

STATE OF WASHINGTON FINAL REPORT OF EXAMINATION FOR WATER RIGHT APPLICATION

PRIORITY DATE WATER RIGHT APPLICATION NUMBER	
March 9, 2021	G1-29313
,	

NAME AND MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
Eagle Ridge Owners Association	
PO Box 52	
Eastsound, WA 98245	

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

Purpose						
PURPOSE	WITHDRAWAL RATE (gpm)	ANNUAL QUANTITY (ac-ft/yr)	PERIOD OF USE			
Municipal	23.5	5	Continuous			

IRRIGATED ACRES	PUBLIC WATER SYSTEM INFORMATION		
	WATER SYSTEM NAME and ID CO		
	Eagle Ridge Water System (AA165J)	23*	

* As currently approved through DOH. Will expand to 24 connections. See Investigator's Report below.

Source Location					
COUNTY WATERBODY		TRIBUTARY TO	WATER RESOURCE INVENTORY AREA		
San Juan	Groundwater		2 – San Juan		

	SOURCE NAME	PARCEL	WELL TAG	TOWNSHIP	RANGE	SECTION	QQ Q	LATITUDE	LONGITUDE
	Lot 14 Well	171750014000	ACM 570	37N	01W	19	NW SE	48.679659	-122.864680
	Lot 15 Well	171750015000	AGA 034	37N	01W	19	NW SE	48.679043	-122.865349
ſ	Parcel A Well	171750111000	ACM 569	37N	01W	19	SE NW	48.683585	-122.870316
	Parcel A Well	171750111000	ACM 569	37N	01W	19	SE NW		-122.87031

QQ Q = ¼ Quarter Quarter

Datum: NAD83/WGS84

Place of Use

The place of use of this water right is the service area described in the most recent Water System Plan approved by the Washington State Department of Health.

<u>Attention</u>: If the criteria in RCW 90.03.386(2) are not met and a Water System Plan/Small Water System Management Program was approved after September 9, 2003, the place of use of this water right is the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and <u>no</u> Water

System Plan/Small Water System Management Program has been approved after September 9, 2003, the place of use reverts to the last place of use described by the Department of Ecology in a water right authorization (see the following legal description).

LEGAL DESCRIPTION OF THE AUTHORIZED PLACE OF USE

Lots 1 through 22, inclusive, ASSESSOR'S PLAT NO. 1 or BUCK MOUNTAIN TRACTS, according to the Plat thereof, recorded in Volume 5 of Plats, at pages 30, 30A, 30B, 30C, 30D, 30E, 30F, 30G and 30H, in the office of the Auditor of San Juan County, Washington, being a portion of Sections 7, 8, 19, & 20, Township 37 North, Range 1 West, W.M., situated in San Juan County, Washington.

PARCEL(S)

171750009900, 171750001000, 171750002000, 171750003000, 171750004000, 171750005000, 171750006000, 171750007000, 17175008000, 17175009000, 171750010000, 171750011000, 171750111000, 171750012000, 171750013000, 171750014000, 171750015000, 171750016000, 171750017000, 171750018000, 171750019000, 171750020000, 171750021000, 171750022000

Proposed Works

Lot 14 Well – 6-inch well to 220 feet ground surface (bgs), with an open-bottom completion. Lot 15 Well – 6-inch well to 265 feet bgs, with an open-bottom completion. Parcel A Well – 6-inch well to 260 feet bgs, with an open-bottom completion.

Development Schedule

Development Schedule					
BEGIN PROJECT BY THIS DATE		COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE		
	Started	December 31, 2027	December 31, 2037		

<u>Attention</u>: These dates represent deadlines that must be met or risk cancellation of this authorization. Submittal of formal documentation for each stage is required. Extensions may be requested.

Measurement of Water Use	
HOW OFTEN MUST WATER USE BE MEASURED AND RECORDED?	Bi-weekly
HOW OFTEN MUST WATER USE DATA BE REPORTED TO ECOLOGY?	Annually by January 31
WHAT QUANTITY SHOULD BE REPORTED?	Total annual quantity in acre-feet
WHAT RATE SHOULD BE REPORTED?	Annual peak rate of withdrawal in gpm

Provisions

Wells, Well Logs and Well Construction Standards

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

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

Measurements, Monitoring, Metering, and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", chapter 173-173 WAC, 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 (Ecology) for modifications to some of the requirements.

Recorded water use data shall be submitted electronically by January 31 each year. To set up an Internet reporting account, contact Ecology's Northwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Northwest Regional Office for forms to submit your water use data.

Department of Health Requirements

Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Northwest Drinking Water Operations, 20435 72nd Avenue S, Suite 200, K17-12, Kent, WA 98032-2358, (253) 396-6750, prior to beginning (or modifying) your project.

Water Use Efficiency

Use of water under this authorization will 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

Consistent with the development schedule given in this report (unless extended by Ecology), the water right holder must file a Notice of Proof of Appropriation (PA) of Water with Ecology. The PA documents the project is complete and all the water needed has been put to full beneficial use (perfected). In order to verify the extent of water use under this permit, an inspection of water use is typically required, known as a "proof exam". After filing the PA, the water right holder's next step is to hire a Certified Water Rights Examiner (CWRE) to conduct this proof exam. A list of CWREs is provided to the water right holder upon filing the PA with Ecology. The final water right document, a water right certificate, then may issue based upon the findings of the CWRE. Statutory county and state filing fees may apply prior to certificate issuance.

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

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 **APPROVAL** of Application No. G1-29313, subject to existing rights and the provisions specified above.

Your Right To Appeal

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

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

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order 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	Department of Ecology
Attn: Appeals Processing Desk	Attn: Appeals Processing Desk
300 Desmond Drive SE	PO Box 47608
Lacey, WA 98503	Olympia, WA 98504-7608
Pollution Control Hearings Board	Pollution Control Hearings Board
1111 Israel RD SW, Ste 301	PO Box 40903
Tumwater, WA 98501	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 20th day of May, 2022.

Kasey Cykler, Section Manager Water Resources Program/Northwest Regional Office Department of Ecology

INVESTIGATOR'S REPORT

Water Right Application No.: G1-29313 (Eagle Ridge Owners Association) Investigator: Burt Clothier, LHG, Pacific Groundwater Group (PGG; A Division of Mott MacDonald, LLC) Reviewer: Chelsea Jefferson, LHG, Department of Ecology, NWRO

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G1-29313.

The Eagle Ridge Owners Association (Association) intends to secure a new water right permit to provide municipal (domestic) supply to a new Group A water system permitted through the Washington State Department of Health (DOH) after combining two existing Group B water systems. Water supply will be provided by three existing wells for municipal supply purposes.

able 1. Summary of Requested Water hight				
Applicant Name	Eagle Ridge Owners Association			
Priority Date	March 9, 2021			
County	San Juan			
WRIA	2			
Water Source	Groundwater			
Place of Use	Area served by Eagle Ridge Water System. The place of use of this water right is the service area described in a Water System Plan approved by the Washington State Department of Health. RCW 90.03.386 may have the effect of revising the place of use of this water right if the criteria in section RCW 90.03.386(2) are met.			

Table 1: Summary of Requested Water Right

Purpose	Instantaneous Rate (gpm)	Annual Quantity (ac-ft/yr)	Begin Season	End Season
Municipal	30	10.3	1/1	12/31

Source Name	Parcel	Well Tag	Township	Range	Section	QQQ	Latitude	Longitude
Lot 14 Well	171750014000	ACM 570	37N	01W	19	NW SE	48.679659	-122.864680
Lot 15 Well	171750015000	AGA 034	37N	01W	19	NW SE	48.679043	-122.865349
Parcel A Well	171750111000	ACM 569	37N	01W	19	SE NWs	48.683585	-122.870316

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

Cost Reimbursement

Application No. G1-29313 is being processed under a cost reimbursement agreement between the Association and the Department of Ecology. This report has been prepared by Pacific Groundwater Group (a Division of Mott MacDonald) and reviewed by Chelsea Jefferson with the Department of Ecology's Water Resources Program.

INVESTIGATION

The Association requests a new water right permit to provide municipal (domestic) supply to the 24 lots. The water system will be permitted as a Group A water system once approved through DOH.

Datum: NAD83/WGS84

Site Description

The Eagle Ridge development is located on Orcas Island between the south flank of Buck Mountain and the northwest flank of Mount Constitution, about three miles southeast from the community of Eastsound, Washington. The development is rural property in wooded, hillside terrain.

Hydrogeologic Evaluation

PGG (2020) describes the geology of northern Orcas Island, WA as glacial deposits overlying a highly variable bedrock basin (Orr and others, 2002). Unconsolidated glacial deposits, where present, overlie, to varying extents, a complex of sedimentary and volcanic bedrock that is metamorphosed in many areas of the islands (Russell, 1975; Brandon and others, 1988).

Surficial geology mapped at the development includes Jurassic to Cretaceous sedimentary, volcanic, and metamorphic bedrock of the Turtleback Complex (WDNR). Based on the driller's log descriptions, all three wells (Lot 14, Lot 15, and the Parcel A well) appear to be completed in metamorphic sedimentary rocks. Most of the bedrock is nonporous, and water occurs primarily in joints and fractures, yielding only small quantities of water. Water is often sufficient only for single-family domestic use, but can occasionally produce higher quantities where fractures are interconnected.

Groundwater flow direction has not been measured but based on topography likely flows west to discharge to East Sound, the body of water adjoining the community of Eastsound. The closest surface water body is Purdue Lake located about ½ mile to the northeast. Another smaller, unnamed pond is located about ½ mile to the southwest, near East Sound. Based on relative elevations, these surface waters are unlikely to be hydraulically connected to the aquifer tapped by the wells. Purdue Lake is perched at a surface elevation of about 1,000 feet which is close to Lot 14 and lot 15 well's surface elevation of about 1,000 feet which is only about 100 feet above sea level. Water levels in the lake. The unnamed pond to the southwest is only about 100 feet above sea level. Water levels in the wells is about 135 to 220 feet below ground surface. The Parcel A well is at a surface elevation of about 460 feet. Average static water level elevations are at land surface.

AQUIFER TESTS

Lot 14 Well

The Lot 14 well is the primary supply well for the current water system. Although the well had been shut down for several days prior to the start of pumping, water levels in the well were still recovering at a rate of about 0.7 feet per day at the start of the test. The aquifer test at the Lot 14 well commenced on October 2, 2020 and continued for 24 hours until the pump was shut off on October 3. Water levels were measured in the Lot 14 well (pumping well) and the Lot 15 well (observation well) using pressure transducers. Barometric readings were also logged to allow for water level correction. Water levels were also measured by hand during the first hour of testing to monitor progress and provide a backup in case of transducer malfunction.

The pumping rate was measured with a totalizing meter and averaged 3.8 gpm. The test produced 11.8 feet of drawdown in the Lot 14 well at the end of pumping. The pump was then shut off and the water level in the Lot 14 Well was allowed to recover. Recovery measurements were collected for about 25 hours. There was no detected drawdown in the Lot 15 well while pumping the Lot 14 well.

Lot 15 Well

The aquifer test at the Lot 15 well commenced on September 30, 2020. Pumping continued for about 25.5 hours until the pump was shut off on October 1. Water levels were measured in the Lot 15 well (pumping well) and the Lot 14 well (observation well) using pressure transducers. Barometric readings were also logged to allow for water level correction. Water levels were also measured by hand during

the first three hours of testing to monitor progress and provide a backup in case of transducer malfunction.

The pumping rate was measured with a totalizing meter and averaged 13 gpm. The test produced 7.7 feet of drawdown in the Lot 15 well after 25.5 hours of pumping. The pump was then shut off and the well was allowed to recover. Recovery measurements were collected for about 72 hours. There was no detected drawdown in the Lot 14 well while pumping the Lot 15 well.

Parcel A Well

The Parcel A well was not tested as part of this investigation; however, previous testing information was available. In 1997, the Parcel A Well was tested for 25.5 hours at 6 gpm. Water level drawdown was 193 feet bgs after about 1.5 hours and then held at this level throughout the remainder of the test period. The report indicates that the static water level was back to flowing conditions 48 hours after pumping ended.

Proposed Use and Basis of Water Demand

Water System Description

The Eagle Ridge Water System was designed and constructed in the 1990s to serve residential lots in the Eagle Ridge Section of the Plat of Buck Mountain. Originally 22 lots, a 23rd lot was added to the development in 2020 by subdivision. One additional vacant lot exists which is not currently designated for development but could represent a future developable lot at full build out and is included for planning purposes.

The development was originally served by two Group B water systems, the Eagle Ridge Water System (Water System ID AA165J) and the Hidden Ridge Water System (Water System ID 08222A), each with its own permit-exempt well. However, current supply has relied primarily on one well (Lot 14 Well), the source designated for the Eagle Ridge Water System. A second well (Lot 15 Well) is located approximately 500 feet southwest of the Lot 14 well and can be used as an additional supply well during peak use or as a back-up source of supply. The source originally designated for the Hidden Ridge Water System (Parcel A Well) is not currently supplying the water system due to poor (aesthetic) water quality but could be employed as a back-up or emergency source.

Application No. G1-29313 intends to combine the two original Group B water systems into a single Group A system.

History of Water Use

The combined water system currently provides water to a total of 15 active connections, 13 singlefamily residences and two lots with trailers. The Association's recent annual water use is shown in Table 2 below.

Year	Total gallons	Acre-feet	Average gpd	Maximum	Maximum	Maximum month peak
	pumped		per connection	use month	month gpd	gpd per connection
					system average	
2016	572,550	1.76	120	Aug	2,590	253
2017	579,540	1.78	161	July	3,332	331
2018	519,590	1.59	158	July	3,029	335
2019	542,770	1.67	124	July	2,684	222
2020	723,400	2.22	149	July	3,514	248

Table 2: Association Annual Water Use 2016 - 2020

Typical water use for the whole system ranges from under 1,000 gallons per day (gpd) up to about 3,500 gpd, depending on the month and the number of active connections. Use per connection ranges from less than 75 gpd up to 335 gpd, with July being the most common peak usage month.

The current system has storage for up to 5,000 gallons (one 2,500-gallon tank each at the Lot 14 and Lot 15 well sites). This has served adequately in the past but will likely need modification as lots are completed or if a larger proportion of lots are used for permanent residences.

Proposed Use

Well testing indicates availability of up to 23.5 gpm combined between the three wells. Assuming 12 hours of production, sufficient water could be produced to support up to 500 gpd per connection across all 23 current lots. Assuming only the Lot 15 well is used, a 12-hour pumping cycle could support 400 gpd per connection.

The Association anticipates a full build-out of 24 lots. While some lots are currently undeveloped and others are mainly used seasonally, the Association assumes that full build-out will result in 23 full-time residences and one community-use parcel. Over the 5-year period from 2016 to 2020, the highest average annual water use was 161 gpd per connection in-use. Applying this rate to the 24-lot total build-out results in 1.4 million gallons or 4.3 acre-feet. Maximum month use at build-out is assumed at 335 gpd per connection or 249,240 gallons in July. Given the number of lots to be built and the potential variability of future use, the system may require additional water to grow into if uses per connection are higher than anticipated. An annual allocation of 5-acre feet per year is recommended as this would provide up to for 1.6 million gallons per year or up to an average 218 gpd per connection, assuming full build-out. This is within the 100 gpd to 300 gpd range of average household water use reported by the County, and less than the County average value of 237 gpd (San Juan County, 2002).

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.

Testing in 2020 indicated water is physically available from the bedrock aquifer tapped by the Lot 14 and Lot 15 wells and the Parcel A Well. Further, given the well locations, the low rates of production, and the lack of interference drawdowns between the wells, the use of the new proposed points of withdrawal should be sustainable. Therefore, water will be physically available for the proposed appropriation.

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 water resource administrative rules or court orders in place for this source of water on Orcas Island. Therefore, water is legally available for the proposed appropriation.

Impairment

In analyzing impairment, Ecology must make a determination as to whether existing water rights, including adopted instream flows, may be impaired by the withdrawal and proposed use.

All three of the source wells for the Association are completed in bedrock. Based on the local geology and the available water level information, it is probable that water in the bedrock aquifer ultimately discharges to the saltwater of East Sound (PGG, 2020).

As noted above, the closest surface water body is Purdue Lake located about ½ mile to the northeast and another smaller, unnamed pond is located about ½ mile to the southwest, near East Sound. No streams are mapped in the vicinity. The lakes are considered to be hydraulically disconnected from the bedrock source aquifer.

Due to the geologic setting, topography and the rural nature of development in the area, groundwater is predominately used for single-domestic withdrawals. These uses are typically small quantity and are a mix of permanent and seasonally intermittent. Based on the testing results, impacts at distance from the use of the Association wells is not expected (PGG, 2020).

Therefore, impairment is considered unlikely due to the nature of bedrock aquifer withdrawals and lack of surface water bodies of concern.

Beneficial Use

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

Municipal (domestic) use is considered a beneficial use of water under RCW 90.54.020(1).

Public Interest

The withdrawal and associated use must not be detrimental to the public interest. At a minimum, the following are considered when making this assessment.

Notification to the Washington Department of Fish and Wildlife

Per RCW 90.03.280 and 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 was provided notice of this water right application on August 3, 2021. Mr. Steve Boessow of WDFW provided a comment letter on August 8, 2021, indicating that WDFW does not oppose the application. The letter makes note of fish use of streams to the north of the Association, but that the aquifer discharges to marine waters and that WDFW makes no claims of impairment of the local habitats.

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, the application under review 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 Islands' Sounder* on May 5, 2021 and May 12, 2021.

Consideration of Protests

No protests to this water right application were received by Ecology. One comment letter was received as a result of public posting for comment. Attorney-at-Law Mr. Shawn Alexander provided Ecology with a letter dated April 7, 2022 on behalf of his clients the Smiths, stating that several lots in the development currently have permit exempt wells and raising a concern that these lots would be forced to connect to the water system. The letter also requests that the water system develop an abbreviated coordinated water system plan (ACWSP) to assure coordination between the system and the permit-exempt well owners. Finally, the letter notes a typographical error in the tax parcel numbers where the wells are located.

The Association acknowledges the existence of three permit-exempt, private wells within the proposed service area that are currently supplying potable water to structures independent of the Eagle Ridge Water System. Owners of these wells are grandfathered by San Juan County and may continue to supply their own domestic water using the groundwater exemption, which will limit the amount of water perfected by Eagle Ridge Water System under this permit. Owners of these wells may connect to Eagle Ridge Water System in the future, and the system has been designed to have the capacity to serve all 24 lots in the plat.

Regarding Mr. Alexander's clients' request for development of an ACWSP, this request does not concern the four-part test for determining water right applications and is outside the jurisdiction of the Department of Ecology. Pending the receipt of its water right, the Association will begin the process of creating a Small Water System Management Plan with the Department of Health, at which time such a request can be considered.

The parcel numbers for the well locations have been corrected.

Conclusions

I find that:

• Water is physically and legally available.

- The appropriation will not impair existing rights.
- The proposed municipal use is a beneficial use.
- Approval of this application will not be detrimental to the public interest.

RECOMMENDATIONS

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

Recommended Quantities, Purpose of Use, and Project Location

The rate and quantity of water recommended are maximum limits. The permit holder may only withdraw water at a rate and quantity within the specified limits that are reasonable and beneficial:

Table 3: Recommended Limits and Location

Maximum Instantaneous Rate (gpm)	23.5		
Maximum Annual Quantity (ac-ft/yr)	5		
Purpose of Use	Municipal		
Points of Withdrawal	NW SE of Section 19, T37N, R01W, and		
	SE NW of Section 19, T37N, R01W		
Place of Use	As described on Page 2		



Burt G. Clothier, LHG, Pacific Groundwater Group



Chelsea Jefferson, LHG, Department of Ecology

__5/20/22_____ Date

5/20/22

Date

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

- Brandon, M.T., Cowan, D.S., Vance, J.A., 1988, The Late Cretaceous San Juan thrust system, San Juan Islands, Washington. Geological Society of America Special Paper 221, 45 p., 2 appendices.
- Orr, L.A, Bauer, H.H, Wayenburg, J.A., 2002, *Estimates of ground-water recharge from precipitation to glacial-deposit and bedrock aquifers on Lopez, San Juan, Orcas, and Shaw islands, San Juan County, Washington*. Water Resources Investigations Report 2002-4114.
- Pacific Groundwater Group, 2020, *Eagle Ridge Aquifer Test Results*. Letter report of findings dated December 2, 2020, prepared for Eagle Ridge Owners Association, 7 p., 9 Figures
- Russell R.H (ed.)., 1975, *Geology and Water Resources of the San Juan Islands, San Juan County, Washington.* Washington Department of Ecology Water Supply Bulletin 46, 76 p., 14 Figures, 4 appendices.
- San Juan County Watershed Management Committee, 2004, San Juan County Water Resource Management Plan – WRIA 2. 49 p., 14 figures, 4 appendices.
- Washington State Department of Ecology records of surface and groundwater rights and claims in the vicinity of the subject production well(s). https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx
- Washington State Department of Ecology water well logs in the vicinity of the subject production well(s). https://fortress.wa.gov/ecy/waterresources/map/WCLSWebMap/default.aspx