DEPARTMENT OF ECOLOGY
State of Washington

STATE OF WASHINGTON

REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

Water Right Control Number CG1-*06694P

Purpose [ ] Place of Use [X] Point of Diversion/Withdrawal [X] Season [ ] Consolidation [ ]

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
April 24, 1963		6471	

NAME
Gold Beach Water Company Inc.

ADDRESS/STREET	CITY/STATE	ZIP CODE
P.O. Box 2138	Vashon, WA	98070

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	WRIA	COUNTY
Wells (3)	15	KING

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
	160	100

QUANTITY, PURPOSE OF USE, PERIOD OF USE
100 acre-feet per year, Community Domestic Supply, Continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL
Well #1 – Approximately 3445 feet South and 2130 feet West of the NE Corner of Section 28, T22N, R03E.
Well #2 – Approximately 2220 feet South and 1725 feet West of the NE Corner of Section 28, T22N, R03E.
Well #3 – Approximately 70 feet North and 2265 feet West of the SE Corner of Section 21, T22N, R03E.

SOURCE	PARCEL	LATITUDE[1]	LONGITUDE	QTR/QTR	SECTION	TOWNSHIP	RANGE
Well #1	2817000340	47.371	122.426	SW/NE	28	22	03E
Well #2	2817000350	47.373	122.424	NW/NE	28	22	03E
Well #3	2122039115	47.375	122.426	WW/SE	21	22	03E

1: Calculated from DOH Public Water System Source data layer point location using ArcGIS/Xtools utility.

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 described as follows:

All of the following in Section 21, T22N, R03E; the SE1/4 of the SW 1/4 of the SW1/4; the S1/2 of the SE1/4 of the SW1/4; and the S1/2 of the SW1/4 of the SE1/4. Together with the following; All of fractional Section 28, T22N, R03E, EXCEPT the NW1/4 of the NW1/4 and the SW1/4 of the NW1/4 and the East 482 ft of said Section 28.

DESCRIPTION OF PROPOSED WORKS

A six-inch or greater diameter well to be completed at a depth of approximately 300 feet or deeper at a point east of the entrance to the Gold Beach Community at an elevation capable of providing gravity assisted flow of water from a new storage tank to completed at the same location (see description of Well #3 location above). Existing wells (Wells #1 and #2), which require pumping to reach upper elevations of the Gold Beach Community, may also be used.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
Started	October 31, 2014	October 31, 2019

STANDARD PROVISIONS

1. Approval of Proposed Change

   1.1. The request to add new points of withdrawal under application for change Groundwater Permit 6471 (G1-*06694P) is granted.

   1.2. The cumulative instantaneous rate of withdrawal (pumping rate) from all points of withdrawal approved for use under Groundwater Permit 6471 (G1-*06694P) shall not exceed 160 gallons per minute.

   1.3. The cumulative annual quantity from all points of withdrawal approved for use under Groundwater Permit 6471 (G1-*06694P) shall not exceed 100 acre-feet per year.

   1.4. The purpose of use is not amended and shall remain Community Domestic Supply.

2. Wells, Well logs and Well Construction Standards

   2.1. All wells constructed in the state shall 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 shall be decommissioned.

   2.2. All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

   2.3. Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

   2.4. In addition to the required access port, the applicant shall install and maintain, in operating condition, an airline and pressure gage. The pressure gage shall be equipped with a standard tire valve and placed in a location accessible to Department of Ecology personnel. The airline shall extend from land surface to the top of the pump bowls and the total airline length shall be reported to the Department of Ecology upon completion of the pump system.

3. Measurements, Monitoring, Metering and Reporting

   3.1. 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.

   3.2. Water use data shall be recorded daily. The maximum monthly rate of diversion/withdrawal and the monthly total volume shall be submitted to the Department of Ecology by January 31st of each calendar year. The Department of Ecology is requiring submittal of daily meter readings to collect seasonal information for water resource planning, management and compliance.

   3.3. 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.

   3.4. 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.

   3.5. 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

   3.6. 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.

4. 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.

5. Easement and Right-of-Way

   The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

6. 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.

7. Proof of Appropriation

   The permit holder shall file Proof of Appropriation 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 subsequently issued will reflect the extent of beneficial use within the limitations of the change authorization. Elements of the project completion inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and compliance with provisions.

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

Therefore, I ORDER that the requested amendments to Groundwater Permit 6471 (G1-*06694P), to add points of withdrawal and change the place of use under, be approved 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 Doug Wood of Ecology at (425) 649-7077.

Signed at Bellevue, Washington, this 2ND day of DECEMBER, 2009.

A. B. D

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

BACKGROUND

Description and Purpose of Proposed Change

The proposed change seeks to bring permit 6471 (Tracking No. G1-*06694P) into compliance with actual development and use under this and companion permit 6470 (Tracking No. G1-*06693P). These permits were issued in the early 1960's and have been in continuous use since the late 1960's.

The two permits were erroneously cancelled in 1969 and were reinstated in 2009.

Attributes of the Permit and Proposed Change

Table 1: Summary of Proposed Changes to Water Right Permit No. 6471

Attributes	*Existing*	*Proposed*
Name	Gold Beach Water Company Inc	Gold Beach Water Company Inc
Priority Date	April 24, 1963	
Date of Application for Change		May 11, 2009
Instantaneous Quantity	160.00 gpm	160.00 gpm
Annual Quantity	256.00 acre-feet per year	256.00 acre-feet per year
Source	Wells (2)	Wells (3)
Points of Diversion or Withdrawal	NE1/4 NW1/4 Sec 28, T22N, R03E NE1/4 NW1/4 Sec 28, T22N, R03E	SW1/4 NE1/4 Sec 28, T22N, R03E NW1/4 NE1/4 Sec 28, T22N, R03E SW1/4 SE1/4 Sec 21, T22N, R03E
Purpose of Use	Community Domestic Supply	Community Domestic Supply
Period of Use	Continuously	Continuously
Place of Use	a) That portion of Government Lot 3 in Sect.28, T.22 N., R.3 E.W.M., in King County, Washington, described as follows: Beginning 1307.3 feet west and 25 feet south of the northeast corner of said Lot 3; thence east, parallel with the the north line thereof, to the east line of said lot; thence southerly along the east line thereof, to an intersection with a line bearing north 72°30'10" east from the northeast corner of Government Lot 4 in said Sec.28; thence south 72°30'10" west to a point south of the point of beginning; thence north to the point of beginning; Except the east 25 feet thereof; (Being known as Tracts 1 to 8, inclusive, Beach View Tracts, unrecorded). b) Beginning at a point 1031.53 feet south and 417.19 feet west of the northeast corner of said Lot 3; thence north 72°30'10" east 411.21 feet west; thence south parallel with the east line of said Lot 762.50 feet, more or less, to the Government meander line; thence along said meander line south 84°06' west 394.29 feet, more or less, to a point south of the point of beginning; thence north 679.40 feet, more or less, to the point of beginning; (Being know as Tracts 16, 17, and 18, Beach View Tracts, according to the unrecorded plat thereof.)	S1/2 of the SE1/4 of the SW1/4, the S1/2 of the SW1/4 of the SE1/4, and the SE1/4 of the SW1/4 of the SW1/4, all within Section 21, Township 22 N., Range 3 E., W.M., and the E1/2 of the NW1/4, the W1/2 of the NE1/4, the W1/2 of the NE1/4 of the NE 1/4, and including Subdivisions 1, 2, 3, and 4 of the Gold Beach Plat, all located within Section 28, Township 22N, Range 3E., W.M. in King County.

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in place of use and point of withdrawal under permit G1-*06694P.

- **Public Notice**

  Notice of the proposed changes to permit G1-*06694P was published on June 10, 2009 and June 17, 2009, by the Vashon-Maury Island Beachcomber, a weekly newspaper of general circulation in the community of Vashon-Maury Island.

- **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.

  - It is a surface water right application for more than 1 cubic feet 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;
  - It is a groundwater right application for more than 2,250 gallons per minute;
  - It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
  - 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);
  - 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

RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights.

The Washington Supreme Court has held that the Washington Department of Ecology (Ecology), when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. *R.D. Merrill v. PCHB* and *Okanogan Wilderness League v. Town of Twisp.*

RCW 90.44.100(2) requires that any well or wells added to a ground water permit must tap the same body of public ground water as the original well on the permit.

RCW 90.44.100 states that a ground water permit holder may construct wells or other means of withdrawal at a new location. The new well(s) may substitute or add to those at the original location, but may not enlarge the right as expressed in the original permit or certificate.

RCW 90.44.100(1) states that a ground water permit can be amended to replace or add wells.

INVESTIGATION

Background

Groundwater Permit 6471 (Tracking Number G1-*06694P) was issued to Lloyd Raab of Vashon-Maury Island on January 24, 1964, pursuant to an application accepted on April 24, 1963. In 1965 the permit was transferred by assignment to Dom Spano and William Joslin, owners of the Gold Beach Water Company (Gold Beach) and developers of the Gold Beach Community on Maury Island.

In 1967, the permit (along with companion permit 6470) was cancelled after a letter to Mr. Spano regarding the filing of an extension was not answered. This was done without the issuance of an order, which is generally considered to be a requirement for such an action. The Gold Beach development however continued to proceed, with homes still being added to the development as recently as 2008. The owners of Gold Beach appeared to have been unaware during this time of the status of the permits.

The issue of the permits was not noticed by either Gold Beach or Ecology until the early 1990's when Gold Beach was contacted by the Department of Ecology. In 1994 Gold Beach filed an application for a new permit to allow it to continue to serve its customers.

Beginning in 2004, Ecology re-opened its investigation of the Gold Beach Water system. At first, Ecology believed that the new applications would need to be processed and informed Gold Beach that agency resources

being limited, it would be faster to achieve closure through the cost reimbursement process than through Ecology directly processing the application.

A review of the records on file for permits 6470 and 6471 was begun in late 2008. While earlier investigations in the 1990's and 2004 had concluded that a new water application would need to be processed to bring the Gold Beach Water system into compliance with the Water Code, this last investigation found that the complete files were lacking orders of cancellation for permits 6470 and 6471. The issuance of such orders has been standard practice for Ecology and its predecessor agencies in such circumstances.

Based on the 2008 review Ecology decided to work with Gold Beach to bring permits 6470 and 6471 back into compliance with the Water Code. The present application for change to permit 6471 is the final step in conforming the permits to actual development and water usage as it has evolved between the late 1960's and 2009. Other actions taken by Gold Beach in 2009 included the filing of extension requests and assignments for the two permits.

No wells have been constructed, but two wells are authorized under permit 6471. The locations of the two wells, as specified in the application, are as follows:

Well #1 – 500 feet west and 250 feet south from the NW 1/4 corner of Section 28.

Well #2 – 1025 feet west and 950 feet south from the NW 1/4 corner of Section 28.

The permit erroneously sites Well #1 at 250 feet north rather than south of the quarter corner, which puts the location in Section 21. The public notice for application 6694 places the two wells within Government Lot 3, which lies within Section 28 and conforms to the application location.

No wells have yet to be drilled under this permit, in part due to the pattern of development of the Gold Beach community, and partly due to later uncertainty over the validity of the permit. Both of the lots originally proposed for the well location are now occupied by homes and would not be able to comply with well setback requirements.

The proposed changes seek to redefine the place of use to conform to the current service area and adjacent un-serviced lots, and to allow the use of existing system wells as well as a proposed new well. The proposed new well (Well #3) is to be located in the SW1/4 of the SE1/4 of Section 21 and is expected to provide the upper portion of the Gold Beach community with a source that does not require booster pumping from the lower elevation part of the community, the location of existing Wells #1 and #2.

History of Water Use

Subsequent to the issuance of permits 6470 and 6471, the Gold Beach Water system began construction of homes within the Gold Beach community. Between the late 1960's and 1986, 101 homes had been built within the community. Since that time development has been continuous with the most recent construction being completed in 2008 (see Table 2).

As of September 1, 2009, there are 191 connections to the Gold Beach distribution system. The State Department of Health (DOH) has approved the system to serve up to 238 connections (DOH System ID 28350). Full build out of the proposed place of use will not likely exceed 238 homes.

The number of connections was not limited by the permits – only the permit quantities, which are 400 gpm/640 afy under permit 6470 and 160 gpm/256 afy under permit 6471. The Reports of Examination (ROEs) for permits 6470 and 6471 specifically references number of connections, stating that the number of total connections was not at that time established and that full build out would determine the final quantities of the certificates when issued.

Water usage has been metered since 1995 (see Table 3). While this data does not separate the quantities of the two permits, it is clear that total usage is well below the permitted total allocation of 896 afy.

The maximum usage of the Gold Beach system during a calendar year between 1995 and 2008 is 61.22 acre-feet in 1996. Maximum usage during a 12-month period is 64.62 Acre-feet for the period between 09/01/2005 and 09/01/2006. This equates with an average daily usage of 313 gallons per day (gpd) per connection, which is consistent with rural usage of 350 gpd per connection used by Ecology as a rural domestic water duty.

Assuming that usage per household remains on the order of 350 gpd per connection and that build out will not exceed the current DOH maximum number of approved connections (238) the maximum combined total annual quantity for both permits will be on the order of 100 acre-feet.

Total build out has been estimated by Gold Beach to occur between 2019 and 2029 (10 to 20 years from now). Extensions were granted to Gold Beach in 2009 for a period of five years (to February 1, 2014). Any extension beyond that will require further approval from Ecology. A development period for the proposed change should be on the order of 10 years with further extensions requiring approval from Ecology.

The two wells currently in use by Gold Beach are located within the published location of the point(s) of withdrawal for permit 6470 (G1-*06693P). The use documented in Table 3 would therefore be applied to perfection of permit 6470 rather than permit 6471, the subject of this application for change.

Table 2: Gold Beach Water System Connections History		
Year	**Connections**	**Notes**
1986	101	Number of connections in 1986
1987	107	Added 6 in 1987
1988	110	Added 3 in 1988
1989	116	Added 6 in 1989
1990	124	Added 8 in 1990
1991	132	Added 8 in 1991
1992	140	Added 8 in 1992
1993	146	Added 6 in 1993
1994	152	Added 6 in 1994
1995	158	Added 6 in 1995
1996	160	Added 2 in 1996
1997	163	Added 3 in 1997
1998	165	Added 2 in 1998
1999	167	Added 2 in 1999
2000	172	Added 5 in 2000
2001	175	Added 3 in 2001
2002	177	Added 2 in 2002
2003	178	Added 1 in 2003
2004	180	Added 2 in 2004
2005	184	Added 4 in 2005
2006	186	Added 2 in 2006
2007	190	Added 4 in 2007
2008	191	Added 1 in 2008

Table 3: Gold Beach Water Company Metered Use				
Year	**CCF**	**Gallons**	**Ac-Ft**	**ADD/Con**
1994	4,594.2	3,436,462	10.55	61.94
1995	25,155.0	18,815,940	57.75	326.27
1996	26,667.1	19,946,991	61.22	341.56
1997	22,367.4	16,730,815	51.35	281.21
1998	25,003.5	18,702,618	57.40	310.55
1999	22,628.4	18,855,808	57.87	309.34
2000	23,545.5	18,693,343	57.37	297.76
2001	19,403.4	18,389,056	56.44	287.89
2002	21,011.0	17,322,184	53.16	268.12
2003	24,097.8	17,199,886	52.79	264.74
2004	27,159.5	16,926,043	51.95	257.63
2005	27,701.3	17,399,677	53.40	259.08
2006	23,736.7	17,754,004	54.49	261.51
2007	23,272.5	17,739,942	54.45	255.80
2008	22,132.3	18,324,803	56.24	262.85

Proposed Use

The applicant does not plan to change the purpose of use from Community Domestic Supply.

Measuring and Reporting Water Use

RCW 90.03.360 requires that the owner of any water diversion maintain substantial controlling works and a measuring device. It must be constructed and maintained to permit accurate measurement and practical regulation of the flow of water diverted. Technical requirements for the measuring and reporting of water use are described in WAC 173-173. This decision contains provisions requiring the measuring and reporting of the quantities of water withdrawn or diverted.

Well Tags

WAC 173-160 contains requirements for well drillers, system operators and/or owners to tag new and existing wells with identification tags supplied by Ecology. The well identification program creates a standard system to identify all newly constructed or existing wells, so that property owners and various agencies can readily share well data. In addition, Ecology field staff use the well tag to identify the well. Accordingly, this decision contains provisions requiring each well to be tagged with a unique identification number.

Other Rights Appurtenant to the Place of Use

The Gold Beach distribution system is supplied by two permits numbered 6470 and 6471. A private well, located at 25507 75th Ave. SW (immediately north of the platted Gold Beach community) is located within the proposed new place of use. Other homes adjacent to the 75th Ave. well location are currently served by Gold Beach. The owner of the 75th Ave. well has indicated an interest in being served by Gold Beach.

Hydrologic/Hydrogeologic Evaluation

The hydrogeological conditions of the Gold Beach community and surrounding area are typical of those encountered throughout the Southern Puget Sound Region. Groundwater derived from rainfall percolates beneath the surface and is hosted by unconsolidated glacial and interglacial sediments. Groundwater flow is largely controlled by surface topography, particularly in shallower aquifers.

The Gold Beach community is built on an alluvial (or colluvial) fan that appears to have been formed as a result of an episode of slope failure during the period after the retreat of ice sheet (post 10,000 years before present). To the north and south of Gold Beach the eastern shore of Maury Island is dominated by cliffs composed primarily of compacted sand, silt and gravel.

Other than in the near surface environment, most of the stratigraphic column is saturated. Aquifers are hosted in coarser sediments, such as sand, gravel, and to lesser extent, sand mixed with silt. On Vashon/Maury Island three aquifers are generally recognized. These are from youngest to oldest, the Perched Aquifer, the Principal Aquifer, and the Deep aquifer.

The Perched Aquifer is hosted in recessional outwash sands and gravels (Qvr) deposited by the retreating Puget Lobe of the Cordilleran Ice Sheet (approximately 13,000 to 10,000 years before present). The Principal Aquifer (also called the Vashon Aquifer) is hosted by advance outwash sand and gravel (Qva) that formed along the leading edge of the Puget Lobe as the ice sheet expanded southward during the last glacial period (approximately from 23,000 to 13,000 years before present). The Deep Aquifer is hosted in non-glacial (Qoc) and glacial (Qpf) sands and gravels that predate the most recent (Fraser) glaciation.

Well logs submitted to Ecology by Gold Beach and others in the immediate vicinity of the Gold Beach Community suggest that the wells currently used to supply the community are completed at a depth of 113 feet in coarse sand and gravel. The aquifer host for the two Gold Beach wells appears to correlate with a unit referred to as the Olympia Beds (Qoc), a non glacial sand and gravel unit deposited between 70,000 and 23,000 years before present.

Two other wells approximately 1/4 mile north of the Gold Beach community are completed at 465 feet and 520 feet. In the one well for which a log is available, the completion aquifer appears to be a deeper aquifer (Qpf) than that utilized by the Gold Beach wells. Two deeper aquifers were encountered in this one well. The first is encountered at a depth of 425 feet (elevation 65 feet above sea level) and the second at a depth of 510 feet (elevation 150 below sea level). The first of these is likely the Olympia Beds (Qoc) and the Second a pre-Fraser glacial sediment hosted aquifer (Qpfc).

A thick sequence of clay separates the Qva from non-glacial sands and gravels of the Olympia beds (Qob). Discontinuous lenses of sand are encountered within the clay deposits beneath the Qva on Vashon/Maury Island and elsewhere in the Puget Sound region. These are referred to as the Transitional Beds (Qtb) and represent deposition during the transition that occurred prior to the last ice advance of the Fraser Glaciation.

Two wells are currently used by Gold Beach; wells 1 and 2 (Table 4). The depth reported by DOH for these wells is 108 feet. This does not match the well log on file with Ecology, which reports a depth of 113.7 feet for well completion. The shallower depth reported by DOH likely refers to the depth of the bottom of the screened interval. Ecology records do not include a copy of the log for Well #2. The description of the completion interval appears to correlate with channel gravels formed in a fluvial or deltaic environment.

Well logs indicate that a clay layer which elsewhere underlies the cliffs (Qva) on the eastern shore of Maury Island is missing in the lower Gold Beach area. The lower Gold Beach area appears to lie on top of a fan

deposited by landslide. The lack of the clay interval (Lawton Clay or Qvl) would imply that this layer is either mixed in with Qvr sands of the fan or were moved beyond the fan and into Puget Sound during the landslide that formed the fan.

Water quality analyses at the time the well was constructed (reported as soft water in 1965) and more recent issues with elevated nitrates, suggest rapid recharge from rainfall and/or short residence time of groundwater, as well possible interaction between septic return flows and the aquifer.

Table 4: DOH Source Information					
Source 01 - WELL # 1 AFJ059					
Source Status	Active	**Usage**	Seasonal	**WRIA**	Kitsap
Type	Groundwater Well	**Capacity (gpm)**	80	**Township**	22
Effective Date	1/1/1970	**Treated**	Yes	**Range**	03E
Inactive Date		**Metered**	Undefined	**Section**	28
DOE Well Tag No.	AFJ059	**Well Depth (ft)**	108	**Qtr/Qtr Section**	NWNE
Source 02 - WELL # 2 AFJ060					
Source Status	Active	**Usage**	Permanent	**WRIA**	Kitsap
Type	Groundwater Well	**Capacity (gpm)**	175	**Township**	22
Effective Date	1/1/1970	**Treated**	Yes	**Range**	03E
Inactive Date		**Metered**	Undefined	**Section**	28
DOE Well Tag No.	AFJ060	**Well Depth (ft)**	108	**Qtr/Qtr Section**	NWNE

Potential for Impairment

Changes to a water right must not impair existing rights, including minimum instream flows established though RCW 90.22 or RCW 90.54. Vashon/Maury Island lies within the boundaries of Kitsap Water Resource Inventory Area (WRIA 15). There are no instream flows established for streams on Maury Island.

The proposed change will result in the new point of withdrawal being marginally closer to a junior water right represented by an exempt well serving a single home. The private well is completed at a depth that would likely be impacted by the proposed new well, but the probability of draw downs capable of impairing the ability of the well to provide for a single home is not significant. If the change is approved for a lesser quantity it will likely have a lesser overall impact. In addition it should be noted that the homeowner has indicated that he is interested in connecting to Gold Beach Water Company system. Any potential for impairment therefore can be mitigated by connecting this home to the Gold Beach system.

Public Interest Considerations

The Water Resources Act of 1971 (RCW 90.54) represents a clear statement of the public's interest in managing and protecting waters of the state for the benefit of people, industry, wildlife, aesthetic, recreational, and environmental purposes and values.

The Instream Resource Protection Plan for WRIA 15 was adopted in 1981 under the authority granted to Ecology in RCW 90.54. Minimum instream flows were adopted for many streams in WRIA 15, but none were adopted for streams on Vashon/Maury Island. Numerous streams were also closed for further appropriation, including Judd, Fisher, Christiansen (named Jod Creek in the rule), Needle and Shingle Mill Creek on Vashon Island. No streams were closed to further appropriation on Maury Island.

The Vashon/Maury Island community is particularly aware of the limitations to water resources imposed by their isolation from sources of recharge. All water, surface and ground, on Vashon/Maury Island originates as precipitation. The approximately 15 to 25% of precipitation that recharges the islands' aquifers support stream base flows and springs. Over appropriation of groundwater would likely have an adverse impact on stream flows where the groundwater supports stream flows.

However there are no known streams located in the vicinity of the Gold Beach community. Springs are known exist near the base of the steep slopes located to the north and south of Gold Beach, but the geological setting of the community indicates that the conditions are not suitable for springs there (the basal clay unit that causes springs is not present). Groundwater in the area discharges directly or indirectly to Puget Sound without interacting with streams.

The water duty that was applied when permit 6471 was issued in 1964 did not reasonably limit annual quantities to a feasible build out. The permit was issued for 256 acre-feet, which is roughly what could theoretically be produced by constant pumping at maximum Qi (160 gpm) for an entire year.

Since the maximum build out is not expected to exceed 238 connections, it would not reasonable to approve the change with the original unrealistic and unnecessary annual quantity. An annual quantity of 100 acre-feet would allow full development of Gold Beach community using a duty of 350 gpd per connection.

Since it is likely that the full build out 238 connections can be adequately served using just one of the two permits, both Ecology and the applicant should consider cancelling permit 6470 (G1-*06693P) when its development schedule comes due in 2014.

It does not appear that the public interest would be negatively impacted by withdrawals of groundwater from the new point of withdrawal as proposed herein.

Consideration of Protests and Comments

No protests were filed against this application.

CONCLUSIONS

The proposal here is to amend the place of use of Permit 6471 (Tracking No. G1-*06694P) and the location of authorized points of withdrawal to conform with the existing service area and supply needs of the Gold Beach community.

The facts as investigated and presented herein, support a finding that the proposal will not impair existing water rights, that water use for Community Domestic Supply is beneficial, and will not prove detrimental to the public interest. Further, it is determined that the proposed new well will tap the same the body of public groundwater and will not enlarge the right as granted in the original permit.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change to Permit 6471 (Tracking No. G1-*06694P) 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:

- 160 gpm
- 100 acre-feet per year
- Community Domestic Supply

Point of Withdrawal

Existing wells (Well #1 and Well #2), located within the SW1/4 of the NE1/4 and the NW1/4 of the NE1/4, both in Section 28, T22N, R03E, W.M.

A new well (Well #3) located within the SW1/4 of the SE1/4 of Section 21, T22N, R03E, W.M.

Place of Use

As described on Page 1 of this Report of Examination.

Since the present investigation has shown that the needs of the Gold Beach community can be adequately served by groundwater permit 6471 (G1-*06694P) as recommended for approval herein, it is further recommended that Ecology and the applicant, in consultation with DOH, should consider cancellation of Gold Beach groundwater permit 6470 (G1-*06693P) when its current development period expires in 2014.

Report by: Douglas H. Wood December 1, 2009

Douglas H. Wood, P.Geo., LHG
Water Resources Program

Date

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952
Licensed Geologist
DOUGLAS H. WOOD

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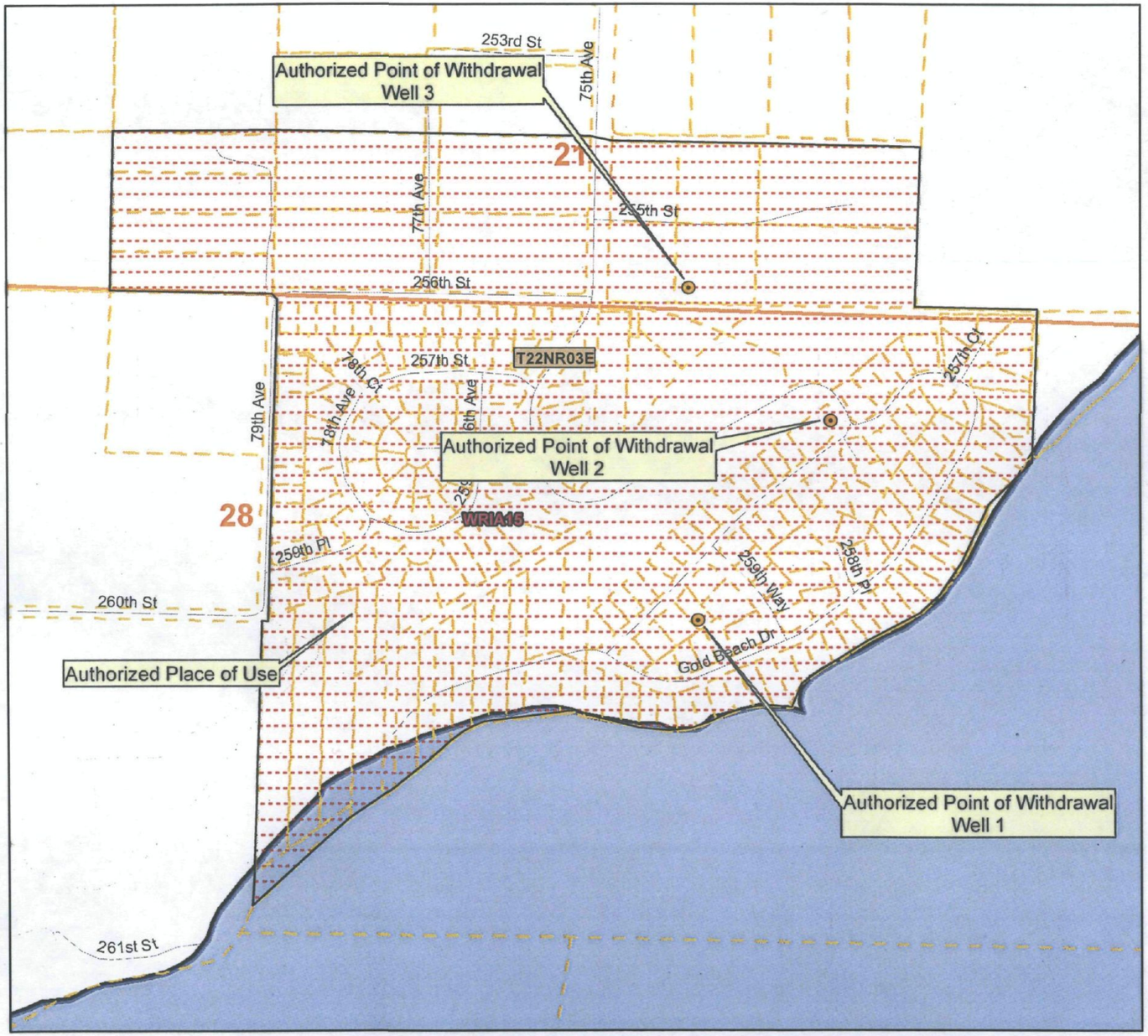
Gold Beach Water Company
Permit Number CG1-*06694PWRIS
Sec.21 & 28, T 22N, R 03E W.M.
WRIA 8 - King County

DEPARTMENT OF ECOLOGY
State of Washington



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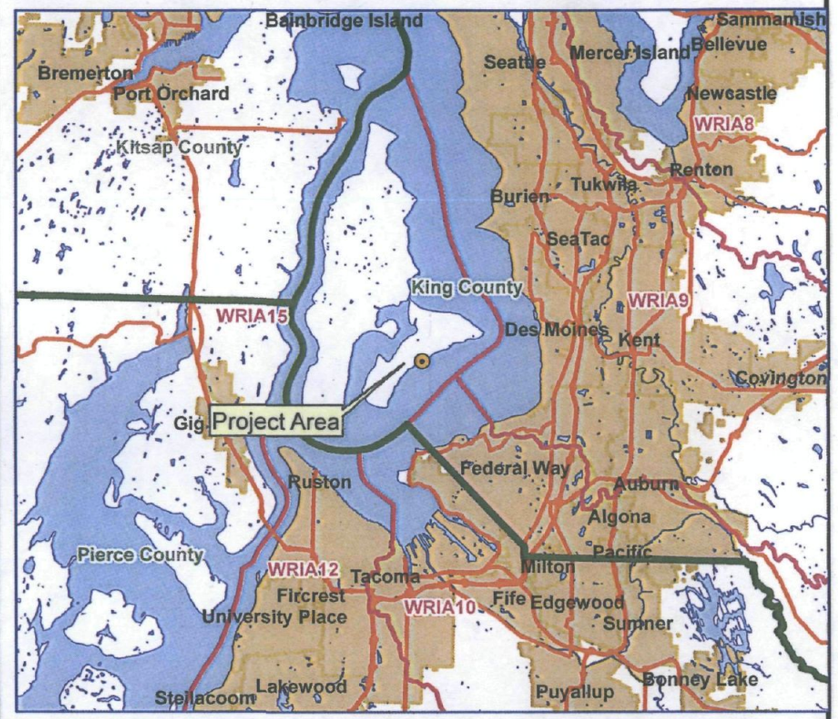

5 2.5 0 5 10 Miles

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.'

Attachment 1