File NR S1-28260
WR Doc ID 4238700

DEPARTMENT OF ECOLOGY
State of Washington

State of Washington

REPORT OF EXAMINATION FOR WATER RIGHT APPLICATION

PRIORITY DATE
6/27/2005

WATER RIGHT NUMBER
S1-28260

MAILING ADDRESS
KIMBAL SUNDBERG
1853 FALSE BAY DRIVE
FRIDAY HARBOR WA 98250

SITE ADDRESS (IF DIFFERENT)

Quantity Authorized for Diversion

DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
0.045	CFS	0.85

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE ADDITIVE	WITHDRAWAL OR DIVERSION RATE NON-ADDITIVE	UNITS	ANNUAL QUANTITY (AF/YR) ADDITIVE	ANNUAL QUANTITY (AF/YR) NON-ADDITIVE	PERIOD OF USE (mm/dd)
Irrigation	0.045		CFS	0.85		05/01 - 10/31

IRRIGATED ACRES ADDITIVE	IRRIGATED ACRES NON-ADDITIVE
0.5	0

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
SAN JUAN	UNNAMED POND	FALSE BAY	2-SAN JUAN

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
UNNAMED POND	353341003000	NOT APPLICABLE	35N	03W	33	NE SE	N 48.4820	123.0623 W
							Datum: NAD83/WGS84	

Place of Use (See Attachment 1)

PARCELS (NOT LISTED FOR SERVICE AREAS)

353341003000

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

NE¼ SE¼ of Section 33, Township 35 North, Range 3 West (see Attachment 2 for full legal description)

Proposed Works

This water right application is for irrigation of a half acre of combined home garden and orchard. The source is an unnamed, man-made pond on southwestern San Juan Island. A drip irrigation system will be used, as needed, during the irrigation season from May 1 – October 31.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Already Begun	April 30, 2014	December 31, 2018

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 diversion (cfs)

Provisions

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.

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.

WAC 173-173 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.

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.

Proof of Appropriation

The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and

the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

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

Findings of Facts
Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. S1-28260, 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 10 day of May, 2013.

Jacqueline Klug, Section Manager
Water Resources Program, Northwest Regional Office

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 – Kimbal Sundberg
Water Right Control Number S1-28260
Ria Berns, Department of Ecology

BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number S1-28260.

On June 27, 2005, Kimbal Sundberg applied for appropriation of waters from an unnamed pond for irrigation of a half acre of home garden and orchard during the irrigation season (May 1 – October 31). The water source is a lined, man-made pond with an outflow that empties into False Bay, a shallow saltwater bay on San Juan Island. The proposed place of use and point of diversion is located within the NE¼ SE¼ of Section 33, Township 35 North, Range 3 West.

The water diversion system is already developed and includes a pump and filter, small storage tank, and underground water distribution system. This report describes the proposed project in greater detail and investigates potential impairments posed by the project.

Table 1. Summary of Requested Water Right

Applicant Name:	Kimbal Sundberg
Date of Application:	6/27/2005
Place of Use	See Attachments 1 and 2, which provide a map and the full legal description of the property on which water is to be used

County	Waterbody	Tributary To	WRIA
San Juan	Unnamed Pond	False Bay	2-San Juan

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Irrigation	0.045	CFS	0.85	05/01	10/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Unnamed Pond	353341003000	Not Applicable	35N	03W	33	NE SE	N 48.4820	123.0623 W

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; 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 September 14 and 21, 2005.

Consultation with the Department of Fish and Wildlife

The Department must give notice to the Washington State Department of Fish and Wildlife (WDFW) of applications to divert water. On April 2, 2013, WDFW submitted comments on this proposed appropriation of surface water. Pursuant to Chapter 77.57.020 RCW, WDFW found no potential impacts to fish and wildlife and therefore does not oppose issuance of this application. This conclusion is based on the fact that the diversion point is a private pond that discharges directly into saltwater. Any impacts associated with this application would be limited to fish stocked in the pond by the landowner and WDFW does not actively manage privately stocked ponds or ponds with no surface connection to waters of the state.

State Environmental Policy Act (SEPA)

A surface water right application is subject to a SEPA threshold determination (i.e., an evaluation of whether there are likely to be significant adverse environmental impacts) if the application is for more than 1 cubic foot per second, 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. Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

INVESTIGATION

On June 27, Kimbal Sundberg submitted an application for appropriation of water from an unnamed pond on his property. The applied for purpose of use is irrigation of a half acre of combined home garden and orchard (10 assorted fruit trees). The point of diversion for this application is downstream of all water rights and water right applications in the sub-basin. The proposed place of use and point of diversion is located within the NE¼ SE¼ of Section 33, Township 35 North, Range 03 West.

Project Description

On March 20, 2013, Jerry Liszak (Senior Hydrogeologist, Department of Ecology) and I met applicant Kimbal Sundberg on his property for a site visit. The project information outlined below was gathered during the site visit and supplemented by email exchanges with the applicant. During the site visit, we confirmed the purpose of the proposed project, toured the source water body, and viewed the existing irrigation system.

Proposed Project

The appropriation of water is for the purpose of irrigating a half acre of combined home garden and orchard, including five perennial vegetable and flower beds (Photo 1) and 10 fruit trees. A small amount of water will also be used to provide water to a landscape feature. The garden will be irrigated using drip irrigation and the fruit trees will be irrigated by hose, as needed, during the dry season from May 1 – October 31.

The Kimbal Sundberg in-house domestic water supply is withdrawn from a certificated well (G1-25157CWRIS) on the property. The 180 foot well is located to the south of the unnamed pond and withdraws groundwater at a rate of 0.25 gallon per minute. Kimbal Sundberg applied for this surface water right to irrigate his home garden due, in part, to the slow withdrawal rate of his well.

Photo 1. Sundberg Perennial Flower and Vegetable Beds (Winter View)

Source Water

Located on False Bay at the southwestern end of San Juan Island, the water source is a man-made pond fed by surface water runoff as well as shallow groundwater discharge (Photo 2). The pond is lined and has a single outlet, which diverts overflow water from the pond, through a corrugated iron pipe, directly into False Bay, a shallow saltwater bay. The outflow pipe has a fish screen to prevent the stocked rainbow trout from escaping into False Bay. The pond depth and water volume vary from a maximum of approximately 12 feet and 650,000 gallons during the rainy season to a minimum depth of approximately 10 feet and 500,000 gallons during the dry season. These numbers are the applicant's estimates and were not verified by Department of Ecology.

Photo 2. View of Source Water (Unnamed Pond) on Sundberg Property

Irrigation Works

The existing irrigation system includes the following elements:

- A pump house located approximately 3 feet from the west side of the pond, containing a:
  - ¾ hp Goulds Jet Pump
  - 42 gallon Flotec pressure storage tank
  - Tagelus sand filter
- Intake system consisting of a 1¼" galvanized steel pipe inlet connected to 1¼" PVC piping that reaches approximately 10 feet into the pond.
- Distribution system consisting of 1¼" buried pipes connecting to drip irrigation system and several ¾" stand pipes located throughout the property that allow for local hose hook-up.

Geography and Water Resources of Project Area

The Sundberg property encompasses approximately 6 acres along False Bay, on San Juan Island's southwestern end. The property is within the NE¼ SE¼ of Section 33, Township 35 North, Range 03 West, W.M. The area is a rolling pastoral landscape with mixed farm, pasture, and forested lands. The Sundberg property slopes downward and northward into False Bay. No streams or other freshwater hydrologic features are downstream of the proposed source water.

The maritime climate of the San Juan Islands is typified by cool, dry summers and mild, moderately wet winters. Due to the rainshadow effect of the Olympic Mountains, the San Juan Islands have significant variation in annual and seasonal precipitation across the islands (USGS, 2002). The applicant submits daily precipitation data to the Community Collaborative Rain, Hail, and Snow Network, a non-profit organization based out of Colorado State University and sponsored by the National Oceanic and

Atmospheric Administration and the National Science Foundation, among others. Based on this multi-year precipitation data tracking, the applicant estimates average precipitation at 20-23 inches per year (see Attachment 3). This is corroborated by the 20 inches per year precipitation estimate from the San Juan Island American Camp National Historic Park (NPS, 2013). The park is located 4.5 miles from the applicant's property.

Other Rights Appurtenant to the Place of Use

The Department of Ecology has record of six water rights within a half mile radius of the applicant's proposed point of diversion (see Attachment 4). Three are state-issued water right certificates for groundwater, two are claims for groundwater, and one is a claim for surface water. The most proximate water right to the proposed point of diversion is the applicant's own water right for domestic supply (G1-25157CWRIS). No water right applications are appurtenant to the proposed place of use.

Table 2. Record of Water Rights within 1/2 Mile Radius of Proposed Point of Diversion

Control Number	Name on Document	Document Type	Priority Date	Purpose	Q_i (gpm)	Q_a (af/yr)	Location
G1-21038CWRIS	RIACH, JOHN DONALD	Certificate	1973	DS IR ST	10	5	SE¼ SW¼ S34, T35, R03W
G1-21042CWRIS	RIACH, JOHN DONALD	Certificate	1973	DS ST	5	5	NE¼ SW¼ S34 T35, R03W
G1-25157CWRIS	SUNDBERG & CLAUSEN	Certificate	1988	DS	3	.5	NE¼ SW¼ S33, T35, R03W
G1-077529CL	BAVE, MILTON M.	Claim S	N/L	DG	N/L	N/L	S04, T34, R03W
G1-131613CL	WALKER, JEAN	Claim S	N/L	DG	N/L	N/L	S33, T35, R03W
S1-131612CL	WALKER, JEAN	Claim S	N/L	DG	N/L	N/L	S34, T35, R03W

Abbreviation Key: Qi – instantaneous quantity, Qa –annual quantity, gpm – gallons per minute, Claim S – short form claim, DG – group domestic, DS – domestic single, IR – irrigation, ST – stockwater, S – Section, T – Township, R – Range, N/L – not listed

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).

Surface water application S1-28260 is down-gradient from the six water right certificates and claims within a half mile radius of the application. The nearest water right is the applicant's certificated well (G1-25157CWRIS). This well is 180' deep, within a bedrock aquifer, and up-gradient from the proposed source water. The proposed diversion will not impair this or other proximate water rights.

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.

During the site visit, we measured the maximum instantaneous flow (Q_i) for the jet pump at 20 gpm (0.045 cfs). Therefore, the instantaneous quantity of 0.045 cfs is physically available from the pond.

The annual quantity of water (Q_a) for appropriation was calculated using Crop Irrigation Requirement (CIR) data from the State of Washington Irrigation Guide (WIG) 1985 and 1992 and precipitation data from Coupeville, Washington. Coupeville has average annual precipitation of 20.66 inches, which is close to the annual average estimated for the site of the proposed diversion.

WIG information on crop duties are used when the actual volume of water applied per acre is not known, or to assess whether actual use is reasonable for a given crop. Application efficiency (Ea) values are from *GUID-1210, Determining Irrigation Efficiency and Consumptive Use.*

Table 3: Calculation of Total Irrigation Requirements

Crop and System Type	Total Irrigation Requirement (TIR) (CIR ÷ Ea)
Crop : Fruit Tree **System:** Lateral-Move Spray heads w/hose feed **Area:** 0.25 acres **CIR:** 1.48 ac-ft/ac **Ea:** 90%	1.48 ac-ft/ac ÷ 90% = 1.64 ac-ft/ ac
Crop : Vegetable garden **System:** Micro-irrigation: Trickle/Drip **Area:** 0.25 acres **CIR:** 1.48 ac-ft/ac **Ea:** 85%	1.48 ac-ft/ac ÷ 85% = 1.74 ac-ft/ ac
	Total Irrigation Requirement All Acres (TIR * No. of Acres) = 0.85 ac-ft/year

Ea: The ratio of the average depth of water infiltrated and stored in the root zone to the average depth of water applied, expressed as a percentage.
TIR: Water supplied by irrigation to satisfy evapotranspiration, miscellaneous water requirements, and irrigation efficiency.
CIR: Water supplied by irrigation to satisfy evapotranspiration that is not provided by water stored in the soil and precipitation.

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 the Department of Fish and Wildlife found no impacts to fish, wildlife, or the habitat they rely on. Therefore, I find water is legally available for appropriation.

Beneficial Use

Irrigation is considered a beneficial use 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 could be 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 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:

- 0.045 cfs
- 0.85 acre-feet per year
- Purpose of seasonal irrigation (May 1 – October 31)

Point of Diversion

NE¼, SE¼, Section 33, Township 35 North, Range 03 West, W.M.

290 feet West and 1420 feet North of Southeast corner of Section 33, Township 35 North, Range 3 West

Place of Use

As described in Attachments 1 and 2

Ria Berns, Report Writer — Date: 05/07/2013

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

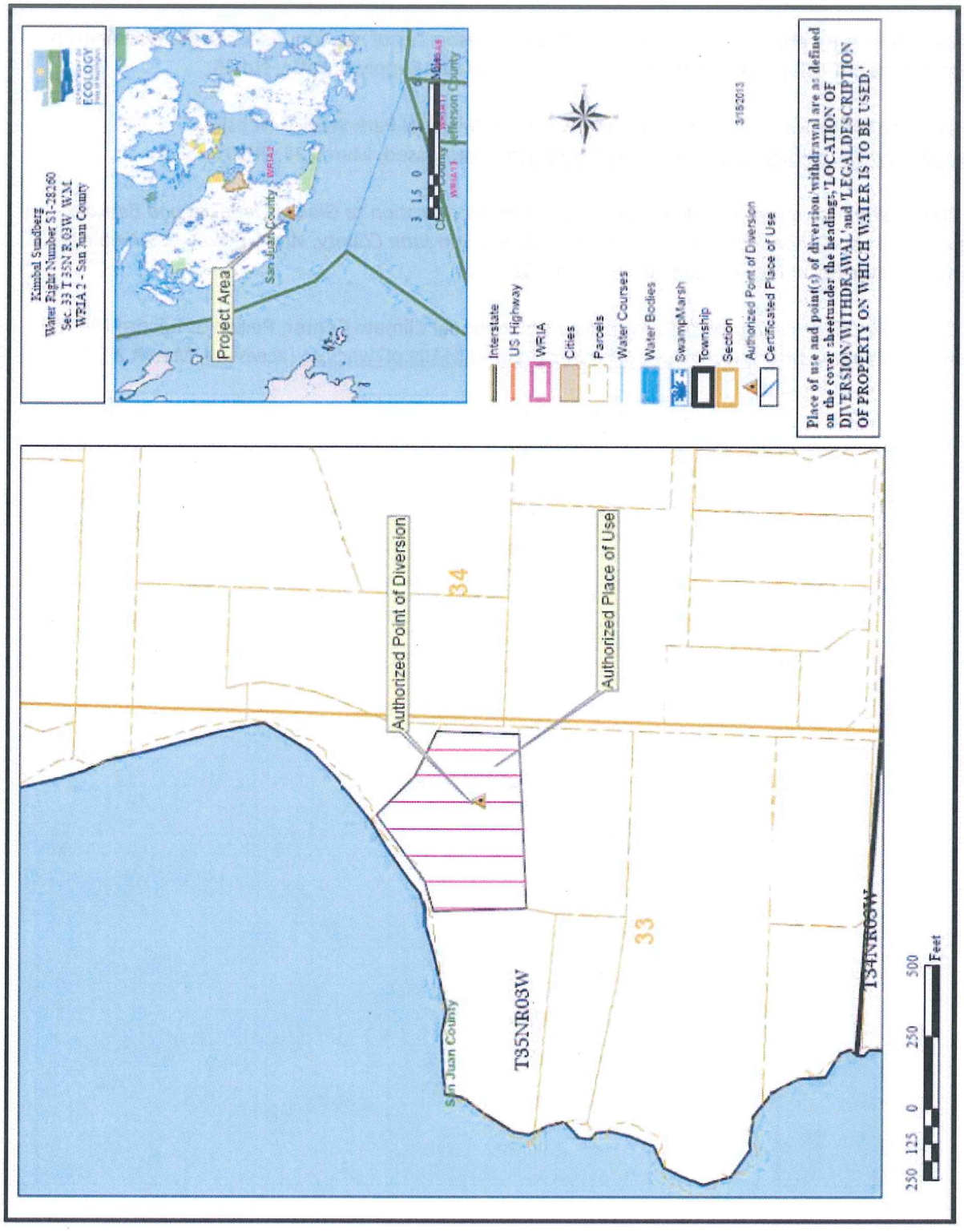
Russell, Robert H., editor, 1975. *Geology and Water Resources of the San Juan Islands.* Washington Department of Ecology, Office of Technical Services, Water Supply Bulletin, No.46.

--. San Juan Island National Historical Park. *Weather.* National Park Service website, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?wacoup (accessed, March 28, 2013).

--, 2002. *Estimates of Ground-Water Recharge from Precipitation to Glacial-Deposits 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.

--. *Coupeville 1 S, Washington (451783).* Western Regional Climate Center, Period of Record Monthly Climate Summary, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?wacoup (accessed, March 28, 2013).

Attachment 1: Place of Use Map



Attachment 2: Legal Description for Place of Use

That portion of Government Lots 8 and 9, in Section 33 Township 35 North, Range 3 West, W.M., in San Juan County, Washington, described as follows:

Commencing at the southeast corner of said Section 33; thence west 25 feet; thence north 1552.1 feet along west margin of the County Road to an iron pipe; thence north 66°10' west 176 feet to an iron pipe and the true point of beginning; thence south 66°10' east 176 feet to said west margin of road; thence along said west margin south 294.4 feet to an iron pipe; thence south 88°08' west 604.1 feet to an iron pipe; thence north 4°50' west 335.2 feet to an iron pipe on bank above the beach; thence continuing north 4°50' west to Government Meander Line; thence along said Meander Line in a northeasterly direction to a point north 48°20' east to an iron pipe on bank above beach; thence continuing south 48°20' east 140.4 feet to true point of beginning.

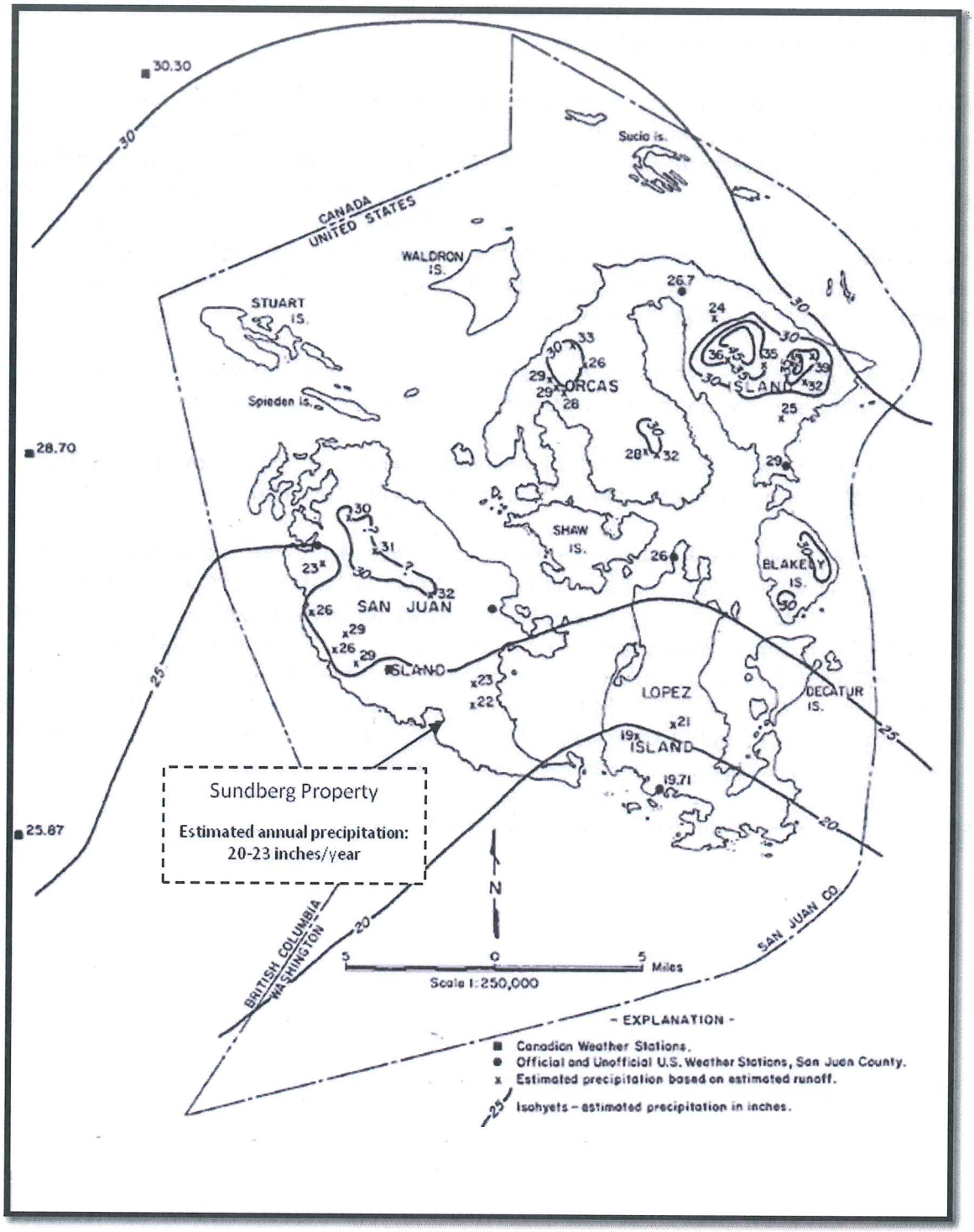
AND ALSO Those portions of said Government Lots 8 and 9 lying between the south and west lines of the above described tract and northerly and easterly of the following described line:

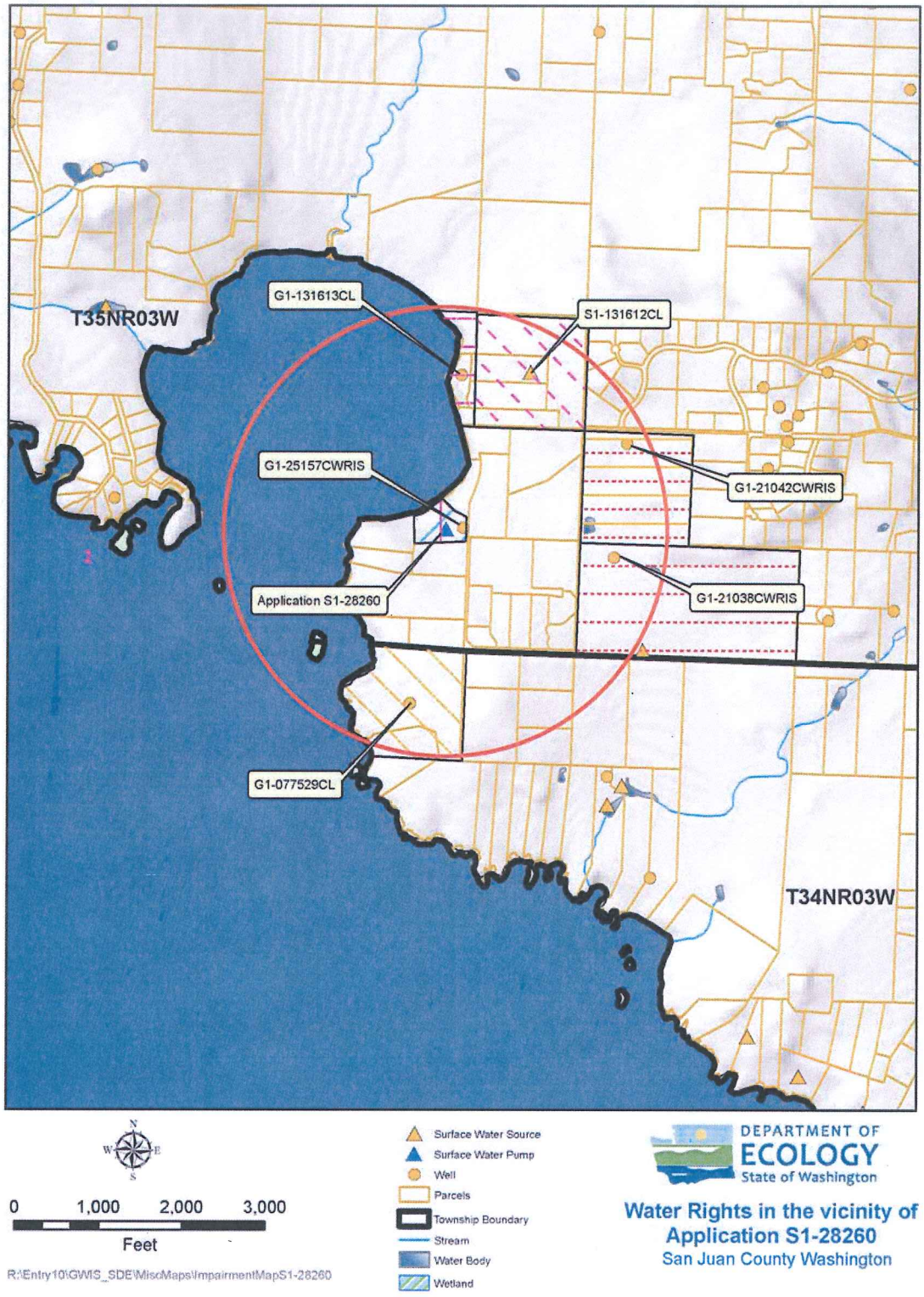
A line being located in portions of Government Lots 8 and 9, Section 33, Township 35 North, Range 3 West, W.M., San Juan County, Washington, being described as follows:

> Commencing at the Southeast Corner of said Section 33, (as same is described by Land Corner Record recorded at Auditors File Number 99035, Records of said County); THENCE N 0°00'17" W 1258.05 feet along the East line of said Section to the TRUE POINT OF BEGINNING of this line description; THENCE said line runs S 89°59'43" W 26.11 feet to a ¾ inch iron pipe; THENCE S 85°40'17" W 616.01 feet to an existing fence corner; THENCE following an existing fence line N 3°08'32" W 257.81 feet; THENCE leaving said fence line N 4°56'09" W 72.48 feet to a ¾ inch iron pipe; THENCE continuing N 4°56'09" W 67.00 feet, more or less, to a point on the outer boundary of said Government lot 8, and the terminus of this line description.

EXCEPT any portion thereof lying within False Bay County Road.

Attachment 3: Estimated Mean Annual Precipitation of San Juan Islands



Credit: *Geology and Water Resources of the San Juan Islands*, Washington Department of Ecology, Water Supply Bulletin No. 46, 1975 (p. 60)

Attachment 4: Water Rights in the Vicinity of SI-28260