



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
 TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

PRIORITY DATE September 8, 2005	APPLICATION NO. G1-28293	PERMIT NO.	CERTIFICATE NO.
---	------------------------------------	------------	-----------------

NAME Admiral's Cove Water District
--

ADDRESS/STREET Post Office Box 446	CITY/STATE Coupeville, WA	ZIP CODE 98239-0448
--	-------------------------------------	-------------------------------

PUBLIC WATERS TO BE APPROPRIATED

SOURCE Wells (3)	WRIA 6	COUNTY ISLAND
----------------------------	------------------	-------------------------

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 440 non-additive	MAXIMUM ACRE FEET PER YEAR 158
-------------------------------	---	--

QUANTITY, PURPOSE OF USE, PERIOD OF USE

158 acre-feet, Municipal, Year round as needed
 Maximum instantaneous pump rate shall not exceed 440 gpm from any combination of wells.
 This water right permit to appropriate does not authorize additive instantaneous quantities.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL

1000 feet south and 875 feet east of NW corner of Section 19, Township 31N, Range 02 East, W.M. Island County

SOURCE	QTR/QTR	SECTION	TOWNSHIP	RANGE
Well 1: AGA 943	NW/NW	19	31	02E
Well 2: AGA 939	NW/NW	19	31	02E
Well 3: AEE 053	NW/NW	19	31	02E

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

[Attachment 1 shows location of the authorized place of use and point(s) of diversion or withdrawal]

The place of use (POU) of this water right is the service area described in the most recent Water System Plan/Small Water System Management Program approved by the Washington State Department of Health, so long as **Admirals Cove Water District** is and remains in compliance with the criteria in RCW 90.03.386(2). RCW 90.03.386 may have the effect of revising the place of use of this water right.

DESCRIPTION OF PROPOSED WORKS

Three wells in the same parcel drilled to similar depths. Lot contains onsite storage tanks (2x 105,000 gallons) and hydropneumatic pressure tanks. The Meters are properly installed. There is dedicated power to the parcel, powering the submersible lift pumps and the four booster pumps.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE Started	COMPLETE PROJECT BY THIS DATE February 29, 2020	WATER PUT TO FULL USE BY THIS DATE February 29, 2024
--	---	--

PROVISIONS

Permit holder must monitor static water level and chlorides in the Telaker Shores well, following the same schedule followed for monitoring the Admiral's Cove wells.

STANDARD PROVISIONS

1. Measurements, Monitoring, Metering and Reporting

- 1.1. 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.
- 1.2. Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

1.3. Reported water use data shall be submitted via the Internet. To set up an Internet reporting account, access <https://fortress.wa.gov/ecy/wrx/wrx/Meteringx/>. If you do not have Internet access, contact the Northwest Region Office for forms to submit your data.

1.4. 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. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements". <http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html>

1.5. In order to maintain a sustainable supply of water, pumping must be managed so that static water levels do not progressively decline from year to year. Water levels shall be measured and recorded monthly, using a consistent methodology. The length of the pumping period or recovery period prior to each measurement shall be constant, and shall be included in the record. Data for the previous year shall be submitted by January 31 to the Department of Ecology.

Static water levels data shall be submitted in digital format and shall include the following elements:

1. Unique Well ID Number
2. Measurement date and time
3. Measurement method (air line, electric tape, pressure transducer, etc.)
4. Well status (pumping, recently pumped, etc.)
5. Water level accuracy (to nearest foot, tenth of foot, etc.)
6. Description of the measuring point (top of casing, sounding tube, etc.)
7. Measuring point elevation above or below land surface to the nearest 0.1 foot
8. Land surface elevation at the well head to the nearest foot.
9. Static water level below measuring point to the nearest 0.1 foot.

2. 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.

3. Municipal Place of Use

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 reverts to the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no 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

4. Chloride Monitoring

In November of each year, the following information shall be submitted in writing to the Department of Ecology, Northwest Region Office, Bellevue, Washington.

April and September measurements from the subject well(s) of:

- Chloride and conductivity (the chemical analysis shall be performed by a state-accredited laboratory)
- Depth to static water level (with pump off long enough to allow for stabilization)
- The chloride/conductivity sampling and the static water level measurement shall be conducted concurrently.

This data collection will assist the applicant and Ecology in determining if actions are necessary to prevent an increasing trend in chloride concentrations (an indicator of seawater intrusion). Preventative actions may include – reducing the instantaneous pumping rate, reducing the annual volume pumped, scheduling pumping to coincide with low tides, raising the pump intake, and/or limiting the number of service connections.

5. Water Use Efficiency

Use of water under this authorization shall 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.

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. Furthermore, I find the application for permit to develop a water right as recommended will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER the requested permit to withdraw from the wells to provide municipal supply to Admirals Cove Water District under Water Right Application No. G1-28293, subject to existing rights and the provisions specified above.

You have a right to appeal this decision. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of this document that you are appealing with your *Notice of Appeal*.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:	OR	Deliver your appeal in person to:
The Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903		The Pollution Control Hearings Board 4224 – 6th Ave SE Rowe Six, Bldg 2 Lacey WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:	OR	Deliver your appeal in person to:
The Department of Ecology Appeals Coordinator P.O. Box 47608 Olympia WA 98504-7608		The Department of Ecology Appeals Coordinator 300 Desmond Dr SE Lacey WA 98503

3. And send a copy of your appeal to:

Andrew B. Dunn, LG, LHG
Section Manager
Water Resources Program -- Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

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> .

If you have any questions, please contact Noel Philip of Ecology at (425) 649-4451.

Signed at Bellevue, Washington, this 22nd day of April, 2009.

Andrew B. Dunn, LG, LHG
Section Manager
Water Resources Program
Northwest Region Office

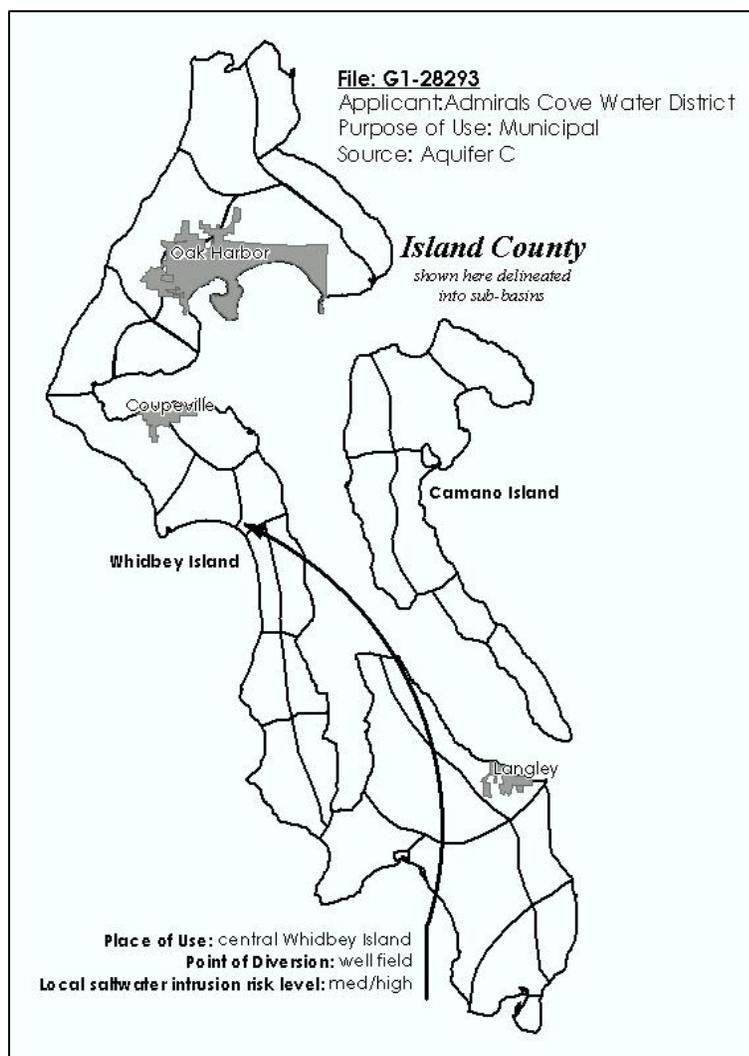
INVESTIGATOR'S REPORT
 Noel S. Philip, LG, Department of Ecology
 Water Right Control Number G1-28293

BACKGROUND

Groundwater App. No.: G1-28293
 Applicant Name: Admiral's Cove
 Priority Date: September 8, 2005
 Source: Well, Aquifer C
 Purpose of Use: Municipal
 Period of Use: Year-round continuous
 Notice of Publication: Whidbey News Times,
 March 11 and 22, 2006
 Protests: None received during 30-
 day protest period
 SEPA Compliance: Exempt

Admirals Cove Water District (Admirals) began serving Telaker Shores Water System (Telaker), depleting the remaining available water for appropriation under their current water right certificates (Table 1). The principal parties to this arrangement hope to preserve aquifer quality and minimize the potential for seawater intrusion in the area. The original point of withdrawal, Telaker's well (Ecology Well Tag #AGA 952), is within 500 feet of Admiralty Bay, in Puget Sound. It is slated for use as a monitoring well, now that Admirals Cove serves the system through an intertie. It serves as a data source to prevent the requirement it be decommissioned due to abandonment while it serves this purpose.

Admirals submitted application G1-28293 to appropriate state waters September 8, 2005. The wells are located in NW ¼, NW ¼ of Section 19, Township 31N, Range 2E, Island County (Attachment 1). Telaker Shores submitted Water Right Change Application CG1-*06743CWIS to release their interest and transfer water rights to Admirals Cove (Appendix: Quit Claim). The resulting permits take availability of water and all these existing water rights into account (Table 1).



Generalized location of original and proposed withdrawal.

Table 1. Admiral's Cove water rights

<u>Name</u>	<u>File Number</u>	<u>Status</u>	<u>Qi¹</u>	<u>Qa²</u>	<u>Priority Date</u>	<u>POU³</u>
Admiral's Cove, Inc.	5044	currently used	100	28	6/18/1963	municipal
Admiral's Cove, Inc.	7242	currently used	300	66	3/12/1968	municipal
Admiral's Cove, Inc.	G1-28293	Pending	440 ⁴	158	9/8/2005	municipal
Admiral's Cove, Inc.	CG1-*06743CWIS	currently used	<u>40</u>	<u>3.9</u>	6/3/1963	municipal
		Total	440 ⁴	255.9		

Notes:
 1) Instantaneous quantity expressed in gallons per minute (gpm)
 2) Annual quantity expressed in acre-feet per year (afy)
 3) Purpose of use stated on certificate and/or determined by Ecology through interpretation of current law
 4) Non-additive quantity

State Water Code

Chapters 90.03 and 90.44 RCW authorize the appropriation of public water for beneficial use and describe the process for obtaining water rights including the process to amend or change existing rights. Laws specifically governing the water right permitting process are RCW 90.03.250 through 90.03.340 and RCW 90.44.060. Changes or amendments to these rights are covered under RCW 90.03.380 and RCW 90.44.100.

INVESTIGATION

Whidbey Island Hydrogeology

As noted by Easterbrook (1968), Whidbey Island is generally composed of unconsolidated Pleistocene glacial and interglacial deposits overlying Tertiary and older bedrock. The Island County Groundwater Management Plan, Part A, Technical Memorandum, (GWMP) describes the groundwater flow system on Whidbey Island as a series of discontinuous water-bearing zones (sand and gravel aquifers) surrounded by zones of lower-permeable glacial sediments (silt, clay and till aquitards). All recharge to the system originates as rain falling on the surface of the island. Groundwater generally flows downward in the inland portions of the island then outward through the aquifers toward the coast and offshore. In these discharge areas, groundwater generally flows from deeper to shallower aquifer zones and then discharges to the sea where the aquifers intersect a cliff, beach face or ocean bottom.

The series of aquifers on Whidbey Island is complex, resulting from the deposition and erosion patterns created by at least three glaciation and three inter-glaciation periods. Although the USGS has designated five aquifer zones, termed A (oldest) through E (youngest), these zones are laterally discontinuous, vary in depth and thickness, and may be interconnected at various locations. The degree of connection with marine waters is also likely variable. As a result, the effect of withdrawing groundwater from any particular depth and location could have widely variable impacts on nearby wells and on the potential for seawater intrusion.

Hydrogeology Near G1-28293

The Admirals wells (Table 2) are approximately 2,300 feet from Admiralty Bay of Puget Sound, on central Whidbey Island (Attachment 1). Island Well Drilling (Freeland, WA) performed the earliest well construction in 1963 (based on dated static water level on well log), likely extending into the Whidbey Formation. Easterbrook describes the Whidbey Formation as glacial deposits consisting of horizontally and cross-bedded layers of sand, silt, and clay with two distinct organic (peat) layers. The wells penetrate Aquifer C, the hydrogeologic unit commonly appearing near sea-level on Whidbey Island. The entire unit is described as a zone containing many small, separate aquifers; not one laterally continuous water-bearing zone. The well logs show the drillers’ interpretation of materials as they were brought to the surface (Appendix: Well Logs). The screened intervals span a zone of water-bearing fine sand or sand and gravel. The Admirals wells do not fully penetrate the aquifer. This is consistent with local drilling practices employed to prevent seawater intrusion into the aquifer.

Table 2. Well construction details.

	<u>Telaker well</u>	<u>Admiral Well #1</u>	<u>Admiral Well #2</u>	<u>Admiral Well #3</u>
Ecology Unique Well ID#	AGA 952	AGA 934	AGA 939	AEE 053
Date completed	1954	< 1963	1967	35961
Casing diameter (inches)	6	6	8	8
Well Depth	117	197	204	215
Static Water Level (TOC) ¹	5 lbs. psi ²	145.7	149.12	148.72
Wellhead elevation (MSL) ³	6	154	158	154
Static Water Level elevation (MSL)	N/A	8.3	8.88	5.28
Screened Interval (MSL)	-111 to -95	-52 to -42	-46 to -31	-45 to -65

Notes:

- 1) TOC = top of well casing; measurements taken April 23, 2008 by Ecology personnel with e-tape
- 2) Pressure measurement taken from well log to indicate flowing conditions, 1954.
- 3) MSL = feet relative to sea level; taken from LIDAR dataset (PSLC, 2003).

Water Availability

Each of Admirals Cove’s Wells 1-3 have been pumped for testing purposes. The data associated with their performance indicates their capacity to produce water requested in this application. These data are summarized below (Table 3). The results of the pump test show the wells are capable of pumping at the rates shown. Recovery occurred over about 2.5 days

after the Well 3 test, during which the wells were regularly pumped through their duty cycle. The wells were not allowed to recover fully (within 0.1 feet of pre-pumping conditions) between the Well 1, Well 2, and 1&2 combined tests, but the water level returned to within 95% of static water level within approximately 1 minute upon pump shut down.

	<u>Well 1</u>	<u>Well 2</u>	<u>Well 3</u>	<u>1&2 combined</u>
Ecology Unique Well ID#	AGA 934	AGA 939	AEE 053	
Test Date	12/11/1996	12/9/1996	12/13/1996	12/13/1996
Test Duration (hours)	24	24	10.75	4
Pump Rate (gpm)	132	250	224	381
Static Water Level (MSL)	7.15	9.20	3.22	7.35, 8.87
Pumping Water Level (MSL)	-2.74	-1.09	2.22	-3.23, -1.87
Drawdown	9.89	10.29	1.00	10.58, 10.74
Specific Capacity (gpm/ft)	13	24	224	not stable
Recovery	NA	NA	2.5 days	NA

Notes:

- 1) TOC = top of well casing; measurements taken April 23, 2008 by Ecology personnel with e-tape
- 2) Pressure measurement taken from well log to indicate flowing conditions, 1954
- 3) MSL = feet relative to sea level; taken from LIDAR dataset produced by PSLC, 2003.

Two nearby wells, equipped with transducer dataloggers, recorded water levels during the pump tests and show no meaningful response correlating to withdrawal at the Admirals wells. These nearby wells are 2,000 feet upgradient, and cross- and down-gradient 1,500 feet.

The water requirement for Admirals' municipal use is estimated for volume based on the potential number of connections. Admirals requests water to meet their needs according to a 20-year population growth curve; having taken into consideration their conservation plans and rate structures. Annual water allocation required by the applicant is calculated using 853 anticipated connections and typical water use per connection. Residential water use is based on historical and current data from similar water systems on Whidbey Island. Presently, these systems indicate average use per connection is approximately one-third (0.3) acre-feet per year (afy). At this rate, the annual water quantity required by the applicant to serve its connections is 255.9 afy. This amount of water minus their certificated water rights for 97.9 afy is 158. However, this is likely too high due to inefficiencies commonly found in smaller water systems (those with fewer than 15 connections). At the time proof of appropriation is filed (20-year development schedule), the actual water use will be examined and the certificate issued based on historical use.

Potential for Seawater Intrusion

The greatest threat to groundwater in Island County is seawater intrusion. The potential for seawater intrusion relates to the elevation of the groundwater (or potentiometric surface) relative to sea level. Aquifers having little or no groundwater head above sea level are susceptible to intrusion. Other factors such as recharge rate, pumping rate, aquifer transmissivity, hydraulic gradient, seasonal variation, and the geometry of the aquifer can influence the distribution and magnitude of seawater intrusion resulting from any particular withdrawal. Increasing concentrations of chloride in groundwater can be an indication of seawater intrusion. Unaffected groundwater in Island County generally contains a chloride concentration between 10-20 mg/L. Concentrations of 100 mg/L or greater provide evidence of seawater intrusion unless other sources of chloride are present such as naturally occurring hard groundwater.

The Island County Health Department ranking system classifies the area of withdrawal as medium to high risk for seawater intrusion. The low groundwater level elevation (Well 3: 3.22 MSL) is cause for greater scrutiny than wells with water levels above 8.4 MSL. Recent data from water quality samples collected in December, 2007, show 55 mg/L chlorides and 570 mhos conductivity, and 250 mg/L hardness (as CaCO₃). These data show chemistry levels comparable to those in wells farther inland, and no signs of seawater intrusion. Other wells in the vicinity likewise show low chloride levels indicative of stable conditions in spite of a relatively close proximity to the coast. Due to static water levels below sea level, it is recommended regular, diligent monitoring and reporting continue to promote awareness of current aquifer conditions and help water right holders and administrators prevent aquifer degradation in the future.

Impairment Considerations

Groundwater wells at greatest risk of potential impairment are those which are completed in the same aquifer zone as the subject well, located in close proximity to the subject well, and also located hydrogeologically down-gradient from the subject well. As water in the aquifer travels toward wells located down-gradient from the subject well, the subject well may potentially capture this water and impair the production of down-gradient wells. Also, surface water diversions located within a close proximity of the subject well may potentially be impacted by the groundwater withdrawal, depending upon hydraulic continuity of the aquifer and surface water body. An arbitrarily, yet conservatively chosen area of one-half mile (1/2-mile) is used to define "close proximity." This value is justified experimentally based on current and historical pump test data

showing negligible drawdown, and therefore unlikely impairment to wells or surface water diversions, induced by groundwater withdrawal at distances of 1000 feet in most cases. Furthermore, it is widely understood the aquifer systems in Island County are not laterally continuous, suggesting physical barriers exist in addition to limiting hydraulic conditions.

The Department of Ecology Water Rights Application Tracking System (WRATS) and Well Log databases and the Island County Hydrogeology database (March 2003) show the existence of one (1) water right certificate and 2 water right claims within a 1/2-mile radius of the Admirals' wells. Some of the ten (10) water production wells of record within one half mile are likely exempt from the application process and in use. Others may be sources for existing water right certificates or claims under a different name.

A water right claim is a statement describing the beneficial use of water occurring prior to the adoption of the water right codes and is not authorized by a state-issued permit or certificate. It is unknown whether the nearby claims are valid, not valid, or once valid and now relinquished back to the state. The Department of Ecology cannot verify the validity of these claims, as water right claims can only be confirmed in an adjudication by the Washington State Superior Court. Exempt withdrawal of public groundwater is defined in RCW 90.44.050.

Washington water law does not consider drawdown to be an impairment of existing water rights, unless the affected wells fully penetrate the aquifer and can no longer produce their allocations. The pump tests show insignificant drawdown at those wells monitored during the tests. Therefore, impairment to any senior water rights due to pumping of the Admirals wells is unlikely. However, it is possible that long-term pumping (years to decades) may affect nearby water right holders. Provisions should include regular monitoring of static water levels.

Public Interest Considerations

Factors considered in determining whether this use of water is in the public interest include but were not limited to: consideration given to exempt wells; existing water right certificates, applications, and claims; potential impacts to the aquifer subject to withdrawal as it pertains to drawdown and water quality (i.e. aquifer degradation); beneficial use of water as a resource defined in this report. No detriment to the public interest could be identified during the investigation of the subject application. Available data show existing wells in the area are not expected to be impaired by the anticipated operation of the subject well.

Consideration of Protests and Comments

No protests were filed against this application.

CONCLUSIONS

Water is available for development of a water right in the amount requested minus the amount transferred from the Telaker Shores water right change application processed concurrently with this application for additive annual water volume.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for permit to appropriate for municipal supply be approved in the amounts and within the limitations listed below and subject to the provisions beginning on Page 2, et seq.

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:

- 440.0 gpm non-additive
- 158 acre-feet per year
- municipal supply

Point of Withdrawal

NW¹/₄, NW¹/₄, Section 19, Township 31 North, Range 02 E.W.M.

Place of Use

As described on Page 1 of this Report of Examination.

Report by: _____ April 22, 2009
Noel S. Philip, LG Date
Water Resources Program

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.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Well tag id: AGA93H

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT Appl. #6762

WELL LOG No. *Cell: 5077*

Date June 12, 19 63

Record by Driller

Source Driller's Record

Location: State of WASHINGTON
County Island

Area _____

Map _____

NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19 T. 31 N., R. 2 E. Diagram of Section

Drilling Co. Lambert Vander Steep, Whidbey drillers

Address P.O. Box 277, Oak Harbor, Washington

Method of Drilling _____ Date _____, 19 _____

Owner Admiral's Cove, Inc.

Address 2000 5th Ave, Bldg., Seattle, Washington

Land surface, datum _____ ft. above
_____ below

CORRE- LATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Gravel	0	2
	Hard pan	2	47
	Sandy	47	53
	Hard pan	53	72
	Sand & gravel	72	145
	Water sand	145	197
	Still in water sand at	197	
	Casing: 6" from 0 to 186'		
	No perforations		
	Screened from 187 to 197'		
	Surface seal was provided - no further data		
	SWL: 145' on March 19, 1963		

Turn up _____ Sheet _____ of _____ sheets

31-2E-19D
File number

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

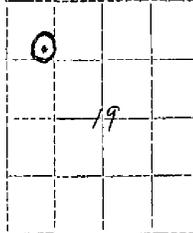
Appli: 9287
Cent. 4672

Well tag id: AGA939

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

WELL LOG

Record by... Driller
Source... Driller's Record



Location: State of WASHINGTON
County... Island
Area.....
Map.....

NW 1/4 NW 1/4 sec. 19 T31 N, R2 E. E. W.

Diagram of Section

Drilling Co... Whidby Well Driller's

Address... P. O. Box 277 Oak Harbor, Wash.,

Method of Drilling... cable Date February 1, 1968

Owner... Admirals Cove, Inc.

Address... 2230 8th Avenue, Seattle, Wash.,

Land surface, datum.....ft above

below

SWL: 148 Date... October 10, 1967 Dims.: x204'

CORRE- LATION	MATERIAL	From (feet)	To (feet)
	COMMUNITY DOMESTIC		
	Gravelly	0	3
	Hard Pan	3	45
	Clay, sandy	45	51
	Clay	51	60
	Sandy	60	204
	Water in good at 148', Still in water, sand at 204' but becoming finer sand.		
	Casing: 0' to 189'		
	Screens: Cook, stainless steel		
	From 189' to 199'		
	199' to 204'		
	Yield: 300 gpm with 15' DD after 8 hrs		
	Rec: 0 to 163'	Date: 1-30-68	
	0:10 to 148 -6		
	Turn up 0:50 to 148 full recovery Sheet of sheets		

31-2E-19D
SHE NUMBER

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Well tag id: AGA952

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION
AND DEVELOPMENT Appli. #6743

WELL LOG No. _____

Date July 9, 1963

Record by Driller

Source Driller's Record

Location: State of WASHINGTON
County Island
Area _____
Map _____
NE 1/4 NW 1/4 sec 24 T 31 N. R 1 E. Diagram of Section

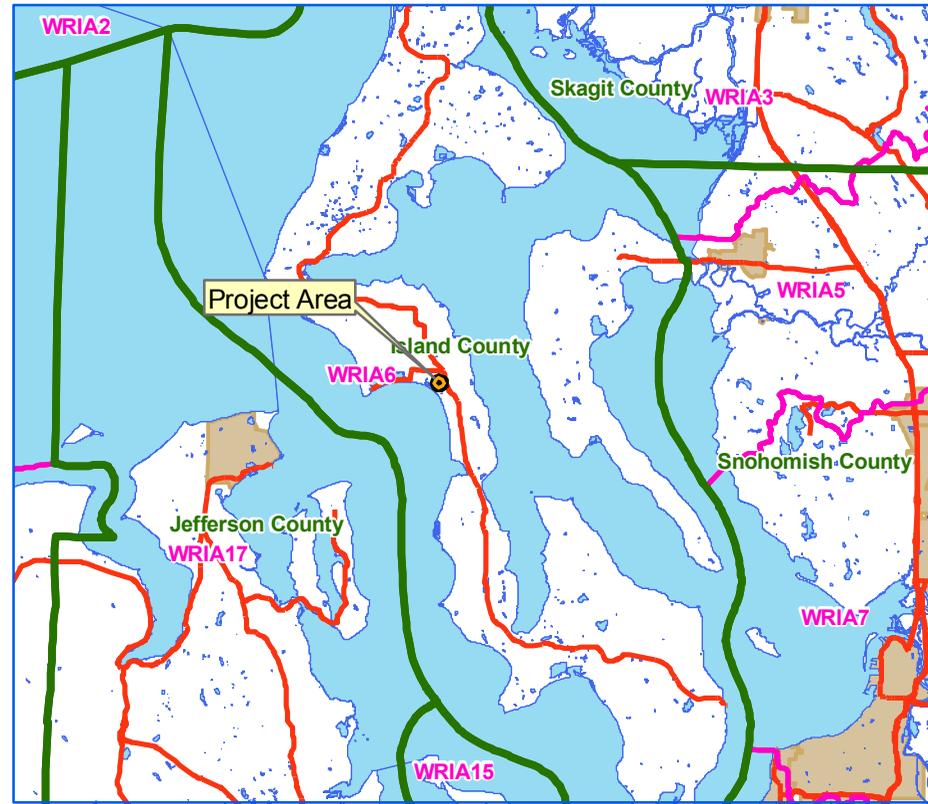
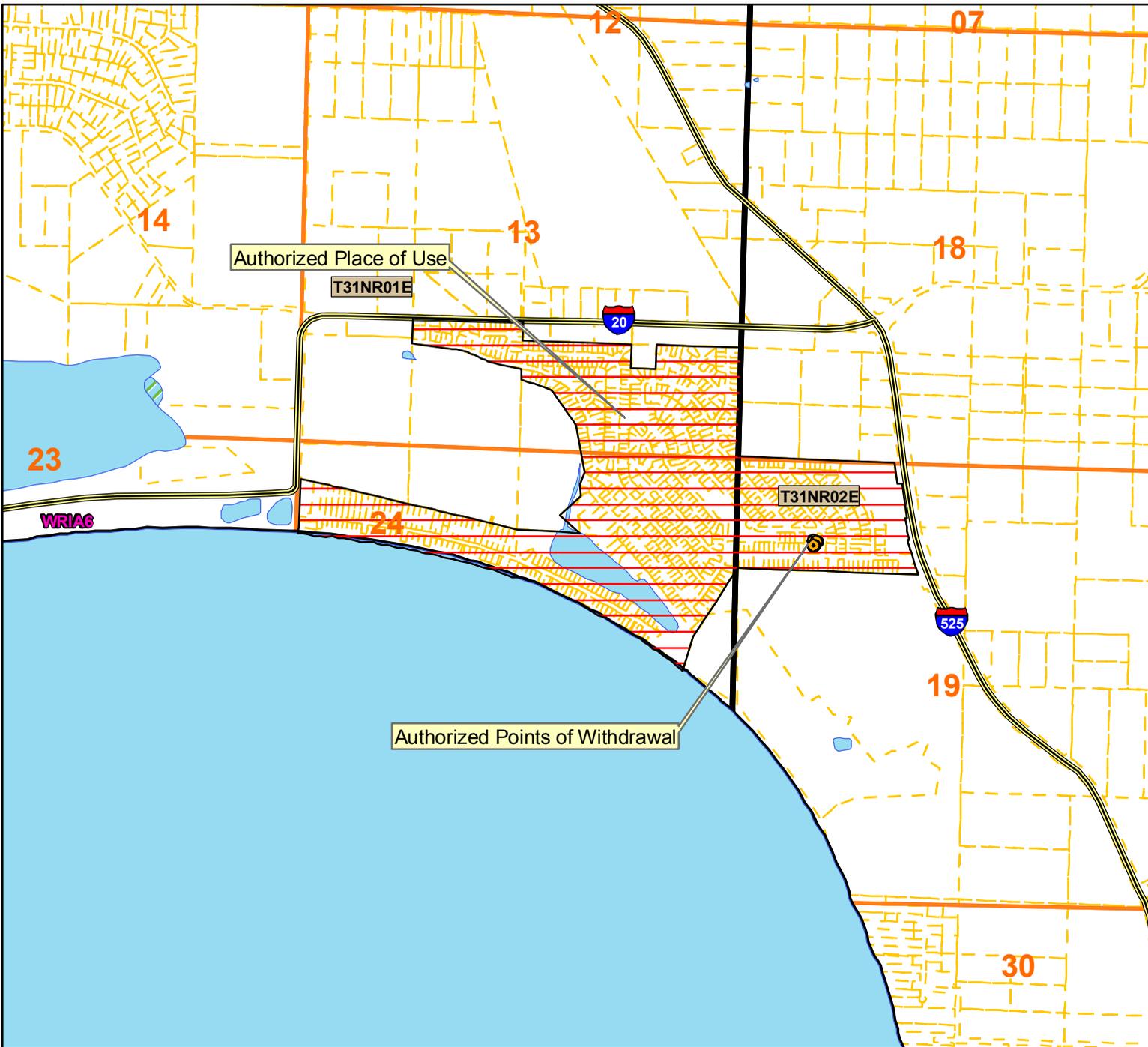
Drilling Co. Island Well Drilling Co.
Address Freeland, Washington
Method of Drilling Cable Date _____, 1954

Owner Telaker Shores Water Company
Address Route 1, Coupeville, Washington
Land surface, datum _____ ft. above
_____ ft. below

31 1 15 24C

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Peat surface soil	0	3
	Gravel	3	21
	Black silt	21	37
	Cemented gravel	37	77
	Brown clay	77	86
	Blue clay	86	92
	Fine sand	92	117
	Casing: 6" from 0 to 101'		
	No perforations		
	Screens: 6' from 101 to 117'		
	Surface sealed with clay to 20'		
	Saline pollution at 30', sealed with clay		

Turn up _____ Sheet _____ of _____ sheets



- Legend**
- County
 - WRIA
 - Highways
 - Townships
 - cities
 - Sections
 - Authorized Point of Withdrawal
 - Authorized Place of Use



Place of use and point(s) of diversion/withdrawal are as defined on the cover sheet under the headings, 'LOCATION OF DIVERSION/WITHDRAWAL' and 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'