

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

File No. S1-28795  
WR Doc ID: 6411597

<b>PRIORITY DATE</b> December 17, 2014	<b>APPLICATION NUMBER</b> S1-28795
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<b>MAILING ADDRESS</b> US Golden Eagle Farms, LP 2 <sup>nd</sup> Floor, 510 West Hastings Street Vancouver, B.C., Canada, V6B-1L8	<b>SITE ADDRESS (IF DIFFERENT)</b>
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**Quantity Authorized for Withdrawal or Diversion**

DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
11.14	cfs	632

**Purpose**

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Irrigation of 2,050 acres	11.14		cfs	632	-	04/15-9/15

**Source Location**

WATERBODY	TRIBUTARY TO	COUNTY	WATER RESOURCE INVENTORY AREA
Snohomish River	Pacific Ocean	Snohomish	7

SOURCE FACILITY/DEVICE	PARCEL	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Snohomish River	28051400101100	28	5E	13	SW/NW	47.913587	-122.118993
Marshland 1	28051600100100	28	5E	16	NW/NE	47.921456	-122.173803
Marshland 2	28051500300200	28	5E	15	SW	47.910544	-122.157950
Marshland 3	28052200100200	28	5E	22	NE	47.903288	-122.147178

Datum: WGS84

**Place of Use (See Map, Attachment 1)**

**LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE**  
The South 809.796 feet of the Southeast quarter of the Northeast quarter of Section 8, Township 28 N, R 5 E, W.M., as measured from the East line of said Section 8, LESS County Road, LESS that portion lying

West of County Road, LESS the right of way of Puget Sound Lower and Light Company, AND LESS the Right of Way to City of Everett by SWD under Auditor's file number 9012170113.

The Southeast quarter of Section 9, Township 28 N, Range 5 E, W.M., lying Southwesterly of Southwesterly line of Burlington Northern Santa Fe Railroad, TOGETHER WITH the Southwest quarter of the Northeast quarter of said Section 9 lying Southwesterly of Southwesterly line of Burlington Northern Santa Fe Railroad.

The Southeast quarter of the Northwest quarter of Section 9, Township 28 N, Range 5 E, W.M., lying Southwesterly of Southwesterly line of Burlington Northern Santa Fe Railway, LESS that portion lying with 125 and Southwesterly of Southwesterly line of Burlington Northern Santa Fe Railway measured at Right angles thereof.

The South 824.13 ft of the Southwest quarter of the Northwest quarter of Section 9, Township 28 N, Range 5 E, W.M.

The East 769.762 feet of the North half of the Northwest quarter of the Southwest quarter of Section 9, Township 28 N, Range 5 E, W.M.

The West 152.98 feet of the East 762.637 feet of the South half of the Northwest quarter of the Southwest quarter of said Section 9, Township 28 N, Range 5 E, W.M.

The East of the West of the North of the Southwest quarter of the Southwest quarter of Section 9, Township 28 N, Range 5 E, W.M.

The East half of Southwest quarter of Section 9, Township 28 N, Range 5 E, W.M., LESS that portion described as follows: That portion of the Southeast quarter of the Southwest quarter of said section 9 which lies west of a centerline described as follows: Beginning at the South quarter corner of said Section 9; thence N  $44^{\circ}11'55''$  W 165 ft; thence along a tangent curve to the right, said curve having a radius of 4584 ft and arc length of 1752.54 feet, to the North line of the Southeast quarter of the Southwest quarter of said Section 9 and North of a line 200 ft South of a Line described as follows: Beginning at the South quarter corner of said section 9; thence N  $44^{\circ}11'55''$  W 165 ft; then along a curve to the right, said curve having a radius of 4584 ft, and an arc Length of 1089 feet to the True Point of Beginning; Thence S  $87^{\circ}40'51''$  W to West Line of said Southeast quarter of Southwest quarter. That portion of the Southwest quarter of the Southwest quarter of Section 9, Township 28 N, Range 5 E, W.M., described as follows: Beginning at the Northwest corner of said Southwest quarter of southwest quarter of Section 9; thence S  $87^{\circ}38'4''$  E 577.514 ft to the TRUE POINT OF BEGINNING; thence S  $1^{\circ}11'38''$  W 124.1 ft; thence S  $89^{\circ}0'18''$  E 150 ft; thence N  $1^{\circ}0'35''$  E 120.5 ft, thence N  $87^{\circ}38'4''$  W 150.741 ft to the TRUE POINT OF BEGINNING.

That portion the Southwest quarter of Section 10, Township 28N, Range 05 E, W.M., lying Southwesterly of Lowell Snohomish River Road, LESS that portion described as follows: Beginning at a point on the West line of said Section 10, 1027.235 ft North of Southwest corner of said Section 10; thence S  $66^{\circ}47'40''$  E 2839.74 ft; thence N  $1^{\circ}5'42''$  E 161.945 ft; thence N  $66^{\circ}47'40''$  W 2834.414 ft; thence S  $2^{\circ}51'45''$  W 160.017 ft to the point of beginning.

That portion in the Southeast quarter of Section 10, Township 28N, Range 05 E, W.M., described as follows: Beginning at the South quarter corner of said Section 10; thence East along South line of said Section 10 287.297 ft; thence N 66°47'39" W 309.658 ft to a point on the North-South section center line 100.281 ft North of the South quarter corner; thence S 100.281 ft to the point of beginning.

The Southwest quarter of Section 13, Township 28 N. Range 5 E., W.M., lying Southwesterly of a 50 ft strip lying Southerly of and adjacent to the Burlington Northern Santa Fe Railroad, LESS the Southwest quarter of the Southwest quarter of said section 13, AND ALSO LESS that portion described as follows: Beginning at the South quarter corner of said Section 13, thence N 87°49'12" W 272.487 ft; thence N 13°20'57" E 218.779 ft; thence N 22°56' W 108.683 ft; thence N 2°19'34" E 1129.309 ft; thence S 70°29'17"E 267.438 ft; thence S 1°25'15" W 1362.798 ft to the Point of Beginning.

That portion of Section 13, Township 28 N., Range 5 E., W.M., described as follows: beginning at a point 2648.055 ft N of the Southwest Corner of said Section 13 as measured along the West Line of said section; thence N 84°44'35" E 272.295 ft; thence S 33°4'18" E 144.199 ft; thence S 24°57'43" W 501.974 ft; thence N 74°27'49" W 8.693 ft; thence N 74°40'9" W 45.591 ft; thence N 75°28'11" W 30.256 ft; thence N 76°29'17" W 61.465 ft; thence N 77°43'4" W 76.119 ft; thence N 78°35'56" W 67.887 ft to the point of beginning.

That portion of the Southeast quarter of Section 13, Township 28 N., Range 5 E., W.M., described as follows: beginning at a point 1571.14 feet North and 175.568 ft East of the South quarter section corner of said Section 13; thence N 2°55'1" E 327.337 ft; thence S 82°20'25" E 28.551 ft; thence S 79°55'32" E 28.249 ft; thence S 12°52'56" W 326.381 ft to the point of beginning.

That portion of Section 13, Township 28 N., Range 5 E., W.M., described as follows: beginning at a point N 2°21'13" E 1581.637 ft from the South quarter section quarter of said Section 13; thence N 70°29'55" W 95.071 ft; thence N 4°35'29" E 313.95 ft; thence S 81°49'35" E 82.289 ft; thence S 2°55'1" W 333.413 ft to the point of beginning.

The West 946 ft of the East 1354 ft of Southwest quarter of Section 13, Township 28 N., Range 5 E., W.M., lying South of the Snohomish River and North of Lowell Snohomish River Road.

That portion of the Southwest quarter of Section 13, Township 28 N., Range 5 E., W.M., lying South of Lowell Snohomish River Road and North of the Burlington Northern Santa Fe Railroad lying west of the Following Described Line: beginning at a point on the North line of the BNSF railroad, N 14°16'21" W 1758 ft from the South quarter section corner of said Section 13; thence running N 3°53'37" W 139.441 ft; thence running N 0°55'17" W 82.239 ft to the South line of Lowell Snohomish River Road. LESS that portion of Section 13, Township 28 N., Range 5 E., W.M., described as follows: Beginning at a point on the North line of Burlington Northern Santa Fe Railway, N 3°34'18" E 2355.739 ft from the Southwest corner of said Section 13; thence N 38°18'42" E 55.943 ft to the South line of Lowell Snohomish River Road; thence easterly along road 117 ft; thence S 23°14'46" W 6.247 ft; thence N 74°53'11" W 100.63 ft; thence S 33°29'30" W 12.585 ft; thence S 38°48'22" W 8.803 ft; thence S 74°55'32" E 105.277 ft; thence S 23°7'52" W 39.368 ft to the North line of BNSF Railway, thence Westerly along North line of said BNSF railway 130.247 ft to the point of beginning.

Those portions of Section 14, Township 28 N., Range 5 E., W.M., more particularly described as follows: Beginning at a point on the East line of said Section 14, 2648.055 ft North of the Southeast quarter of said Section 14; thence S 84°44'35" W 193.934 ft; thence N 66°47'11" W 146.584 ft; thence S 3°52'35"

W 42.289 ft to the North line Lowell Snohomish River Road; thence continuing along North line of Lowell Snohomish River Road to its intersection with the East line of said Section 14; thence North along East line of said Section 14 109.559 ft to the point of beginning; ALSO that portion of said Section 14 lying South of the following described line: Beginning at a point on the West line of said Section 14, 829.199 ft South of the Northwest Corner of said Section 14; thence running S 66°47'8" E 824.248 ft; thence running S 0°56'43" W 21.617 ft; thence running S 66°47'28" E 2706.761 ft; thence running N 48°21'53" E 21.863 ft; thence running S 66°47'38" E 2100.089 ft to the East line of said Section 14, LESS the South quarter of Section 14.

All that portion of Section 15, Township 28 N., Range 5 E., W.M., lying Southerly and Westerly of the following described line: Beginning at a point on the East line of said Section 15, 829.199 ft South of the Northeast corner said Section 15; thence running North 66°47'45" W 2482.533 ft to a point on the North Section line of said Section 15, 2294.371 ft West of the Northeast corner of Section 15.

The East half of Section 16, Township 28 N., Range 5 E., W.M., LESS the Southwest quarter of the Southeast quarter of said Section 16.

The North 59.833 ft of the S 396.977 ft of the Southwest quarter of the Southeast Quarter of Section 16, Township 28 N., Range 5 E., W.M., lying East of County Road.

The South 977.207 ft of the Northeast Quarter of the Southwest Quarter of Section 16, Township 28 N., Range 5 E., W.M., lying East of County Road.

The East 944.524 ft of the South 208.899 ft of the Northeast quarter of the Northwest corner of Section 16, Township 28 N., Range 5 E., W.M.

The Southeast quarter of the Northwest quarter of Section 16, Township 28 N., Range 5 E., W.M., LESS the South 315.904 feet, LESS the West 501.356 ft of the North 763.236 ft, LESS County Road, AND LESS any portion lying west of County Road.

The North half of the North half of the Northeast quarter of the Northeast quarter of Section 21, Township 28 N, R 5E, W.M., together with that portion of the North half of the Northwest quarter of the Northeast quarter of said Section 21 lying Easterly of Easterly line of an easement recorded under Snohomish County Auditor's file 9512220271; LESS the portion described as follows: Beginning at the Southeast corner of the North half of the Northwest quarter of the Northeast quarter; thence Southwesterly 17 ft, more or less to the South line of the North half of the Northwest quarter of the Northeast quarter; Thence E 12 feet to the Point of Beginning.

The North half of the North half of the Northwest quarter of the Northwest Quarter of Section 22, Township 28 N, Range 5 E, W.M.

The Northeast quarter of said Section 22, Township 28 N, Range 5 E, W.M.

The Southeast quarter of said section 22, Township 28 N, Range 5 E, W.M., LESS that portion lying south of County Road known as Lowell Larimer Road; ALSO LESS that portion of South 2220.662 ft of the West

748.4 ft of the E 1372.089 ft of said Southeast quarter of said Section 22 lying West of County Road known as Marsh Road; AND ALSO LESS County Roads.

The West 1200.375 ft of the Northwest quarter of Section 23, Township 28 N, Range 5 E, W.M., LESS County Roads, ALSO less right of way conveyed to Drainage District Number 1 as recorded in Snohomish County Auditor's file numbers 174059 and 174066, if any.

The Southwest quarter of the Northwest quarter of Section 24, Township 28 N, Range 05 E, W.M., LESS an 18 ft-wide strip for Drainage District 1, ALSO LESS County Road, AND ALSO LESS Road Right of way conveyed to Snohomish County as recorded in Snohomish County Auditor's File Number 200310030089. The South Half of the South half of the Southeast quarter of the Northwest quarter of said Section 24, Township 28 N, Range 05 E, W.M., LESS County Road, ALSO LESS State Highway, AND ALSO LESS additional right of way conveyed to the State of Washington as recorded in Snohomish County Auditor's File Number 8809120090.

That portion of the Northeast quarter of the Northeast quarter of Section 27, Township 28 N, Range 5 E, W.M., lying East of county road known as East Lowell Larimer Road and North of a line described as follows: Beginning at a point on the E line of said Section 27, 371.259 ft S of the Northeast corner of said section 27; thence running N 86°48'22" W 419.201 ft; thence running S 73°42'38" W 95.873 ft to the East line of said East Lowell Larimer Road.

**Proposed Works**

Four diversion points – one pump station on the Snohomish River, and three pump stations along the Marshland Flood Control District’s drainage canal (Marshland ditch).

**Development Schedule**

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	September 1, 2020	September 1, 2025

**Measurement of Water Use**

How often must water use be measured?	Daily
How often must water use data be reported to Ecology?	Annually (Jan 31)
What volume should be reported?	Total Annual Volume
What rate should be reported?	Monthly Peak Rate of Withdrawal (cfs)

**Provisions**

**Instream Flows**

During those times when flows in the Snohomish River as measured at the USGS gaging station near Monroe (12150800) are 1410 cfs or lower, USGE will cease all diversions from the Snohomish River and direct other diversions to the Marshland ditch diversions.

**Department of Fish and Wildlife Requirement(s)**

Pursuant to Chapter 77.55 RCW, a Hydraulic Project Approval permit must be obtained from the Washington State Department of Fish and Wildlife prior to beginning construction of the diversion.

The intake(s) shall be screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.57.040). Contact the Department of Fish and Wildlife, 600 Capitol Way N, Olympia, WA 98501-1091. Attention: Habitat Program, Phone: (360) 902-2534 if you have questions about screening criteria. <http://wdfw.wa.gov/licensing/hpa/>

**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, 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.

**Water Use Efficiency**

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.

**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. S1-28795, 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 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.

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> 111 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 30<sup>th</sup> day of July 2015.



Tom Buroker, Section Manager  
Water Resources Program/NWRO  
Department of Ecology

INVESTIGATOR'S REPORT

Application for Water Right: US Golden Eagle Farms, LP

Water Right Control Number: S1-28795

Investigator: Jill E. Van Hulle, Pacific Groundwater Group

**BACKGROUND**

On December 17, 2014, **US Golden Eagle (USGE)**, a subsidiary of the Canadian owned Aquilini Investment Group Limited Partnership, filed an *Application for Water Right Permit* with the State Department of Ecology (Ecology). The intent of the application is to secure rights for the irrigation of 2050 acres (Attachment 1). Approximately 1,750 acres which is owned by USGE will be planted in commercial blueberries, and an additional 300 acres of mixed pasture and turf which is owned by other farmers.

This application has been processed under Ecology's Cost Reimbursement Program. Pacific Groundwater Group (PGG) prepared this report under contract to Ecology. PGG reviewed all available documents pertaining to this and other related *Applications for Water Right*, including site conditions, hydrogeological and well construction reports, historical water use, and the standing of existing rights.

Under the provisions of RCW 90.03.290 and 90.44, a water right may be issued upon findings that water is available for appropriation for a beneficial use, and that the appropriation will not impair existing rights or be detrimental to the public welfare. In accordance with these provisions, I recommend issuance of Permit S1-28795.

**Table 1**  
Summary of Application No. S1-28795

<i>Attributes</i>	<i>Proposed</i>
Applicant	US Golden Eagle
Application Received	December 17, 2014
Instantaneous Quantity	11.14 cfs
Source	The Snohomish River and Marshland Flood Control District's main ditch, diversion points located in the NW ¼ of Section 13, the NE ¼ of Section 22, the SW ¼ of Section 15 and the NE ¼ of Section 16, all in Township 28 N, Range 5 E.W.M.
Purpose of Use	Irrigation of 2,050 acres
Period of Use	During irrigation season, April 15 to September 15
Place of Use	See page 1 and 2

## **Legal Requirements for Application Processing**

The following requirements must be met prior to processing a water right application:

### **Public Notice**

A public notice of the proposed appropriation was published in the Tribune on March 18<sup>th</sup> and 25<sup>th</sup> of 2015. No protests were received as a result of this notice. A copy of the application was also sent on April 27<sup>th</sup>, 2015 to the Washington Department of Fish and Wildlife and to the Tulalip Tribe of Indians for their direct consultation.

WDFW responded that "Based on impacts to fish and/or wildlife and the habitat they rely on, and pursuant to Chapter 77.57.020 RCW, WDFW does not oppose the issuance of this application. The Snohomish River near the project diversion supports rearing and migrating salmon that should not be influenced by the reduction in flows. The adjacent marsh is a complex of drainage ditches and natural streams that do not have confirmed fish presence. This letter does not exempt the applicant from compliance with state Hydraulic Code (Chapter 77.55 RCW).

The Tulalip Tribes provided a comment letter dated July 20, 2015. The comments included recommendations for metering, as well as other suggestions, some of which have been reflected in this final report of examination.

### **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.

- a. It is a surface water right application for more than 1 cfs, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as the that irrigation project will not receive public subsidies.
- b. It is a groundwater right application for the appropriation of more than 2,250 gpm.
- c. It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above,
- d. It is part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not subject to SEPA),
- e. It is part of a series of exempt actions that, together, trigger the need to do make a threshold determination, as defined under WAC 197-11-305.

Since this request does not meet any of these thresholds the application is categorically exempt from SEPA and a threshold determination is not required.

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

- Under the provisions of RCW 90.03.290 and 90.44.050, a water right shall be issued upon findings that water is available for appropriation for a beneficial use and that the appropriation,

as proposed in the application, will not impair existing rights or be detrimental to the public welfare.

- This application has been processed under Ecology's Cost Reimbursement Program. Based on the provisions of RCW 43.21A.690 and RCW 90.03.265, PGG prepared this report under contract to Ecology.

RCW 90.03.265(2) provides that, in pursuing a cost-reimbursement project, the Department must determine the source of water from which the water is proposed to be diverted or withdrawn, including the boundaries of the area that delimit the source. The Department must determine if any other water-right applications are pending from the same source. A water source may include surface water only, groundwater only, or surface and groundwater together, if the Department finds they are hydraulically connected. The Department shall consider technical information submitted by the applicant in making its determinations under this subsection.

RCW 90.03.265(1)(b) provides that the requirement for an applicant to pay for the processing of senior applications does not apply in situations where the water allocated to one party will not diminish the water available to a senior applicant from the same source. Because there are no other pending applicants that will be affected by the requested allocation, this application can be processed prior to other pending applications.

## INVESTIGATION

Evaluation of this application included, but was not limited to, research and/or review of the following:

- Department of Ecology records of surface and groundwater rights and claims, and of well construction reports within the vicinity of the subject production wells.  
<http://www.apps.ecy.wa.gov/welllog/>
- Fox, Bill, Cosmopolitan Marine Engineering, 2015. U.S. Golden Eagle Snohomish River DO Analysis
- Butkus, Steven R., Cusimano Robert F., and Wright, David E., 1999. Snohomish River Estuary Total Maximum Daily Load – Submitted Report. Washington Department of Ecology Publication No. 99-57-WQ. August 1999.
- Cusimano, Robert F., 1995. Snohomish River Estuary Dry Season TMDL Study - Phase 1, Water Quality Model Calibration. Washington Department of Ecology Publication No. 95-338.
- Cusimano, Robert F., 1997. Snohomish River Estuary Dry Season TMDL Study – Phase II, Water Quality Model Confirmation and Pollutant Loading Capacity Recommendations. Washington Department of Ecology Publication No. 97-325.
- Cusimano, Robert F. and Coots, Randy, 1997. Water Quality Assessment of Tributaries to the Snohomish River and Nonpoint Source Pollution TMDL Study. Washington Department of Ecology Publication No. 97-334. September 1997.
- Snohomish Basin Salmonid Recovery Technical Committee, 2002. Snohomish River Basin Salmonid Habitat Conditions Review. September 2002.
- Staheli, K. and Duyvestyn, G. 2003. Snohomish River Crossing: Bring on the Boulders, Success on the Second Attempt. Proceedings of North American No-Dig 2003, NASTT, Las Vegas, April, Paper B-4-03.

- Thomas, B.E., Wilkinson, J.M., and Embrey, S.S., 1997. The Ground-Water System and Ground-Water Quality in Western Snohomish County, Washington. U.S. Geological Survey Water Resources Investigation Report 96-4312.
- Washington Department of Ecology, 2001. Protested Report of Examination, Snohomish River Regional Water Authority (SRRWA).
- Wright, Robert J., Coots, Randy, and Cusimano, Robert F. 2001. Snohomish River Tributaries Fecal Coliform Total Maximum Daily Load. Washington Department of Ecology Publication No. 00-10-87. June 2001.

A field visit was conducted on April 15, 2015 by Jill Van Hulle and Dan Matlock with Pacific Groundwater Group, also attending were John Negrin and Jason Bartelheimer of Aquilini. The group visited the project site, including the Marshland pumping station, proposed diversion site and areas to be farmed.

### **Project Description**

The intent of this application is to secure rights for the irrigation of 2,050 acres of commercial farmland, 1,750 acres will be cultivated as blueberries and the balance of approximately 300 acres is intended to provide a source of water to neighboring properties that have provided easements to USGE.

The maximum diversion rate is 11.14 cubic feet per second (cfs), and USGE has designated multiple diversion points – one will be a permanent pump station on the Snohomish River, while the others will be seasonally placed pumps that are located along the Marshland Flood Control District's main drainage canal. Pumping capacity will be distributed between the pumping stations, and it is not anticipated that all pumps will ever be running at the same time. Total average monthly irrigation demand will range from 0.33 cfs in May, to a maximum of 3.96 cfs in July, to 1.31 cfs in September (i.e. based on continuous operation during the approximately 100 day irrigation season). The larger pumping capacity allows for quicker, more efficient pumping (i.e. 8 hour periods versus continuous operation).

USGE anticipates shifting between the Snohomish River and Marshland Ditch sources to address water quality issues and efficiency. All sources will be metered, and USGE will monitor it's diversions such that the maximum rate of withdrawal is not exceeded.

### **Site Description**

The project is located in the Snohomish Watershed, (WRIA 7) near the Town of Snohomish in Snohomish County. This watershed includes the Snohomish River and its major tributaries; the Snoqualmie and Skykomish Rivers. The drainage basin comprises the northeastern portion of King County and south central Snohomish County and including the City of Everett and its adjacent suburban areas.

The project site is located within the administrative boundaries of the 6,000-acre Marshland Flood Control District (Marshland). The Marshland District was created in 1938 and abuts the Snohomish River between river miles 7 and 15.5. The site sits along the south bank of the Snohomish River south and southeast of the point where Ebey Slough branches off the mainstem of the river. The topography of this area is generally level, and is bounded on the west and south by a steep upland bluff. District facilities include dikes, drainage ditches, main canal, sediment ponds, and pump station.

The Marshland project's mandate is to control flooding and to drain its administrative boundaries in order to avoid river flooding and to keep groundwater levels low enough to facilitate agricultural activities. A large pump station is located at the northerly limit of Marshland's main drainage canal and discharges drainage from the surrounding agricultural area to the Snohomish River under the Lowell-Snohomish River Road bridge. No fish passage exists at the Marshland Pump Station.

A series of small Class A tributary streams originating in residential areas along bluffs about 400 feet above the Marshlands to the south and west provide additional runoff to the Marshland ditches. The network of irrigation ditches all discharge to the main ditch which directs flow north and west to the pump station.

### **Aquifer Characterization and Site Hydrogeological Conditions**

The geology of the study area is underlain by a mixture of unconsolidated glacial and interglacial deposits (Thomas et al, 1997). During the Pleistocene Epoch (2 million to 10,000 years ago), glaciers advanced into the Puget Sound lowland from the north several times, with the most recent period of glaciation, referred to as the Vashon Stade, beginning about 15,000 years ago. As the Vashon glacier advanced southward, coarse sand and gravel referred to as advanced outwash was deposited from meltwater at the leading edge of ice. As the glacier continued to advance, additional sediment was deposited beneath the glacier. These sediments are generally a highly compacted, unsorted mixture of clay, silt, sand and gravel referred to as glacial till. Later, as the glacier receded northward, meltwater deposited additional outwash within low lying areas, referred to as recessional outwash. More recently, alluvium was deposited by streams in major river valleys during the Holocene Epoch (10,000 years ago to present). These alluvial sediments consist of a mixture of silt, sand, gravel, clay, and peat up to 120 feet thick beneath the Snohomish River Valley (Thomas et al, 1997). Older (pre-Vashon) undifferentiated glacial and interglacial deposits also occur at depth. Prior to the Vashon glaciation thick layers of fine-grained sediments referred to as "transitional beds" were deposited in lakes and sluggish streams (Thomas et al, 1997).

The following hydrogeologic units (from youngest to oldest) are found within the study area (Thomas et al, 1997):

- Holocene Alluvium (Qal): Occurs within the Snohomish River valley. Forms an aquifer with large yields in more permeable sand and gravel layers.
- Vashon Recessional Outwash (Qvr): Occurs in isolated areas on the adjacent uplands. Can form a discontinuous perched aquifer.
- Vashon Till (Qvt): Occurs at the surface on most of the adjacent uplands. Generally a confining bed. Not a significant source of water.
- Vashon Advanced Outwash (Qva): Occurs at depth on the adjacent uplands and in exposures along the steep bluffs. Forms a principal aquifer for water supply in the upland areas.
- Transitional Beds (Qtb): Occurs beneath the Qva in the uplands and in exposures along the steep bluffs. Forms a confining layer to deeper units.
- Older Undifferentiated Sediments (Qu): Older glacial and interglacial deposits. Forms a confined aquifer in more permeable sand and gravel units. Occurs at depth beneath the uplands and likely present beneath the Holocene Alluvium in the Snohomish River Valley.

The Marshland study area is located along a broad floodplain in the Lower Snohomish River Valley and is underlain by thick deposits of Holocene alluvium and possibly older undifferentiated sediments. The Marshland floodplain (up to 2 miles wide and 6 miles long) is bounded by the Snohomish River to the north and east and by steep upland bluffs to the south and west.

Based on review of well driller logs in the Marshland study area, the upper 20 to 50 feet of alluvium is generally characterized by deposits of silty clay, peat, and/or fine silty sand. This upper 20 to 50 feet likely represents more recent over-bank deposits. Surface soils developed on the Marshlands are described as mostly poorly drained clays, sand, and silt loams (Butkus, et al, 1999). Below these more recent over-bank deposits, a coarser sand and gravel deposit is commonly encountered which provides good yields to water supply wells.

A similar sequence of sediments was encountered in a series of geotechnical borings collected in the Marshlands area as part of the Clearview Water Supply Project (Staheli and Duyvestyn, 2003). The borings were drilled up to 160 feet deep adjacent to and beneath the Snohomish River about 1.5 miles downstream of Highway 9 and in close proximity to USGE's proposed Snohomish River diversion point. The detailed geologic profile constructed from the borings show an upper deposit about 50 to 60 feet thick consisting of clay, organics, silt, silty sand, with occasional lenses of sand and gravel defined as the "younger alluvium". Below the younger alluvium are more laterally extensive sand and gravel units defined as "older alluvium".

Groundwater levels below the Marshlands are generally shallow with reported depths ranging from 1 to 20 feet below ground surface. Groundwater recharge to the alluvium is derived from direct precipitation or from groundwater discharging from aquifers in the adjacent uplands - either as subsurface discharge from deep undifferentiated aquifers beneath the alluvium or from springs discharging from shallow aquifers along the bluffs that then infiltrate to the alluvium beneath the floodplain. Groundwater discharge from the alluvium is towards the Snohomish River, the regional discharge for the watershed.

There is no indication of long term trends in groundwater levels in the alluvium. Long term groundwater monitoring since the late 1990's in the alluvium near the town of Snohomish show about 2 to 5 feet of seasonal variability in groundwater levels but no apparent long-term trends. Groundwater quality for the Marshlands area is not available, but it is reported that groundwater downgradient of the Marshlands is brackish due to saltwater intrusion (Butkus, 1999).

#### **Potential Impairment to Surface Water**

Under the provisions of WAC 173-507, instream flows have been established for the Snohomish River and its tributaries. All new water withdrawals in the Snohomish River watershed are subject to the rule, but instream flows do not apply to new rights on the Snohomish River below the point of tidal influence. The control point for regulation is described by WAC 173-507-020 as being the point represented by "Influence of mean annual high tide at low base flow levels..."

The exact location of this point is not well defined, however it is generally accepted that the Snohomish River is tidally influenced as far upstream as the confluence with the Pilchuck River<sup>1</sup>, and the USGS Gage on the Snohomish River at Snohomish, which is just about 1 river mile upstream from USGE's proposed diversion point, shows clear signs of being tidally influenced.

While instream flows have not been established for this lower part of the river, there is a well-documented correlation between water quality—as addressed in Ecology's TMDL work—and streamflow, especially during certain tidal stages. Understanding the connection between streamflow and water quality was addressed extensively by Ecology in the permitting of the Snohomish River Regional Water Authority's (SRRWA) Application for Change of Water Right (S1-\*10629C)<sup>2</sup>. Under the authority of its superseding certificate, the SRRWA moderates diversions beyond the water right's TMDL "background condition" withdrawal rate to reflect changing instream flow, water quality conditions, and tidal stages in the Snohomish River. Thus, while water is legally available for new permits in the lower watershed, the unique conditions that affect the SRRWA's operation were taken into consideration by Ecology in its recommendation to USGE.

### **Water Quality Impacts to Snohomish River and Other Water Right Holders**

In consultation with Ecology, USGE has indicated a willingness to avoid impacts to senior Snohomish River water rights, including the SRRWA water right, by developing a trigger flow at the USGS gaging station near Monroe at which time they would stop operating the Snohomish River diversion in favor of the pump stations on the Marshland ditch. This trigger flow would be higher than the SRRWA target flow and would account for their full water right diversion, thus USGE's diversions will not impinge on the SRRWA's operation.

The SRRWA's trigger flow is 1,350 cfs as measured at Monroe. When flows reach that threshold the SRRWA is required to reduce its withdrawal rate from 36 million gallons per day (MGD) to 25.7 MGD. In order to make sure that the USGE application did not impact the SRRWA, the TMDL model was used to establish a similar river discharge threshold, at which withdrawals would have to cease when river flow is below the threshold. The threshold river discharge value for U.S. Golden Eagle was determined from multiple model runs by trial and error (Fox, 2015) and assumed that the SRRWA would be withdrawing at their peak rate of 36 MGD. Based on these model results, an instream flow level of 1,410 cfs was identified as a threshold flow above which additional water may be diverted from the Snohomish River without resulting degradation of water quality based on the DO impact threshold of 0.2 mg/L.

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<sup>1</sup> [http://www.pugetsoundnearshore.org/supporting\\_documents/WRIA\\_7\\_LFAR.pdf](http://www.pugetsoundnearshore.org/supporting_documents/WRIA_7_LFAR.pdf) - Document Page 38

<sup>2</sup> The Snohomish River Regional Water Authority (SRRWA) holds a water right certificate for the diversion of up to 36 million gallons per day (mgd) from the Snohomish River Estuary just downstream of the confluence with Ebey Slough. SRRWA's approved Plan of Use includes a provision to mitigate the withdrawal impacts on dissolved oxygen (DO). SRRWA is required to reduce withdrawal to a maximum rate of 25.7 mgd at any time the discharge in the Snohomish River as measured at the upstream USGS gauge at Monroe is below 1,350 cubic feet per second (cfs). SRRWA may withdraw water from the estuary at any river discharge above 1,350 cfs measured at Monroe.

### Physical Water Availability in the Snohomish River – Subject to Trigger Flow

A review of stream flow statistics for that Monroe gage indicates that flows in the Snohomish River are generally well above the 1,410 cfs mark and high enough to not affect USGE’s proposed operations, with the exception of perhaps August and September when the trigger flow may be reached between about 1 to 10% of the time. We understand however, that most irrigation occurs earlier in the season and USGE does not anticipate needing to irrigate much beyond the end of August in most years.

Table 2 shows the percentage of time when flows at USGS station 12150800 are expected to fall below 1410 cfs.

**Table 2 – Flows Expected to Fall below 1410 CFS**

Month	% of Time
Jan	0.0%
Feb	0.0%
Mar	0.0%
<b>Apr</b>	<b>0.0%</b>
<b>May</b>	<b>0.0%</b>
<b>Jun</b>	<b>0.0%</b>
<b>Jul</b>	<b>0.0%</b>
<b>Aug</b>	<b>3.8%</b>
<b>Sep</b>	<b>10.3%</b>
Oct	5.2%
Nov	1.2%
Dec	0.0%

During those times when flows in the Snohomish River as measured at Monroe are 1410 cfs or lower, USGE will pump from the main flood control ditch that is maintained by the Marshland Flood Control District.

### Physical Water Availability in the Marshland Ditch System

As previously described, the Marshland Flood Control District (MFCD) operates the Marshland drainage canal. Water in the canal is collected from a series of irrigation ditches along the floodplain and

tributary streams originating along the bluffs. The drainage area encompasses approximately 24 square miles. The MFCD controls discharge from the canal to the Snohomish River at a pump station at the north end of the Marshland flood plain.

Marshland canal discharge is not monitored by the MFCD. Water availability in the canal was therefore evaluated using MFCD's monthly pump station power records between 2009 to present and a previously estimated average discharge rate from the Marshlands during the critical low flow period of July to October of 16.2 cfs (Cusimano, 1997). MFCD's records of average monthly power usages were used to calculate monthly Marshland discharge rates based on the average discharge rate of 16.2 cfs during the low flow period and an assumed linear relationship between power usage and canal discharge rate. With this method, the average water availability in the Marshland drainage varies from about 58 cfs in January to 13 cfs in August, which is more than enough to meet US Golden Eagle's water demands.

### **Marshlands Water Quality:**

The Marshlands has some of the most degraded water quality draining to the Snohomish River due to poor agricultural practices and inadequate stream buffers resulting in high levels of nutrients (nitrogen, phosphorus, TOC, and BOD), turbidity, and fecal coliform (Cusimano, 1995 and Cusimano and Coots, 1997). High sediment loads in the drainage system necessitates periodic sediment removal from settling ponds and dredging of ditches (Snohomish Basin Salmonid Recovery Technical Committee, 2002).

The drainage water has been characterized as hypereutrophic due to excessive nutrients and low dissolved oxygen. Dissolved oxygen concentrations below surface water criteria under WAC 173-201A for spawning salmonids (8 mg/L) have been routinely measured in the Marshland drainage (Cusimano and Coots, 1997) with concentrations as low as 1.7 mg/L measured near the pump station (Cusimano, 1995). Loading of oxygen depleting nutrients and low dissolved oxygen water to the Snohomish River from the Marshland have been estimated to be lowering dissolved oxygen concentrations in the Snohomish River during critical summer low flow conditions (Cusimano, 1995).

In contrast, dissolved oxygen concentrations in the adjacent Snohomish River are generally higher than the concentrations measured in the Marshland drainage with median concentrations ranging from about 9 to 12 mg/L (Butkus, 1999).

### **Legal Utilization of Marshland Ditch Sources**

Three of the diversion sites are located within the boundaries of the Marshland Flood Control District, and USGE has entered into a private agreement with Marshland to access and use the water in the ditch system.

The rules governing the sale, lease, or use of water by Flood Control Districts are regulated under RCW 86.09.154, which provides that:

*Duly created flood control districts, when maintaining and operating flood control works, shall have authority incidental thereto to lease, acquire, construct, operate and maintain appropriate instrumentalities for the use and sale or lease of water for any and all beneficial purposes and for the drainage, diking, or irrigation of lands upon the payment to the district of the reasonable cost of such service on a semiannual or monthly toll basis.*

It is Ecology's position however, that the actual beneficial use of water is not exempt from the provisions of RCW 90.03 and a water right permit is required for the use of water, regardless of the arrangements made between the property owner and District. Based on our review of the physical availability of water in the ditch and the likelihood that other users will not be adversely impacted by USGE's use of the water, we find that water is available for appropriation.

### **Impacts to Other Water Right Holders**

#### *Snohomish River Regional Water Authority*

The Snohomish River Regional Water Authority (SRRWA) holds a certificated municipal purpose water right (SWC-10617) for the diversion of up to 36 million gallons per day (mgd) from the Snohomish River Estuary just downstream of the confluence with Ebey Slough. SRRWA's approved Plan of Use includes a provision to mitigate the withdrawal impacts on DO. SRRWA is required to reduce withdrawal to a maximum rate of 25.7 mgd at any time the discharge in the Snohomish River as measured at the upstream USGS gauge at Monroe is below 1,350 cubic feet per second (cfs). SRRWA may withdraw up to 36 mgd of water from the estuary when river discharge exceeds 1,350 cfs measured at Monroe.

U.S. Golden Eagle Farms has requested a water right application to withdraw up to 11.14 cfs (7.2 mgd) from the Snohomish River just downstream from the City of Snohomish. The proposed water right for U.S. Golden Eagle would be junior to the SRRWA water right.

In order to make sure that the USGE application did not impact SRRWA, the TMDL model was used to establish a similar river discharge threshold, at which withdrawals would have to cease when river flow is below the threshold. The threshold river discharge value for U.S. Golden Eagle was determined to be 1410 cfs based on a series of TMDL model runs that considered a 0.2 mg/L DO impact limit.

#### *Surface Water Right Holders*

Table 3 lists senior rights that authorize direct diversions from the Snohomish River downstream of USGE's requested point of diversion. This list represents other diverters (or potential diverters) that could be utilizing the Snohomish River as a supply source<sup>3</sup>.

These rights are located in the tidally influenced reaches of the Snohomish, in the case of the Simpson Paper and Weyerhaeuser rights near the mouth of the river. The issuance of this permit to USGE will

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<sup>3</sup> Not listed here is the SRRWA rights which is specific to Ebey Slough which flows into the Snohomish River downstream of USGE.

not affect senior right holders, or pending applications because water is legally available subject to the same conditions as will apply to this permit recommendation.

Table 3 Snohomish River Surface Water Rights

File #	Water Right Holder	Type	Priority Date	Purpose	CFS	Qa	Ir Acres	TRS
S1-23026G	BAGWELL BARNEY	Cert	1/9/1978	IR	0.72	60	30	28N 5E 04
S1-22814G	TUENGEL LEONARD H	Cert	3/7/1977	IR	0.35	32	16	28N 5E 04
S1-28757	Ham Won Young	NewApp	8/30/2013	ST,IR	2.08		100	28N 5E 04
3615	ALEXANDER A	Cert	5/12/1949	IR	0.3		30	28N 5E 05
S1-137384CL	STASWICK SID	Claim L		IR				28N 5E 09
S1-103271CL	PORTER PERRY	Claim L		IR,DG			1	28N 5E 09
S1-116943CL	MELNYK PETE	Claim S		NR				28N 5E 10
5114	GRAAFSTRA D	Cert	4/5/1948	IR	0.5		50	28N 5E 13
S1-28795	US Golden Eagle Farms LP	NewApp	12/17/2014	IR,FP	11.14	4046.32	2049	28N 5E 13
S1-26275	Weyerhaeuser Co	Cert	7/29/1991	FR,CI	0.96	8		29N 5E 08
7505	Weyerhaeuser Co	Cert	9/10/1958	CI	47			29N 5E 08
S1-25914C	Dunlap Towing Inc	Cert	9/21/1990	FR	3.33			29N 5E 09
S1-119671CL	HAMMER KENNETH S	Claim L		ST,IR				29N 5E 27
11843	Simpson Lee Paper Co	Cert	8/14/1970	FR	4.45	9.7		29N 5E 32
6177	Simpson Paper Co	Cert	12/17/1951	CI	21.5			29N 5E 32

#### Other Pending Water Right Applications

Since the Cost Reimbursement process requires that Ecology assess what affect the issuance of a new permit to a junior applicant may have on any senior applicants, PGG evaluated the four pending water applications in the vicinity.

The first is a ground water application G1-21568AWRIS for the Stocker property. With the issuance of the USGE permit, USGE will make water available to Stocker Farms for a portion of their water use. We understand that Stocker currently utilizes a portable surface water intake on the Snohomish River. Stocker's pump will be authorized by this permit, and USGE will be responsible for ensuring that the source is properly permitted with metering data submitted to Ecology<sup>4</sup>.

The second is an application for surface water right for a downstream source – surface water application S1-28757. This application was filed by Ham Won Young on August 30<sup>th</sup>, 2013 for the irrigation of 100 acres. The Young application's proposed point of diversion is located approximately three miles downstream from the USGE application and upstream of the confluence on Ebey Slough and the Snohomish River. Given the location of the Young application - in an area that is legally open to new withdrawals we see no conflict that would arise from the issuance of a permit to USGE.

Third is a ground water application. Groundwater application G1-28749 was filed under the name of Gaia's Harmony Farm. The place of use is located in Section 23, of T. 28, R. 5 E.W.M. south and east of USGE's project site. The applicant requested groundwater rights for the irrigation of 31 acres of mixed crops. The issuance of a surface water permit to USGE should not affect the decision that is ultimately made on the Gaia's Harmony Farm application, ground water within the boundaries of the Marshland

<sup>4</sup> Ecology has indicated that the Stocker Application will be rejected.

project is readily available and USGE's use of water in the ditching system should not have any effect on groundwater levels.<sup>5</sup>

Finally groundwater application G1-27745, which was filed by Mark and Gaye Simpson and assigned to current property owners Keith and Janet Stocker for the irrigation of 20 acres along Lowell-Larimer Road in the southwest portion of the project site. The parties have requested an irrigation right from a well. It is not expected that USGE's direct use of surface water will affect groundwater levels such that water would not be physically available to the applicants.

#### *Potential to Impact Other Water Right Holders*

There are several formal water right certificates that have been issued within the boundaries of the Marshland Flood Control District in the vicinity of the US Golden Eagle Property. These include surface water certificate 8119-A (S1-\*14565ALCWRIS) which was issued to Boushey H G & Sons with a source listed as the Rucker Drainage District. The place of use is appurtenant to property owned by USGE and allows for the withdrawal of 0.6 cfs, and 120 acre-feet for the irrigation of 60 acres.

Another larger irrigation right is S1-21537CWRIS issued for the irrigation of 180 acres immediately south and west of USGE's project. This certificate authorizes the use of water from an unnamed drainage ditch (presumed to be part of the Marshland complex) under the name of Raymond Hagen. Since the Hagen project is situated "upstream" using water from a ditch before that water drains to the main flood control ditch there will not be a conflict between the projects.

Finally, groundwater certificate G1-26406 issued to Bueler Farms allows for the irrigation of 254 acres also located south of USGE's project. The source is a shallow well, which will not be affected by USGE's use of the main flood control ditch.

There are also numerous claims and a few certificates filed for springs (and the resulting creeks) that emerge from the hillside to the west and south of the project area. The named surface water bodies that drain the uplands include Wood, Larimer and Thomas Creeks, however there are numerous unnamed creeks that flow through densely populated areas before reaching the lowland areas. Since USGE's project relies on water within the drainage system itself, there will be no effect\impact to upstream spring or creek users.

#### **Quantities for Permit**

USGE's operation is intended to be highly efficient and the individual berry bushes are irrigated with micro-drip tape. Berries are planted in rows approximately 2 feet in apart with rows spaced 10 feet apart (approximately 1750 plants per acre).

The Hortau irrigation system that is proposed for use by USGE allows for the targeted use and application of water and fertilizer, and is coupled with a network of sensors that monitor for ambient temperature, soil tension, and humidity.

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<sup>5</sup> Ecology has indicated that it may not be possible for this applicant to locate a well on the flood plain, accordingly this application may be further modified.

We have calculated a Crop Irrigation Requirement for the blueberries of about 2.15 inches a year, and a somewhat higher demand (12.7 inches) for the 300 acres of other crop types for a total demand for the entire 2,050 acres (rounded from 2,049.48 acres) of approximately 632 acre-feet per year. The estimated blueberry demand is based on numbers provided by USGE (John Negrin, e-mails dated 4/16/15 and 4/22/15) which indicate that there are 1750 plants/acre which use an average of 0.317 gallons/plant/day over a growing season of 100 days. The water demand analysis also assumes that the irrigation system for the blueberries is working at or above a 95% efficiency rate, and that the remaining property achieves an efficiency rate of 75% or higher. Monthly demand estimates for blueberries were based on a review of consumptive needs for raspberries, grapes and strawberries whereas monthly demand for the other crops assumed irrigation of pasture/turf. The water demands for pasture/turf assume a highly efficient irrigation system and are consistent with regional practises and guidelines from the Washington Irrigation Guide.

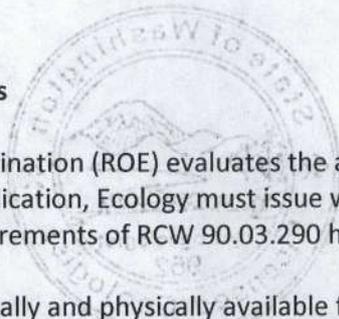
This former marshland is well-suited to blueberry cultivation. Soil conditions for the Snohomish site are such that water retention is good and irrigation requirements are fairly low. Soils within the project area include a wide range of loamy soil types (from gravelly sandy loam to silt clay loam) to “muck” or organic soils. The majority of the area consists of Puget silty clay loam and Mukilteo muck. Most of these soil types are considered “prime farmland if drained” (Anchor Environmental and ICF Jones and Stokes 2008; NRCS 2009).

In addition to irrigation, USGE also applies fertilizer – mixed with water through the system in mid-April, for that reason we recommend that period of use on this permit run from April 15 to September 15. The amount of water needed for this purpose– less than a gallon per acre of berries is negligible, and a specific allocation has not been assigned beyond the irrigation requirements.

**Table 4 – Projected Irrigation Demand**

	acres <sup>6</sup>	Inches/Acre	Total Irrigation Requirement Acre-feet	Comments
Tim Stocker	157	12.7	166	Using own pump, growing turf grass
Kurt Bartelheimer	137	12.7	145	
J. Kirk Misich	6	12.7	6	
US Golden Eagle	1,750	2.15	315	Blueberries
	2,050		632	

<sup>6</sup> Acreage estimates have been rounded up to nearest whole number  
REPORT OF EXAMINATION



**Four Statutory Tests**

This Report of Examination (ROE) evaluates the application based on the information 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. Water is legally and physically available for appropriation for both the Snohomish River – subject to curtailment to protect downstream water right holders, and from the main flood canal within the Marshland Flood Control District.
2. Existing water rights, including surface waters subject to instream flow rules (WAC 173-507) are not anticipated to be impaired by the proposed withdrawals.
3. Use of the water by USGE for irrigation purposes is considered a beneficial use of water, (RCW 90.14.031)
4. The issuance of this permit is consistent with RCW 90.54 (Water Resources Act of 1971) which requires allocation of water in a manner that preserves instream resources, protects the quality of water, provides adequate and safe supplies of water to serve public need, and makes water available to support the economic well-being of the state and its citizens. The use of the water by USGE is not detrimental to the public welfare.

**CONCLUSIONS**

The conclusions based on the above investigation are as follow:

1. The proposed appropriation for Irrigation is a beneficial use of water;
2. The requested quantity of 11.14 cfs and 632 acre-feet per year, is available for appropriation;
3. The appropriation will not impair senior water rights; and
4. The appropriation will not be detrimental to the public interest.

**RECOMMENDATION**

Based on the information presented above, the author recommends that the request to appropriate 11.14 cfs and 632 acre-feet per year be approved in the amounts described, limited, and provisioned on page 1 through 3 of this report.

*Jill E Van Hulle*

*7/22/15*

Report by:

\_\_\_\_\_  
Jill Van Hulle, Pacific Groundwater Group

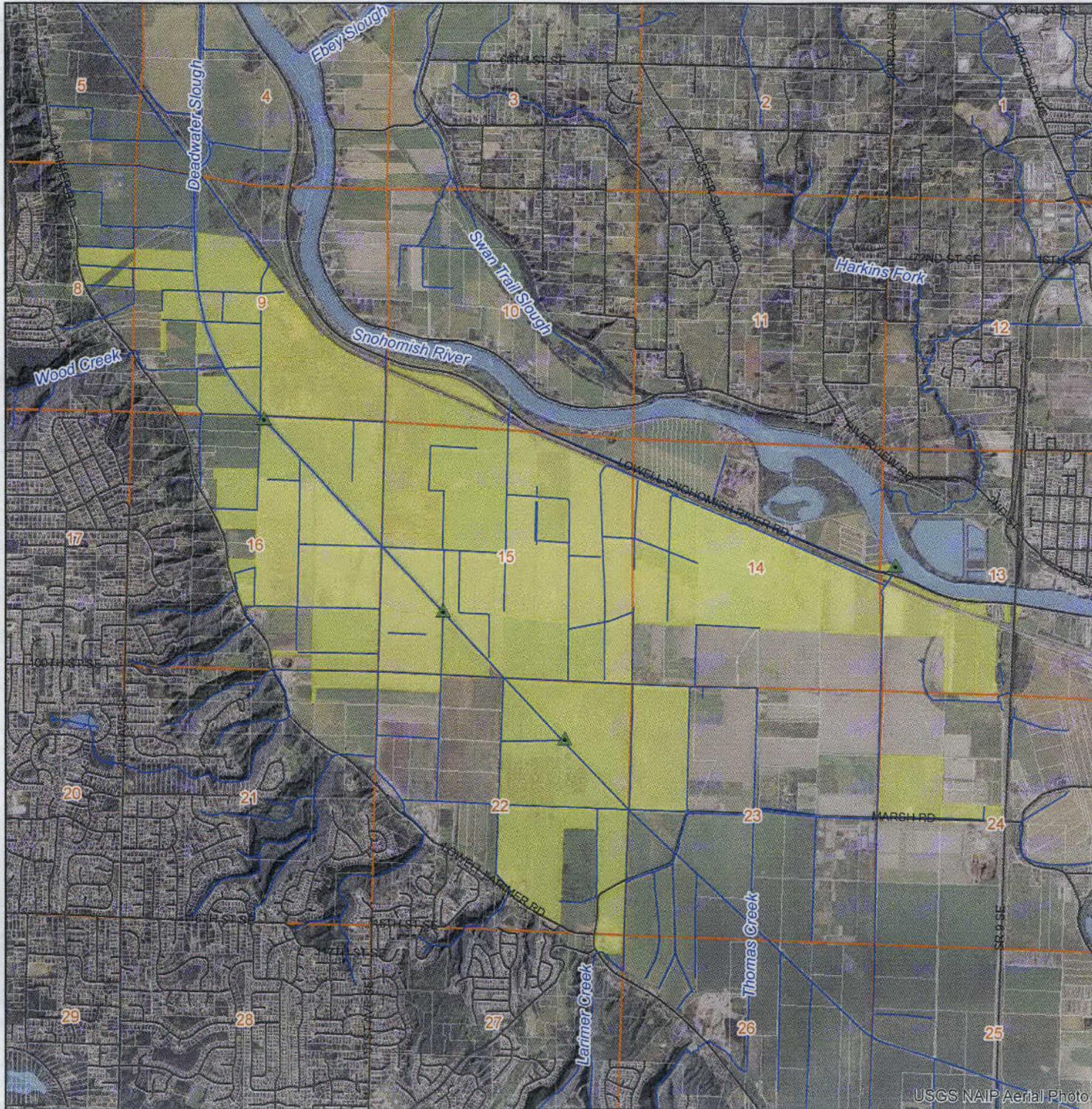
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Date



Reviewed by: Douglas H. Wood DOUGLAS H. WOOD July 21, 2015  
Douglas H. Wood, LHG, Water Resources Program Date

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Attachment 1  
Place of Use and  
Points of Diversion  
US Golden Eagle Farms



- ▲ Proposed Points of Diversion
- Place of Use
- Sections (T28N R5E)

