

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
DRAFT REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

- Surface Water** (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)
- Ground Water** (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

| | | | |
|------------------------------|--------------------------------|---------------|--------------------|
| PRIORITY DATE May 7, 2013 | APPLICATION NUMBER G1-28750 | PERMIT NUMBER | CERTIFICATE NUMBER |
|------------------------------|--------------------------------|---------------|--------------------|

| | | | |
|---|------------------|---------------|---------------------|
| NAME Vashon-Maury Island Park and Recreation District, Elaine Ott, General Manager | | | |
| ADDRESS (STREET) P.O. Box 1608 | (CITY) Vashon | (STATE) WA | (ZIP CODE) 98070 |

PUBLIC WATERS TO BE APPROPRIATED

| | | |
|--|----------------------------------|-----------------------------------|
| SOURCE One well | | |
| TRIBUTARY OF (IF SURFACE WATERS) | | |
| MAXIMUM CUBIC FEET PER SECOND | MAXIMUM GALLONS PER MINUTE 30 | MAXIMUM ACRE FEET PER YEAR 9.2 |
| QUANTITY, TYPE OF USE, PERIOD OF USE Irrigation of 6 acres (April to October) | | |

LOCATION OF DIVERSION/WITHDRAWAL

| | | | | | |
|---|---------------|-------------------|------------------------------|---------------|----------------|
| APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL The existing well is located about 700 feet east of the SW corner of Section 20. | | | | | |
| LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) SW1/4 SW1/4 | SECTION 20 | TOWNSHIP N. 23 | RANGE, (E. OR W.) W.M. 3E | W.R.I.A. 9 | COUNTY King |

The existing well (Well 1) is located at the Vashon Fields athletic fields approximately 1,000 ft northeast of 99th Ave SW and SW 161st St.

RECORDED PLATTED PROPERTY

| | | |
|--------------------------|-------|------------------------------------|
| LOT Parcel 2023039020 | BLOCK | OF (GIVE NAME OF PLAT OR ADDITION) |
|--------------------------|-------|------------------------------------|

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Parcel 202303-9020: S1/4 SW1/4 SW1/4, Sec. 20, T23N, R3E W.M. and
Parcel 292303-9081: W 5 acres of the N 10 acres of the NW1/4 NW1/4, Sec. 29, T23N, R3E W.M.

DESCRIPTION OF PROPOSED WORKS

Vashon-Maury Island Park and Recreation District (the District) requested a groundwater right to withdraw groundwater from an aquifer known locally as the "Deep Aquifer" (i.e., the Vashon advance outwash [Qva]). The District will use an existing well (Well #1) for irrigation of the Vashon Fields athletic complex. Available well log information indicates the existing well was drilled in 2009 to a depth of 495 feet below ground surface (bgs), and has 6-inch diameter casing, with a 0.012-inch slot stainless screen from 485 to 495 feet bgs. Irrigation is accomplished by drawing water from the well and detaining it in storage tanks (10,000 to 20,000 gallons total capacity). Water is then fed into a zoned irrigation system for distribution.

A groundwater right was requested to withdraw groundwater at a maximum instantaneous rate (Qi) of 30 gallons per minute (gpm) and an annual quantity (Qa) of 9.2 acre-feet (AF) for irrigation of approximately 6 acres between April and October. Based on an air photo review, 6 acres is a reasonable estimate of the amount of acreage that will be irrigated. This is in the lower range of acreage typically irrigated at for pasture/turf. The requested annual quantity of 9.2 AF corresponds with a duty of 1.53 feet (18.4 inches) for the 6 acres of irrigated land, which is less than the estimated crop irrigation requirement of up to 25.7 inches. This permit sets the upper limit on the Qa of 9.2 AF and the Qi at 30 gpm, as requested.

DEVELOPMENT SCHEDULE

| | | |
|--|---|--|
| BEGIN PROJECT BY THIS DATE: Already Started | COMPLETE PROJECT BY THIS DATE: December 31, 2014 | WATER PUT TO FULL USE BY THIS DATE: December 31, 2019 |
|--|---|--|

PROVISIONS

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition 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".

Water Level Monitoring: In order to protect the ground water resource, static water level in the well shall be measured quarterly each year. The water level data shall be maintained and made available to Ecology upon request.

Water Use: An approved measuring device shall be installed and maintained for each well used under this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use," Chapter 173-173 WAC.

Water use data shall be recorded weekly. The maximum rate of diversion/withdrawal and the annual total volume shall be submitted to the Department of Ecology by January 31st of each calendar year. Reported water use data shall be submitted via the Internet or by using the enclosed forms. To set up an internet account, access <https://fortress.wa.gov/ecy/wrx/Meteringx/>. If you have questions or need additional forms, contact the Northwest Regional office.

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.

Water Allocation: The applicant is advised that the certificate will issue for only that quantity of water that has been withdrawn and applied to actual beneficial use. Such quantity applied to actual beneficial use shall not exceed the quantity specified in this report of examination and will be calculated on the basis of the best information available to Ecology, including metering data and/or water duty analysis. The applicant is advised that the quantity of water allocated by this permit may be reduced at the time of final certification to reflect system capacity and actual usage.

A water right certificate shall not be issued until a final investigation has been made.

FINDINGS

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 change of water right as recommended will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER the requested permit to be granted under Groundwater Application No. G1-28750, subject to existing rights and the provisions specified above.

You have a right to appeal this action to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this document. 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 this document:

- File your appeal and a copy of this document 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 document on Ecology in paper form - by mail or in person. (See addresses below.) Email 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 Road SW Suite 301 Tumwater, WA 98501 | Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903 |

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> .

Signed at Bellevue, Washington, this _____ day of _____, 2014.

 Jacqueline Klug, Section Manager
 Water Resources Program
 Northwest Regional Office

 INVESTIGATOR'S REPORT

Background

Ground Water Application #: G1-28750
 Applicant Name: Vashon-Maury Island Park and Recreation District.
 Priority Date: May 7, 2013
 Source: Well # 1 Purpose of Use: Irrigation (Athletic and mixed use field complex)
 Period of Use: April to October
 Notice of Publication: May 15 and 22, 2013 in *The Vashon Beachcomber*.
 Protests: None received

SEPA Compliance: This application is exempt from the provisions of the State Environmental Policy Act (SEPA), Chapter 43.21 RCW, due to the fact that the cumulative quantity of water constitutes a withdrawal of less than 2,250 gallons per minute (gpm) of groundwater (WAC 197-11-800(4)).

 INVESTIGATION

In considering this application, the investigation included, but was not limited to, research and/or review of:

- Ecology's online Water Rights Tracking System (WRTS) database
- Records of water rights in the vicinity
- Ecology's online Well Log Database
- Topographic and local area maps
- Site visit
- Available regional geologic and hydrogeological information, including:
 - Booth, D. B 1991. Geologic Map of Vashon and Maury Islands, King County, Washington. USGS Miscellaneous Fields Studies Map: 2161
 - Carr/Associates, 1983. Vashon/Maury Island Water Resources Study. Submitted to the King County Department of Planning and community Development.
 - King County, 2013. Vashon-Maury Island Water Resources – A Retrospective of Contributions and Highlights. Prepared by King County Department of Natural Resources and Parks, Water and Land Resources Division, Science and Technical Support Section, Seattle, Washington.
 - Vashon-Maury Island Groundwater Management Committee (VMI GWMC), 1998. Vashon-Maury Island Ground Water Management Plan-Management Strategies. Prepared by King County Natural Resources and Parks and Seattle-King County Department of Public Health.

Background

Vashon-Maury Island Park and Recreation District (the District) requested a groundwater right to withdraw groundwater from an aquifer known locally as the "Deep Aquifer" using an existing well (Well #1). Available well log information indicates the existing well was drilled in 2009. In late August 2012, Ecology was informed that an irrigation project had been on-going at the location of the Vashon Fields athletic complex. It became apparent that the quantities being used were in excess of the ½ acre of non-commercial lawn and garden allowed for irrigation under the RCW 90.44.050 groundwater exemption, and Ecology notified the District that a water right permit would be required.

In response to Ecology's determination, the District filed a water right application that was recorded with a priority of May 7, 2013. On June 27, 2013, Ecology granted a temporary permit for use Well #1 to irrigate the Vashon Fields athletic complex. The temporary permit was intended to allow the District to continue to irrigate from Well #1 until the District's application was processed through Ecology's Cost Reimbursement program. The temporary permit allowed the District to operate at a Qi of 30 gpm and a Qa of 9.3 AF/year, consistent with the quantities requested in the application.

Vashon-Maury Island Park and Recreation District (the District) requested a groundwater right to withdraw groundwater from an aquifer known locally as the "Deep Aquifer" using an existing well (Well #1). Available well log information indicates the existing well was drilled in 2009. The well was drilled to a depth of 495 feet below ground surface (bgs), and has 6-inch diameter casing, with a 0.012-inch slot stainless screen from 485 to 495 feet bgs. Static water level at the time of well construction was 390 feet below the top of the well casing. Based on an approximate elevation at the well head of 415 feet, the groundwater elevation at this time was approximately 25 feet above mean sea level (msl).

Purpose of Use

Groundwater is requested for irrigation of an athletic field complex (April to October). This purpose of use can be permitted as a publicly owned land permit under RCW 90.66.050(3).

Vashon Island Geology and Hydrogeology

The local geologic units in the vicinity of Vashon Fields consist of glacial and interglacial sediments that were deposited by repeated advances and retreats of continental glaciers, and during interglacial periods. The typical glacial and interglacial sequence for Vashon Island County (Booth, 1991; King County, 2013); from youngest to oldest, is:

- Vashon/Fraser age glacial deposits, including:
 - Vashon Recessional outwash (Qvr) – stratified sand and gravel, moderate to well sorted.
 - Vashon Till (Qvt) – Vashon Drift – poorly sorted boulders, pebbles, sand, silt and clay.
 - Vashon Advance outwash (Qva) – well sorted fluvial sand and pebbly sand with occasional lenses of gravel.
- Pre Fraser Deposits, including:
 - Undifferentiated pre-Fraser deposits, massive to laminated silt and clay, and bedded sand and gravel.
 - Olympia interglaciation – peat, silt and sand deposits of the Possession Drift – till, sand and gravel, and pebbly clay.
- Other pre-Fraser deposits and/or Tertiary sedimentary rocks and pre-Tertiary metasedimentary and metavolcanic rocks.

Local Aquifer Units

Local aquifer units on Vashon Island have been delineated in several previous studies. Carr (1983) delineated a Principal Aquifer and a Deep Aquifer, while the Vashon-Maury Island Ground Water Management Plan (GWMP) delineated four aquifer zones as summarized in the following table:

Table 1. Summary of Vashon Island Aquifers

| Aquifer Unit (Carr, 1983) | GWMP (VMI GWMC 1998) | Average Groundwater Elevation (feet above msl) | Screen Elevation (feet above msl) | Geology |
|---------------------------|----------------------|--|-----------------------------------|---|
| Principal Aquifer | Zone 1 | 255 | Varies | Vashon recessional outwash (Qvr) |
| | Zone 2 | 97 | Varies | Vashon advance outwash (Qva) |
| Deep Aquifer | Zone 3 | 18 | At or below msl | Pre-Fraser coarse grained deposits (Qpfc) |
| | Zone 4 | 11 | >200 below msl | Olympia coarse grained deposits (Qpoc) and deeper units |

Aquifer Unit of Well #1 Completion

Geologic mapping indicates that surficial deposits at the location of Well #1 are Vashon till (Qvt). According to the available well log for Well #1, drilling encountered sand and clay to about 46 feet bgs, which is expect to be Qvt. Below this depth, brown sand and gravel was noted to 170 feet bgs, interpreted to be Vashon advance outwash (Qva). Fine grained deposits were encounter below the Qva to a depth of 460 ft bgs, followed by coarse sand from 460 to 495 bgs. The well was completed with a 0.012-inch slot stainless screen from 485 to 495 feet bgs (approximately 70 to 80 below msl). Static water level at the time of well construction was 390 feet below the top of the well casing (approximately 25 feet above msl). With reference to the table presented above, the well is likely completed in the Zone 3, also known as pre-Fraser coarse grained deposits (Qpfc) and the Deep Aquifer.

Instream Flow Regulations

Vashon Island lies within the boundary of Water Resource Inventory Area (WRIA) 15, referred to as the Kitsap Peninsula and Islands Watershed. Upon issuing the Temporary Permit for Well #1, Ecology determined that the well is located within the coastal watershed of Vashon Island, and is not within one of the island sub-basins regulated under WAC 173-515 (the Instream Flow Rule for WRIA 15). Location of the well within the coastal watershed of East Vashon was confirmed during this investigation. Based on these determinations, water is legally available at this location.

Pumping Test Results

A constant-rate pump test was performed on October 30, 2013 in Well #1. The well had not been pumped for several days prior to the test, to ensure that static conditions were present in the well. Golder installed a pressure transducer and flow meter to monitor water levels and flow rates, respectively. Wired and acoustic water level sounders were used to measure absolute water levels throughout the test. Manual measurements of both water level and flow rates were made a minimum of every 30 minutes.

The well was pumped for approximately 5 hours at a rate of about 19 gallons per minute (gpm) and experienced 17 feet of drawdown at the end of the test. The well was then allowed to recover for 2 hours after pumping stopped to measure recovery rates. A permanent flow meter installation (SeaMetrics MJ Series) was used to determine groundwater withdrawal rates. No observation wells or other nearby wells were available for monitoring during the test, and the hydraulic evaluation is based on the response of Well #1 only.

Well test analysis determined a transmissivity of approximately 296 ft²/day, based on analysis of both drawdown and recovery using the Cooper-Jacob (1946) straight line method. Although well drawdown was 17 feet, based on a review of the Cooper-Jacob results, actual aquifer drawdown appeared to be closer to 5 feet, with the remaining 12 feet representing well losses.

Assessment of Salt Water Intrusion Potential

Salt water intrusion either from landward migration of the freshwater-saltwater interface or upconing of the interface as a result of pumping is a known problem in isolated areas on Vashon Island. King County evaluated chloride in Vashon Island wells from 1990 to 2010 (King County, 2013) and determined that chloride levels in groundwater in most areas of the island are classified as Good (0-100 mg/L chloride). All wells reported in the vicinity of the District’s Well #1 were categorized as

good, while problem areas identified where in close proximity to the shoreline of Puget Sound. Concerns regarding salt water intrusion are also associated with groundwater elevations approaching or below sea level, in combination with proximity to the shoreline. Salt water intrusion is not considered to be a significant risk associated with permitted use of Well #1, given that:

- Well #1 is approximately a mile from the shoreline; and
- The static water level is approximately 25 feet above msl, and aquifer drawdown during the pumping test was estimated to be approximately 5 feet at the well location, suggesting that water level elevations will not approach within a few feet above sea level during use of the well.

Evaluation of Potential Surface Water Impacts

Any surface water bodies or diversions located within a close proximity of the subject well are not likely to be affected by the proposed groundwater withdrawal, because of the relatively low hydraulic continuity between surface water and aquifer Zone 3 (Deep Aquifer) associated with intervening low-permeability materials (till and other fine grained glacial deposits).

Site Visit

A site visit was made on October 20, 2013 as part of pump testing. The existing well location and Vashon Fields athletic complex area were visited. The existing well is located in a small well house on the south end of the baseball field, approximately 1,000 ft northeast of 99th Ave SW and SW 161st St. The well is equipped with a submersible pump and motor.

Protests

No protests were received from the public notice, which was published on May 15 and May 22, 2013 in *The Vashon Beachcomber*.

CONCLUSIONS

In accordance with state law, the following considerations must be addressed prior to the issuance of a permit:

- Water Availability
- Impairment to Existing Rights
- Beneficial Use of Water
- Detriment to Public Interest

Water Availability

Vashon Island lies within the boundary of Water Resource Inventory Area (WRIA) 15, referred to as the Kitsap Peninsula and Islands Watershed. Ecology previously determined that the well is located within the coastal watershed of Vashon Island, and is not within one of the island sub-basins regulated under WAC 173-515 (the Instream Flow Rule for WRIA 15). Location of the well within the coastal watershed of East Vashon was confirmed during this investigation. Based on these determinations, water is legally available at this location. The constant-rate pumping test conducted during this investigation indicated that water is physically available. Although the pumping rate for the test was 19 gpm rather than the 30 gpm requested by the District, the limited drawdown and the estimated transmissivity of 296 ft²/day support this conclusion. In addition, the well has been previously used during the 2012 and 2013 irrigation seasons.

Impairment to Existing Groundwater Rights

Impairment occurs when there is an adverse impact on the physical availability of water for a beneficial use that is entitled to protection.

Qualifying ground water withdrawal facilities are defined as those wells which in the opinion of Ecology are adequately constructed. An adequately constructed well is one that (a) is constructed in compliance with well construction requirements; (b) fully penetrates the saturated thickness of an aquifer or withdraws water from a reasonable and feasible pumping lift (WAC 173-150); (c) has withdrawal facilities capable of accommodating a reasonable variation in seasonal pumping water levels; and (d) the withdrawal facilities and pumping facilities are properly sized to match the ability of the aquifer to produce water. 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.

Well interference is the overlap of the cones of depression for two or more wells. Well interference reduces the water available to the individual wells and may occur when several wells penetrate and withdraw ground water from the same aquifer. Each pumping well creates a drawdown cone. When several wells pump from the same aquifer, well density, aquifer characteristics, and pumping demand may result in individual drawdown cones that intersect and form a composite drawdown cone.

Groundwater wells that are 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.

WRTS Database and Exempt Wells

Ecology's online water rights database (2011) was searched for claims, permits, and certificates in an approximate 0.5-mile radius of Well#1 in T23N/R3E, Sections 19, 20, 29, and 30. Five groundwater claims were identified, and no other water rights were identified.

Ecology's online well log database (2011) was searched for water supply wells on file in an approximate 0.5-mile radius of Well#1 in T23N/R3E, Sections 19, 20, 29, and 30. There are 23 wells on file. There may be other wells in the area of

Vashon Fields that are not on file with Ecology if they were drilled before filing of logs was required, or they were not properly filed.

The Heintzman well is recorded in the same ¼ ¼ section as the District’s Well #1 (i.e., the SW ¼ SW ¼ of Section 20, T23N/R3E). It is completed to a depth of 60 feet with a static water level of 21 feet below ground surface at the time it was installed in 1991. Ground surface is approximately 400 feet above mean sea level and the well is interpreted to be completed in Zone 1 of the Principal Aquifer (Table 1). Zone 1 is interpreted to be hydraulically separated from Zone 3 in which the District’s Well 1 is completed, due to the vertical separation of static water levels in each of the zones, as well as intervening confining layers. Therefore, the Heintzman Well will not be affected by pumping of the District’s well.

Four wells were located in adjacent ¼ ¼ sections: the Blakelee well and the Good well, both located in the NE1/4 SW1/4 of Section 20 T23N/R3E; and the Koch and Winkler wells located in the NE ¼ of the NW ¼ of Section 29, T23N/R3E (Table 2).

Table 2: Wells Located in ¼ ¼ Sections Adjacent to the District’s Well #1 (all in T23N/R3E).

| Well | Location | Distance from District Well (feet) | Ground Elevation Range (feet msl) | Depth (feet) | Depth to Water (feet) | Interpreted Aquifer Zone |
|----------|-----------------------|------------------------------------|-----------------------------------|--------------|-----------------------|--------------------------|
| Blakelee | NE ¼ SW ¼, Section 20 | >1,600 | 300-360 | 323 | 240 | Zone 2 |
| Good | | >1,200 | | 415 | 380 | |
| Koch | NE ¼ NW ¼, Section 29 | >1,000 | 200-300 | 282 | 232 | Zone 3 |
| Winkler | | >1,000 | | 320 | 270 | |

Completion depths and static water levels characteristic to each aquifer zone were used identify the aquifer zone in which these wells were completed (Table 1). The District’s Well #1 is completed in Zone 3. The Blakelee well appears to be completed within the Zone 2 aquifer. The rest of the wells appear to be completed in the same aquifer as the District’s Well #1. The distance of these wells from the District’s well is assumed to be approximately a quarter mile away (e.g., approximately 1,320 feet).

The Cooper-Jacob straight line method was used to estimate potential aquifer drawdown in nearby wells using the following parameters:

- Aquifer transmissivity of 296 ft²/day measured from a pumping test of the District’s Well #1.
- A distance of a potentially affected well of a 1,320 feet from the District Well.
- An assumed aquifer storativity of 0.005.
- Continuous pumping of the District well for 90 days at a pumping rate of 30 gpm.

The predicted drawdown is approximately 3 feet.

Assuming well losses of approximately 5 feet, and typical seasonal variation of aquifer levels on the order of 5-10 feet, it does not appear that use of the District’s Well #1 will cause impairment to adjacent groundwater users. Ecology also noted in issuing the temporary permit, that irrigation of the playfields had apparently been ongoing for four to six months in 2012 at the time of the October 2012 field visit. Ecology did not during that time receive any reports of well interference or other signs of potential impairment of existing rights, thus there is a reasonable probability that the well might continue to produce without impairment of existing water rights.

All other wells are registered in ¼ ¼ sections that are further away from the one in which District’s Well #1 is completed. Therefore, wells that are completed further away from the District’s well will also not be impaired by its operation.

Beneficial Use

Water used for irrigation is considered a beneficial use under RCW 90.54.020(1). Based on an air photo review conducted as part of this investigation, 6 acres is a reasonable estimate of the amount of acreage that will be irrigated. Irrigation water need was determined using Appendix B of the Washington Irrigation Guide (1985, amended in 1992). Crop irrigation requirement for pasture turf during the April through October irrigation season in Tacoma is 1.7 feet. This is slightly higher than the requested duty of 1.53 feet, without consideration of irrigation efficiency. Therefore, the requested quantity of water is reasonable for the beneficial use to which it is to be applied.

Public Interest

No detriment to the public interest was identified during the investigation of the subject application. The permitted use will support public use of recreational facilities associated with Vashon Fields.

RECOMMENDATIONS

It is recommended that a groundwater permit be issued for irrigation (sports play fields) at an instantaneous rate of **30 gpm**. The permit shall be issued subject to the following provisions.

In accordance with chapters 90.03 and 90.44 RCW, I find there is water available for this beneficial appropriation from the source in question and that the appropriation as authorized will not impair existing rights or be detrimental to the public interest. Therefore, a permit should be issued, subject to the provisions noted on Page 2 of this Report.

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.

30 gpm (Qi) for irrigation of 6 acres, with a maximum total annual withdrawal (Qa) of 9.2 ac-ft per year (April to October).

Point of Withdrawal

SW¹/₄, SW¹/₄, Section 30, Township 23 North, Range 3 East W.M.

Place of Use

As described on Page 1 of this Report of Examination.

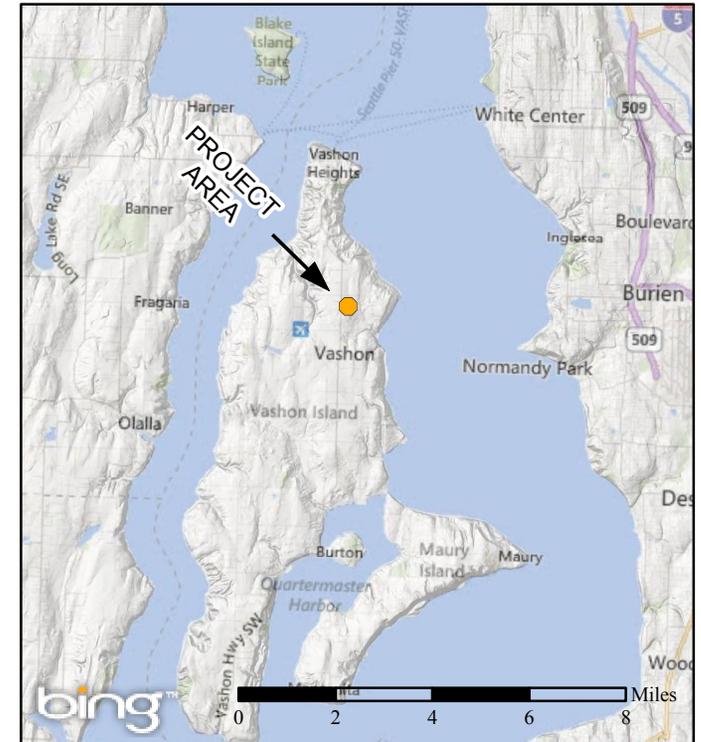
REPORT BY _____ DATE _____

Chris Pitre, L.Hg
Golder Associates Inc.

REVIEWED BY _____ DATE _____

Douglas H. Wood, L.Hg
Department of Ecology

Vashon-Maury Island Park and Recreation
 Water Right G1-28750
 Section 20 T 23N R 03E W.M.
 WRIA 15 - King County



Legend

-  Authorized Place of Use
-  Authorized Point of Withdrawal
-  Water Body
-  Townships
-  Sections



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