State of Washington

DRAFT

REPORT OF EXAMINATION FOR WATER RIGHT APPLICATION

File NR G2-28909
WR Doc ID 2222107

PRIORITY DATE	WATER RIGHT NUMBER
8/26/1993	G2-28909

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
F&M DEVELOPMENT LLC 17786 DES MOINES MEMORIAL DRIVE BURIEN WA 98148	11619 109TH CT ANDERSON ISLAND WA 98303

Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
50	GPM	10.5

Purpose

	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		
PURPOSE	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	PERIOD OF USE (mm/dd)
Domestic multiple*	50	0	GPM	10.5	0	01/01 - 12/31

*Once this system has more than 15 residential connections, this right will be for municipal water supply.

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

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
PIERCE	GROUNDWATER	N/A	15-KITSAP

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWP	RNG	SEC	QQ	LATITUDE	LONGITUDE
SOUND VIEW WELL 2	0119095004	BCP-608	19N	01E	09	NENE	47°9.12 'N	122°41.05 W

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

0119095004, 0119094041, 0119094000

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

LOT 2, AS SHOWN ON THAT CERTAIN SURVEY OF A PORTION OF SECTION 9, TOWNSHIP 19 NORTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN, RECORDED NOVEMBER 29, 1978 IN BOOK 25 OF SURVEYS, PAGE 20, UNDER RECORDING NO. 2420, RECORDS OF PIERCE COUNTY, WASHINGTON;

EXCEPT THE NORTH 674.88 FEET OF SAID LOT 2;

AND EXCEPT THAT PORTION OF SAID LOT 2 LYING SOUTH OF A LINE DESCRIBED AS FOLLOWS: BEGINNING AT THE MOST NORTHERLY CORNER OF LOT 29 OF COLE POINT HEIGHTS DIVISION NO. 1, ACCORDING TO THE PLAT RECORDED IN BOOK 522 OF PLATS, PAGE 5; THENCE WEST PARALLEL WITH THE NORTH LINE OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 9 TO THE WEST LINE THEREOF AND THE TERMINUS OF SAID LINE;

TOGETHER WITH LOT 4 OF PIERCE COUNTY SHORT PLAT NO. 9207070523, ACCORDING TO THE SHORT PLAT RECORDED JULY 7, 1977 UNDER RECORDING NO. 9207070523, RECORDS OF PIERCE COUNTY, WASHINGTON;

TOGETHER WITH THE SOUTH 660 FEET OF LOT 5 AND ALL OF LOT 4, SECTION 9, TOWNSHIP 19 NORTH, RANGE 7 EAST OF THE WILLAMETTE MERIDIAN, TOGETHER WITH TIDELANDS OF THE SECOND CLASS ABUTTING UPON THE ABOVE DESCRIBED PORTION OF LOT 5;

TOGETHER WITH THE SECOND CLASS TIDELANDS IN FRONT OF ADJACENT TO OR ABUTTING UPON THAT PORTION OF GOVERNMENT LOT 4, SECTION 9, TOWNSHIP 19 NORTH, RANGE 1 EAST OF WE WILLAMETTE MERIDIAN, MEASURED ALONG THE GOVERNMENT MEANDER LINE AS FOLLOWS: BEGINNING AT THE POINT OF INTERSECTION OF THE NORTH LINE OF SAID GOVERNMENT LOT 4 AND SAID MEANDER LINE AND RUNNING THENCE ALONG SAID MEANDER LINE SOUTH 31 3/4' EAST 2.98 CHAINS, MORE OR LESS, TO AN ANGLE POINT THEREIN; THENCE SOUTH 39 1/4' EAST 8.18 CHAINS; THENCE SOUTH 1.95 CHAINS AND THENCE SOUTH 50 1/2' WEST 8.64 CHAINS TO AN ANGLE POINT IN SAID MEANDER LINE AND THE END OF THIS DESCRIPTION;

SITUATE IN THE COUNTY OF PIERCE, STATE OF WASHINGTON.

The place of use (POU) of this water right will be the service area described in the most recent Water System Plan/Small Water System Management Program, once approved by the Washington State Department of Health, so long as the water system 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. Once this system has more than 15 residential connections, this right will be for municipal water supply.

Proposed Works

The system will include a single 8-inch well drilled to a depth of 224.5 feet. The well will be equipped to produce up to 50 gpm; however, it is expected that the pump will typically be throttled to about 25 gpm. The system will include the necessary distribution system along with adequate storage–estimated at 30,000 gallons–to meet peak demand. Treatment will be installed to reduce iron and manganese levels in the water; however, the precise method of treatment has not yet been selected.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Started	September 1, 2013	2023

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm)

Provisions

Decommissioning of Sound View Well 1
The test well Sound View Well 1, located approximately 1,000 feet south of the proposed source (Sound View Well 2) encountered saline water during drilling and testing and must be properly decommissioned in accordance with WAC 173-160.

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.

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.
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.

Chloride Monitoring
By January 31st of each year, the following information shall be submitted in writing to the Department of Ecology.

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

- Chloride and conductivity (the 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.

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.

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

Therefore, I ORDER approval of Application No. G2-28909, subject to existing rights and the provisions specified above.

Signed at Olympia, Washington, this day of 2011.

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Michael J. Gallagher, Section Manager

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.

Mailing Addresses	Street Addresses
Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903	**Pollution Control Hearings Board** 1111 Israel RD SW Ste 301 Tumwater, WA 98501
Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608	**Department of Ecology** Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503

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.

BACKGROUND

Cost Reimbursement

This application is being processed under a cost reimbursement agreement between the applicant and the Washington State Department of Ecology (Ecology). This report was prepared by Hart Crowser, Inc. under Contract No. C1000188, Work Assignment HAR002 with Ecology.

History

On August 26, 1993 Joyce Kleppen filed an Application for Permit with Ecology for a permit to appropriate groundwater in the amount of 90 gpm for multiple domestic use. The application was accepted for processing and given reference number S4-35252. The application was subsequently assigned to the current property owner, F&M Development, LLC (F&M), on July 6, 2009.

Project Description

The subject property is currently undeveloped. F&M intends to develop the property into 21 residential lots. Toward that end, F&M submitted a Preliminary Plat for the development (Sound View) to Pierce County Planning and Land Services. On December 2, 2010, the Pierce County Hearings Examiner approved the Preliminary Plat. The 21 lots are intended for construction of upscale, year-round residences. Lots 1 through 20 ranges in size between about 1 and 2 acres with an average size of 1.54 acres. Lot 21 occupies 10.66 acres.

Water for the development will be supplied by Sound View Well 2 located near the northwest corner of the property. The well will be equipped to produce up to 50 gpm; however, it is expected that the pump will typically be throttled to about 25 gpm. The water system will include the necessary distribution infrastructure along with adequate storage–estimated at 30,000 gallons–to meet peak demand. Treatment will be installed to reduce iron and manganese levels in the water; however, the precise method of treatment has not yet been selected.

Site Visit

On September 24, 2011, Mark Dagel of Hart Crowser visited the site to observe the proposed place of use and Sound View Well 1 (the originally proposed point of withdrawal). He was accompanied during the visit by Linton Wildrick of Pacific Groundwater Group, the consultant for the applicant. Subsequent to the site visit, the applicant drilled Sound View Well 2 and identified it as the proposed point of withdrawal instead of Well 1. Because Well 2 is located within about 1,000 feet of Well 1, a second site visit was judged not to be required.

Attributes of Proposal

Table 1 Application Summary

Name	F&M Development, LLC
Priority Date	8/26/1993
Instantaneous Rate	50 gpm
Annual Quantity	10.5 acre-feet/year
Purpose(s) of Use	DM* *Once this system has more than 15 residential connections, this right will be for municipal water supply.
Period of Use	Year round as needed
Place(s) of Use	Parcels 0119095004, 0119094041 and 0119094000

Table 2 Proposed Sources of Withdrawal or Diversion

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ	Latitude	Longitude
WELL	0119095004	BCP-608	19N	01E	09	NENE	47°9.12 ′	122°41.05 W

Legal Requirements for Approval of Appropriation of Water

RCWs 90.03 and 90.44 authorize the appropriation of public water for beneficial use and describes the process for obtaining water rights. Laws governing the water right permitting process are contained in RCW 90.03.250 through 90.03.340 and RCW 90.44.050. In accordance with RCW 90.03.290, determinations must be made on the following four criteria in order for an application for water rights to be approved:

- Water must be available
- There must be no impairment of existing rights
- The water use must be beneficial
- The water use must not be detrimental to the public interest

This report serves as the written findings of fact concerning all things investigated regarding Water Right Application Number G2-28909.

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 Peninsula Gateway during the weeks of October 6 and October 13, 1993.

State Environmental Policy Act (SEPA)

The subject water right permit application is categorically exempt from threshold determination requirements under SEPA [WAC 197-11-305 and WAC 197-11-800(4)] because the instantaneous quantity is less than 2,250 gpm.

INVESTIGATION

Geology and Hydrogeology

Hydrostratigraphy and Groundwater Occurrence

The hydrogeology and groundwater conditions of Anderson Island and the Sound View site were described by Wildrick and others (2001) and in two reports prepared by Pacific Groundwater Group in support of the subject application (PGG 2010 and 2011). The following summary is drawn from these sources.

Anderson Island is capped by a thin, discontinuous layer of Vashon till, a glacially deposited, highly compacted mixture of clay, silt, sand, gravel, and boulders. Enough water percolates through the Vashon till and into the underlying sediments to create a high quality, freshwater supply.

Groundwater on the Island is withdrawn from two main aquifers. The uppermost Vashon aquifer, is semi-confined to unconfined and is composed of Vashon advance outwash, a permeable, glacially deposited mixture of sand and gravel. Underlying the Vashon aquifer is a silty, low permeability, nonglacial and glaciolacustrine unit that serves as an aquitard. Below the silt unit lies the Sea Level aquifer, the most widely tapped aquifer on the Island. The Sea Level aquifer is confined and is composed of permeable sand and gravel glacial deposits of pre-Vashon age. The top of this aquifer is near sea level, while the bottom extends well below sea level.

Sound View Well 2 was drilled to a depth of 224.5 feet below ground surface (about -30 feet MSL). The well is screened from elevation -22 to -27 feet MSL and taps the Sea Level aquifer. The static water level in March 2011 was +1.8 feet MSL. A nearby well (Sound View Well 1, located approximately 1,000 feet to the south) encountered a saline aquifer underlying the Sea Level aquifer at an elevation of about -35 feet, immediately underlying a thin aquitard (interpreted to be a pre-Vashon till unit). The drilling of Sound View Well 2 was stopped short of this aquitard to avoid penetrating it.

Aquifer Characteristics

Sound View Well 2 is located about a mile from Puget Sound. The well is tidally influenced, exhibiting water level fluctuations of about 3 feet in response to tidal fluctuations in Puget Sound of about 11 feet.

Step testing of Well 2 indicated a specific capacity of 8.3 gpm/foot at a pumping rate of 15.5 gpm and a specific capacity of 6.9 gpm/foot at a pumping rate of 24.3 gpm.

An analysis of early-time recovery data in Well 2 (the pumping well) following a 24-hour pumping test resulted in an estimate of transmissivity of 5,000 $feet^2$/day (PGG 2011). This value is reasonably consistent with an estimated transmissivity of 1,700 $feet^2$/day derived from the well's specific capacity using the relationship of Logan (1998), T=1.22Q/s (in units of gpm/foot, gpm, and feet, respectively).

Proposed Use and Basis of Water Demand

The requested annual withdrawal of 10.5 acre-feet/year is intended to supply the domestic needs of 21 year-round residences and is based on an average demand of 0.5 acre-feet/year. This estimated demand is consistent with that calculated using the approach outlined in Appendix D of the Washington State Department of Health Water System Design Manual (December 2009):

Average daily demand (gpm) = [8,000/avg. annual precip. (inches)] +200

Using the average annual precipitation for Anderson Island of 35 inches and the above equation yields a demand estimate of 430 gpm or 0.48 acre-feet per year. Given the large lot sizes (average >1.5 acres) and expected upscale residences with extensive landscaping, the minor upward rounding of this value to 0.5 gpm is appropriate.

Other Rights Appurtenant to the Place of Use

There are no other water rights appurtenant to the place of use.

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).

Impairment, Qualifying Ground Water Withdrawal Facilities, and Well Interference

Senior Water Rights

A query of Ecology's online water rights database revealed that there are four wells in the vicinity of the proposed withdrawal that are associated with senior groundwater rights. These wells are shown on Figure 1 and summarized below:

- Riviera Water System Wells #1, #2, and #4 (G2-01108ALC, priority date 11/1/68)

- Cole Point Heights Water System Well #1 (G2-24334C, priority date 11/2/76 and G2-26981CWRIS, 10/17/86)

A query of Ecology's online well log database did not reveal any wells that might be associated with permit exempt withdrawals in the vicinity that were drilled before the priority date of the subject application.

Impairment Evaluation

We evaluated impairment by estimating drawdown at various pumping rates and at various distances from Sound View Well 2. Drawdown was estimated with the Theis equation using a spreadsheet tool (USGS Open File Report 02-197, Spreadsheets for the Analysis of Aquifer-Test and Slug-Test Data, Version 1.2, July 2, 2004). For these analyses, we assumed storage coefficients ranging from 0.1 to 0.001 and transmissivity values ranging from 1,700 to 5,000 ft^2/day (corresponding to estimates based on specific capacity and recovery data, respectively).

To simulate potential interference associated with a complete fill of the storage system (estimated to be 30,000 gallons), we calculated drawdown after 25 days of pumping at the maximum instantaneous rate of 50 gpm. Conservative values for storage coefficient and transmissivity of 0.001 and 1,700 ft^2/day, respectively, gave an estimated drawdown at Riviera Well #1 (the nearest well; approximately 1,500 feet from Sound View Well 2) of less than 2 feet.

To simulate potential interference associated with long-term operation, we calculated drawdown after 1 year of pumping at an average rate of 6.51 gpm (equivalent to the requested annual quantity of 10.5 acre-feet/year). Conservative values for storage coefficient and transmissivity of 0.001 and 1,700 ft^2/day, respectively, gave an estimated drawdown at Riviera Well #1 of less than 0.4 feet.

Results from these analyses are consistent with the absence of observed drawdown in Sound View Well 1, completed in the same aquifer and located about 1,000 feet away from Sound View Well 2, during the 24-hour pump test.

Based on these analyses, we concluded that withdrawals associated with the subject application would not impair senior water rights.

Evaluation of Sea Water Intrusion

During the drilling of Sound View Well 1—originally installed to be the source for the subject application—a saline aquifer was encountered at an elevation of about 35 feet below mean sea level (MSL) immediately underlying a 7-foot-thick aquitard consisting of silt bound gravel (interpreted to be pre-Vashon till). The boring was subsequently backfilled with cement/bentonite to the top of the aquitard and a well screen was set at an elevation of about 28 feet below MSL. During testing at the well's maximum sustainable rate (about 14 gpm), the well produced water with elevated chloride concentrations (about 1,000 mg/L). We interpret the elevated chloride to have been caused by upconing of saline water from below, perhaps via leakage through the cement/bentonite backfill. Given this well's location of almost a mile from the shore and because of the modest pumping rate and associated drawdown, we do not believe that the observed salinity was associated with lateral intrusion of salt water.

Sound View Well 2 was drilled about 1,000 feet to the north of Sound View Well 1. Well 2 penetrated similar stratigraphy to that encountered in Well 1; however, drilling for Well 2 was terminated at an elevation of about 29 feet below MSL to avoid drilling into any underlying saline water. A well screen was set at an elevation of 27 feet below MSL. Following completion, several pumping tests were conducted, consisting of short-term step tests at 15.5, 28 and 30 gpm; a 24-hour constant rate test at 15.5 gpm; and a 3-day constant rate test at 24.3 gpm. A total of eight chloride analyses were performed during the pumping tests, including one collected near the end of the 3-day test. Results from these analyses did not indicate elevated chloride levels (concentrations ranged from 4 to 5 mg/L) or discernible upward concentration trends.

These results are encouraging and suggest that Sound View Well 2 is significantly less likely to be subject to sea water intrusion from upconing than Sound View Well 1. However, because Well 2 is expected to be subject to pumping rates and pumping durations greater than those tested—and because seasonal groundwater level fluctuations will at times reduce the head in the target aquifer—the water must be tested and the operation of the system must be managed to detect and prevent sea water intrusion. This could involve significantly reducing pumping rates and may require installation of additional storage.

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 water present in quantities and quality and on a sufficiently frequent basis to provide a reasonably reliable source for the requested beneficial use.

Logs for wells completed within the Sea Level aquifer in the vicinity of the subject application indicate that this aquifer is locally capable of providing over 100 gpm to wells; however, the capacities of individual wells are quite variable. To evaluate water availability at the proposed source we compared available drawdown in the Sound View Well 2 to drawdown expected during pumping at the maximum instantaneous rate of 50 gpm. Based on the log for Well 2 (PGG 2011), the static water level elevation in March 2011 was +1.8 feet MSL. Given that the top of the well screen was set at 22 feet below MSL, this provides an available drawdown of about 24 feet.   We believe that this available drawdown could be reduced by as much as 3 feet due to tidal fluctuations (see Figure 3 in PGG [2011]) and by as much as 4 feet due to seasonal fluctuations (based on hydrographs for the Sea Level aquifer presented in Wildrick and others [1991]). This means that available drawdown could be reduced to as little as 17 feet during some periods. Using a specific capacity value of 6.9 gpm/foot (based on a pumping rate of 24.3 gpm) yields an estimate of drawdown at 50 gpm of about 7 feet. However, since specific capacity typically decreases with increasing pumping rates, we believe an estimated drawdown of 10 feet is more realistic. This value would still theoretically allow the pumping water level in the well to remain at least 7 feet above the top of the screen. Based on this analysis, we conclude that the aquifer in the vicinity of Sound Point Well 2 would be capable of providing the requested instantaneous rate of 50 gpm during at least some seasons.

To evaluate water availability on an island-wide basis, we compared an upper end estimate of total groundwater demand with total estimated aquifer recharge. Based on information summarized in Wildrick and others (2001) and contained in Ecology's online water resources databases, there are 15 permitted or certificated groundwater rights and 101 groundwater claims on Anderson Island that are senior to the subject application. In addition, there are a total of 62 well logs in Ecology's database for wells installed before the priority date of the subject application. The permitted and certificated rights, along with the subject application, total 997 acre-feet/year. Making the conservative assumption that all 101 claims and all 62 wells are each associated with a 5,000 gallon per day withdrawal, the total additional withdrawals from these categories would amount to an additional 97 acre-feet/year. Total withdrawals on the island would then amount to 1,094 acre-feet/year. Based on an estimated recharge rate for the Sea Level aquifer of 0.9 to 1.3 acre-feet/year (Vaccaro and others 1997)—and conservatively assuming that all withdrawals are coming from the Sea Level aquifer—the total groundwater demand could be satisfied with a recharge area of no more than about 1,200 acres. Because this represents less than one-quarter the area of the island, we conclude that there is groundwater available for appropriation on a regional island-wide basis.

Legal availability

A review of WAC 173-515 (Instream Resources Protection Program—Kitsap Water Resource Inventory Area [WRIA] 15) indicated that there are no surface water closures in the vicinity of the proposed withdrawal and that groundwater for the subject application is legally available for appropriation.

Beneficial Use

The use of water for purposes of domestic supply/municipal supply is defined in statute as a beneficial use (RCW 90.54.020(1)).

Conclusions

In conclusion, we find that water is available for appropriation for a beneficial use and that the appropriation thereof, as described in this report, will not impair existing rights or be detrimental 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:

- 50 gpm
- 10.5 acre-feet per year
- Multiple domestic use/Municipal supply

Point of Diversion

NE¼, NE¼, Section 9, Township 19 North, Range 1 E.W.M.

Place of Use

As described on Page 1 of this Report of Examination.

Reviewed by Phil Crane *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

Pacific Groundwater Group, 2010. Well Construction and Testing Report, Sound View Project, Anderson Island, Pierce County, Washington. March 2010.

Pacific Groundwater Group, 2011. Well 2 Construction and Testing, Sound View Project, Anderson Island, Pierce County, Washington. June 2011.

Vaccaro, J., Woodward, D., Gannett, M., Jones, M., Collins, C., Caldwell, R., and Hansen, A., 1997. Summary of the Puget-Willamette Lowland Regional Aquifer-System Analysis, Washington, Oregon, and British Columbia. U. S. Geological Survey Open-File Report 96-353, Tacoma.

Wildrick, L. Neumiller, C. M., Garrigues, R., and Sinclair, K., 2001. Investigation of Water Resources, Water Quality, and Seawater Intrusion, Anderson Island, Pierce County, Washington. Washington State Department of Ecology, Water Resources and Environmental Assessment Program, Water Resource Inventory Area 15, Publication No. 01-11-013, October, Olympia.