bedrock aquifer discharges to overlying sediments, including the Vashon advance outwash, and eventually to Puget Sound.

### *Hydrogeologic Conclusions*

It is the opinion of AESI that DW-1 and DW-3 tap the same body of public ground water based on the following:

1. Subsurface conditions described in the available water well logs and information presented in the USGS reports do not indicate any significant hydraulic separation between the Vashon advance outwash aquifer and the water-bearing fracture zones in the **OEcb** bedrock.
2. Ground water flow is toward the west in the Vashon advance outwash aquifer and the **OEcb** bedrock aquifer in the immediate vicinity of the Hanika properties.
3. No ground water flow divides or flow boundaries exist between DW-1 and DW-3.
4. The maximum distance between the two domestic wells is less than 0.75 miles.

I (Buck Smith) have reviewed this evaluation for accuracy. I agree with the interpretations and hydrogeologic conclusions.

## Impairment Considerations

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection (i.e., water rights that are both senior and junior in priority to the right the applicant seeks to change).

Based on the low pumping rate to be allowed for DW-3 (less than 20 gpm), distance from neighboring wells, proper well construction, and local geology, I do not anticipate any impairment of junior or senior right holders. Regarding the potential for impairment of Skagit River instream flows (as per WAC 173-503), approval of the subject application will have no impact. With the reduction of the number of head of cattle (by 30) to be watered and the requirement to meter and report, Mr. Hanika will not be using any greater instantaneous or annual quantities of water than was historically perfected and put to beneficial use within the most recent five year period.

## Potential for Detriment of the Public Interest

No potential for detriment of the public interest could be identified during the processing of the subject application.

## *Consideration of Protests and Comments*

No protests were filed against the subject application.

## CONCLUSIONS

My investigation conclusions are as follows:

- The subject claim has been tentatively determined to be a valid vested (pre-1945) right that is eligible for change.
- The additional well (DW-3) taps the same body of public ground water as DW-1.
- Other existing rights (including instream flows) will not be impaired.
- Due to the reduction in the number of cattle to be watered, there will be no enlargement of the right. Total usage of DW-1 and DW-3 will be restricted to the instantaneous and annual quantities beneficially used under claim 083693 within the most recent five years. The total annual volume allowed for use under claims 083693 and 083694 shall be limited to the perfected quantity of 5.0 acre-feet per year.
- There will be no detriment to the public interest.

## RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend this request for change be approved in the amounts and within the limitations listed below and subject to the provisions listed on page 2.

*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:

- The total instantaneous withdrawal rate from wells DW-1 and DW-3 cannot exceed 20 gallons per minute under Water Right Claim 083693.
- The total annual withdrawal volume cannot exceed 5.0 acre-feet per year under Water Right Claims 083693 and 083694.

*Purpose of Use*

- The purpose of use remains unchanged for domestic supply and stockwatering.

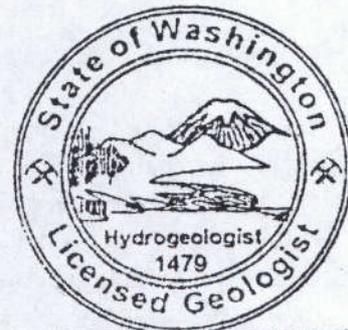
*Points of Withdrawal*

SOURCE	PARCEL#	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
DW-1	P17781	BHN409	33N	04E	34	NWNW	48.309340	-122.290730
DW-3	P17761	BAB504	33N	04E	34	NWNE	48.310835	-122.275917

Datum: NAD83/WGS84

*Place of Use*

Skagit County parcel number P17781 within the North ½ of the Northwest ¼ of Section 34, Township 33 North, Range 4 East, W.M. and Skagit County parcel number P17761 within the Northwest ¼ of the Northeast ¼ of Section 34, Township 33 North, Range 4 East, W.M.



J. R. "BUCK" SMITH

*Buck Smith*

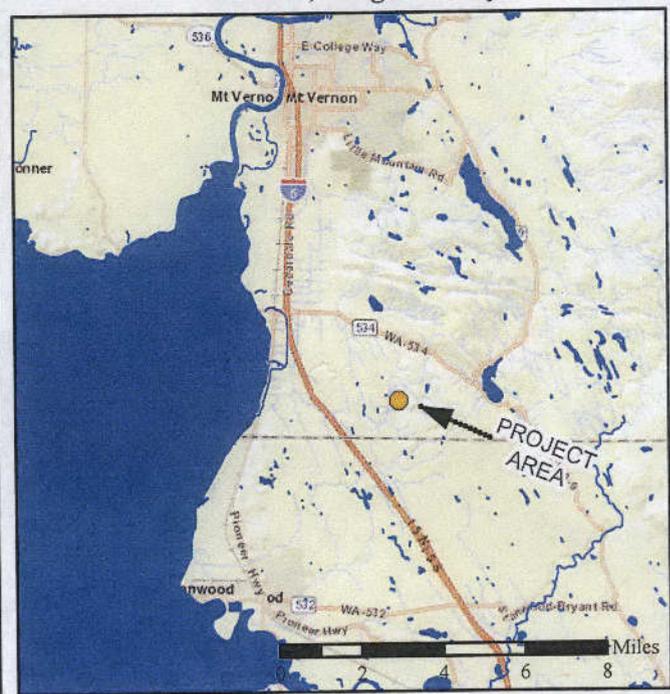
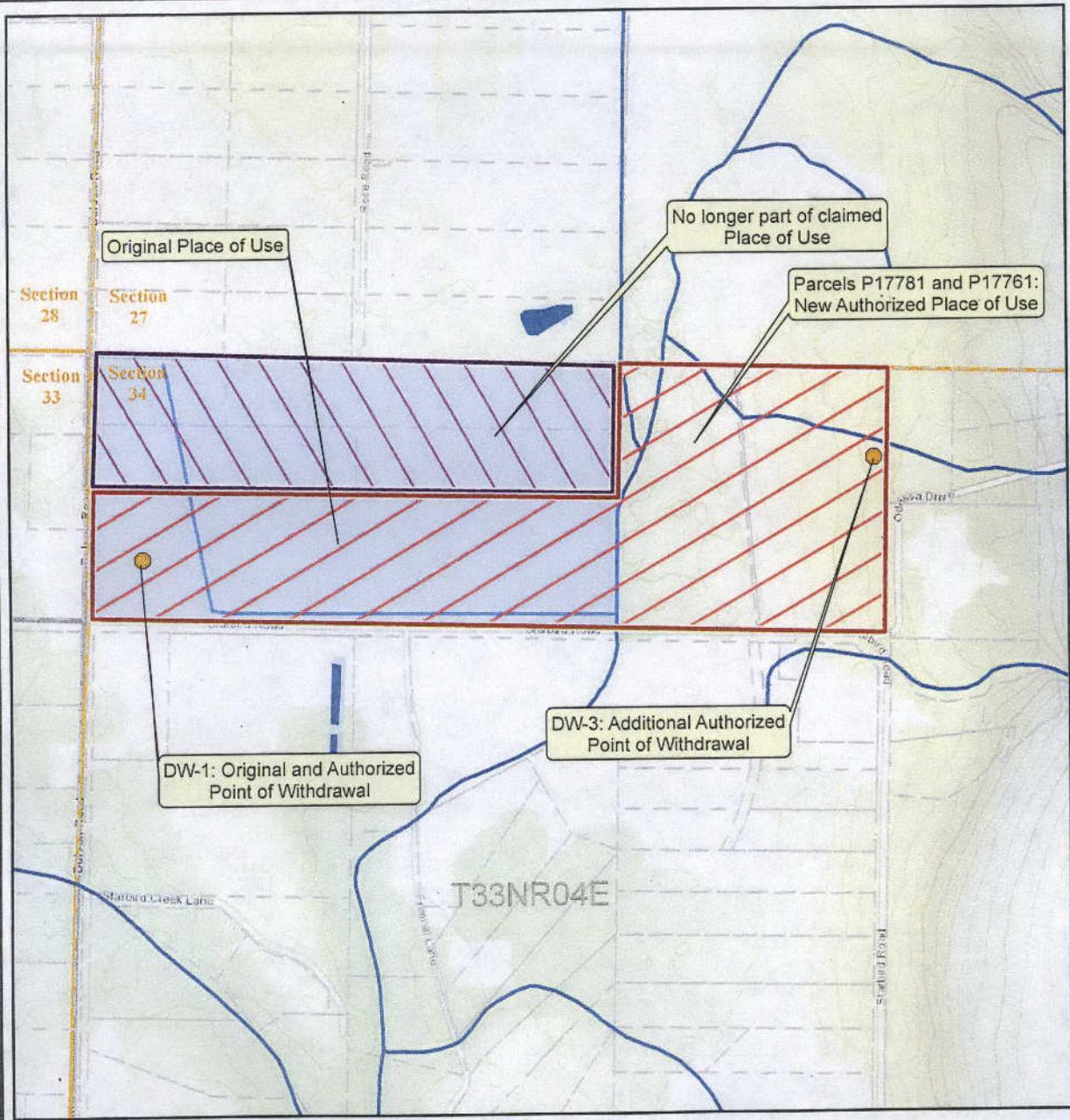
*9/23/14*

Buck Smith, LG, LHG (license #1479)

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.

Richard Hanika  
 Water Right CG1-083693CL  
 Section 34, T 33N R 04E W.M.  
 WRIA 3, Skagit County



- Legend**
-  Authorized Place of Use
  -  Authorized Point of Diversion
  -  Original Place of Use
  -  No longer part of claimed Place of Use
  -  Water Body
  -  River or Stream
  -  Townships
  -  Parcels
  -  Sections

0 500 1000 1500 2000 Feet



Map Date: 8/11/2014

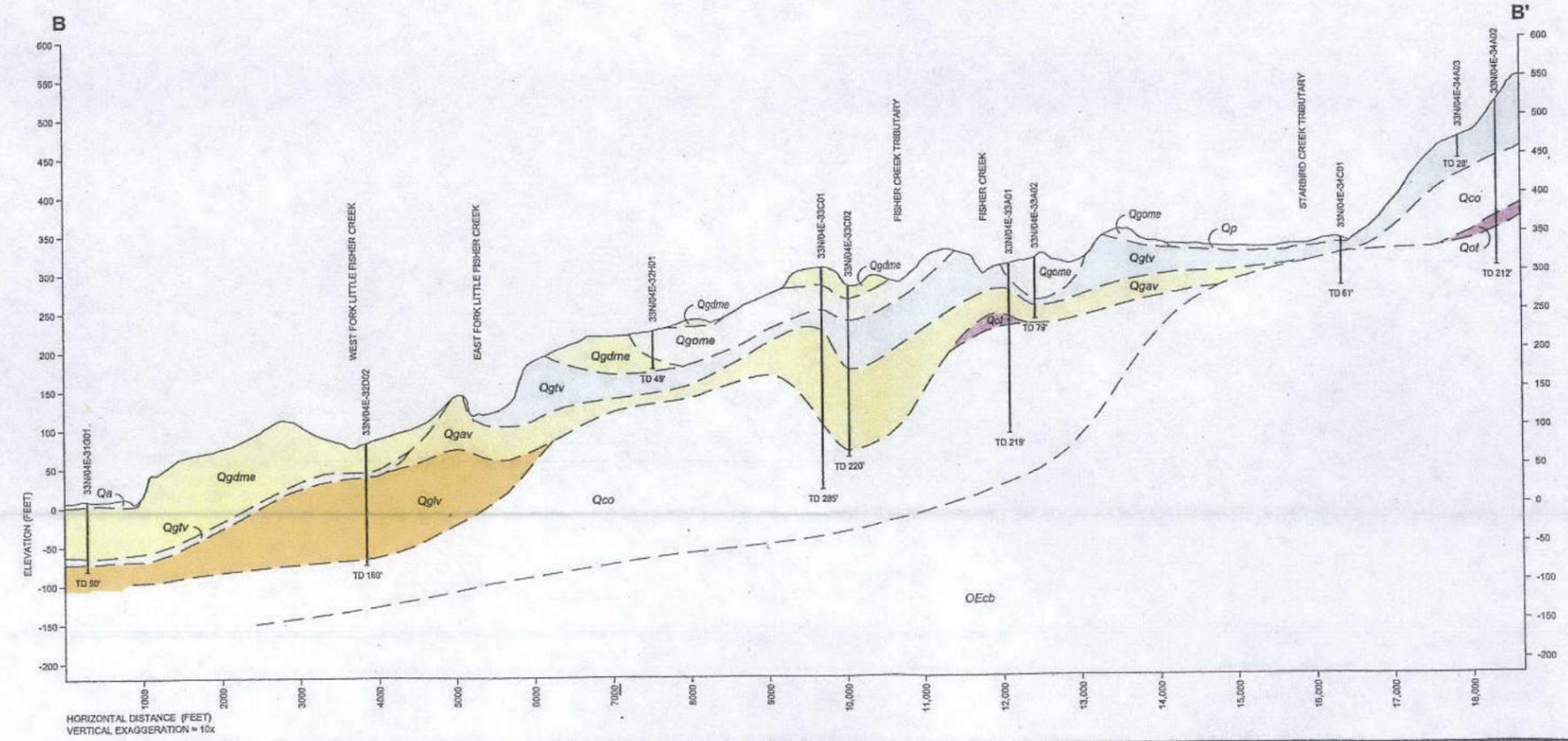
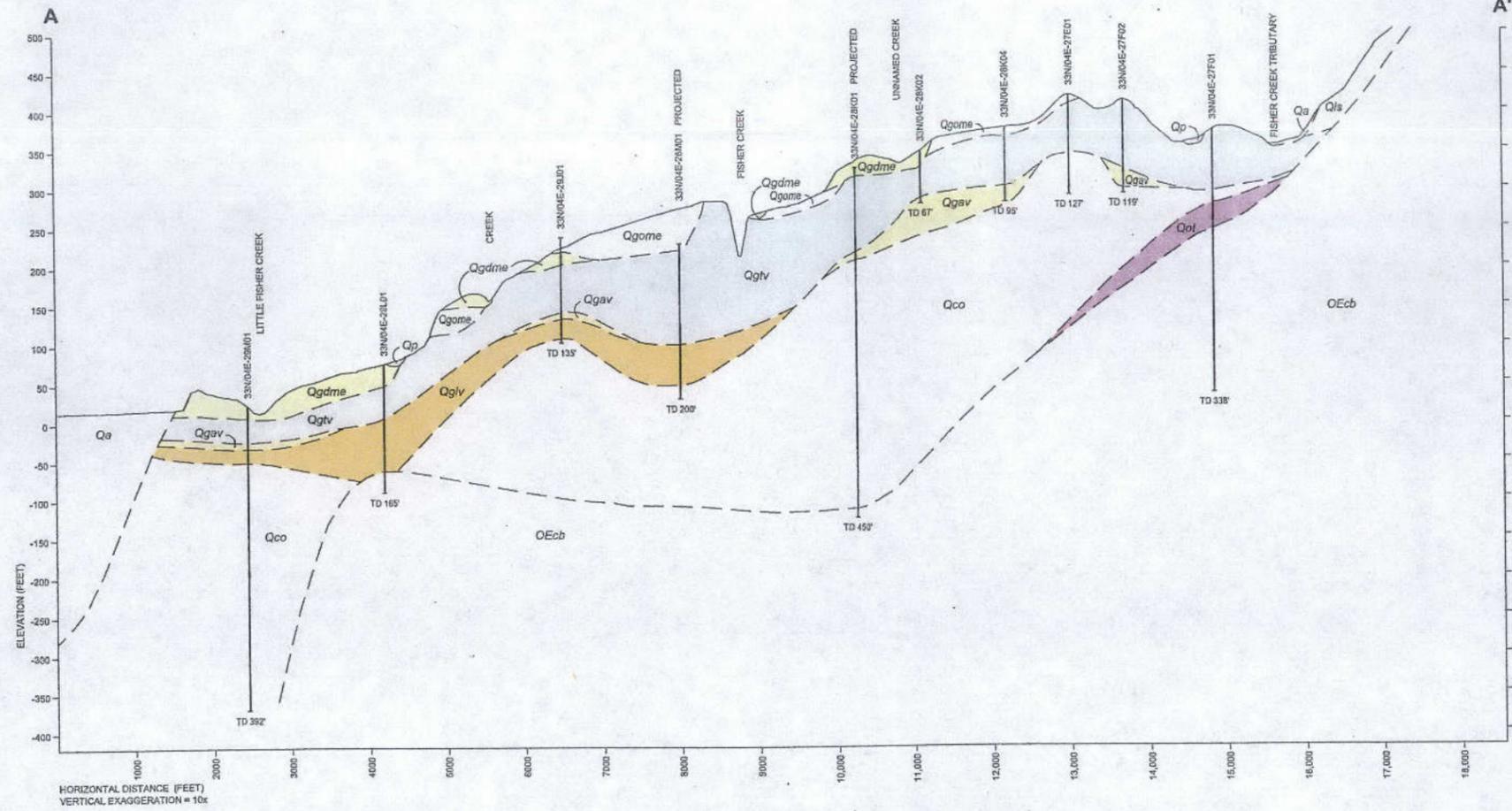


Place of use and point(s) of withdrawal are as defined on the cover sheet under the headings, 'LOCATION OF WITHDRAWAL' and 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'

ATTACHMENT 1



ATTACHMENT 3



Associated Earth Sciences, Inc.  
 www.aes.com

Everett Office  
 2011 17th Street, Suite 2  
 Everett, WA 98201  
 (425) 259-0523

Tacoma Office  
 1552 Commerce Street, Suite 101  
 Tacoma, WA 98402  
 (253) 725-2992

Kirkland Office  
 917 7th Avenue  
 Kirkland, WA 98033  
 (425) 827-7701

GEOLOGIC CROSS-SECTIONS A-A' AND B-B'  
 FISHER CREEK BASIN  
 SNOHOMISH AND SKAGIT COUNTIES, WASHINGTON

DRAWN BY:	DMG/EIN
CHECKED BY:	JWC/CSL
DATE:	4/14
PROJECT NO.:	EH130580A
FIGURE:	7A

130580\_Fisher\_Creek\_1\_130580\_Geo\_Sects\_3-14.dwg LAYOUT: Sections A-B