



State of Washington
**REPORT OF EXAMINATION
FOR TRUST WATER RIGHT**

| | | | |
|--|--------------------------------------|--|------------------------------------|
| PRIORITY DATE 12/9/1926 | WATER RIGHT NUMBER SWC5735 | BEGIN TRUST TERM 2014 | END TRUST TERM PERMANENT |
| WATER RIGHT OWNER DEPARTMENT OF ECOLOGY SOUTHWEST REGIONAL OFFICE PO BOX 47775 OLYMPIA, WA 98504-7775 | | APPLICANT WASHINGTON WATER TRUST-SEATTLE 1530 WESTLAKE AVE N STE 400 SEATTLE WA 98109-3011 | |

Purpose and Quantity

Trust water right for the purpose of instream flow, with quantities allocated to primary reach in the following manner.

| Period | Primary Reach | |
|---------------------|---------------|---------------|
| | Flow (cfs) | Acre-feet |
| 05/01 -10/01 | 0.07 | 134.19 |
| ANNUAL TOTAL | | 134.19 |

“Primary reach” means that portion of a water body that benefits from both the former consumptive use and former return flow waters of a water right. Because of the location of this water right relative to marine water, there are no secondary reaches associated with this Trust Water donation.

Trust Water Right Place of Use

| | | | |
|---------------------------------|------------------------------------|------------------------|---|
| WATERBODY Johns Creek | TRIBUTARY TO Oakland Bay | COUNTY Mason | WATER RESOURCE INVENTORY AREA 14-Kennedy-Goldsborough |
|---------------------------------|------------------------------------|------------------------|---|

| REACH | WATERBODY | RIVER MILE | TWN | RNG | SEC | QQ Q | LATITUDE | LONGITUDE |
|---------------------|-------------|------------|-----|-----|-----|-------|----------|------------|
| Begin Primary Reach | Johns Creek | 0.25 | 20N | 3W | 3 | SE SE | 47.24741 | -123.04332 |

Latitude/Longitude Coordinates may approximate reach segments. Datum: NAD83/WGS84

Provisions

This trust water right has a priority date of December 9, 1926 and is protected from impairment by junior appropriators. It is being issued with the intent to permanently augment flows already protected under Chapter 173-514 WAC and is not available for re allocation.

Findings of Facts and Decisions

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 detrimental to the public interest.

Therefore, I ORDER the requested change of place and purpose of use under Trust Water Right Application No. CS2-SWC5735@1 be approved subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

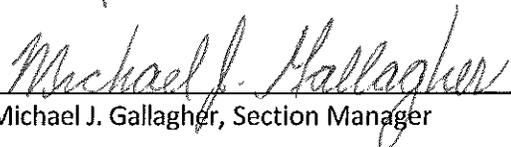
To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

| Street Addresses | Mailing Addresses |
|--|---|
| 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 RD SW Ste 301 Tumwater, WA 98501 | Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903 |

Signed at Olympia, Washington, this 26th day of May 2015.


Michael J. Gallagher, Section Manager

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

Description and Purpose of Proposed Change

On April 24, 2014, Amanda Cronin, representing Washington Water Trust (WWT), filed Trust Water Application CS2-SWC5735@1 to place surface water rights associated with Bayshore Golf Course into permanent Trust. Surface Water Certificate (SWC) 5735 allowed diversion of water from Johns Creek for irrigation of 40 acres as well as domestic supply and gravel washing.

This application qualifies for expedited processing under WAC 173-152-050(3)(a) whereby water right change applications may be processed prior to applications submitted at an earlier date when the proposed water use, if approved, would substantially enhance or protect the quality of the natural environment.

Surface Water Certificate (SWC) 5735 and Proposed Change

Table 1. Summary of Existing Attributes and SCS2-SWC5735@1

| Attributes | | Authorized | Trust Donation |
|---|--|---|-----------------------|
| Name | | Bayshore Inc. | Department of Ecology |
| Priority Date Date of Application for Change | | December 9, 1926 | April 28, 2014 |
| Instantaneous Quantity cubic feet per second (cfs) | | 2.56 | 0.7 |
| Annual Quantity Acre-feet (Ac-ft) | | Not specified | 134.19 Ac-ft |
| Source | | Johns Creek Spring Creek | Johns Creek |
| Purpose of Use | | Domestic supply Gravel washing Irrigation of 40 acres | Instream Flow |

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change.

Public Notice

RCW 90.42.040(5) requires notice of a trust water right application be published once a week for two consecutive weeks in a newspaper of general circulation in the county where the water is being diverted and used. An original public notice for this trust application was posted in *Shelton-Mason County Journal*, published in Mason County, beginning October 30 and ending November 6, 2014. The Department of Ecology did not receive any protests or letters of concern in response to this notice.

State Environmental Policy Act (SEPA)

A SEPA determination evaluates if a proposed withdrawal will cause significant adverse environmental impacts. A SEPA threshold determination is required for:

- 1) Surface water applications for more than 1 cubic feet per second (cfs). For agricultural irrigation, the threshold increases to 50 cfs, if the project isn't receiving public subsidies.
- 2) Groundwater applications requesting more than 2,250 gpm.
- 3) Projects with several water right applications where the combined withdrawals meet the conditions listed above.
- 4) Projects subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA).
- 5) Applications that are part of several exempt actions that collectively trigger SEPA under WAC 197-11-305.

This application does not meet any of these conditions and is categorically exempt from SEPA.

Water Resources Statutes and Case Law

The primary authority for trust water is Chapter 90.42 RCW. A trust water right, as defined in Chapter 90.42 RCW is any water right acquired by the state for management in the State's Trust Water Right Program. Trust water rights acquired by the state shall be held or authorized for use by the department for instream flows or other beneficial uses.

However, in order to place a water right in permanent trust, Ecology is required to change the purpose of the water right under RCW 90.03.380. RCW 90.03.380(1) states a water right put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed as long as other water rights are not impaired.

The Washington Supreme Court has held that Ecology is required to make a tentative determination of extent and validity of the claim or right when processing an application for change to a water 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*).

INVESTIGATION

The material reviewed in support of this application included the following:

- The State Surface Water Codes, administrative rules, and policies.
- Department of Ecology's Water Right Tracking System (WRTS) database.
- Topographic and local area maps.
- Information submitted with the application.
- Notes from a site visit on February 26, 2015.

Project Location and Site Description

Bayshore Golf Course is situated at the mouth of Johns Creek in Mason County, near the terminus of Oakland Bay, northeast of Shelton.

See Attachment #1

Bayshore Golf Course was constructed in 1931 and operated from around 1948 to 2014, when it was purchased by Capitol Land Trust (CLT). Washington Water Trust (WWT) took title to the water right to place it in the Trust Water Program for instream flow benefit. The golf course property is managed by the CLT.

Other Rights Appurtenant to the Place of Use

Water Right Claim 116124 was filed in June 4, 1974 claiming 1.92 cfs and 780 ac-ft per year from Johns Creek for golf course irrigation. This claim was filed after SWC 5735 was issued and has the same place of use. The face of the claim also states first use was December 1926, after the Surface Water Code (RCW 90.03) was enacted. Historical information provided by Washington Water Trust conflicts this first use date. However, only Superior Court can confirm the validity of a claim through an adjudication. Because both Water Right Claim 11625 and SWC 5735 cover the same place of use, filing the claim appears to be duplicative. Following the approval of this Trust Water Application, Ecology will reject Water Right Claim 11625.

Hydrologic Evaluation

Johns Creek originates from Johns Lake and Munson Lake, at an elevation of roughly 425 feet above mean sea level (msl). The watershed drains roughly 11 mi² of glacial drift plains and outwash plain before it empties into Oakland Bay roughly 3 miles northeast of Shelton. Wetlands and springs contribute to late summer baseflow and year round groundwater discharge. (Golder, 2015)

History of Water Use

Bayshore Golf Course was irrigated exclusively with surface water from Johns Creek from roughly 1938 until it closed in early 2014. Although SWC 5735 identified the source to be Spring Creek, the active diversion in use when Washington Water Trust acquired the property was on Johns Creek. It is not known when the change in point of diversion occurred. Based on air photos, total irrigated area was roughly 23 acres.

Photographs of the pump in use at the time of CLT's purchase of the golf course show a pump with a 6" delivery and conveyance main line from the diversion in Johns Creek. Although the pump had been removed at the time of the field exam on February 26, 2015, timers for the sprinkler system were still present. Several of the golf course buildings had been demolished and planting and restoration of some portions of the golf course had begun.

WWT was unable to provide any information regarding the last use of water for gravel washing or for domestic supply. Domestic water for the club house at the golf course was provided by a well.

Tentative Determination

Water Use Calculations

Water use from Johns Creek was not metered; however power records from a dedicated power meter were used by WWT to estimate annual and maximum instantaneous water use using the following formula:

$$\text{Gallons Pumped} = \frac{318,600 \times \text{KWH} \times \text{pump efficiency estimate} \times \text{motor efficiency estimate}}{\text{Total Dynamic Head (TDH)}}$$

$$\text{TDH (ft)} = \text{Elevation gain to outlet pipe (5 feet)} + \text{friction losses (10 feet)} + 2.31 \text{ ft/psi} \times \text{Pressure (psi)} \text{ (25 psi)}$$

KWH= Kilowatt hours

Power records show the maximum annual quantity pumped from 2008 to 2012 ranged from 72.16 to 134.19 ac-ft, depending on the pump and motor efficiency. Pump and motor efficiencies are assumed to be the same. This information is summarized in Table 2.

Table 2. Water use calculations using power records for 2008 through 2012.

| Year | Power use KWH | Ac-ft/year 55% efficiency | Ac-ft/year 65% efficiency | Ac-ft/year 75% efficiency* |
|---------|------------------|------------------------------|------------------------------|-------------------------------|
| 2008 | 15780 | 64.15 | 89.60 | 119.30 |
| 2009 | 17750 | 72.16 | 100.79 | 134.19 |
| 2010 | 12429 | 50.53 | 703.58 | 93.96 |
| 2011 | 13787 | 56.05 | 78.29 | 104.23 |
| 2012 | 17355 | 70.56 | 98.55 | 131.20 |
| Maximum | 17750 | 72.16 | 100.79 | 134.19 |

*Most well-maintained pump and motor systems sized to maximum flow efficiency operate closer to 75%.
Source: WWT, 2015

The highest use period (from July 27, 2012 to August 29, 2012) and consumption of 6,062 KWH equates roughly to 169 gpm (0.376 cfs, 55% efficiency) or 314 gpm (0.7 cfs, 75% efficiency). The conveyance and delivery system at Bayshore utilized a 6" pipe which corresponds to a pumping rate between 0.4 to 1 cfs. Records kept at the golf course show the most likely operated at maximum flow efficiency rate (75%) which would have produced an instantaneous quantity of 0.7 cfs and an annual amount of 134.19 ac-ft. (WWT, 2015)

Conclusions

In accordance with RCW 90.03.380 and Chapter 90.42 RCW, I find the proposed changes in purpose from irrigation to instream flow and placing it in the Trust Water Program is a beneficial use of water. Further, the proposed transfer of water to the Trust Water program will not impair existing water rights.

Recommendations

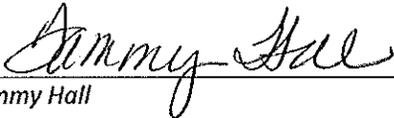
Based on the above investigation and conclusions, I recommend Trust Water Right CS2-SWC5735@1 be approved for placement in the state's Trust Water Program within the limits listed below and the provisions listed at the beginning of this Report of Examination.

Purpose of Use and Authorized Quantities

- 0.7 cfs
- 134.19 ac-ft
- Instream flow

Primary Reach

- River mile 0.25 of Johns Creek to the mouth where it empties into Oakland Bay.



Tammy Hall

Date

5/21/2015

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.

References

Washington Water Trust, 2014, *Annual Water Use Estimates from Bayview Golf Course Pump Records*. March 20, 2014.

Golder Associates, Inc, 2015, *Johns Creek and Goldsborough Creek Groundwater Modeling Study: January 2015 Report*. January 2015.

Water Duty

The water duty of a crop is the sum of crop requirements, irrigation efficiency, evaporative losses, and return flows. Using standard methodology in Ecology Guidance Document 1210 and the Washington Irrigation Guide (WIG), water duty to grow 23 acres of turf at Bayshore Golf Course using sprinklers would be roughly 41.04 ac-ft/yr, the consumptive portion being 36.94 ac-ft. This information is summarized in Table 3.

Table 3. Water Duty for SWC 5735

| #of acres | Crop Requirement inches/ac (WIG) | Total Crop Requirement (ac-ft/yr) | Efficiency/ % evaporated | Total consumed (ac-ft/yr) | Return flows (ac-ft/yr) | Water Duty (ac-ft/yr) |
|-----------|----------------------------------|-----------------------------------|--------------------------|---------------------------|-------------------------|-----------------------|
| 23 | 16.06 | 30.78 | 75%/15% | 36.94 | 4.10 | 41.04 |

Trust Water Right Calculations

Water use estimates from power records shows 0.7 cfs (314 gpm) and 134.19 ac-ft was used under SWC 5735. Since the consumptive portion of the water was only 36.94 ac-ft, irrigation return flows of 97.25 ac-ft would have reentered the surface and groundwater flow system.

Typically, water use in excess of the annual consumptive quantity of a crop would not be considered to be a beneficial use and eligible to be placed in the Trust Program, especially since excess would be seen as return flows. However, since Bayshore is bounded by the waters of Oakland Bay, return flows were likely to be direct discharge to marine water and not to flows in Johns Creek. Because of this relationship, actual benefits to flow in Johns Creek will be much greater than 36.94 ac-ft, the consumptive portion of the water right. It is for this reason the entire pumped quantity is seen as being eligible to be placed in the Trust Program. However, realizing the point of diversion was likely tidally influenced, direct benefit to stream flow would be more apparent during low tide.

Primary Reaches

The reach that will benefit from placing SWC 5735 in the Trust Program will be the length of Johns Creek from the point of diversion to the mouth of the creek where it enters Oakland Bay.

Water Right impairment analysis

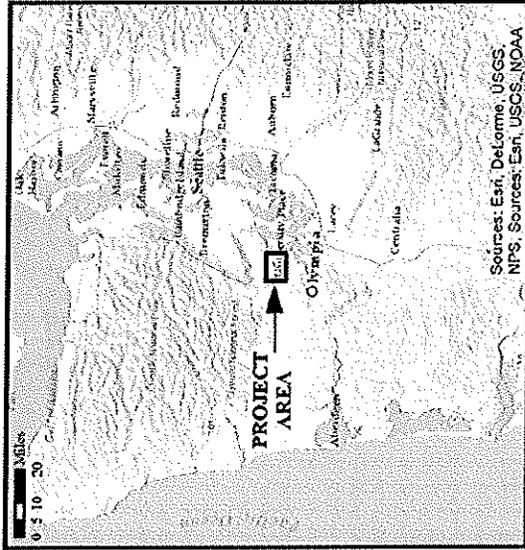
Placing SWC 5735 in the Trust Water Program will not impair area water uses. There are no groundwater users between the diversion and marine water who may have benefited from the irrigation return flows from water applied at the golf course.

Public Interest Considerations

RCW 90.42.040 (4) states that the exercising of a trust water right can be authorized only if the department first determines neither water rights existing at the time the trust water right is established nor public interest is impaired. Exercising SWC 5735 as a trust water right will increase flows from the point of diversion downstream to the mouth of Johns Creek.

ATTACHMENT 1

Water Right Number
CS2-SWC5735@1
Sec. 3 T. 20 N. R. 3 W. W.M.
WR1A 14 - Mason County



Sources: Esri, DeLorme, USGS,
NPS, Sources: Esri, USGS, NOAA

Basemap - ESRI Terrain

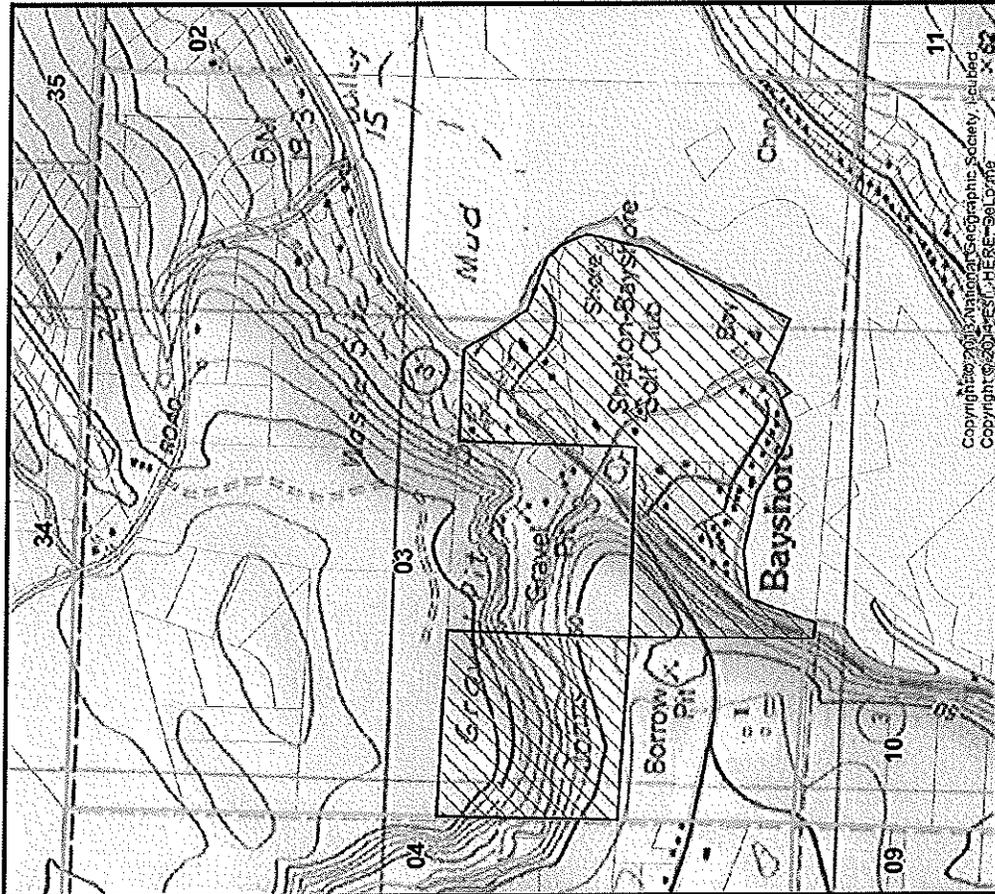
Legend

- POINT OF DIVERSION (POD)
- PLACE OF USE (POU)
- SECTION LINES
- MASON CO PARCELS

Comments:

The Washington State Department of Ecology does not warrant, guarantee, or make any representations regarding the use of, or results from the use of the data in terms of correctness, accuracy, reliability, or otherwise.

Map Created 2/16/2012



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Basemap - ESRI US Topo Map



