



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION

*Change approval: Additional point of withdrawal and expanded place of use
WRTS File # CG1-00452C*

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
July 21, 1967			G1-00452C

NAME Maberry Packing		
ADDRESS/STREET	CITY/STATE	ZIP CODE
816 Loomis Trail Road	Lynden, WA	98264

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Two infiltration trenches
TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND (cfs)	MAXIMUM GALLONS PER MINUTE (gpm)	MAXIMUM ACRE FEET PER YEAR (ac-ft/yr)
	180	50.63

TYPE OF USE & PERIOD OF USE
Irrigation supply for up to 44 acres – May 1 to October 1

LOCATIONS OF POINTS OF WITHDRAWAL

APPROXIMATE LOCATIONS OF POINTS OF WITHDRAWAL							
Original trench: 585 feet south and 938 feet east of the northwest corner of Section 20							
Additional trench: 975 feet north and 1185 feet west of the southeast corner of Section 19							
SOURCE NAME	PARCEL #	LATITUDE	LONGITUDE	QTR/QTR	SECTION	TOWNSHIP	RANGE
Original trench	400220 066463	48.94835	-122.59250	E1/2 NW1/4 NW1/4	20	40N	2E
Additional trench	400219 375058	48.93818	-122.60152	SE1/4 SE1/4	19	40N	2E

LEGAL DESCRIPTIONS OF PROPERTIES ON WHICH WATER IS TO BE USED
[Attachment 1 shows locations of the authorized places of use and points of withdrawal]

Original place of use (the “Schmidt” place): NW¼ NW¼ of Section 20, Township 40 North, Range 2 East, less the east 10 rods, and less roads (parcel #400220 066463)

Additional place of use (the “Brann” place): N½ E½ W½ SE¼ of Section 19, Township 40 North, Range 2 East, less roads (parcel #400219 312203)

DESCRIPTION OF WATER WORKS

The water works consists of the following:

Original trench – Water is withdrawn by a 7.5 horsepower Berkley pump attached to a pontoon that floats in the middle of an approximately 40 x 200 foot oval infiltration trench. The pumped water then moves through a filtration plant and is distributed to the irrigation system on the former “Schmidt” place (now owned by Maberry Packing).

Additional trench – Water is withdrawn by a 15 horsepower Berkley pump attached to a pontoon that floats in the middle of an approximately 80 x 600 foot irregular-shaped infiltration trench. The pumped water then moves through a filtration plant and is distributed to the irrigation system on the former “Brann” place (now owned by Maberry Packing). The trench is located on the former “Decker” place (now also owned by Maberry Packing).

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
Begun	Completed	January 1, 2014

PROVISIONS

1. Meter Installation

An approved measuring device shall be installed and maintained for each of the sources authorized by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173. See <http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html>

2. Metering Rule Description And Petition Info

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. Installation, operation and maintenance requirements are enclosed as a document titled "Water Measurement Device Installation and Operation Requirements".

See <http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html>

3. Record Weekly, Report Monthly Totals

Water use data shall be recorded weekly and maintained by the property owner for a minimum of five years. The maximum rate of withdrawal and the monthly total volumes shall be submitted to the Department of Ecology by January 31st of each calendar year.

4. Electronic Reporting

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact Christy Dustrude at Ecology's Northwest Regional Office (425-649-7000). 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.

5. Authority To Access Project

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, points of withdrawal, measuring devices and associated distribution systems for compliance with water law.

6. No Impairment of Existing Rights

This authorization to make use of public waters of the state is subject to existing rights, including any existing rights held by the United States for the benefit of Tribes under treaty or settlement. The Lummi Nation protested the subject application because of their concern of impairment of tribal rights. By ensuring no greater consumptive use of water, this change authorization should have no greater impact on tribal rights than the original authorization.

7. Conservation

Use of water under this authorization shall be contingent upon the water right holder's maintenance of efficient water delivery systems and use of up-to-date water conservation practices consistent with established regulation requirements and facility capabilities.

8. Project Completion

The water right holder shall file the notice of project completion 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 *Superseding Certificate* will reflect the extent of beneficial use within the limitations of the change authorization. Elements of the project completion inspection may include, as appropriate, the sources, system instantaneous capacity, beneficial use, annual quantity, place of use, and compliance with provisions.

FINDINGS OF FACT AND ORDER

Upon reviewing the investigator's report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights.

Therefore, I ORDER approval of the recommended change to certificate G1-00452C, subject to existing rights and the provisions listed above.

You have a right to appeal this ORDER. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.

- Serve your appeal on the Department of Ecology within 30 days of the “date of receipt” of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). “Date of receipt” is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of this document that you are appealing with your Notice of Appeal.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

Deliver your appeal in person to:

The Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

OR

The Pollution Control Hearings Board
4224 – 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

Deliver your appeal in person to:

The Department of Ecology
Appeals and Application for Relief
Coordinator
PO Box 47608
Olympia, WA 98504-7608

OR

The Department of Ecology
Appeals and Application for Relief
Coordinator
300 Desmond Dr SE
Lacey, WA 98503

3. And send a copy of your appeal to:

Andrew B. Dunn
Department of Ecology
3190 160th Ave SE
Bellevue, WA 98008

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> .

Signed at Bellevue, Washington, this _____ day of _____ 2009.

Andrew B. Dunn, LG, LHG
Section Manager
Water Resources Program
Northwest Regional Office

INVESTIGATOR'S REPORT
by Buck Smith - Senior Hydrogeologist

BACKGROUND INFORMATION

Description and Purpose of Proposed Change

On April 9, 2008, Maberry Packing filed the subject application for change. This report was written in response to that application.

Maberry Packing currently grows raspberries and blueberries on what is referred to as the "Schmidt" place. The subject water right certificate was issued only for this property. Maberry Packing also grows raspberries on the nearby "Brann" place. The subject of this report is Maberry's request to add the "Brann" place as an additional place of use and the infiltration trench on the adjacent "Decker" place as an additional point of withdrawal. All of these properties are located approximately six miles west of Lynden.

Attributes of the Original Certificate and the Proposed Changes

Table 1: Summary of Existing Attributes and Proposed Changes to Certificate G1-00452C

<i>Attributes</i>	<i>Existing</i>	<i>Proposed</i>
Name on Certificate	Henry D. Schmidt	Maberry Packing
Instantaneous Rate	180 gallons per minute	180 gallons per minute
Annual Quantity	58 acre-feet per year	58 acre-feet per year (subsequently reduced to 50.63 acre-feet per year)
Source	"Schmidt" infiltration trench	Add the "Decker" infiltration trench
Points of Withdrawal	E½ NW¼ NW¼ of Section 20, Township 40N, Range 2E (the "Schmidt" place)	Add an additional point in the SE¼ SE¼ of Section 19, Township 40N, Range 2E (the "Decker" place)
Purpose of Use	Irrigation of 29 acres	Irrigation of 44 acres
Period of Use	May 1 to October 1	May 1 to October 1
Place of Use	29 acres within the NW¼ NW¼ of Section 20, Township 40N, Range 2E, less the east 10 rods thereof and less roads ("Schmidt" place)	Add 15 acres within the N½ E½ W½ SE¼ of Section 19, Township 40N, Range 2E ("Brann" place)

Legal Requirements Prior to Processing

The following legal requirements were accomplished prior to processing the subject water right change application:

1. Public Notice

Public notice of the application was published in the *Lynden Tribune* on April 30 and May 7, 2008. The Lummi Nation filed a protest during the 30-day statutory protest period. No other protests were received.

2. State Environmental Policy Act (SEPA)

In accordance with WAC 197-11-305 and WAC 197-11-800(4), this water right change application is exempt from SEPA because the instantaneous withdrawal rate is less than 2250 gallons per minute.

Legal Analyses to be Conducted During Processing

The following analyses must be conducted during the investigation of an application for the requested types of changes:

1. Tentative Determination of the Validity of the Right

The Washington State Supreme Court ruled that Ecology, when processing an application for change to a water right, is required to make a tentative determination of the extent and validity of the right. This is necessary to establish whether the right is eligible for change (*R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp*).

2. Authorization for an Additional Point of Withdrawal

RCW 90.44.100 allows Ecology to change a groundwater right to allow the right holder to construct an additional point of withdrawal at a location outside of the location of the original point of withdrawal, if:

- a. The additional point of withdrawal taps the same body of public ground water as the original point of withdrawal.
- b. The combined total withdrawal does not enlarge the right conveyed by the original certificate.
- c. Other existing rights are not impaired.

3. Authorization to Allow for the Irrigation of Additional Acreage

RCW 90.03.380 allows Ecology to authorize a change in place of use to enable irrigation of additional acreage if such change results in no increase in the annual consumptive quantity of water used under the water right. Specifically, the statute states: *A change in the place of use, point of diversion, and/or purpose of use of a water right to enable irrigation of additional acreage or the addition of new uses may be permitted if such change results in no increase in the annual consumptive quantity of water used under the water right. For purposes of this section, "annual consumptive quantity" means the estimated or actual annual amount of water diverted pursuant to the water right, reduced by the estimated annual amount of return flows, averaged over the two years of greatest use within the most recent five-year period of continuous beneficial use of the water right.*

INVESTIGATION RESULTS

The results of my investigation of the above three legal analyses are as follows:

1. Tentative Determination of the Validity of the Right

On May 15, 2008, Marty Maberry of Maberry Packing provided Ecology with a notarized affidavit attesting to the validity of water use on the "Schmidt" property. Mr. Maberry attested to the following:

- a. He purchased the currently authorized place of use (the "Schmidt" place) in December of 1996 and previously had rented the property since 1970.
- b. He has grown berries on the property since 1970.
- c. There has never been a 5 year period of non-use of water on the property.
- d. He has pumped up to 180 gallons per minute (gpm) and 58 acre-feet per year (ac-ft/yr) on a regular basis.
- e. His method of watering has been a mix of overhead and drip irrigation.
- f. Irrigation and fertigation has occurred from early spring through fall.

Based on Mr. Maberry's affidavit, my site visits on April 30, 2008 & March 11, 2009, my personal knowledge of the area, Berkeley Pump rating curves, and available aerial photographic records (1998, 2002, 2006), I have determined the subject right is valid and eligible for change.

2. Authorization for an Additional Point of Withdrawal

- a. The "Schmidt" and "Decker" points of withdrawal should be considered to be tapping the same body of public ground water for the following reasons:
 1. Both points of withdrawal are completed in the shallow, unconfined, Sumas Outwash Aquifer (see Attachment 2).
 2. Both points of withdrawal are located within the Dakota Creek Surface Water Subbasin as defined by the WRIA 1 Watershed Planning Group.
 3. The points of withdrawal are relatively close together (0.85 miles apart).
- b. The combined total withdrawal will not enlarge the right conveyed by the original certificate. A legal requirement (a provision) of this change authorization will require Maberry Packing to meter both points of withdrawal to ensure the combined instantaneous rate and total annual volume withdrawn does not exceed the quantity limitations of this water right. In addition, Maberry Packing will be required to submit annual metering reports to verify compliance.

- c. The amount of water withdrawn from the “Schmidt” point of withdrawal will be reduced from historical use levels, so no impairment of existing rights will occur at that location. The “Decker” point of withdrawal has previously been used with no complaints of neighboring impairment. The amount of water available at this location appears to be substantial, so no impairment of neighboring rights is anticipated.

The subject points of withdrawal are likely hydraulically connected to Dakota Creek (which is closed year-round to new appropriations), but the total instantaneous rate and annual volume will not be increased, so the impact to the creek will not be any greater (see next section) than previously authorized.

3. Annual Consumptive Quantity Eligible for Change

RCW 90.03.380(1) requires Ecology to calculate the “annual consumptive quantity” (ACQ) available for change. Based on Mr. Maberry’s affidavit attesting to the full use of 58 ac-ft/yr on a regular basis, the ACQ available under this change approval has been calculated as follows:

- The annual amount of water withdrawn has been 58 ac-ft/yr for 29 acres = 2 feet per acre = 24 inches per acre.
- According to the 1985 Washington Irrigation Guide (WAIG), the crop irrigation requirement (near the Blaine weather station) for raspberries (Mr. Maberry’s highest use crop) is 17.48 inches per acre.
- Mr. Maberry attested to a combination of overhead (moving big gun) and drip irrigation.

- If the water use for the original 29 acres was strictly from a moving big gun, the ACQ would be:
Assuming an irrigation efficiency of 65% (this is average for a big gun) and an average of 10% being lost to evaporation, return flow to the aquifer would be 25%. So, 75% would be considered consumptive and 25% would be non-consumptive.

Therefore, in order for 17.48 inches of water to be available to the crop, a total of 26.89 inches (2.24 feet) would have to be applied. Of this total, 20.17 inches (75%) would be consumptive (ACQ) and 6.72 inches (25%) would be non-consumptive.

But, the certificate does not allow for 26.89 inches (65 ac-ft/yr) of application.

- If the water use for 29 acres was strictly from drip irrigation, the ACQ would be:
Assuming an irrigation efficiency of 88% (this is average for drip irrigation) and an average of 5% being lost to evaporation, return flow to the aquifer would be 7%. So, 93% would be considered consumptive and 7% would be non-consumptive.

Therefore, in order for 17.48 inches of water to be available to the crop, a total of 19.86 inches (1.66 feet) would have to be applied. Of this total, 18.47 inches (93%) would be consumptive (ACQ) and 1.39 inches (7%) would be non-consumptive.

But, Mr. Maberry attested to 24 inches of application, so this volume is less than the attested to usage.

- Because Mr. Maberry attested to a combination of overhead and drip irrigation, and full usage of 58 ac-ft/yr over 29 acres, on average he must have irrigated 17 acres with overhead irrigation for a total of 38.08 ac-ft/yr (17 acres x 2.24 feet per acre). And he must have irrigated 12 acres with drip irrigation for a total of 19.92 ac-ft/yr (12 acres x 1.66 feet per acre). Therefore, the combined total would be $38.08 + 19.92 = 58$ ac-ft/yr.

To determine the ACQ available for transfer, 75% of the 38.08 ac-ft/yr applied by overhead irrigation shall be considered consumptive. So, the overhead ACQ is 28.58 ac-ft/yr. For drip irrigation, 93% of 19.92 ac-ft/yr shall be considered consumptive. So, the drip ACQ is 18.51 ac-ft/yr.

Therefore, the total ACQ available for transfer is $28.58 + 18.51 = 47.09$ ac-ft/yr.

- Because Mr. Maberry is going to be using 100% drip irrigation (no overhead) from now on, and as outlined above, drip is on average 93% efficient, the total annual withdrawal (consumptive & non-consumptive) cannot exceed 50.63 ac-ft/yr ($47.09 \text{ ac-ft/yr} \div 0.93$) over the entire 44 acres to be irrigated.

ADDITIONAL INVESTIGATION INFORMATION

Other Rights Appurtenant to the Places of Use and/or Properties Containing the Points of Withdrawal

A search of the Department of Ecology Water Rights Tracking System (WRTS) showed there are no other water rights appurtenant to the “Schmidt”, “Brann”, or “Decker” properties.

Future Water Use Plans

Mr. Maberry's affidavit stated the following:

- He will deficit irrigate both properties (Schmidt & Brann) in order to conserve water.
- He will install tensiometers to monitor soil moisture.
- He will not use overhead irrigation.
- He will attempt to pulse irrigate during peak times. (Giving less water to the plants but irrigating more frequently.)
- He will reduce his fertigation and fall irrigation programs.

(Maberry Packing received a seasonal change authorization on June 24, 2008, to allow for the additional point of withdrawal and additional place of use for the 2008 growing season. Mr. Maberry instituted the above efficiency methods at that time.)

Beneficial Use

Irrigation supply is considered to be a beneficial use under RCW 90.54.020(1).

Public Interest

No potential for detriment to the public interest could be identified during the investigation of this application.

Consideration of Protests and Comments

This application was protested by the Lummi Nation on May 12, 2008. Their letter of protest expressed concern about affects on Dakota Creek. This concern is certainly understandable, but the subject water right is an existing appropriation, pre-dating the administrative stream closure listed in chapter 173-501 WAC. As such, the quantities of water determined to be eligible for transfer can legally be changed. In addition, because there can be no additional consumptive use allowed as a result of this change, there should be no new affect on Dakota Creek.

The following shall be included in the provisions section of this report and any superseding documents issued under this water right:

This authorization to make use of public waters of the state is subject to existing rights, including any existing rights held by the United States for the benefit of Tribes under treaty or settlement.

CONCLUSIONS

In accordance with chapters 90.03 and 90.44 RCW, I conclude that certificate G1-00452C is eligible for change. The addition of a second point of withdrawal and the addition of acreage will not enlarge the existing right, nor will granting of the request for change impair existing rights or be detrimental to the public interest. In addition, the original authorized point of withdrawal and the new point of withdrawal are located within the same body of public groundwater.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend the request for an additional point of withdrawal and the addition of acreage be approved in the amounts and within the limitations listed below and subject to the provisions on page 2.

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:

- 180 gallons per minute
- 50.63 acre-feet per year
- For the irrigation of up to 44 acres – May 1 to October 1

Points of Withdrawal

- E½ NW¼ NW¼ of Section 20, Township 40 North, Range 2 East (parcel #400220 066463)
- SE¼ SE¼ of Section 19, Township 40 North, Range 2 East (parcel #400219 375058)

Places of Use

As described on Page 1 of this Report of Examination and as shown in Attachment 1.

Report by: _____
Buck Smith, LG, LHG

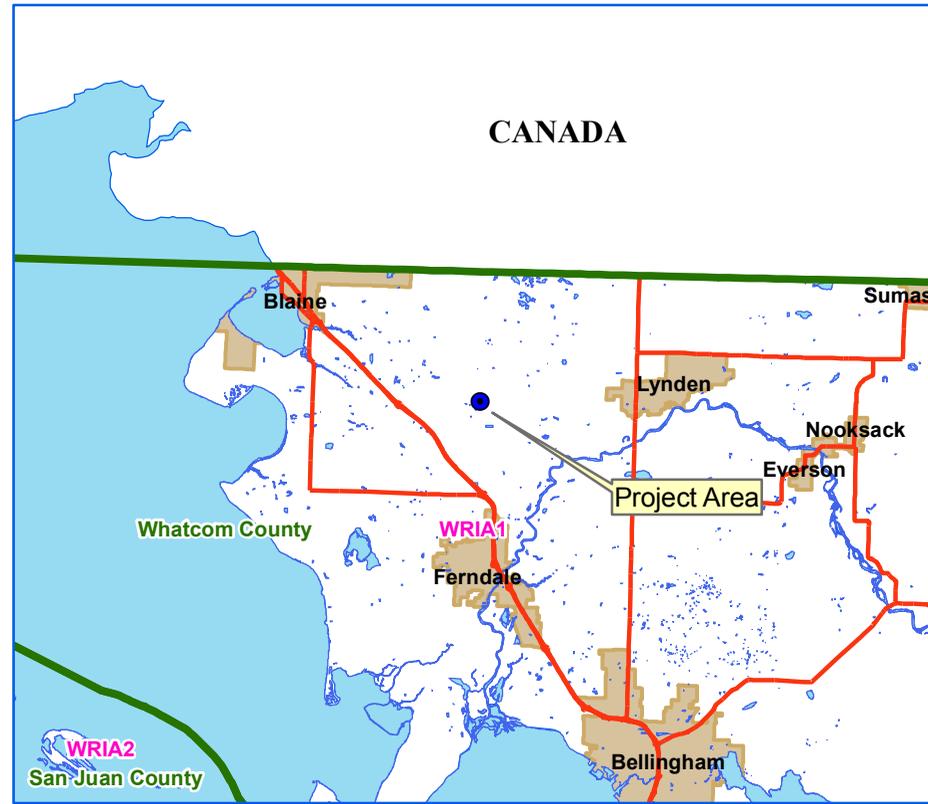
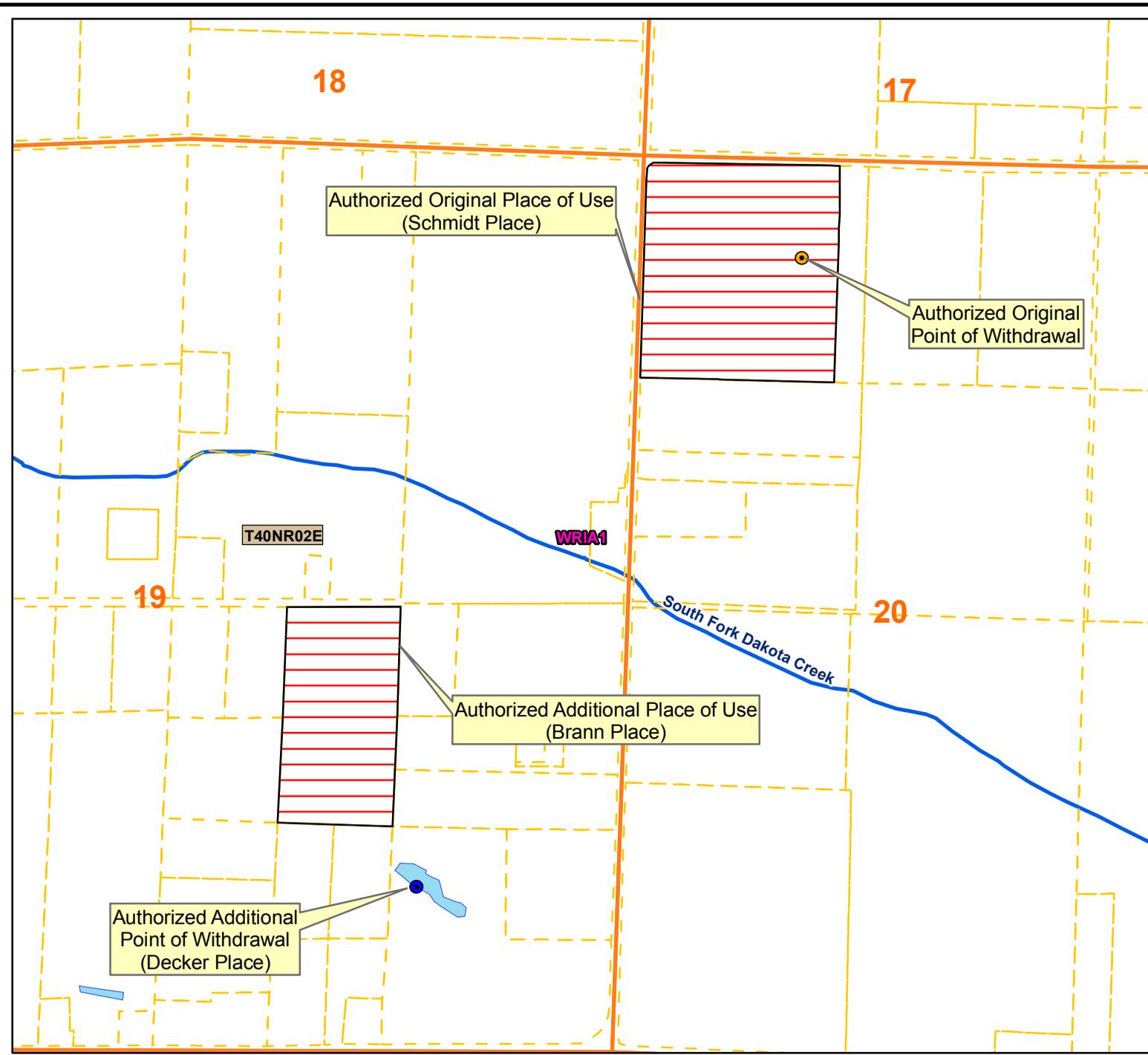
Date

Licensed Geologist/Hydrogeologist No. 1479

If you need this publication in an alternate format, please call the Water Resources Program at 425- 649-7000. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Maberry Packing
 Water Right Number CG1-00452C
 Sect. 19 & 20 T 40N R 02E W.M.
 WRIA 1 - Whatcom County



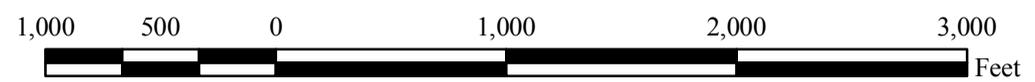
Attachment 1



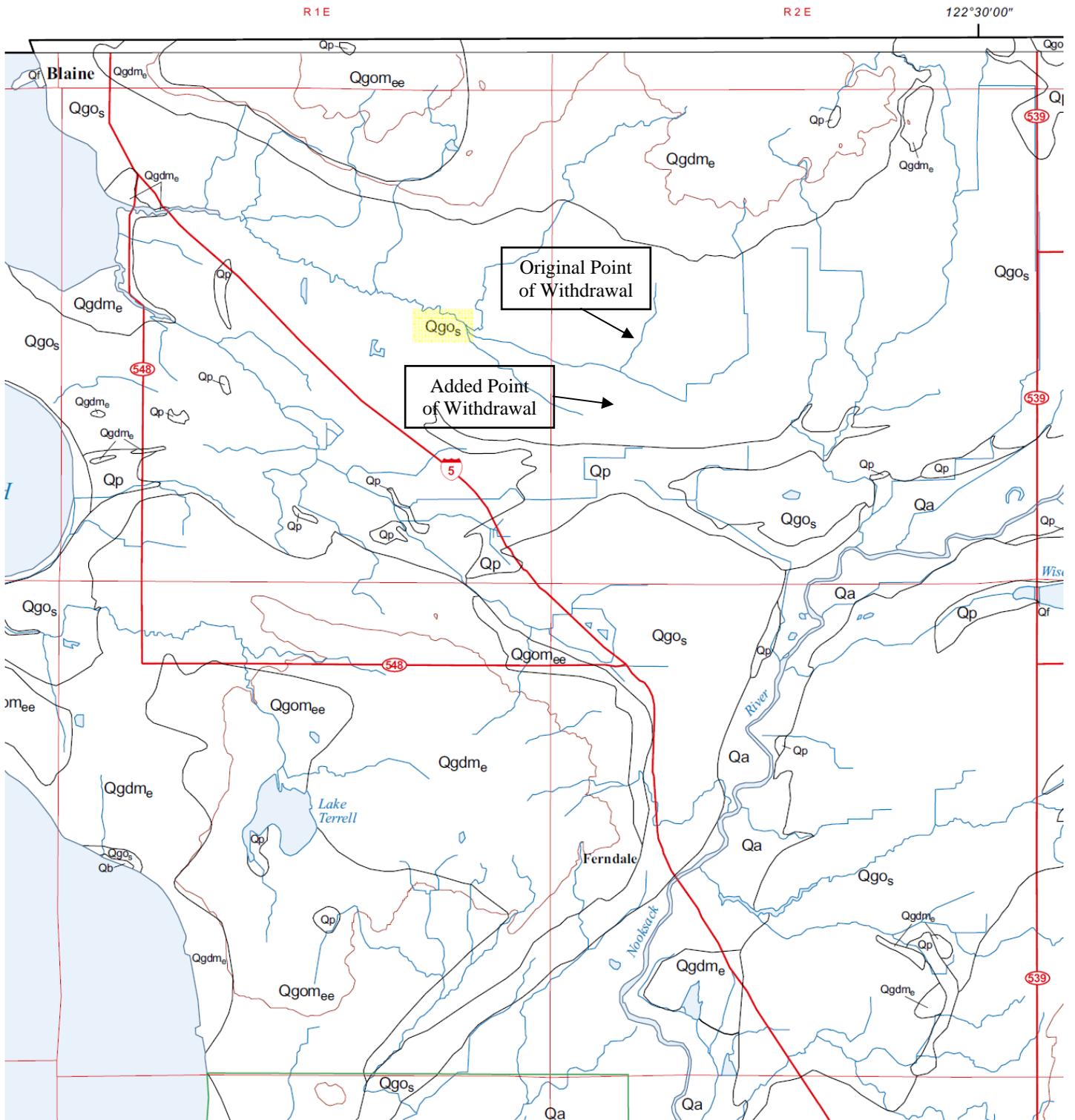
Legend

- County
- WRIA
- Highways
- Townships
- cities
- Sections
- Additional Point of Withdrawal
- Existing Point of Withdrawal
- Authorized Places of Use

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



Attachment 2



Clipped from the WA DNR Geologic Map of the Bellingham 1:100,000 Quadrangle

Qgo_s is the designation for Quaternary glacial outwash of the Sumas Stage

Both the original and the added points of withdrawal are within the area delineated as being Quaternary glacial outwash of the Sumas Stage (aka Sumas Outwash Aquifer)