



State of Washington
DRAFT
REPORT OF EXAMINATION
FOR WATER RIGHT APPLICATION

PRIORITY DATE 06/24/2010	WATER RIGHT NUMBER G1-28663
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MAILING ADDRESS Olerin Business Park Owners Association c/o Mike Carlson P.O. Box 1070 Friday Harbor, WA 98250

Quantity Authorized for Withdrawal

WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (AF/YR)
12	GPM	7.9

Purpose

PURPOSE	WITHDRAWAL			ANNUAL QUANTITY (AC-FT/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
DOMESTIC MULTIPLE	12		GPM	7.9		01/01 - 12/31

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
N/A	N/A	ABO22K	14

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
SAN JUAN	GROUNDWATER		2-SAN JUAN

SOURCE	PARCEL	WELL TAG	TOWNSHIP	RANGE	SECTION	QUARTER QUARTER	LATITUDE	LONGITUDE
Well	351049101000	AKY-662	35N	03W	10	SW¼ SE¼	48.537	-123.047

Datum: NAD83/WGS84

Place of Use

PARCELS 35143010000, 35143007000, 35143009000, 35149103000, 35149101004, 35149101005, 35149101006, 35149101007, 35149101008, 35149101009, 35149101010, and 35140101011
LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE Those portions of Sections 10 and 15 of Township 35 N, Range 3W, described as follows:

Beginning at the South quarter-corner of Section 10, thence S 88°8'16" E 659.99 ft to the TRUE POINT OF BEGINNING; thence S 88°9'54" E 359.70 ft; thence S 43°1'48" E 432.49 ft; thence N 1°37'11" E 1333.43 ft to the South line of a County Road known as Beaverton County Road; thence Westerly along South line of Beaverton County Road to a point that is N 1°46'36" E and 1175.10 ft from the TRUE POINT OF BEGINNING; thence S 1°46'36" W 1175.10 ft to the TRUE POINT OF BEGINNING.

All lying within San Juan County, WA.

Proposed Works

A well, 200 feet deep with a 6-inch casing and a pump to meet system capacity, serving a Group A non-transient community water system.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Complete	Complete	December 31, 2026

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Upon Request by Ecology

Provisions

Measurements, Monitoring, and Metering

An approved measuring device shall be installed and maintained for the source 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.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state shall 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 shall be decommissioned.

All wells shall 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 shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

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.

Department of Health Requirements

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

Water Use Efficiency

The water right holder is required to maintain efficient water delivery systems and use of up-to-date water conservation practices consistent with RCW 90.03.005.

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 of use is beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. G1-28663, subject to existing rights and the provisions specified above.

Your Right To Appeal

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

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

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
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

Signed at Bellevue, Washington, this _____ day of _____, 2015.

Tom Buroker, Section Manager

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.

INVESTIGATOR’S REPORT

Application for Water Right – Olerin Business Park Owners Association

Water Right Control Number G1-28663

Ria Berns, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G1-28663. The application seeks a continuous, year-round water supply for a proposed Group A water system on San Juan Island. The Group A system will serve 3 residential connections, as well as commercial and industrial purposes.

Table 1. Summary of Requested Water Right

Applicant Name:	Olerin Business Park Owners Association
Date of Application:	6/24/2010
Place of Use	Those portions of Sections 10 and 15 of Township 35 N, Range 3W, described as follows: Beginning at the South quarter-corner of Section 10, thence S 88°8’16” E 659.99 ft to the TRUE POINT OF BEGINNING; thence S 88°9’54” E 359.70 ft; thence S 43°1’48” E 432.49 ft; thence N 1°37’11” E 1333.43 ft to the South line of a County Road known as Beaverton County Road; thence Westerly along South line of Beaverton County Road to a point that is N 1°46’36” E and 1175.10 ft from the TRUE POINT OF BEGINNING; thence S 1°46’36” W 1175.10 ft to the TRUE POINT OF BEGINNING. All lying within San Juan County, WA.

County	Waterbody	Tributary To	WRIA
San Juan	Groundwater	N/A	2-San Juan

Purposes	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Commercial & Industrial	12	GPM	7.0	01/01	12/31
Domestic Multiple			0.9		

Source	Parcel	Well Tag	Township	Range	Section	Quarter Quarter	Latitude	Longitude
Well	351049101000	AKY-662	35N	3W	10	SW SE	48.537	-123.047

Datum: NAD83/WGS84.

Legal Requirements for Approval of Appropriation of Water

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 *Journal of the San Juan Islands* on February 25 and March 4, 2015.

Consultation with the Washington Department of Fish and Wildlife

Ecology must give notice to the Washington Department of Fish and Wildlife (WDFW) of applications to divert, withdraw or store water. On December 2, 2014, Ecology requested comment from WDFW's Steven Boessow. WDFW submitted no comments concerning the proposed withdrawal.

State Environmental Policy Act (SEPA)

Groundwater withdrawals are subject to a SEPA threshold determination (i.e., an evaluation of whether there are likely to be significant adverse environmental impacts) if the water right application proposes withdrawals greater than 2,250 GPM. Because this application does not meet this condition and because the application is not part of a larger project that would trigger SEPA, the application is considered to be categorically exempt from SEPA and a threshold determination is not required.

INVESTIGATION

This investigation draws on a January 20, 2015 site visit as well as: (1) conversations with the applicant, Mike Carlson, and water system manager, Al Mauldin, (2) water rights research, and the (3) resources listed in the References section.

Hydrologic/Hydrogeologic Evaluation

Geological Overview of the San Juan Islands

Bounded by the Strait of Juan de Fuca to the south, Rosario Strait to the east, Haro Strait to the west, and Boundary Pass to the north, the San Juan Islands archipelago has a complex geologic history. Radiometric dating indicates that the San Juan Islands were accreted to North America sometime prior to the Late Jurassic Period. However, the Late Cretaceous period most dramatically shaped the Islands' bedrock geology. A major suture, known as the Haro Thrust zone, formed during the late Cretaceous Period and joined the Wrangellia terrane of Vancouver Island and the San Juan-Cascade nappes (Brandon, 1989). The San Juan Islands consist of a thick sequence of Late Cretaceous thrust faults, referred to as the San Juan thrust system, containing a diverse group of rocks (terranes) ranging from early Paleozoic to middle Cretaceous in age. A terrane is a fault-bounded package of rocks with a distinctive stratigraphy, structure and geologic history. Formed in compressed tectonic zones (e.g., subduction zones), a nappe is a large sheet of rock with a horizontal or sub-horizontal axial plane that has moved due to faulting or folding.

Wrangellia is a large allochthonous terrane that underlies most of Vancouver Island and parts of Alaska. On Vancouver Island it is characterized as a coherent Paleozoic-to-Lower Jurassic stratigraphic sequence that is dominantly volcanic. The thrust system straddles the southeastern edge of the Wrangellia terrane of Vancouver Island. The San Juan-Cascade nappes are northwest-trending belts that are bounded by the Skagit metamorphic core. In the San Juan Islands, five terranes (Haro, Turtleback, Deadman Bay, Garrison, and Decatur) were thrust and stacked upon each other and on top of the Wrangellia Terrane. The San Juan-Cascade nappes are thought to represent an old accretionary system formed by the successive arrival of these far-traveled terranes (Brandon, 1989).

The bedrock geology of the San Juan Islands has been greatly modified by the three major glacial advances, including the Double Bluff Glaciation (earliest), Possession Glaciation, and Fraser Glaciation

(latest) (Russell et al, 1975). However, erosion beneath the glaciers was likely guided by the topography formed by the fracture and fault zones already in existence.

San Juan Island Hydrogeology

San Juan Island is the second largest of the San Juan Islands and has an aerial extent of about 55 square miles. About 40 percent of San Juan Island is overlain by Quaternary glacial deposits, but only as thin, discontinuous sheets, with thicknesses generally less than 30 feet. The glacial deposits, where saturated, generally yield large quantities of water to wells, but the bedrock is nonporous, and water occurs primarily in joints and fractures (Russell et al, 1975).

The underlying geology in the vicinity of the Olerin Business Park is part of the Late Jurassic Constitution Formation (referred to as KJmm and Jc), which includes ophiolitic plutonic rocks, mid-oceanic-ridge basalt, ribbon chert, and arc-derived mudstone-sandstone (Brown et al, 2007). The Constitution Formation is the predominant geologic formation on San Juan Island.

The mean annual precipitation for the Olerin Business Park site is 30-32 inches/year and average annual recharge to the ground water system for this area ranges from 1.5 – 2.5 inches (Orr, 2002).

Proposed Use and Basis of Water Demand

The Olerin Business Park is located in San Juan Island's Beaverton Valley and is an approved Group A water system with the Washington State Department of Health. The full build out proposes 3 residential units and up to 13 commercial businesses, including a FedEx distribution center, fitness center, commercial kitchen, and a light manufacturing facility. The business center has not reached full build out. The water needs of each business differ and some turnover among businesses is likely. In addition, a small cement-making industrial facility is planned.

Located just outside of the Town of Friday Harbor, the commercial development is nearly complete. The residential properties and small cement-making facility have not yet been built.

Water System and Well Test Results

The Olerin Business Park well (well ID# AKY-662) is located in the SW¼ SE¼ of Section 10, Township 35 North, Range 3 West. Drilled in 2004, the well is 6 inches in diameter and 200 feet deep. The well is completed in bedrock and cased to 59 feet below the surface. A 129.58 hour well test was conducted during the dry season, from June 30 – July 5, 2004. Static water level on the day of the well test was 6.1 feet. The well was pumped to a maximum of 53.61 feet below the top of the well casing over a 25.25 hour drawdown period. 96% recovery was reached after 103.6 hours. No complaints were filed by nearby well owners during the drawdown test.

The water system is managed by Al Mauldin, a well driller and water system manager on San Juan Island. The system contains five pressure tanks, two booster pumps, and four 5,000-gallon storage tanks. The capacity of the submersible pump is 12 gpm. There's a master meter as well as individual meters at each connection. Al Mauldin has been collecting metering data for the system since 2008.

Water Rights in the Vicinity

The Department of Ecology has record of three water rights within a half mile radius of the Olerin Business Park proposed point of withdrawal (see Table 2 and Attachment 2). There are no water rights appurtenant to the place of use. Of the water rights considered for the impairment analysis, two are state-issued groundwater certificates and one is a superseding groundwater permit.

Table 2. Record of Water Rights within a Half Mile Radius from the Proposed Point of Withdrawal

<i>Control Number</i>	<i>Name on Document</i>	<i>Document Type</i>	<i>Priority Year</i>	<i>Purpose</i>	<i>Q_i (gpm)</i>	<i>Q_a (ac-ft/yr)</i>
G1-20717CWRIS	Hammond Herbert, et al	Certificate	1973	DM	8	7
G1-22396CWRIS	Ronald B Breuninger	Certificate	1975	CI, DM	3	3
G1-23548P	North Forty Owners Assoc	Superseding Permit	1980	DM	20	6

Key: Q_i – instantaneous quantity, Q_a – annual quantity, GPM – gallons per minute, CI – Commercial and Industrial Manufacturing, DM – domestic multiple, DS – domestic single.

In addition to the above-listed water rights and water right claims, there are approximately 32 water wells located within a half mile radius of the Olerin Business Park point of withdrawal. This information was obtained using the Department of Ecology’s well log database. Most of these wells are likely permit-exempt wells (RCW 90.44.050).

ANALYSIS

Under Washington State law, the following four criteria must be met for an application to be approved:

- There must be no impairment of existing rights
- Water must be available
- The water use must be beneficial
- The water use must not be detrimental to the public interest

Impairment Considerations

Impairment is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection. A water right application may not be approved if it would:

- Interrupt or interfere with the availability of water to an adequately constructed groundwater withdrawal facility of an existing right. An adequately constructed groundwater withdrawal facility is one that (a) is constructed in compliance with well construction requirements and (b) fully penetrates the saturated zone of an aquifer or withdraws water from a reasonable and feasible pumping lift.
- Interrupt or interfere with the availability of water at the authorized point of diversion of a surface water right. A surface water right conditioned with instream flows may be impaired if a proposed use or change would cause the flow of the stream to fall to or below the instream flow more frequently or for a longer duration than was previously the case.
- Interrupt or interfere with the flow of water allocated by rule, water rights, or court decree to instream flows.
- Degrade the water quality of the source to the point that the water is unsuitable for beneficial use by existing users (e.g., via sea water intrusion).

Seawater Intrusion Potential

The Olerin well was tested for chlorides in 2004, when the well was first drilled. Chloride levels were measured at 55 mg/L, well below the Environmental Protection Agency's maximum contaminant level of 250 mg/L. Furthermore, the well's depth and distance from the shoreline make salt water intrusion a low-level risk. There are no known wells with saltwater intrusion issues in the vicinity.

Water Availability

For water to be available for appropriation, it must be both physically and legally available.

Physical Availability

For water to be physically available for appropriation there must be ground or surface water present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use or uses. In addition, the following factors are considered:

- Volume of water represented by senior water rights, including federal or tribal reserved rights or claims;
- Water right claims registered under Chapter 90.14 RCW;
- Ground water uses established in accordance with Chapter 90.44 RCW, including those that are exempt from the requirement to obtain a permit; and
- Potential riparian water rights, including non-diversionary stock water.
- Lack of data indicating water usage can also be a consideration in determining water availability, if the department cannot ascertain the extent to which existing rights are consistently utilized and cannot affirmatively find that water is available for further appropriation.

The Olerin Water System well test demonstrated a capacity to sustainably yield the requested 12 gpm. Furthermore, the water system design includes 20,000 gallons of storage in addition to significant storage in the well casing. From the well test and system design, I find that water is physically available for appropriation.

The annual quantity is calculated based on the domestic needs for: 3 residential units, multi-purpose commercial activities, and a small industrial cement-making facility. For domestic purposes, a water use duty of 0.3 ac-ft/yr per connection is used. The commercial uses range from basic sanitary purposes (e.g., flushing toilets, drinking water, etc.) to heavier industrial processes (e.g., cement-making) to medium use commercial purposes (e.g., commercial kitchen, parts fabrication, equipment washing). Because the business park is still building out and future businesses may have different water duties, the water duties cannot be precisely calculated. Thus, a reasonable yet flexible annual quantity of 0.6 ac-ft/yr is used for each of the 10 commercial connections. A water duty of 1 ac-ft/yr is used for the potential heavier-use industrial purpose. In total, a water duty of 7.9 ac-ft/yr is used to account for future changes in the system. While this is a generous estimate, Ecology believes that this approach is reasonable.

Legal Availability

To determine whether water to be legally available for appropriation, the following factors are considered:

- Regional water management plans – which may specifically close certain water bodies to further appropriation.
- Existing rights – which may already appropriate physically available water.

- Fisheries and other instream uses (e.g., recreation and navigation). Instream needs, including instream and base flows set by regulation. Water is not available for out of stream uses where further reducing the flow level of surface water would be detrimental to existing fishery resources.
- The Department may deny an application for a new appropriation in a drainage where adjudicated rights exceed the average low flow supply, even if the prior rights are not presently being exercised. Water would not become available for appropriation until existing rights are relinquished for non-use by state proceedings.

There are no regulatory closures or restrictions affecting water availability in this San Juan Island watershed. WDFW did not submit comments on this proposed withdrawal and no impacts to fish, wildlife, or the habitat they rely on are anticipated. Thus, the Department of Ecology finds that water is legally available from this source.

Beneficial Use

Domestic, commercial, and industrial purposes are considered beneficial under RCW 90.54.020(1).

Public Interest Considerations

No protests were filed against this application and no potential for detriment to the public interest was identified during the investigation of this application.

Conclusions

In accordance with chapter RCW 90.03, I conclude there is water available from the source in question, the purpose of use is beneficial, there will be no impairment of existing rights, and there will be no detriment to the public interest.

RECOMMENDATIONS

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

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

- 12 gallons per minute
- 7.9 acre-feet per year
- Multiple domestic and commercial & industrial purposes

Point of Withdrawal

SW¼, SE¼, Section 10, Township 35 North, Range W, W.M.

Place of Use

Those portions of Sections 10 and 15 of Township 35 N, Range 3W, described as follows:

Beginning at the South quarter -corner of Section 10, thence S 88°8'16" E 659.99 ft to the TRUE POINT OF BEGINNING; thence S 88°9'54" E 359.70 ft; thence S 43°1'48" E 432.49 ft; thence N 1°37'11" E 1333.43 ft to the South line of a County Road known as Beaverton County Road; thence Westerly along South line of Beaverton County Road to a point that is N 1°46'36" E and 1175.10 ft from the TRUE POINT OF BEGINNING; thence S 1°46'36" W 1175.10 ft to the TRUE POINT OF BEGINNING.

All lying within San Juan County, WA.

Ria Berns, Report Writer

Date

Jerry Liszak, LHg, Reviewer

Date

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

SELECTED REFERENCES

Brandon, M.T., 1989. *Geology of the San Juan-Cascade Nappes, Northwestern Cascade Range and San Juan Islands*. Geologic guidebook for Washington and adjacent areas: Washington Division of Geology and Earth Resources Information Circular 86, 26 pages.

http://earth.geology.yale.edu/~markb/Eprints/Brandon1989DGER_FieldGuide.pdf

Brandon, M.T., et al, 1988. *The Late Cretaceous San Juan thrust system, San Juan Islands, Washington*. Geological Society of America Special Paper 221, 81 p.

http://earth.geology.yale.edu/~markb/Eprints/Brandon_et al1988.pdf

Brown E.H., et al, 2007. *Tectonic Evolution of the San Juan Islands Thrust System, Washington*. The Geological Society of America, Field Guide 9, 35 pages.

<http://myweb.facstaff.wwu.edu/bernieh/reprints/brown-gsa-cord-07-san-juans.pdf>

Orr, L.A., Bauer, H.H. and Wayenberg, 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*. U.S. Geological Survey Water-Resources Investigations Report 02-4114, 114 pages.

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 No 46, 171 pages.

ATTACHMENT 1: PLACE OF USE MAP



ATTACHMENT 2: IMPAIRMENT MAP

