



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

File No. G2-30612  
 WAC Doc ID: 5566407

<b>PRIORITY DATE</b> January 10, 2013	<b>APPLICATION NUMBER</b> G2-30612
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<b>MAILING ADDRESS</b> Hood Canal Highlands Community Club c/o Ed Devange 5015 289 <sup>th</sup> PI NE Auburn WA 98001	<b>SITE ADDRESS (IF DIFFERENT)</b> Hood Canal Highlands Community Club North Shore Rd Tahuya, WA
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Quantity Authorized for Withdrawal or Diversion		
WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (AF/YR)
15	gpm	4.75

Purpose						
PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (MM/DD)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Multiple Domestic Supply	4.75	1	gpm	15		01/01-12/31

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
0	0	304020V	TBD

Source Location			
WATERBODY	TRIBUTARY TO	COUNTY	WATER RESOURCE INVENTORY AREA
Groundwater	N/A	Mason	15

SOURCE FACILITY/DEVICE	PARCEL	TAG	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
WELL 1	322187500450		22	03W	18	SW NE	47.398	-123.100

Datum: WGS84

Place of Use (See Map, Attachment 1)
<b>LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE</b> The plat of Hood Canal Highland and that part of Government Lot 3, lying easterly of the county road; all in Sec. 18, T. 22 N., R. 3 W.W.M.

Proposed Works
6-inch diameter well 232 feet deep

### Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	Completed	July 1, 2023

### 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

#### Municipal Water Right Status

This water right is being issued as multiple domestic supply for a proposed municipal water system. Once this system serves 15 or more connections, it will be considered a municipal water system as a matter of law. When this occurs, the permit holder can request a superseding permit which reflects the system's municipal status.

#### Wells, Well Logs and Well Construction Standards

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

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 Southwest Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Southwest Regional Office for forms to submit your water use data.

#### Seawater Intrusion

In November of each year, the following information shall be submitted in writing to the Department of Ecology, Southwest Regional Office, Lacey, Washington.

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.

### **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.

### **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. G2-30612, 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 Hearing 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
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
<b>Pollution Control Hearings Board</b> 111 Israel RD SW STE 301 Tumwater, WA 98501	<b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903

Signed at Olympia, Washington, this \_\_\_\_\_ day of \_\_\_\_\_ 2018.

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Michael J. Gallagher, Section Manager  
Water Resources Program/SWRO

Department of Ecology INVESTIGATOR'S REPORT  
 Application for Water Right -- Hood Canal Highlands Community Club  
 Water Right Control Number G2-30612  
 Tammy Hall, Department of Ecology

## BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number G2-30612. The applicant requested withdrawal of groundwater from a well 232 feet deep at a rate of 15 gpm (non-additive) to serve a total of 23 lots. The project area is in Mason County, roughly 20 miles northwest of Tahuya on the north shore of the Hood Canal.

**Table 1 Summary of Requested Water Right**

<b>Applicant Name:</b>	Hood Canal Highlands Community Club
<b>Date of Application:</b>	1/10/2013
<b>Place of Use</b>	The plat of Hood Highland and that part of Government Lot 3, lying easterly of the county road; all in Sec. 18, T. 22 N., R. 3 W.W.M.]

County	Waterbody	Tributary To	WRIA
Mason	Groundwater	Hood Canal	15-Kitsap

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Domestic multiple	15	GPM	4.75	01/01	12/31

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Well	3221807500450		22N	03W	18	SW NE	47.398	-123.100

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; E.W.M. = East of the Willamette Meridian; Datum: NAD83/WGS84.

Department of Ecology representative, Tammy Hall, L.H.G., conducted a site inspection on February 12, 2018 and reviewed available documents pertaining to this application, including hydrogeologic and well construction reports, and information related to existing rights.

Under the provisions of RCW 90.03.290 and 90.44.060, a water right permit shall be issued upon findings that water is available for appropriation for a beneficial use, and that the appropriation will not impair existing rights or be detrimental to the public welfare. In accordance with these provisions, I recommend approval of this application and issuance of Permit G2-30612.

## LEGAL REQUIREMENTS

RCWs 90.03 and 90.44 authorizes the appropriation of public water for beneficial use and describes the process for obtaining water rights. Laws governing the water right permitting process are addressed in RCW 90.03.250 through 90.03.340 and RCW 90.44.050. In accordance with RCW 90.03.290, Ecology must make determinations on these four criteria in order to approve an application for water rights:

- Water must be available for appropriation.
- There must be no impairment of existing rights.

- The water use must be a beneficial use.
- Approving the application must not be detrimental to the public interest.

### Water Right Application Public Notice

A public notice of the application must be published in accordance with RCW 90.03.280 in a newspaper of general circulation in the county in which the proposed appropriation will be made. A public notice was published as required in *Shelton Mason County Journal*, of Shelton, Washington from March 15<sup>th</sup> to March 22, 2018.

No protests or letters of concern were received in response to the public notice.

### Department of Fish and Wildlife Comments

The Department must give notice to the Department of Fish and Wildlife (DFW) of applications to divert, withdraw or store water if the proposed appropriation would adversely impact stream flows. The WDFW was not specifically consulted for this application because the subject well is roughly 350 feet from marine water and withdrawals will not affect regulated surface water in the WRIA.

### State Environmental Policy Act (SEPA)

A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- (a) It is a surface water right application for more than 1 cubic foot per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- (b) It is a groundwater right application for more than 2,250 gallons per minute;
- (c) It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- (d) It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- (e) It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

### Water Resources Statutes and Case Law

Under the provisions of RCW 90.03.290 and 90.44.060, a water right shall be issued upon findings that water is available for appropriation for a beneficial use and that the appropriation, as proposed in the application, will not impair existing rights or be detrimental to the public welfare.

### **INVESTIGATION**

Evaluation of this application included, but was not limited to, research and/or review of the following:

- Washington State Department of Ecology records of surface and groundwater rights and claims in the vicinity of the proposed subject production wells. <https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx>
- Washington State Department of Ecology water well logs in the vicinity of the proposed subject production well. <https://fortress.wa.gov/ecy/waterresources/map/WCLSWebMap/default.aspx>
- Chapter 173-514 Washington Administrative Code (WAC), Instream Resources Protection Program—Kennedy-Goldsborough Basin, Water Resource Inventory Area (WRIA) 14

## Site Location

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Hood Canal Highlands Community Club is a development situated on the north shore of the Hood Canal, roughly 20 miles northwest of Tahuya. The development was platted in the 1970's and was intended to be used for a combination of vacation and year round residences. Lots are small, roughly 0.3 acres in size, but steep, and overlook Hood Canal. The existing residences are modest in size. Lots are wooded and primarily consist of native vegetation with mature timber and underbrush.

*See Attachment #1*

## Project Description and History of Water System

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The water system is a Group B water system (DOH ID#304020V) approved by Washington Department of Health in 1970 to serve 14 residential connections however, the system wishes to expand to serve the remaining undeveloped lots. The applicant's plans include creating a Group A water system (Water system planning status).

The system infrastructure is in place and the 4 inch in diameter main line is roughly ¼ mile long. Vacant lots have hook ups at the main road that are capped off. The water system is supplied by a well 6 inches in diameter and 230 feet deep, drilled in 1970.

## Area Geology/Hydrogeology

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The Hood Canal Highlands project area is located on the Tahuya Peninsula in the lower Hood Canal region of Puget Sound Lowland. The Puget Lowland is part of a large glacial drift plain formed by multiple glaciations that occurred in the region.

The low rolling hills found on the upland area situated above the Hood Canal Highlands is the remnant of a glacial drift plain (Garling and Molenaar, 1965). Most recently, this area was mapped by Logan (2003) as glacial deposits of alpine glacial origin and composed largely of till; an unsorted, unstratified, and compacted mixture of clay, silt, sand, gravel, and boulders deposited by glacial ice when glaciers advanced across the area roughly 12,000 to 14,000 years ago. Gold Mountain and Green Mountain, in the northeast portion of the Tahuya Peninsula, consist of Tertiary age volcanic basalt and are the oldest rocks on the peninsula. During the glaciation, the entire area, with the exception of these two upland areas, was covered by glaciers.

During this period, vast glaciers originating in Canada advanced several times into the Puget Sound Lowland. The most recent glaciation in the region ended approximately 13,500 years ago. As these glaciers advanced and retreated, a complex sequence of unconsolidated and partially consolidated sediments were left behind. These deposits are characterized by a sequence of recessional outwash, lodgment till and other ice contact deposits, and advance outwash deposits.

Generally, groundwater development on the Tahuya Peninsula has been for domestic supplies. Most of the wells are relatively shallow, drawing groundwater from shallow perched aquifers found within glacial till or overlying outwash deposits. Perched groundwater occurs primarily in localized areas where impervious layers prevent or retard the downward percolation of groundwater. However, increased development of waterfront property has increased the demand for water.

Beneath the perched aquifer system lies the Sea Level aquifer system, which generally occurs between 100 feet above and 200 feet below mean sea level. Typically, upper perched aquifers discharge to streams, lakes, or discharge as springs on the bluffs overlooking Hood Canal. The Sea Level and deeper aquifers discharge largely to Hood Canal.

### Site Conditions

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The Hood Canal Highlands well was drilled by Tye Well Drilling Co in November 1969. The well is 6-inches in diameter and completed at a depth of 232 feet below ground surface (bgs) or a surface elevation of roughly 92 feet below mean sea level (msl). The wellhead elevation is roughly 140 feet above msl and about 350 feet from the marine water of Hood Canal.

The well report describes drilling through layers of till, clay, and sandy clay before encountering a thin layer of gravel at a depth of 134 feet bgs that yielded roughly 3 gpm. With further depth, thin layers of gravel and sand, which contain some water are encountered, which alternate with thin clay layers. The well is completed in a water bearing brown sand and gravel layer that is roughly five feet thick. The well is screened from 228 to 233 ft and the static water level, measured after drilling, was 125 feet bgs, which is roughly 15 feet above mean sea level (msl). Based on the completion depth and the screened interval of the well, it draws water from the Sea Level aquifer and captures water that would otherwise discharge to Hood Canal.

### Seawater Intrusion

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Seawater intrusion is the movement of saline water into freshwater aquifers. It can occur naturally to some degree in most coastal aquifers, owing to the hydraulic connection between groundwater and seawater. However, it is most often caused by groundwater pumping when drawdown in a pumping well causes groundwater elevations to fall below sea level, allowing the encroachment of the saltwater-freshwater interface.

Although seawater intrusion has not been reported in wells the north shore of Hood Canal (Dion et al., 1984), pumping from wells in close proximity to the shore have the potential to experience seawater intrusion.

The Hood Canal Highlands well draws water from the sea level aquifer, there is the potential for seawater intrusion to occur. The well is roughly 350 feet from the marine water of Hood Canal and has a static water level only 15 feet above sea level. Pumping the well has the potential to drop the water level in the well to the point that it may initiate seawater intrusion. Therefore withdrawal rates should be monitored so that a pronounced cone of depression does not develop. As a provision of approving this application, chloride sampling of the well is required every September. If chloride concentrations begin to show elevated levels, it is recommended that mitigative measures, such as alternative pumping schedules, be undertaken to prevent further degradation of the aquifer.



### Effects to area water users

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To evaluate the potential to impair area users, Ecology's WRTS and well log databases were queried to determine the number of water users within a one mile radius of Hood Canal Highlands. This search revealed the following information:

- Eight surface water claims and four groundwater claims
- Nine surface water certificates totally 0.18 cubic feet per second (cfs) and 12.25 ac-ft per year. The surface water sources are primarily springs.
- One groundwater certificate for 10 gpm and 16 ac-ft per year. This water right certificate is issued for multiple domestic supply from well roughly 250 feet deep. This well is located on property about one mile south of the subject well on property overlooking Hood Canal and intercepts groundwater that would otherwise discharge to marine water. This well is cross gradient from the Hood Canal Highlands well.
- Thirty-one well reports are on file with Ecology's well log database ranging depth from less than 100 feet to more than 500 feet deep, drawing water from both the perched and Sea Level aquifer systems.

The approval of this application is not expected to affect area water users or impair existing water rights. The Hood Canal Highlands well has been in operation since the 1970's and is one of the older water users in the area. Water pumped from the subject well is water that would otherwise discharge to Hood Canal and area groundwater users should be unaffected.

### Effects to regulated surface water

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Chapter 173-515 WAC establishes instream flows for some streams and closes other streams to further appropriation. The nearest stream with regulated instream flows is Rendsland Creek which is situated about one mile south of the subject well.

Flows in Rendsland Creek will not be impacted by increased withdrawals from the Hood Canal Highlands well. The well captures groundwater that would otherwise discharge to Hood Canal and withdrawals will not affect baseflow in the creek.

### Other water right appurtenant to the Place of Use/Municipal water status

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Withdrawals from the well are authorized by Groundwater Certificate (GWC) G2-00640 issued on July 1, 1977. This certificate authorized withdrawals of 30 gpm and 24 ac-ft per year, based on system capacity. However, the project was completed perfecting only 0.7 ac-ft of water. Currently this system does not qualify as a municipal water system as defined in RCW 90.03.015 based on the number of connections, therefore is not entitled to the inchoate portion on the certificate.

The well is metered and use is recorded monthly. According to water use data, the highest annual water use recorded in the most recent five year period occurred in 2015 which was roughly 0.7 ac-ft.

### Future Demand/Quantities for Permit

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The intent of this application is to provide water service to a total of 23 lots. Although water use is primarily for vacation homes, it is possible that residences may eventually be occupied year round. Because little native vegetation has been cleared due to the steep topography, outdoor water use is expected to be minimal. Therefore 0.25 ac-ft per connection or a total of 5.75 ac-feet should be adequate for all 23 proposed residences at full buildout.

## Beneficial Use

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The proposed use of water for community domestic supply is defined in statute as a beneficial use (RCW 90.54.020(1)). **Public Interest Considerations**

The proposed additional appropriation of water will enable an existing water system to serve the remaining undeveloped lots within its service area boundaries, thereby discouraging the proliferation of private wells. This will promote greater water use efficiency and long-term accountability to protect the aquifer from over-pumping and water quality degradation.

The proposed withdrawals will not diminish stream flows or adversely affect surface water bodies and will not be detrimental to the public interest.

### *Consideration of Protests and Comments*

No protests were filed against this application.

## Conclusions

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Based on my evaluation, I find that:

- The use of water for community domestic supply is a beneficial
- Water is physically available in sufficient quantities to provide a reliable source, based on well and pump information.
- The issuance of this water right will not impair regulated surface waters.
- This appropriation will not impair any senior water right holders.
- Approving this appropriation, as recommended, is not detrimental to the public interest

## **RECOMMENDATIONS**

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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

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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:

15 gpm

4.75 ac-ft per year

Community domestic supply

Point of Withdrawal

SW¼, NE¼, Section 18, Township 22 North, Range 3 W.W.M.

Place of Use

As described on Page 1

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*Report Writer*

*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

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Dion, N.P. and Sumioka, S.S., 1984, Seawater Intrusion into Coastal Aquifer in Washington, 1978, USGS Water Supply Bulletin 56

Garling and Molenaar, 1965, Water Resources and Geology of the Kitsap Peninsula and Certain Adjacent Islands, USGS Water Supply Bulletin No. 18.

Logan, Robert L, 2003, Geologic Map of Shelton 1:100,000 Quadrangle, Washington Division of Geology and Earth Resources, Open File Report 2003-15.

