



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

File NR G1-27558
 WR Doc ID 2284446

PRIORITY DATE 11/21/1994	WATER RIGHT NUMBER G1-27558
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MAILING ADDRESS SOUTH BELLEVUE FARM HOMEOWNERS ASSOCIATION C/O GLEN CORSON 23011 SE 41ST CT SAMMAMISH WA 98075-7234	SITE ADDRESS (IF DIFFERENT) 105 WEBSTER DR FRIDAY HARBOR WA 98250
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Quantity Authorized for Withdrawal		
WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (AF/YR)
10	GPM	2.25

Purpose						
PURPOSE	WITHDRAWAL RATE			ANNUAL QUANTITY (AC-FT/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
DOMESTIC MULTIPLE	10	0	GPM	2.25	0	01/01 - 12/31

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
0	0	04438	8

Source Location			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
SAN JUAN	GROUNDWATER	N/A	2-SAN JUAN

SOURCE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
WELL	462452011000	ABO-756	36N	04W	24	SW NE	N 48.6050	123.1345 W

Datum: NAD83/WGS84

Place of Use (See Attached Map)
PARCELS (NOT LISTED FOR SERVICE AREAS)
 San Juan County parcel numbers: 462452004, 462452003, 462452002, 462452001, 462452010, 462452005, 462452006, 462452007, and 462452008

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE
 That portion of Section 24, Township 36 North, Range 4 West, W.M., lying within San Juan County, Washington, described as follows:

Beginning at the North quarter corner of Section 24, thence South 29°39'48" East 831.655 feet to the true point of beginning, thence South 35°57'49" East 279.259 feet, thence along a curve to the right having an arc length of 184.53 feet and a radius of 970 feet, thence South 25°4'9" East 94.632 feet, thence South 25°3'49" East 922.083 feet, thence North 66°33'48" West 305.079 feet, thence along a curve to the right having an arc length of 329.56 feet and a radius of 355 feet, thence North 88°57'57" West 149.618 feet, thence South 29°3'22" West 113.548 feet, thence South 14°11'23" East 204.18 feet, thence North 89°14'1" West 242.516 feet, thence North 19°50'44" West 18.921 feet, thence North 46°43'44" West 139.27 feet, Thence North 83°58'27" West 8.723 feet, thence North 34°28'7" West 90.951 feet, thence North 31°24'49" West 304.502 feet, thence North 36°49'56" West 191.739 feet, thence North 50°22'30" East 256.307 feet, thence North 33°40'25" East 155.618, thence North 46°11'40" East 486.263 feet to the true point of beginning.

Encompassing the entirety of the South Bellevue Farm Short Plat, Auditor's File Number 95121307, 1995.

Proposed Works

A single 6-inch well, drilled 76 feet deep with a 6-inch casing, fitted with a ¾ HP submersible pump, and serving a Group B water system.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Begun	December 31, 2014	December 31, 2029

Measurement of Water Use

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

Provisions

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.

Measurements, Monitoring, Metering and Reporting

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173, which describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Northwest Regional Office. 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.

Proof of Appropriation

The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

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.

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. G1-27558, 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).

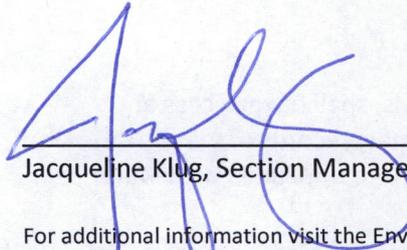
To appeal you must do the following within 30 days of the date of receipt of the Order.

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 14 day of May, 2014.



Jacqueline Klug, 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 – South Bellevue Farm Homeowners Association
 Water Right Control Number G1-27558
 Ria Berns, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G1-27558.

South Bellevue Farm Homeowners Association (SBFHA) applied for a water right to appropriate groundwater on November 21, 1994, originally under the name, Bellevue Farm, LLC. The purpose of use is year-round domestic supply. Eight homes and one recreational parcel (tennis court) are currently connected to this Group B water system. One well serves the system, located within the SW¼ NE¼ of Section 24, Township 36, Range 4 West.

The system is fully developed; however, small out-buildings may be built and connected to the system in the future. This report describes the proposed project, discusses the hydrogeology of the area, investigates potential impairments, and evaluates water availability issues raised by this project.

Table 1. Summary of Requested Water Right

Applicant Name:	South Bellevue Farm Homeowners Association
Date of Application:	11/21/1994
Place of Use	See Attachment 1

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

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Domestic multiple	10	GPM	2.25	January 1	December 31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Well	462452011000	ABO-756	36N	04W	24	SW NE	N 48.6050	123.1345 W

Datum: NAD83/WGS84

GPM = Gallons per Minute; Ac-ft/yr = Acre-feet per year; Twp = Township; Rge = Range; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area

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, withdrawn and used. Notice of this application was published in the *Journal of the San Juan Islands* on September 21, 2005 and September 28, 2005.

Consultation with the Department of Fish and Wildlife

The Department of Ecology must give notice to the Department of Fish and Wildlife (WDFW) of applications to divert, withdraw or store water. On October 18, 2013, Ecology provided notice to Mr. Stephen Boessow (WDFW). WDFW submitted no comments concerning the proposed withdrawal.

State Environmental Policy Act (SEPA)

Ground water 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

The following investigation is based on an October 14, 2013 site visit to the SBFHA property with Water Resource Program hydrogeologist, John Rose. During the site visit, we met with SBFHA President, Glen Corson, who described and gave us a tour of the system. This water right investigation draws on: (1) information gathered during the site visit, (2) follow-up conversations with the SBFHA president Glen Corson, (3) Water right research, (4) hydrogeological analysis of the site, and (5) selected references listed in this report.

San Juan Island Geology and Hydrogeology

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. It is probable that a fault of considerable magnitude occupies each of the major San Juan channels.

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 geology in the vicinity of the SBFHA well is Orcas Chert, which is Triassic-Jurassic formation composed of ribbon chert, with lesser pillow basalt, mudstone, and limestone (Brown et al, 2007). Orcas Chert and the Deadman Bay Volcanics found north of Lime Kiln Point are regarded as a single terrane based on similarity of age, lithology, and basalt chemical signatures (Brandon, et al, 1988). Orcas Chert is found along the eastern and northern coastline of San Juan Island (see Attachment 2).

The mean annual precipitation for the SBFHA site is 32-34 inches/year. Average annual recharge to the ground water system for this area ranges from 2.5 to 4.5 inches (USGS, 2002).

Project Description

SBFHA applied for a water right, originally under the name Bellevue Farm, LLC, to serve eight homes from a well on the SBFHA property. The system also serves a tennis court on the property. Submitted to the Department of Ecology on November 21, 1994, the application lists multiple domestic as the purpose of use. The project was fully developed in 2003; however, most of the homeowners have been putting the water to beneficial use since the mid-1990s. Currently, only one homeowner lives onsite year-round. Within the next several years, additional homeowners are expected to relocate to South Bellevue Farms full time. In addition, some homeowners are interested in building small guest houses/accessory dwelling units on their parcels.

Parcels range in area from approximately 1 to 2.7 acres and the landscapes vary in terms of tree and lawn coverage. With the exception of small ornamental and vegetable gardens, there is no outdoor irrigation.

Water System and Well Test Details

The SBFHA Water System is a Group B system served by a six-inch well. The well is located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ within Section 24, Township 36 North, Range 4 West (San Juan parcel 462452011000). The Department of Ecology does not have a well log on file for this well (well ID # ABO-756); however, Al Mauldin, a well driller on San Juan Island, conducted a well test on October 13, 1990 (see Table 2).

The well is cased to 76 feet and a bentonite surface seal was completed to 30 feet. A 5 hour well test yielded a pumping rate of 14,440 gallons per day (10.03 gpm) and the well reached full recovery in approximately 1 hour. Static water level was measured at 52 feet. During a conversation with Al Mauldin on February 10, 2014, Al said that the well was drilled sometime before 1979 and that he thought San Juan County Health Department attached the Ecology well tag.

A $\frac{3}{4}$ HP Grundfos submersible pump withdraws water from the well and pumps the water to a nearby 1,200 gallon storage tank. A well house adjacent to the well (see figure 1) contains a Franklin Electric booster pump and three 119 gallon Challenger-brand pressure tanks. Water is supplied to the residences through a 2-inch PVC mainline pipe and 1 $\frac{1}{4}$ -inch PVC connection pipes. Each home and a tennis court are metered individually and a master meter tracks the system's total water use.

SBFHA includes a provision in their homeowners' Covenants, Conditions, and Restrictions that limits each homeowner to 9,000 gallons per month.



Figure 1. South Bellevue Farms Homeowners Association Water System. Photos Listed clockwise from top left: (1) well and pump house, (2) well (well tag # ABO-756), (3) pressure tanks, (4) storage tank.

Table 2. Pump Test Data (October 13, 1990)

Test Element	
Duration	5 hrs
Static Water Level	52 ft
Maximum drawdown	73 ft
Recovery Level	52 ft
Recovery Time	1 hr
Well Yield	14,440 gallons per day
Chloride	75 ppm
Iron	0.2 ppm
pH	7.5
Hardness	15 gr/gal

Other Water Rights Appurtenant to the Place of Use

The Department of Ecology has record of one water right application for groundwater within a half mile radius of SBFHA well site (see Table 3 and Attachment 3). No water rights or water right claims exist

within this half mile radius. Ecology's well log database shows six wells within a half mile radius of the SBFHA point of withdrawal. Most if not all of these wells likely represent wells that fall under the groundwater permit exemption (RCW 90.44.050).

Table 3. Record of Water Rights within a Half Mile Radius of the Proposed Point of Withdrawal

Control Number	Name on Document	Document Type	Priority Year	Purpose	Q_i (gpm)	Q_a (ac-ft/yr)	Location
G1-27116	Roche Harbor Water System Inc	New Application	1993	DM	N/L	N/L	S19, T36N, R03W

Abbreviation Key: Q_i – instantaneous quantity, Q_a – annual quantity, gpm – gallons per minute, DM – domestic multiple, S – Section, T – Township, R – Range, N/L – not listed

FINDINGS

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).

Potential for Seawater Intrusion

SBFHA has collected water quality data for over ten years. According to water quality sampling conducted in March 2006, the chloride concentration was measured at 49 mg/L. Glen Corson said that these chloride measurements were fairly consistent over time. Chloride concentrations are used as a water quality indicator for seawater intrusion—49 mg/L is considered a low risk for seawater intrusion. As reference, the Environmental Protection Agency lists 250 mg/L as the maximum contaminant level, which the Department of Ecology considers a "Very High" risk for seawater intrusion.

Other Impairment Considerations

Water right application G1-27116 (Roche Harbor Water Systems Inc) is the only water right (application, permit, or certificate) within a half mile radius of the SBFHA point of withdrawal. This application has not

yet been processed by Ecology and is for emergency supply during drought years. Furthermore, the proposed Roche Harbor well site is up-gradient and inland from the SBFHA well and therefore, will not likely be impaired by (or impair) this system. The SBFHA Group B water system has operated since the early 1990s. Since this time, the Department of Ecology has received no impairment complaints regarding the use of this system. This suggests that no senior water right holders have been impaired.

The SBFHA well is drilled in compliance with the well drilling rules and regulations. There is no evidence to suggest that this water right will degrade water quality and there are no regulatory closures or restrictions affecting water availability on San Juan Island. Thus, I find no impairment concerns associated with the SBFHA point of withdrawal.

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.

Completed on October 13, 1990, the well test showed that the well is capable of producing 10 gpm. This instantaneous quantity (Q_i), the fast recovery rate, and 20-plus years of use without water supply issues, all support the finding that water is physically available for appropriation from this well.

The annual quantity (Q_a) is calculated based on the domestic needs for 8 homes and 1 tennis court (drinking water supply). Using an average water use requirement of .25 ac-ft/yr for San Juan County, the 9 parcels (8 homes, 1 tennis court) would need approximately 2.25 ac-ft/yr to serve their domestic needs ($9 * .25 \text{ ac-ft/yr} = 2.25 \text{ ac-ft/yr}$). Allocating .25 ac-ft/yr for the tennis court is a generous estimate.

Legal Availability

To determine whether water is 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 on San Juan Island and WDFW did not submit comments related to impacts on fish, wildlife, or the habitat they rely on. Therefore, I find water is legally available for appropriation

Beneficial Use

Domestic use is 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 90.03 RCW, I conclude that 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 posed by this project 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 listed 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:

- 10 gpm
- 2.25 ac-ft/yr
- Year-round multiple domestic supply

Point of Withdrawal

SW¼, NE¼, Section 24, Township 36 North, Range 4 West, W.M.

Place of Use

That portion of Section 24, Township 36 North, Range 4 West, W.M., lying within San Juan County, Washington, described as follows:

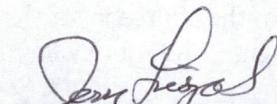
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Encompassing the entirety of the South Bellevue Farm Short Plat, Auditor's File Number 95121307, 1995.

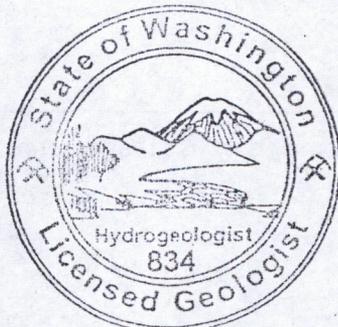

Ria Berns, Report Writer

05/13/2014
Date


Reviewed by Jerry Lyszak, L.Hg

5/14/14
Date

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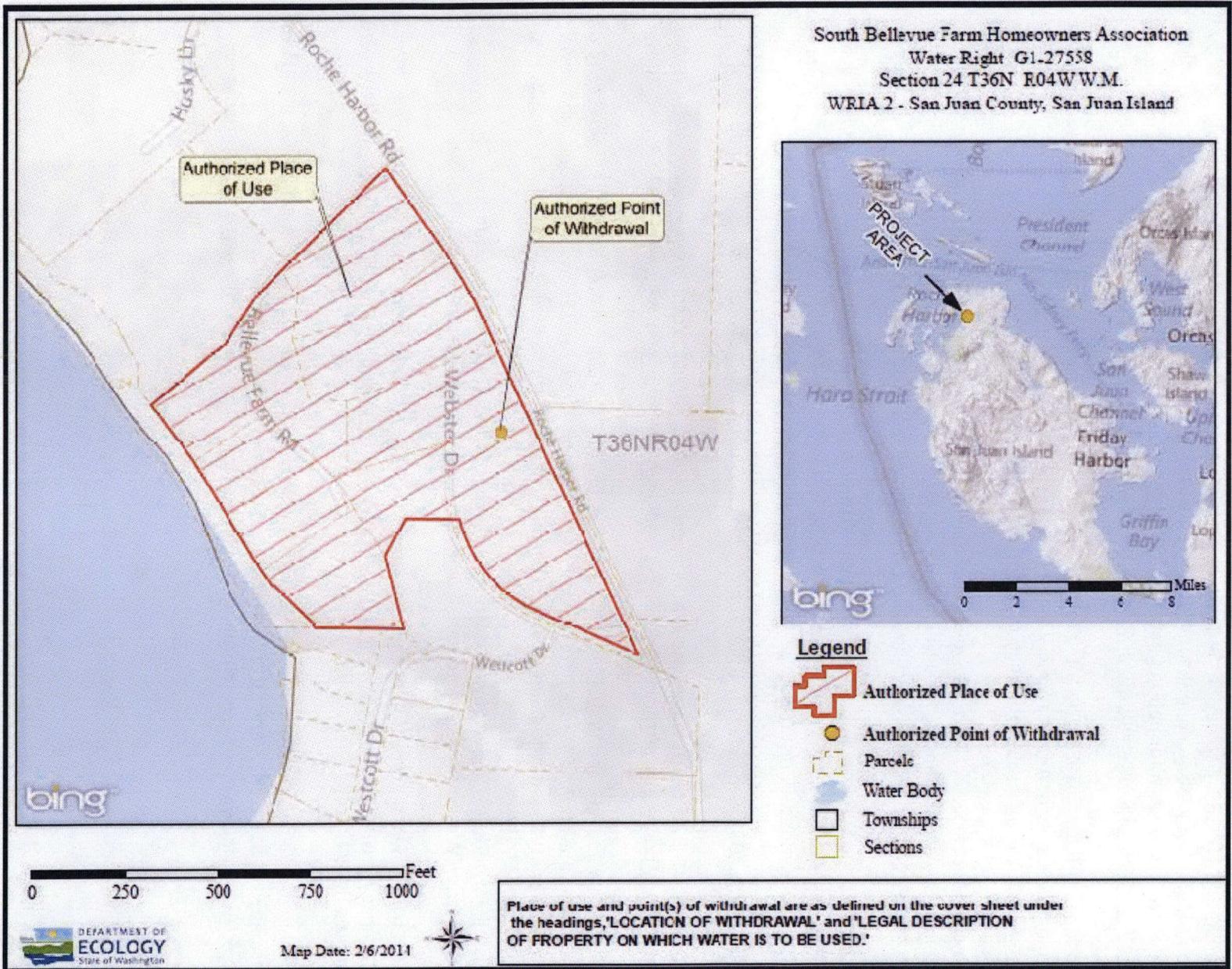


JERRY LEE LISZAK

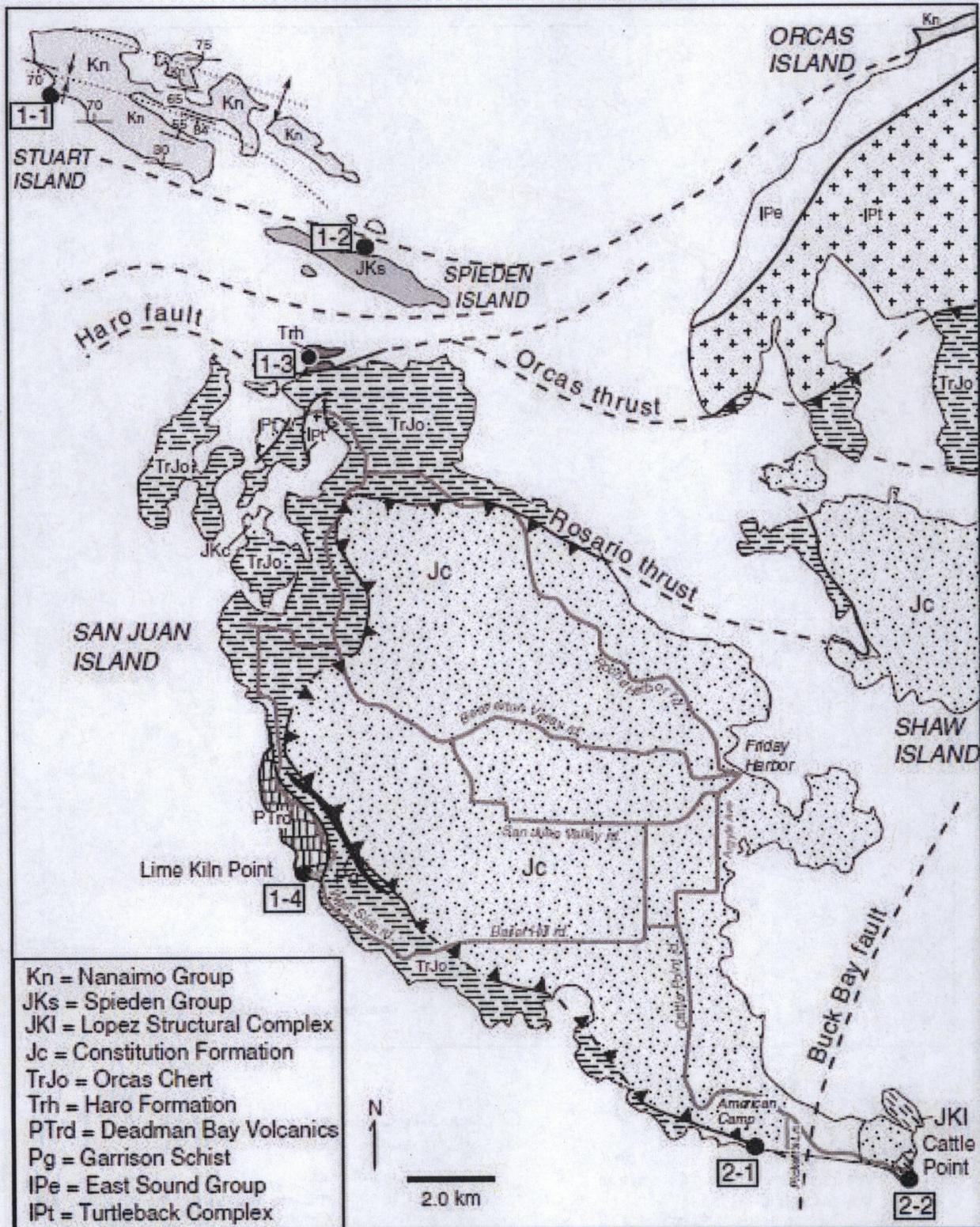
Selected References

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<http://www.dnr.wa.gov/ResearchScience/Topics/GeologyofWashington/Pages/lowland.aspx>

Attachment 1: Place of Use Map



Attachment 2: San Juan Island Bedrock Geology



Credit: Brown, E.H., et al, 2007. *Tectonic Evolution of the San Juan Islands Thrust System, Washington*. P. 157

Attachment 3: Impairment Map

