



STATE OF WASHINGTON
DRAFT
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

WR Doc ID 6801883

DENIED

| | |
|----------------------|---------------------------------------|
| PRIORITY DATE | WATER RIGHT APPLICATION NUMBER |
| February 6, 2019 | G1-28878 |

| | |
|---|--|
| NAME AND MAILING ADDRESS | SITE ADDRESS (IF DIFFERENT) |
| US Golden Eagle Aquilini Centre, Gate 16 in Rogers Arena 800 Griffiths Way Vancouver, BC V6B 6G1 | 33083 Cockreham Island Road Sedro-Woolley, WA 98284 |

Total Rate and Quantity Authorized for Withdrawal

| | |
|------------------------------|-----------------------------------|
| WITHDRAWAL RATE (gpm) | ANNUAL QUANTITY (ac-ft/yr) |
| N/A | N/A |

gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year

Associated Water Rights

| DOCUMENT NUMBER | INSTANTANEOUS RATE (gpm) | ANNUAL QUANTITY (ac-ft/yr) | REMARKS |
|-----------------|--------------------------|----------------------------|---|
| SWC 11032 | 270 | 53 | Additive for irrigation of 172 acres |
| GWC 1848-A | 180 | 33.5 | Additive for irrigation of 109 acres |
| GWC 2677-A | 650 | 81 | Additive for irrigation of 263 acres |
| G1-096365CL | 150 | 26.5 | Additive for irrigation of 86 acres |
| Total | 1,250 | 194 | Additive for irrigation of 630 acres |

Purpose

| PURPOSE | WITHDRAWAL RATE (gpm) | | ANNUAL QUANTITY (ac-ft/yr) | | PERIOD OF USE |
|------------|-----------------------|--------------|----------------------------|--------------|---------------|
| | ADDITIVE | NON-ADDITIVE | ADDITIVE | NON-ADDITIVE | |
| Irrigation | N/A | 0 | N/A | 0 | N/A |

| IRRIGATED ACRES | | PUBLIC WATER SYSTEM INFORMATION | |
|-----------------|--------------|---------------------------------|-------------|
| ADDITIVE | NON-ADDITIVE | WATER SYSTEM NAME and ID | CONNECTIONS |
| N/A | 630 | N/A | N/A |

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.

Therefore, I ORDER **DENIAL** of Application No. G1-28878.

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

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>.

Authorizing Signature

Signed at Shoreline, Washington, this day of , 2021.

Ria Berns, Section Manager
Water Resources Program/Northwest Regional Office
Department of Ecology

INVESTIGATOR'S REPORT

Water Right Application No.: G1-28878 (US Golden Eagle)

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G1-28878.

The applicant, US Golden Eagle (USGE) identifies this as its Cockreham Operation. This project proposes to irrigate an additional 140 acres of blueberries and to allow for more water to be used for irrigation on the existing 630 acres of blueberries covered under SWC 11032, GWC 1848-A, GWC 2677-A, and G1-096365CL.

New water rights within the Skagit River Watershed are subject to chapter 173-503 Washington Administrative Code (WAC). This rule contains minimum instream flows that must be met before a junior water right holder can divert or withdraw water that would otherwise flow in the river.

The new water right is proposed to be fully mitigated through a lease agreement between USGE and the Town of Darrington as documented in a Water Supply Agreement, dated November 29, 2018.¹ This lease agreement involves a transfer of a portion of the Town's water right claim S1-163865CL, determined through prior Ecology decisions to be valid for 570 ac-ft/yr, into the State's Trust Water Rights Program. The Town has proposed to transfer 100 ac-ft/yr of that perfected quantity into the Trust Water Rights Program, of which 60 ac-ft/yr would provide mitigation for USGE's new water right.

Application No. G1-28878 originally requested a period of use of, "irrigation season." This period of use was refined by the applicant to be April 1 through September 15, through an email sent on November 14, 2019, by Nick Tennant of the Aquilini Group.

¹ The Water Supply Agreement allows for a 25-year lease, with the potential for four 10-year extensions, for a total duration up to 65 years.

Table 1. Summary of Requested Water Right

| | |
|-----------------------|--|
| Applicant Name | US Golden Eagle |
| Priority Date | February 6, 2019 |
| County | Skagit |
| WRIA | 3 – Lower Skagit/Samish |
| Water Source | Groundwater |
| Place of Use | <p>All those portions of Section 15, Township 35 North, Range 6 East, W.M., described as follows: The South 1/2 of the NW 1/4, the SW 1/4, and SW 1/4 of the SE 1/4 of said Section 15 lying west of the Skagit River, LESS ROADS.</p> <p>All those portions of Section 16, Township 35 N, Range 6E, W.M., described as follows: The South 1/2 of said Section 16, AND the South 183 ft of the SE 1/4 of the NW 1/4 of Section 16 lying South of Jims Slough (AKA Etach or Minkler Creek), AND the South 485 feet of the SW 1/4 of NE 1/4 lying South and West of said Jims Slough, AND the SE 1/4 of the NE 1/4 of said Section 16 lying South of County road and West of the following described line: Beginning at the East 1/4 corner of said Section 16, thence West along the East and West Centerline of said Section 16 389 feet, thence N 1°47'2" E 120 ft, thence N 8°54'36 W 1184 ft to the South line of County road, LESS the East 363 ft of the NW 1/4 of the SE 1/4 of said Section 16, AND LESS the South 310 ft of the East 516 ft of the SW 1/4 of the SE 1/4 of Section 16 lying northeasterly of county road, AND LESS ROADS.</p> <p>All those portions of Section 21, Township 35N, Range 6E, W.M., described as follows: The North 1/2 of said Section 21, lying North of the Skagit River, LESS those portions of lot 3 and lots 7-15 of the Plat of Heart O'Skagit River Tracts lying in said Section 21, AND LESS ROAD.</p> <p>All those portions of Section 22, Township 35N, Range 6E, W.M., lying North and West of the Skagit River, LESS those portions of lots 15-36 of the Plat of Heart O'Skagit River Tracts lying in said Section 22, and LESS ROADS.</p> |

| Purpose | Instantaneous Rate (gpm) | Annual Quantity (ac-ft/yr) | Begin Season | End Season |
|----------------|---------------------------------|-----------------------------------|---------------------|-------------------|
| Irrigation | 600 | 60 | 4/1 | 9/15 |

| Source Name | Parcel | Well Tag | Township | Range | Section | QQ Q | Latitude | Longitude |
|--------------------|---------------|-----------------|-----------------|--------------|----------------|-------------|-----------------|------------------|
| Well 1 | P41829 | BHZ525 | 35 | 6E | 22 | SE NW | 48.51000 | -122.01968 |
| Well 4 | P41852 | AHG046 | 35 | 6E | 22 | NE NW | 48.51227 | -122.02127 |
| Well 6 | P41270 | BIS393 | 35 | 6E | 16 | SE SW | 48.51768 | -122.04053 |
| Well 10 | P41309 | BHZ524 | 35 | 6E | 16 | NW SE | 48.51952 | -122.03508 |
| Well 13 | P41308 | APS882 | 35 | 6E | 16 | NE NE | 48.52665 | -122.03134 |
| Well 14A | P41238 | BKL473 | 35 | 6E | 15 | SE NW | 48.52592 | -122.01701 |
| Proposed Well 15 | P41246 | TBD | 35 | 6E | 15 | S/2 SW | TBD | TBD |

WRIA = Water Resource Inventory Area; gpm = Gallons per Minute; ac-ft/yr = Acre-feet per Year; QQ Q = Quarter Quarter

Datum: NAD83/WGS84

Cost Reimbursement

This application was partially processed under a cost reimbursement agreement between the applicant and the Department of Ecology. A report of examination was initially prepared by RH2 Engineering, Inc. under a work assignment with Ecology (RH2121). Following a series of agency-level conversations, Ecology’s Water Resources Program staff assumed responsibility for amending the ROE. Ecology staff completed this report, building on the work completed by RH2, outside of the original contract vehicle.

Priority Processing

This application met the criteria for priority processing under WAC 173-152-050(2)(g) since it was proposed to be a water budget neutral project.

INVESTIGATION

Proposed Use and Basis of Water Demand

Site Description

On December 3, 2019, Mr. Andy Dunn of RH2 Engineering, Inc. (RH2), met with Mr. Nick Tennant (Regulatory & Development Coordinator), Mr. Michele Cherchi (Operations Director), and Mr. Wilhelm Gutierrez (Farm Manager) of US Golden Eagle (USGE) at the Cockreham Operation to discuss water right application G1-28878. Before doing a site tour, the parties met at the farm office to go over the details of the farm and Water Right Application No. G1-28878.

The proposed place of use is wholly owned by USGE. The plan is to grow blueberries within the proposed place of use under G1-28878, which also includes the place of use of USGE’s four existing irrigation water rights. The lifecycle of the blueberry varieties grown on the farm (Duke, Draper, and Legacy) allow them to remain productive for at least 30 years. The blueberries are irrigated using a double drip tape setup lying on the ground next to the crown of each plant. A small nursery area (approximately 1 acre) of young blueberry plants is irrigated using impact sprinklers. The intent is that the operation will be split into eight different irrigation areas with one water source serving each area. The distribution systems from the sources, serving their own irrigation area, are not currently interconnected, but could be if desired by the water right holder. The table below identifies the source, fields irrigated by that source, and acres irrigated.

| SOURCE | FIELDS | ACRES |
|----------------------|-------------------------------|--------------|
| Pond | Nursery | 1 |
| Well No. 1 | Field No. 1, 2, and 3 | 71 |
| Well No. 4 | Field No. 4 | 157 |
| Well No. 6 | Field No. 5, 6, 7, 8, and 9 | 180 |
| Well No. 10 | Field No. 10, 11, and 12 | 122 |
| Well No. 13 | Field No. 13 | 33 |
| Well No. 14A | Field No. 14 | 66 |
| Proposed Well No. 15 | Proposed Field Nos. 15 and 16 | Proposed 140 |
| | Total | 770 |

The blueberries are planted in rows that are spaced 10 feet apart with the individual plants spaced 2.5 feet apart along a row. The drip tape has a 1-foot spacing between emitters and the drip tape emits 0.16 gallons per hour per emitter when in operation. Each well is designed to pump at 500 gallons per minute and that pumping rate allows for irrigation of approximately 21 acres at a time from each well.

Each zone is typically irrigated for 2.5 to 3 hours at a time. Each zone is irrigated up to twice a week during peak demand. The nursery stock is irrigated for 3 hours twice a week since the plants are young and planted at a higher density. The pumps are operated depending on the irrigation demand as determined by buried soil moisture probes, plant health, and test pits.

Treatment consists of a cyclone filter at each wellhead to remove particulates, such as sand, to prevent it from clogging the drip emitters. The water is clean and no adjustment of the chemistry of the water is necessary prior to irrigation use. The irrigation system is also used for fertigation.

Each well has a similar pumping setup with a portable diesel motor driven vertical lineshaft turbine pump. The diesel motors produce up to 54 kilowatts. The pumps are Rovatti with a 5/OM2 drive head. USGE indicated that each of the wells can produce approximately 500 gallons per minute with this setup. The motors are removed from the field and protected from the elements during the winter.

There are currently 630 acres of blueberries being irrigated under four existing water rights. The quantities requested under Application No. G1-28878 were intended for:

- the irrigation of an additional 140 acres of blueberries;
- an increase in the allowable pumping rate so that more wells could be used at the same time;
- to allow for more zones to be irrigated at the same time; and
- to increase the water duty allowable on the existing 630 acres of blueberries.

Water System Description

Mainlines deliver water from one of the six wells to each zone through valves. The pressure at each wellhead is approximately 40 pounds per square inch (psi) with the pressure in the drip tape being less than 30 psi.

Each field is divided up into different zones. The zones range from 4 acres up to 11 acres in size with the most common zone being approximately 9 acres. Besides the nursery, there are 72 existing zones. An additional 14 zones were planned for the new acres to be irrigated, for a proposed total of 86 zones.

History of Water Use

USGE has been metering water use for irrigation of 630 acres of blueberries at its Cockreham Operation under its four existing water rights, which authorize 194 ac-ft/yr. That metering data is contained in the table below.

| USGE COCKREHAM OPERATION METERING DATA | | |
|---|-------------------------------------|------------------------|
| YEAR | ANNUAL VOLUME (ac-ft/yr) | IRRIGATED ACRES |
| 2016 | 265 | 630 |
| 2017 | 180 | 630 |
| 2018 | 182 | 630 |
| 2019 | 176 | 630 |
| 2020 | 171 | 630 |

In 2016, USGE exceeded its water right annual volume, but has been able to maintain its use below its water right limit in the years since then. Superseding water right documents were issued in 2020 by Ecology based on the 2016 water metering data, when the combined annual volume of the four water rights (194 ac-ft/yr) was fully utilized.

Proposed Use

USGE already holds four water rights totaling 194 ac-ft/yr for irrigation of 630 acres. USGE has requested an additional 60 ac-ft/yr under Application No. G1-28878 to increase the total authorized water rights to 254 ac-ft/yr for irrigation of up to 770 acres. 254 ac-ft/yr spread over 770 acres is equal to a total irrigation requirement of just under 4 inches.

A total irrigation requirement of 4 inches is less than the crop irrigation requirement identified for raspberries (surrogate crop for blueberries) at both the Concrete (16.25 inches) and Sedro Woolley (15.97 inches) stations, which are located equal distance east and west of the farm, respectively.

Other Rights Associated with Project or Place of Use

USGE holds four water rights used for irrigation of the Cockreham Operation as described in the table below.

| EXISTING USGE COCKREHAM OPERATION IRRIGATION WATER RIGHTS | | | | | |
|--|----------------------|-----------------|----------------------|------------------------|----------------------|
| DOCUMENT NUMBER | PRIORITY DATE | QI (GPM) | QA (AC-FT/YR) | IRRIGATED ACRES | PERIOD OF USE |
| SWC 11032 | 6/22/1967 | 270 | 53 | 172 | 6/1 – 9/15 |
| GWC 2677-A | 3/31/1954 | 650 | 81 | 263 | 4/1 – 9/15 |
| GWC 1848-A | 5/6/1953 | 180 | 33.5 | 109 | 6/1 – 9/15 |
| G1-096365CL | Prior to 1945 | 150 | 26.5 | 86 | 6/1 – 9/15 |
| Total | | 1,250 | 194 | 630 | - |
| All water rights include Well Nos. 1, 4, 6, 10, 13, and 14A as points of withdrawal. In addition to these wells, SWC 11032 also includes a point of diversion from a pond. | | | | | |

All four water rights above had change applications processed in 2016 and superseding documents issued in 2020, after the changes had been re-perfected. The instantaneous rate, annual volume, and irrigated acres under the existing water rights are all additive to one another.

As proposed, G1-28878 would be additive with respect to instantaneous rate and annual volume but would be partially additive and partially non-additive with respect to irrigated acres. The requested place of use of G1-28878 includes not only the entire place of use of the existing four water rights, but also additional parcels.

Application No. G1-28878 included all existing wells and one additional proposed well, to be referred to as Well No. 15. The requested period of use for the new water right is April 1 through September 15, which is the same as GWC 2677-A. Therefore, G1-28878, if approved, would allow for additional early season irrigation, beyond that currently authorized.

In addition to the groundwater wells associated with the four water rights, there are permit-exempt wells within the place of use that have been developed and maintained over time through beneficial use. The permit-exempt water rights appear to include domestic, industrial, stockwatering, and non-commercial lawn and garden irrigation.

Hydrogeologic Evaluation

Hydrologic Setting

The project is located on the right bank of the Skagit River at approximately river mile (RM) 37, at a large meander referred to as Cockreham Island, located within the western middle Skagit Valley. The Skagit Valley is a broad alluvial valley bounded on the north and south by pre-tertiary bedrock uplands comprised of complex assemblages of metamorphic rocks. The existing valley floor is a composite of infilled glacial, volcanic, and alluvial deposits. During the Vashon Stade glaciation, continental glaciers invaded the area coming south down the South Fork Nooksack Valley and over Lyman Pass and down the Samish River depositing basal till over much of the area (Dragovich, 2000). During the subsequent melting associated with the Everson interglacial period a layer of glaciomarine sediment was deposited within the valleys, along with deltaic assemblages in many of the tributary basins (Dragovich, 2000).

One or more large laharc deposits occurred just north of the project area (Dragovich, 2000). These lahars originated from eruptions of Glacier Peak, located 53 miles to the southeast, approximately 5,000 and/or 1,500 years ago (Dragovich, 1999). These lahars are implicated in the capture of the Sauk River away from the Stillaguamish River and into the Skagit River (Dragovich, 1999).

The glacial, glaciomarine, and volcanic deposits have all been subsequently reworked by the present-day Skagit River. Dragovich (1999) used LiDAR and historic maps and aerial photos to map numerous older river channels in the Skagit Valley.

HDR (2017) identified groundwater flow as generally being down valley with a converging flow component originating at the valley margins.

Mitigation Plan Adequacy Evaluation

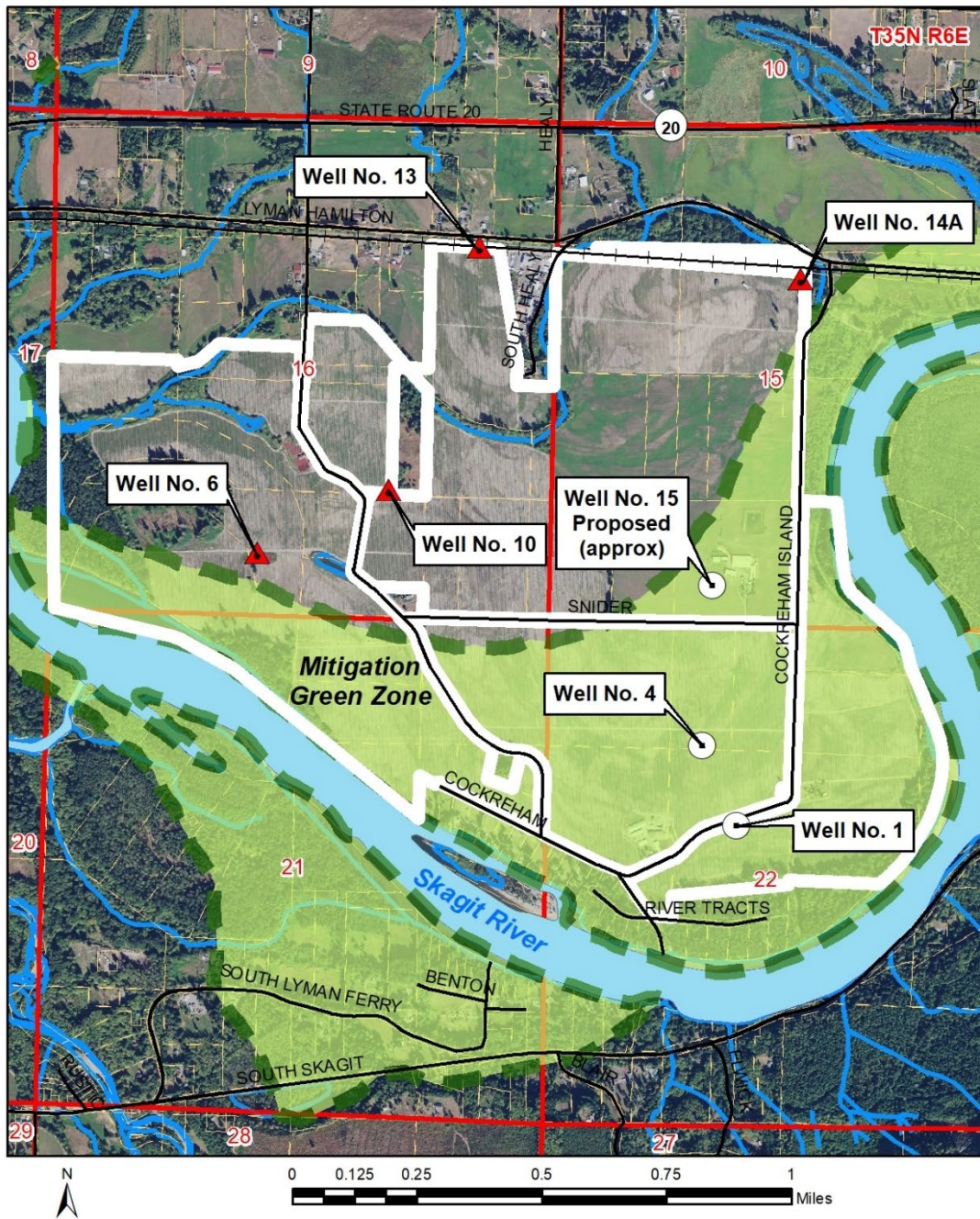
Ecology recently processed a water right (S1-28885) that identifies where permit-exempt wells can be located along the Skagit River in order to have their impact adequately offset by upstream mitigation of the mainstem Skagit River. As part of that Skagit River Basin Mitigation Plan, HDR prepared the Middle Skagit Valley Hydrogeologic Assessment (2017) which modeled pumping impacts along the Skagit River and tributaries between approximately Sedro Woolley (RM 32) and Marblemount (RM 50).

HDR used hydrogeologic information, streamflow, and well water level data to create a groundwater model to simulate flow, groundwater elevations, and impacts to surface water bodies. HDR then modeled projected well withdrawals to determine the relative impact to the mainstem Skagit River

compared to the tributaries. Ecology determined that mitigation of the mainstem Skagit River, through the reach that includes Cockreham Island, was sufficient for a well if at least 75 percent of the withdrawn water either would normally recharge or was drawn from the Skagit River and no more than 25 percent of the water would normally recharge or was drawn from tributary streams. At this location, tributary streams include Red Cabin Creek, Mannser Creek, and Jims Slough (none of which are regulated by chapter 173-503 WAC). Based on the HDR results, Ecology prepared a “green zone” map that identified the locations where permit-exempt wells can be mitigated by surface water flowing by in the mainstem Skagit River.

Through consultation with Ecology staff, the same methodology was proposed to evaluate G1-28878, which requests a new mitigated groundwater withdrawal based on the Town of Darrington’s transfer of water into the Trust Water Program. The 2018 Water Supply Agreement between the Town of Darrington and USGE indicates that the Town will provide 60 ac-ft/yr to be used as mitigation. This quantity is from previously perfected industrial uses for steam locomotives (56 ac-ft/yr) and a portion from lumber mills (4 ac-ft/yr). The Town no longer serves these industries at the same historical quantities. **Figure 1** shows the USGE wells that would and would not be adequately mitigated by the Town’s proposed Trust Water Right, as depicted by the green zone created under S1-28885.

Figure 1. Green Zone Mitigation Area near Cockreham Island



Of the eight wells requested on the water right application, only three wells, two existing (Well No. 1 and Well No. 4) and the proposed well (Well No. 15), are located within the mitigation green zone. For this reason, only those three wells are evaluated as points of withdrawal under this application (Figure 1).

Interference Drawdown Impairment Evaluation

Since only Well Nos. 1, 4, and 15 are within the mitigation green zone, only those wells were analyzed for impairment. These three wells are located approximately 1,000 feet from the closest neighboring well. All nearby properties are located closer to the Skagit River than the onsite existing and proposed wells.

HDR (2017) estimated the median transmissivity of the alluvial aquifer to be 11,000 ft²/day (82,286 gallons per day per foot (gpd/ft)) in the lower middle Skagit Valley. Well-specific data on Cockreham Island, as shown in the HDR report, appears to be slightly under the median and more consistent with the PGG (2016) estimated transmissivity of 21,000 gpd/ft (2,807 ft²/day). PGG (2016) also estimated an aquifer storage coefficient of 0.15. Alluvial aquifer thickness in this area is estimated to be at least 100 feet (PGG, 2016; HDR, 2017). Depth to water from ground surface is typically 10 to 15 feet (PGG, 2016), which is consistent with the water level measurements collected during the site visit. Therefore, the saturated thickness of the alluvial aquifer is approximately 85 feet.

The table below shows interference drawdown calculations, using the Theis equation, based on the different transmissivities identified in previous reports and discussed above (HDR, 2017 and PGG 2016). Please note the estimates below are conservative as they assume continuous pumping at the maximum authorized rate until the annual volume is reached. All calculations show that the calculated maximum interference drawdown at a distance of 1,000 feet will be less than 2 feet.

| MAXIMUM INTERFERENCE DRAWDOWN CALCULATIONS | | | | | | |
|---|--------------------------------|----------------------------|---------------------------|------------------------------|---------------------|--------------------------------------|
| SCENARIO | TRANSMISSIVITY (GPD/FT) | STORAGE COEFFICIENT | PUMPING RATE (GPM) | VOLUME PUMPED (AC-FT) | DAYS PUMPING | DRAWDOWN AT 1,000 FEET (FEET) |
| 1 | 21,000 | 0.15 | 600 | 60 | 22.63 | 1.52 |
| 2 | 82,286 | 0.15 | 600 | 60 | 22.63 | 1.22 |

ANALYSIS

Under Washington State law (RCW 90.03.290), each of the following four criteria must be met for an application for a new water right permit to be approved:

- Water must be available for appropriation.
- Water withdrawal and use must not cause impairment of existing water rights.
- The proposed water use must be beneficial.
- Water use must not be detrimental to the public interest (public welfare).

Water Availability

For any new appropriation, water must be both physically and legally available.

Physical Availability

For water to be physically available for appropriation, water must be present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses. An analysis of physical availability is required for both surface water and groundwater applications.

The shallow alluvial aquifer in the vicinity of Cockreham Island is hydraulically connected to the Skagit River. Existing wells used by USGE demonstrate the ability of the aquifer to produce several hundred gallons per minute per well. Depending on the aquifer material encountered where the proposed well is drilled, the number of wells drilled, and the design of the well screen, USGE should be able to physically withdraw an additional 597 gpm from the aquifer.

Legal Availability

To meet the legal availability test, the proposed appropriation may not withdraw and use water that is already “spoken for”, such as water from sources that are protected by administrative rule or court order.

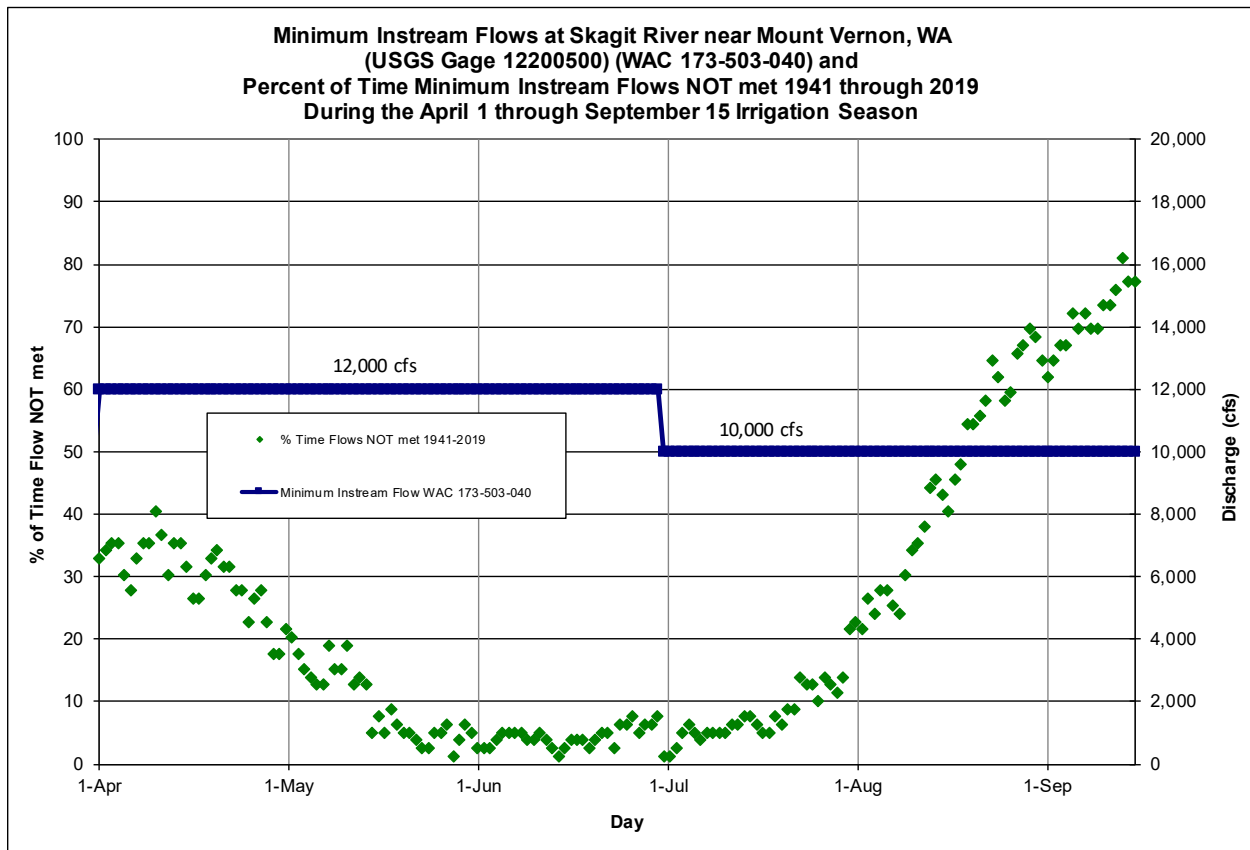
There are no legal limitations to water availability (i.e., stream closures) in the vicinity of Cockreham Island, based on review of chapter 173-503 WAC. Therefore, water is legally available for appropriation.

Impairment

In analyzing impairment, Ecology must determine whether existing water rights, including adopted minimum instream flows, may be impaired by the withdrawal and proposed use.

Chapter 173-503 WAC identifies minimum instream flows that must be met for the Skagit River at the USGS Gage No. 12200500 control station, which is also referred to as the Skagit River near Mount Vernon, WA. During the irrigation season of April 1 through September 15, the minimum instream flows are 12,000 cfs from April 1 through June 30 and 10,000 cfs from July 1 through September 15.

The figure below shows the probability of the minimum instream flow not being met (1941-2019) during the irrigation season.



The irrigation season of April 1 through September 15 is 168 days long. The table below identifies the number of days each irrigation season that the minimum instream flows have not been met on a mean daily discharge basis over the past six years. The 2015 irrigation season was the worst irrigation season with respect to minimum instream flows not being met since records have been maintained (1941 through 2020).

| SKAGIT RIVER DISCHARGE COMPARED TO MINIMUM INSTREAM FLOWS DURING THE IRRIGATION SEASON 2015 THROUGH 2020 | | | |
|---|-----------------------------------|--|---|
| IRRIGATION SEASON | IRRIGATION SEASON DAYS | DAYS MINIMUM INSTREAM FLOWS NOT MET | PERCENT OF TIME MINIMUM INSTREAM FLOWS NOT MET |
| 2015 | 168 | 146 | 87% |
| 2016 | 168 | 45 | 27% |
| 2017 | 168 | 37 | 22% |
| 2018 | 168 | 37 | 22% |
| 2019 | 168 | 88 | 52% |
| 2020 | 168 | 69 | 41% |

Mitigation Plan

USGE has proposed a mitigation plan to offset impacts caused by water use under G1-28878 at the Cockreham Operation, which would otherwise impair the minimum instream flows established in WAC 173-503-040.

The mitigation plan includes:

- Water Supply Agreement – Effective date November 29, 2018.
- Transfer of 60 ac-ft/yr of municipal supply water rights under the historically perfected portion of S1-163865CL into Ecology’s Trust Water Rights Program by the Town of Darrington.

The Water Supply Agreement identifies that the quantity of water available to USGE is 60 ac-ft/yr.

Since the mitigation water proposed to be transferred into trust (100 ac-ft/yr) by the Town of Darrington is greater than the volume of water requested, the offset is full, even when minimum instream flows are unmet. With an approved mitigation plan in place, there would not be impairment of the minimum instream flow by use of water under the proposed application.

Interference Drawdown

The maximum calculated interference drawdown as calculated at the nearest neighboring well location is less than 2 feet. This level of interference drawdown is reasonable and does not constitute impairment of other groundwater rights, including permit-exempt wells, given the saturated thickness of the aquifer.

Beneficial Use

The proposed appropriation must be for a beneficial use of water.

Irrigation is declared a beneficial use of water under RCW 90.54.020(1).

Public Welfare/Public Interest

RCW 90.03.290(3) provides that the withdrawal and associated use must not be detrimental to the public welfare. Additionally, because the applicant proposes to mitigate impacts with the Town’s trust water right, Ecology can only authorize the exercise of that trust water right for mitigation purposes if there will be no impairment to the public interest per RCW 90.42.040(4)(a): “Exercise of a trust water right may be authorized only if the department first determines that neither water rights existing at the time the trust water right is established, nor the public interest will be impaired.”

The following were considered when making this assessment.

Notification to the Washington Department of Fish and Wildlife

Per RCW 90.03.280 and RCW 77.57.020, Ecology must give notice to the Washington Department of Fish and Wildlife (WDFW) of applications to divert, withdraw, use, or store water.

WDFW submitted two letters to Ecology. The first, received on April 16, 2020, recommended denial of this application. The recommendation for denial was based on WDFW’s opinion that the mitigation plan was inadequate. The recommendation stated that, “There are no benefits to instream flows or habitat from placing the unused portion of claim S1-163865CL into trust. There are, however, impacts to the Skagit River in continuity with the target wells.” WDFW pointed to language in the 2003 ROE for change. The language referenced was an August 6, 2002, email from the Town’s attorney (Tom McDonald) to

Ecology as the extent and validity of the water right was being determined for the change. In that email, Mr. McDonald wrote that, “The 674 afy is also 104 afy over the amount the Town desires to have validated and changed. The Town is willing to forego the 104 afy to cover any possible error in the numbers, which we believe are already conservative” to suggest that 570 ac-ft/yr represented the maximum extent of S1-163865CL and that the 104 ac-ft/yr did not represent a valid part of the claim. WDFW finished its letter, “with no recent historical use or storage of the surface water, this claim has no value as mitigation for flows or fish impacts.”

Following receipt of that letter, The Town amended their Trust Program (water banking) proposal to instead transfer 100 ac-ft/yr of the 570 ac-ft/yr that was determined to be valid and historically perfected through Ecology’s prior change decisions in 2003 and 2005. On April 27, 2021, Ecology requested an updated letter from WDFW based on this new information and proposal.

On May 13, 2021, WDFW provided their updated response letter. In that second letter, WDFW similarly recommended denial of the application. The recommendation for denial was based on WDFW’s opinion that the mitigation plan was inadequate. WDFW expressed numerous concerns, including that the application represented a “new impact to the water needs of fish without a new benefit to fish from the proposed mitigation.” WDFW notes how the “Skagit River is inhabited by all five Pacific salmon species and is a major source of fish for commercial, recreational, and cultural salmon harvest.”

The recommendation stated that, “There are no benefits to instream flows or habitat from placing water into trust that is not currently being used. There are, however, impacts to the Skagit River and tributaries in continuity with the target wells.” WDFW importantly notes that the “areas that would be affected most by this application are used by all salmonids that are found in the Skagit River during a portion, or their entire life history. Species include ESA listed Chinook, bull trout, and steelhead. Non-ESA listed species found in this area include but are not limited to, sockeye, pink, coho, and chum salmon, and also coastal cutthroat.” WDFW notes that fish use the impacted area year-round at various critical life stages, and that coho in particular use creeks and side channels on the applicant’s property.

WDFW concludes by noting that treaty and non-treaty fisheries regularly occur in the river and in outside areas, including Puget Sound and the Pacific Coast, that all major salmon species are in decline in the Skagit, and that ongoing efforts are underway by the state and treaty co-managers to reverse these declines.

Historical Beneficial Use of the Town’s Subject Water Right Proposed for Mitigation

In the CS1-163865CL report of examination for change (2003) and a subsequent report of examination for change issued on February 23, 2005 (file number CS1-163865CL@1), 570 ac-ft/yr was transferred by the Town of Darrington to be withdrawn from Town wells. This quantity was determined to be valid and a full extent and validity analysis was completed as part of those previous changes, as required under RCW 90.03.380. While the Town of Darrington’s surface water right was perfected long ago, the Town retains a right to the perfected portion since water used for municipal water supply purposes is not subject to relinquishment per RCW 90.14.140(2)(d). While this water is retained for municipal purposes, there is no current or identified long-term demand for this water within the Town’s defined water service area.

Ecology did not make a tentative determination on the extent of the instantaneous rate that had been perfected under the water right during previous change decisions in 2003 and 2005 except to say that it exceeded the rate that was transferred to the wells (350 gpm). The rate claimed on the original claim

form was 1,500 gpm. Documentation in the change application file (CS1-163865CL) contained engineering calculations based on the diameter of the pipe leading from the reservoir to the treatment facility and the head difference between those two points. The capacity of the pipe was calculated to be 1,800 gpm. Since the claim was only filed for 1,500 gpm, which is less than the calculated maximum flow, the claimed rate of 1,500 gpm is considered the maximum instantaneous rate perfected under S1-163865CL.

State Environmental Policy Act (SEPA)

Under chapter 197-11 WAC, a water right application is subject to a SEPA threshold determination (i.e., an evaluation of whether there will be significant adverse environmental impacts) if any of the following conditions are met:

- 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 cfs, so long as that irrigation project will not receive public subsidies;
- It is a groundwater right application for more than 2,250 gpm;
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- 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.

Considering that none of the above conditions are met, G1-28878 is categorically exempt from a SEPA threshold determination.

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 stored, diverted, and used. Notice of this application was published in the *Skagit Valley Herald* on February 26, 2020 and March 4, 2020.

Consideration of Protests

On August 27, 2020, Ecology staff circulated preliminary draft decision documents to the Swinomish Indian Tribal Community, Upper Skagit Indian Tribe, and the Sauk-Suiattle Indian Tribe. No comments were submitted by the Upper Skagit or Sauk-Suiattle Tribes.

On March 29, 2021, Ecology received a combined protest and comment letter from the Swinomish Indian Tribal Community. The letter related to this application for USGE and the source of mitigation through the Town's February 10, 2021 application to transfer a portion of Water right S1-163865CL into the Trust Water Rights Program.

The Swinomish Tribe raised concerns regarding Darrington's use of the subject water right for trust and banking purposes to mitigate for new consumptive uses in the Skagit Basin. The Tribe specifically stated, "Darrington's application and proposed water banking agreement would authorize the use of its long-dormant water right to 'mitigate' new consumptive uses of water withdrawn from aquifers that are hydrologically connected to the Skagit River. Those new uses, located some 40 miles from Darrington's service area, would impair minimum flow rights established in CH 173-503 WAC, the Swinomish Indian Tribal Community's senior federally reserved water rights, and the public interest."

The Tribe stated that the new consumptive uses that would be authorized by Darrington's application to transfer water into trust, including the subject application, would harm fish, including species listed as threatened and endangered under the Endangered Species Act. The Swinomish Tribe challenged whether Darrington's water right, proposed to mitigate the impacts of the subject application, is valid, or whether it has relinquished for nonuse, or is presumptively abandoned.

The Swinomish Tribe also asserted that this application for new water does not satisfy the "four-part test" for new permits under RCW 90.03.290(3). The Tribe asserted that the proposed withdrawals will impair the Tribe's senior reserved water right and regulatory minimum flows in the Skagit River and will be detrimental to the public welfare. The Tribe specifically disputed whether Darrington's long-unused water right will in fact mitigate impacts from USGE's proposed use. Because the water has not been used in decades, the Tribe asserts in its protest, "The acceptance of such faux mitigation not only results in impairment of existing water rights, but is detrimental to the public interest in maintaining base flows and preserving fish populations."

Salmon in the Skagit River

The Skagit River provides habitat for all 5 Pacific salmon species: Chinook, Coho, Chum, Pink, and Sockeye salmon, as well as Steelhead trout, Coastal Cutthroat trout, and Bull Trout. Chinook, Bull Trout, and Steelhead are listed as threatened under the Endangered Species Act (ESA). Salmonids use the mainstem Skagit and tributaries for spawning, rearing, foraging and migration. The *Skagit Chinook Recovery Plan* lists water withdrawals as a limiting factor for Chinook recovery in WRIA 3: "[water] withdrawals...can cause dewatering of off channel habitat, exacerbation of water quality problems—particularly temperature, increased predation, reduction of available rearing habitat, and amplification of simplified habitat."²

Chinook salmon are the primary food source for Southern Resident Killer Whales (Southern Residents), which are classified as endangered under the Endangered Species Act. Governor Inslee's Executive Order 18-02 lists prey availability as one of three primary factors that threaten Southern Resident populations. Executive Order 18-02 states "The health of Southern Residents and Chinook salmon are tightly linked. Recent scientific studies indicate that reduced Chinook salmon runs undermine the potential for the Southern Resident population to successfully reproduce and recover."³ The 2019 *Southern Resident Orca Task Force Report and Recommendations* recommends increasing Chinook abundance through habitat protection and restoration as one of three outstanding needs to address critical gaps and accelerate progress.⁴ Modeling by Washington Department of Fish and Wildlife (WDFW) and National Oceanic and Atmospheric Administration (NOAA) Fisheries West Coast Region

² Skagit River System Cooperative and Washington Department of Fish and Wildlife. 2005. Skagit Chinook Recovery Plan. <https://www.skagitwatershed.org/wp-content/uploads/SkagitChinookRecoveryPlan13.pdf>

³ Executive Order 18-02: Southern Resident Killer Whale Recovery and Task Force. 2018. https://www.governor.wa.gov/sites/default/files/exe_order/eo_18-02_1.pdf

⁴ Southern Resident Orca Task Force: Report and Recommendations. November 2019. https://www.governor.wa.gov/sites/default/files/OrcaTaskForce_FinalReportandRecommendations_11.07.19.pdf

rated North Puget Sound fall runs of Chinook, which use the Skagit River and tributaries, as the highest priority salmon stocks to contribute to Southern Resident recovery.⁵

Streamflow in the Skagit River and tributaries are below minimum instream flow levels established in WAC 173-503 ninety-seven days per year, on average. Climate change is projected to further decrease summer streamflows in the Skagit watersheds. A 2015 University of Washington Climate Impacts Group report on climate change in Puget Sound projects low summer flows in the Skagit River to decrease by 51% by the 2080s.⁶ Salmonids require cool water temperatures (below 64 degrees F) and the report projects that the Skagit River will increasingly experience average summer stream temperatures that are stressful to salmon.

The 2019 Southern Resident Orca Task Force report discusses the impacts of climate change on streamflows and water temperatures and the resulting impact to Southern Residents: “Lower snowpack and changing precipitation patterns caused by the warming climate are also damaging salmon populations by lowering summer streamflows...The end result is fewer salmon in our streams, rivers and oceans — and, consequently, less food for the Southern Residents.”⁷

Summary of Public Interest Concerns

In making a determination regarding whether this application is detrimental to the public welfare, Ecology staff considered WDFW’s recommendation for denial, the Swinomish Tribe’s March 29, 2021 letter and information shared during the subsequent April 22, 2021, Government-to-Government meeting with the Tribal Senate and Ecology’s director, and the Governor’s March 2018 executive order directing state agencies to take immediate actions to help protect the Southern Resident Killer Whales and the salmon they rely on (EO 18-02).

US Golden Eagle’s permit relies on the exercise of Darrington’s trust water right to mitigate for impairment to instream flows adopted under chapter 173-503 WAC. Ecology has authority under the trust water code to accept and administer valid water rights for banking purposes (RCW 90.42.110). However, Ecology cannot authorize exercise of a trust water right if the agency determines that the public interest will be impaired when the trust water right is established (RCW 90.42.040(4)).

Although Ecology concludes that Darrington’s water right is valid and not subject to relinquishment, Ecology also concludes that exercise of Darrington’s water right for banking purposes to mitigate for US Golden Eagle’s proposed use will impair the public interest. This is because the proposed new use of water by US Golden Eagle, to be mitigated by Darrington’s long-unused water right, will reduce actual flows in the Skagit River Basin that will have negative impacts on fish, including endangered species.

Ecology must also consider whether US Golden Eagle’s application for a new permit is detrimental to the public welfare (RCW 90.03.290(3)). For the same reasons as articulated for the exercise of the trust

⁵ NOAA Fisheries West Coast Region and Washington Department of Fish and Wildlife. June 2018. Southern Resident Killer Whale Priority Chinook Stocks Report. https://media.fisheries.noaa.gov/dam-migration/srkw_priority_chinook_stocks_conceptual_model_report_list_22june2018.pdf

⁶ Mauer, G.S., J.H. Casola, H.A. Morgan, R.L. Strauch, B. Jones, B. Curry, T.M. Busch Isaksen, L. Whitely Binder, M.B. Crosby, and A.K. Snover. 2015. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle. doi: 10.7915/CIG93777D. <https://cig.uw.edu/resources/special-reports/ps-sok/>

⁷ Southern Resident Orca Task Force: Report and Recommendations. November 2019. https://www.governor.wa.gov/sites/default/files/OrcaTaskForce_FinalReportandRecommendations_11.07.19.pdf

water right, Ecology concludes that US Golden Eagle’s application for a new permit is detrimental to the public welfare.

In summary, because Darrington’s water proposed for banking and mitigation for US Golden Eagle’s application has not been used for many decades, even though it is a valid municipal water right, there will be negative impacts to fish, including salmonids if this long-unused water right is used to mitigate for US Golden Eagle’s application. Thus, it is Ecology’s finding that the exercise of the trust water right would impair the public interest, and this application, if approved, would be detrimental to the public welfare.

Conclusions

I find that:

- Water is physically and legally available.
- The appropriation will not impair existing rights when paired with an approved mitigation plan.
- The proposed purpose of use is a beneficial use.
- Approval of this application would be detrimental to the public welfare.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend this request for a water right be **DENIED**.

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

References

Department of Ecology - water right file for Surface Water Claim S1-163865CL, including subsequent files associated with change applications and the partial transfer into trust.

Department of Ecology – water right files for existing USGE water rights.

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Pacific Groundwater Group, March 15, 2016, Technical Memorandum Re: *Hydrogeologic and Impairment Evaluation of the US Golden Eagle Farms Water Right Change Applications*.

Town of Darrington and US Golden Eagle, November 29, 2018, *Water Supply Agreement*.