



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPROVED
TRUST WATER RIGHT
REPORT OF EXAMINATION
(PORTION OF ORIGINAL WATER
RIGHT PLACED INTO TRUST)
Change of Purpose and Place of Use
WRTS File #: CS1-*62085ATJ@1
RECORD B

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
1884			Volume XI page 85

NAME OF PARTY CONVEYING RIGHT TO TRUST WATER RIGHTS PROGRAM
Orcas Water Holdings, LLC

ADDRESS/STREET	CITY/STATE	ZIP CODE
2722 Fairmont Street	Dallas, TX	75201

NAME OF PARTY RIGHT IS BEING CONVEYED TO
Washington State Trust Water Rights Program (Administered by the Department of Ecology)

MAILING ADDRESS	CITY/STATE	ZIP CODE
PO Box 47600	Olympia, WA	98504-7600

TRUST WATER RIGHT ATTRIBUTES

SOURCE
Cascade Creek

TRIBUTARY OF (IF SURFACE WATERS)

Buck Bay	
MAXIMUM CUBIC FEET PER SECOND (cfs)	MAXIMUM ACRE FEET PER YEAR (ac-ft/yr)
0.25 - June, July, August	105.9
0.50 - September, October	

TYPE OF USE, PERIOD OF USE
Permanent instream flow purposes, June 1 – October 31 of each year

HISTORICAL POINT OF DIVERSION and AFFECTED REACH

APPROXIMATE LOCATION OF HISTORICAL DIVERSION
258 feet south and 337 feet west from the northeast corner of Section 5

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE [E. or W.] W.M.	WRIA	COUNTY
NE 1/4 of Government Lot 1	5	36 North	1 West	2	San Juan
PARCEL NUMBER	LATITUDE	LONGITUDE	DATUM		
160511001000	48.6445	-122.8372	NAD83		

The affected reach of stream is from the historical point of diversion downstream to the mouth of Cascade Creek at Buck Bay (see Attachment 1).

PROJECT SUMMARY

One-half of the dry season water right currently authorized for use by Orcas Water Holdings is being transferred to the Trust Water Rights Program. This water will not be diverted from the historical point of diversion, but will instead be left permanently in Cascade Creek for instream flow purposes.

**PORTION OF WATER RIGHT
NOT PLACED INTO TRUST
WRTS File #: CS1-*62085ATJ@1
RECORD A**

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
1884			Volume XI page 85

NAME Orcas Water Holdings, LLC		
ADDRESS/STREET	CITY/STATE	ZIP CODE
2722 Fairmont Street	Dallas, TX	75201

WATER RIGHT ATTRIBUTES

SOURCE
Cascade Creek (diverted into storage in Cascade Lake)

TRIBUTARY OF (IF SURFACE WATERS)
East Sound (receives the tailrace water from the hydropower plant and spillway water from Cascade Lake Dam)

MAXIMUM CUBIC FEET PER SECOND (cfs) FROM CASCADE CREEK*	MAXIMUM ACRE FEET PER YEAR (ac-ft/yr) FROM CASCADE CREEK
3.0 - January, November, December 2.0 - February, March 1.5 - October 1.0 - April, May 0.75 - June 0.50 - September 0.25 - July, August	974.1 ac-ft/yr for hydroelectric power 124 ac-ft/yr for domestic** 1098.1 ac-ft/yr total for both uses

TYPE OF USE, PERIOD OF USE
Hydroelectric power and community domestic use – year round as needed

*This right also authorizes the diversion of 0.359 cfs for community domestic supply and 2.084 cfs for hydroelectric power supply from the stored waters of Cascade Lake.

** Of the 124 ac-ft/yr for community domestic use, 90 ac-ft/yr is owned by Orcas Water Holdings, 34 ac-ft/yr (and 0.0914 cfs) is owned by Washington Water Service Company.

LOCATION OF DIVERSION

APPROXIMATE LOCATION OF CURRENT DIVERSION
258 feet south and 337 feet west from the northeast corner of Section 5

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE [E. or W.] W.M.	WRIA	COUNTY
NE 1/4 of Government Lot 1	5	36 North.	1 West	2	San Juan
PARCEL NUMBER	LATITUDE	LONGITUDE		DATUM	
160511001000	48.6445	-122.8372		NAD83	

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED
[See Attachment 1 for a map of the place of use and point(s) of diversion or withdrawal]

The place of use of the hydroelectric power portion of this water right is as follows:

Government Lots 1, 2, 3, 4 and 5 of Section 6, T36N, R1W, W.M.; All of Section 31 except the NW1/4 NW1/4 and that portion lying within Moran State Park, T37N, R1W, W.M.; SE1/4 SE1/4 SW1/4, N1/2 SW1/4, S1/2 NW1/4, and that portion of Government Lot 4 lying north of the county road, of Section 30, T37N, R1W, W.M.; NW1/4 SW1/4, SW1/4 SW1/4, SE1/4 SW1/4, of Section 5, T36N, R1W, W.M.; Government Lots 1 and 2, of Section 36, T37N, R2W, W.M.; Those portions of Government Lots 2 and 3, of Section 25, lying east of county road, T37N, R2W, W.M.

The place of use of the community domestic portion of this water right is the area served by Washington Water Service Company within:

W1/2 of Section 5, T36N, R1W; W1/2 of Section 8, T36N, R1W; N1/2 of Section 6, T36N, R1W; SE1/4 of Section 6, T36N, R1W; SE1/4 of Section 30, T37N, R1W; SW1/4 of Section 30, T37N, R1W; S1/2 NW1/4 of Section 30, T37N, R1W; All of Section 31, T37N, R1W; E1/2 SE1/4 of Section 25, T37N, R2W; SE1/4 NE1/4 of Section 25, T37N, R2W; E1/2 NE1/4 of Section 36, T37N, R2W; NE1/4 NE1/4 of Section 36, T27N, R2W, W.M.

DESCRIPTION OF EXISTING WATER SYSTEM

Water diverted from Cascade Creek (by gravity) is sent through a pipe and then an open ditch to Cascade Lake. The water is then stored in Cascade Lake for eventual use for domestic and hydroelectric power purposes.

Community domestic supply – pumped from Cascade Lake by 20 hp and 15 hp pumps (one as backup), 8” and 4” pipes to treatment plant, and then into the distribution system.

Hydroelectric power supply – 10” penstock from Cascade Lake dam to the powerhouse on the grounds of the Rosario Resort.

DEVELOPMENT SCHEDULE FOR RECORD A AS PER THE CHANGE AUTHORIZATION ISSUED ON OCTOBER 21, 2008

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
Project begun	March 13, 2023	March 13, 2033

PROVISIONS

Trust water right provisions (Record B)

The Department of Ecology and the Washington Water Trust agree to subordinate the priority of this trust water right to those water rights of equal priority date described in Volume XI page 85 that are or will be changed to serve domestic or municipal purposes for property on Orcas Island. See Exhibit B of the Conveyance of Water Rights and Subordination Agreement to Buyer recorded in the real property records of San Juan County and in the water right file for this change authorization.

Transfer of ownership of Record B (from Orcas Water Holdings, LLC to the Trust Water Rights Program) shall occur no later than sixty (60) days following the approval of this Report of Examination, unless the Report of Examination is appealed, in which case the transfer shall occur no more than sixty (60) days following termination of such appeal(s).

Provisions of the portion of water right not placed into trust (Record A)

The following provisions were copied from the October 21, 2008, change decision made on the subject water right:

A proof of appropriation for the water use being granted in this report will be submitted when community domestic use has reached its final level of 283 ac-ft/yr. Note that this authorization does not convey legal title to Washington Water Service Company to any of the water rights, which must be negotiated and obtained directly from the legal owner, Orcas Water Holdings, LLC. At the time of this decision, Ecology understands that Washington Water Service Company has acquired legal title to 159 ac-ft/yr, 192 gpm of Volume XIII page 2, 34 ac-ft/yr, 41 gpm of Volume XI page 85 (the subject right), and 193 acre feet of storage rights in Cascade Lake from Volume XIII page 1.

Under RCW 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be emphasized in the management of the State's water resources, and must be considered as a potential new source of water. To that end, the diversion weir on Cascade Creek must be improved or replaced so it clearly and accurately measures the amount of water diverted from the creek with an accuracy of plus or minus 10% of the actual diversion amount, as per the requirements of WAC 173-173-130. The piping leading from the weir to the diversion ditch, and the ditch itself between Cascade Creek and Cascade Lake must be improved so that it prevents an unreasonable conveyance loss over its entire length. These improvements must be made such that any streams currently entering the ditch that would otherwise flow into the Cascade Creek basin must be able to freely flow into that basin. This work must be completed by no later than August 31, 2011, and the applicant shall provide notice to Ecology of the completion of the repair work along with evidence of the amount of conveyance losses following the completion of repairs. Ecology may inspect the diversion and ditch and issue enforcement orders if it finds that the conveyance losses continue to exceed a reasonable amount.

This diversion shall comply with any and all applicable sections of chapter 173-173 WAC not specifically mentioned in these provisions. Water diversion data shall be recorded weekly and shall be submitted annually to Ecology by January 31st of each calendar year as per WAC 173-173-060.

A staff gauge that displays the lake level in feet above msl shall be maintained at the dam on Cascade Lake.

Release and/or use of stored waters shall be conditioned to maintain a level in Cascade Lake of no less than 347 feet above mean sea level (msl) in years of average or greater than average precipitation (29.22” at Olga) and no less than

345 feet above msl during low runoff years. Hydropower operations shall be curtailed at lake levels of no less than one foot above minimum in order to conserve stored waters for domestic purposes. To facilitate management, the "water year" from October 1 through September 30 should be used in making operational plans and estimates of water availability. Failure to maintain minimum lake levels may result in civil actions such as administrative orders and/or penalties.

This permit does not relieve the applicant of any other applicable requirements of state or federal law, including Section 23 of the Federal Power Act (16 U.S.C. 791a-825r).

The applicants are advised that this change decision is their authorization to appropriate for hydroelectric power and domestic supply purposes in the quantities set forth above, but that a final superseding certificate will issue for only that quantity of water that has been diverted and applied to actual beneficial use. Such quantity applied to actual beneficial use under this authorization shall not exceed the quantity specified in this report of exam and will be calculated on the basis of the best information available to Ecology, including metering data and/or water duty analysis.

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 subject right to be in good standing and the change of water right as recommended will not be detrimental to existing rights.

Therefore, I ORDER the requested change of place and purpose of use under Trust Water Right Application for Volume XI page 85, be approved subject to existing rights and the provisions specified above.

You have the right to appeal this order to the Pollution Control Hearings Board. Pursuant to RCW 43.21B, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty days of the date of your receipt of this document.

To appeal this order, your notice of appeal must contain a copy of the Ecology order you are appealing.

Your appeal must be mailed to:
The Pollution Control Hearings Board
PO Box 40903
Lacey WA 98504-0903

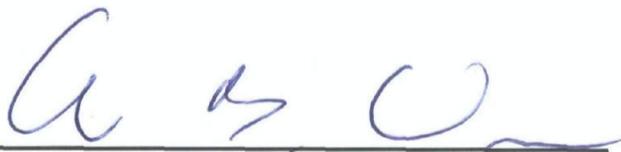
OR Hand Deliver your appeal to:
The Pollution Control Hearings Board
4224 - 6th Ave SE Rowe Six, Bldg 2
Lacey WA 98503

AND

Your appeal must also be served on:
The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia WA 98504-7608

In addition, send a copy to:
Andrew B. Dunn, Section Manager
Water Resources Program
Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008

Signed at Bellevue, Washington, this 25th day of AUGUST, 2009.



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

INVESTIGATOR'S REPORT
by Buck Smith - Senior Hydrogeologist

BACKGROUND

Proposed change

Orcas Water Holdings, in conjunction with the Washington Water Trust, is requesting a change in purpose of use and place of use of a portion of the instantaneous and annual quantities authorized by adjudicated certificate Volume XI page 85. The request is to change a portion of the existing right from hydroelectric power production to permanent instream flow purposes, with the intent of conveying the changed portion to the Washington State Trust Water Rights Program (TWRP).

The existing water right will be split into two records (Records A and B). Record A will be retained by Orcas Holdings, LLC for community domestic supply (partially shared with Washington Water Service Company) and hydroelectric purposes. Record B will be transferred to the TWRP for the purposes of instream flow protection for the benefit of fish and wildlife and for the benefit of public enjoyment in Moran State Park (and downstream).

Priority processing

The subject 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.

Attributes of the existing water right and proposed changes

Attributes	Documented	Proposed
Name	Orcas Water Holdings, LLC <i>(A portion of the community domestic supply is owned by Washington Water Service Company)</i>	<u>Record A</u> Orcas Water Holdings, LLC <i>(A portion of the community domestic supply is owned by Washington Water Service Co.)</i> <u>Record B</u> Washington State Trust Water Rights Program
Priority Date	1884	<u>Record A</u> 1884 (Senior) <u>Record B</u> 1884 (Junior)
Date of Application for Change	May 14, 2009	--
Instantaneous Rate from Cascade Creek	3.0 cfs - January, November, December 2.0 cfs - February, March, October 1.0 cfs - April, May, June, September 0.50 cfs - July, August	<u>Record A</u> 3.0 cfs - January, November, December 2.0 cfs - February, March 1.5 cfs - October 1.0 cfs - April, May 0.75 - June 0.50 cfs - September 0.25 cfs - July, August <u>Record B</u> 0.25 cfs - June, July, August 0.50 cfs - September, October
Annual Volume & Purpose of Use from Cascade Creek	1080 ac-ft/yr for hydroelectric power 124 ac-ft/yr for community domestic 1204 ac-ft/yr total	<u>Record A</u> 974.1 ac-ft/yr for hydroelectric power 124 ac-ft/yr for community domestic 1098.1 ac-ft/yr total <u>Record B</u> 105.9 ac-ft/yr for instream flow

Source	Cascade Creek into storage in Cascade Lake	<u>Record A</u> Same <u>Record B</u> Cascade Creek only
Point of Diversion	NE¼ of Government Lot 1, Section 5, Township 36 North, Range 1 West	<u>Record A</u> Same <u>Record B</u> Water will be left in stream from the original point of diversion downstream to Buck Bay
Period of Use	Year-round	<u>Record A</u> Same <u>Record B</u> June 1 – October 31 of each year
Place of Use	See page 2 of this authorization	<u>Record A</u> See page 2 of this authorization <u>Record B</u> See page 1 of this authorization

Statutory authorities

RCW 90.03.380(1) provides that a water right may be changed if the change can be made without detriment or injury to existing rights, and to the extent the right is valid and has been beneficially exercised without a break of more than five consecutive years without sufficient cause for nonuse.

Trust water rights are governed by chapter 90.42 RCW. This statute limits the portion of a water right eligible for transfer to the TWRP to the extent the water right was exercised in the five years prior to application. A water right accepted into the TWRP may not be enlarged. When a portion of a water right is accepted in the TWRP, the portion remaining with the landowner and the portion in trust combined may not exceed the greatest amount exercised within the last five years before application.

Legal requirements for the proposed change

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

- **Public Notice**
Public notice of the application was published in *The Islands' Sounder* on May 27 and June 3, 2009. There were no written protests during the statutory 30-day protest period.
- **State Environmental Policy Act (SEPA)**
The subject application is categorically exempt under SEPA WAC 197-11-305 and WAC 197-11-800(4) because the instantaneous diversion rate requested to be changed is less than one cubic foot per second.

INVESTIGATION

History of the water right and ownership

Reports and records show the subject diversionary use from Cascade Creek has occurred since 1884. Water was originally used to operate a barrel, box, and shingle mill adjacent to the creek. By about 1887, a diversion was completed to take water from Cascade Creek out of the Mountain Lake-Cascade Creek drainage basin and into the Cascade Lake drainage. Water was then taken from Cascade Lake for operation of a lumber mill at Cascade Bay.

In 1904, Robert Moran bought the mill properties, diversion works, and appurtenant water rights for use at his private estate. Moran constructed a mansion, the existing Cascade Lake dam, and a hydroelectric plant. In 1921, Moran donated more than 2,700 acres of the surrounding countryside to the state of Washington for a state park (Moran State Park). In 1939, the mansion, grounds, and hydroelectric plant were sold to Donald Rheem. In 1960, the mansion, grounds, and hydroelectric plant were acquired by Gilbert and Cleda Geiser and were developed into the Rosario Resort.

In 1970, the Mountain Lake-Cascade Creek General Water Rights Adjudication (County Cause No. 2448) established the subject right (owned by the Geisers) as being the senior-most (class I) right in the basin. The right was confirmed for hydroelectric power production and domestic supply for the Rosario Resort and for the water utility (the Rosario Water System) that served the surrounding residential development.

Resort and utility ownership subsequently changed hands a number of times. In 2008, the resort was sold by then owner Oly Rose, LLC to Rosario Signal LLC. The subject water right, along with associated certificates Volume XIII-A page 1 and XIII-A page 2, were not included in the sale and were instead retained by Oly Rose's affiliate company, Orcas Water Holdings, LLC (certain portions of the domestic purposes of use are owned by Washington Water Service Company).

In 2007 (prior to the sale of the resort), a different subsidiary of Oly Rose, LLC and former operator of the Rosario Water System, Rosario Utilities, LLC, sold the water utility and certain portions of existing domestic water rights to Washington Water Service Company (WWSC). WWSC now operates the water utility and owns 193 ac-ft/yr of domestic supply water rights, including 34 ac-ft/yr of Volume XI-A page 85 (the subject right) and 159 ac-ft/yr of Volume XIII-A page 2. WWSC also owns 193 acre-feet of storage rights in Cascade Lake pursuant to Volume XIII-A page 1.

Water had been continuously diverted from Cascade Creek and put to beneficial use prior to the diversion structure being washed out in a storm event in 2006. A recently issued (October 21, 2008) change to the subject water right confirmed the diversion from Cascade Creek to Cascade Lake in the amounts of 3.0 cubic feet per second during November, December and January; 2.0 cubic feet per second during October, February and March; 1.0 cubic foot per second during April, May, June and September; and 0.5 cubic foot per second during July and August for hydroelectric power and community domestic supply. The annual volume listed in the change authorization was 1080 ac-ft/yr for hydroelectric power and 124 ac-ft/yr for community domestic use, for a total of 1204 ac-ft/yr.

The hydropower portion of this right is not subject to relinquishment (in accordance with RCW 90.14.140(2)(a) and RCW 90.16.050) by virtue of it being claimed for power development and because the statutory hydropower fees are paid annually by the current owners.

The drainages

The subject water right authorizes diversion from the Mountain Lake-Cascade Creek drainage into the Cascade Lake drainage. Prior to human activities in the 1880s these two drainages were separate and distinct basins. Each basin is described separately in the following narrative.

Mountain Lake-Cascade Creek

The Mountain Lake-Cascade Creek drainage basin is approximately five square miles in area. The basin extends from the east flank of Mount Constitution, which is 2,409 feet in elevation, southward to sea level where Cascade Creek discharges into Buck Bay near the town of Olga. Mountain Lake has an areal extent of 198 acres. The average water level is approximately 914 feet above sea level. The lake has an estimated maximum depth of 100 ft. Estimated maximum storage capacity is 8,800 acre-feet.

A combination earth-fill concrete dam and controlling works at the south end of Mountain Lake regulates outflow into the natural drainage of Cascade Creek. The controlling works also are the point of diversion for the Doe Bay Water Users Association (adjudicated certificates Volume XI page 88 & Volume XI page 89, and state-issued certificate S1-22996C). From the controlling works, Cascade Creek flows for approximately three-quarters of a mile through Moran State Park, to the point of diversion for the Olga Water Users Association (adjudicated certificate Volume XI page 86).

Approximately one thousand feet further downstream is the subject diversion (authorized by this right) that shunts a portion of Cascade Creek water to the Cascade Lake drainage basin. This diversion consists of a 3 foot high dam, controlling works, pipeline, and an open ditch to Cascade Lake. Below the point of diversion, Cascade Creek meanders for approximately two more miles to where it discharges into Buck Bay.

In addition to the above described diversions, Washington State Parks holds a right (adjudicated certificate Volume XI page 87) to divert water from an unnamed tributary to Mountain Lake. This right is used to serve the Mountain Lake campground.

Cascade Lake

The Cascade Lake drainage basin is approximately four square miles in area. This basin originates on the west flank of Mount Constitution and extends to its outlet at Cascade Bay. Cascade Lake had a natural surface area (before the dam) of approximately 139 acres (in September 1874) and presently has a surface area of about 172 acres (including Cascade Lagoon) when full. The water level is normally maintained at 347-351 feet above mean sea level. Lake level

is controlled by a concrete arch dam, operation of the nearby Washington Water Service Company domestic supply pumping plant, operation of the hydroelectric power plant, and seasonal spillage over the dam spillway.

Cascade Lake is fed primarily by four tributary streams, the ditch from Cascade Creek, and direct precipitation.

Water rights appurtenant to the original place of use

Due to continuing water disputes after the completion of the Mountain Lake-Cascade Creek Adjudication in 1970, a second adjudication was undertaken. In 1978, the Cascade Lake Adjudication (County Cause No. 3236) was completed. The Geisers were confirmed to be the senior-most right holders (Volume XIII-A page 1 and Volume XIII-A page 2) in this basin also.

Orcas Water Holdings (and WWSC) is currently operating under portions of the authorizations confirmed in the two adjudications and quantities authorized under water right permit S1-27616. (Permit S1-27616 was issued in 1997 and granted additional instantaneous and annual quantities for community domestic and hydropower purposes of use.) The following is a summary of the water rights issued for the original place of use:

The Mountain Lake-Cascade Creek Adjudication established the Geisers as having the senior rights in the basin (the subject of this change).

Reference number:	Volume XI of Adjudicated Water Right Certificates, at Page 85
Priority date:	1884 – Class I
Purposes of use:	Hydroelectric power, domestic
Source:	Cascade Creek (diverted to Cascade Lake)
Point of diversion:	NE¼ of Government Lot 1, Section 5, Township 36N, Range 1W
Instantaneous rates:	3 cfs – November, December, January 2 cfs – October, February, March 1 cfs – April, May, June, September 0.5 cfs – July, August (Continuous diversion at the above rates is equal to 1204 ac-ft/yr) Note: The domestic quantity of this water right was limited to 0.133 cfs and 34 ac-ft/yr. The domestic annual quantity was conveyed to WWSC in 2007.

The Cascade Lake Adjudication also established the Geisers as the senior right holders in this basin. Two rights were confirmed for the Geisers.

Reference number:	Volume XIII-A of Adjudicated Water Right Certificates, at page 1
Priority date:	1910 – Class I
Purpose:	Storage of water in Cascade Lake
Source:	Precipitation, inlet streams to Cascade Lake, appropriated water from Cascade Creek
Impoundment location:	NW¼ SE¼, Section 31, Township 37N, Range 1W (Note: past ROEs have erroneously listed Section 32)
Storage quantity:	1879 acre-feet to lip of spillway at elevation 351 feet msl
Provisions:	Filling may take place any time during the year; lake level must be maintained at no less than 347 feet above msl (four feet below spillway) in years of average precipitation and no less than 345 feet above msl (six feet below spillway) during low runoff years

Reference number:	Volume XIII-A of Adjudicated Water Right Certificates, at page 2
Priority date:	1910 – Class I
Purpose:	Power generation, irrigation of five acres, fire protection as needed
Source:	Natural and stored waters of Cascade Lake and its tributary streams
Point of diversion:	NW¼ SE¼, Section 31, Township 37N, Range 1W
Instantaneous rates:	0.10 cfs for irrigation – April 15 to October 1 2.31 cfs for power generation, including rights from Mountain Lake through Cascade Creek
Annual quantities:	Fire protection as needed Irrigation – 5 ac-ft/yr Power generation – 499 ac-ft/yr

Hydroelectric power generation is a consumptive use of water as it relates to the Cascade Lake diversion. The Mountain Lake-Cascade Creek Adjudication did not segregate the quantities allowable for hydropower and domestic uses. The subsequent Cascade Lake Adjudication established 1669 ac-ft/yr for hydropower – 1170 ac-ft/yr from the

Mountain Lake right and 499 ac-ft/yr from the Cascade Lake rights. Domestic supply from the Mountain Lake right was limited to a maximum of 0.133 cfs (60 gpm) and 34 ac-ft/yr. The Cascade Lake rights did not have a domestic component. Irrigation has always been limited to 5 ac-ft/yr. This made a total annual quantity of 1708 ac-ft/yr from all existing rights. Hydropower and irrigation water are taken from the Cascade Lake dam. Domestic supply is from a pumping plant facility on Cascade Lake.

A certificate of change issued in 1989 modified the Volume XIII-A pages 1 and 2 rights.

A Certificate of Change to Volume XIII-A pages 1 and 2 issued on January 4, 1989. The owner of the rights requested a change in point of diversion, purpose of use, and place of use of waters diverted from Cascade Lake. The certificate of change authorized the following:

- 1) Added domestic supply to the page 2 right in the amounts of 0.133 cfs, 39 ac-ft/yr from the pumping plant on Cascade Lake. Domestic supply from this change and the prior Mountain Lake-Cascade Creek right increased certificated domestic quantities to 0.266 (0.133 + 0.133) cfs, 73 (34 + 39) ac-ft/yr.
- 2) The page 2 hydroelectric power purpose of use was commensurately reduced by 0.133 cfs and 39 ac-ft/yr. Maximum allowable diversionary quantities were 2.177 cfs and 1630 ac-ft/yr (460 ac-ft/yr using the natural waters and 1170 ac-ft/yr using the stored waters) from the dam on Cascade Lake.
- 3) Irrigation (0.10 cfs, 5 ac-ft/yr), fire protection (as needed), and storage rights (1879 ac-ft/yr) remained the same.

A new water right was issued in 1997.

Permit S1-27616 issued on November 17, 1997. Previous owners of the Rosario Water System and Rosario Resort requested additional water for domestic and hydropower purposes from both the natural and stored waters of Cascade Lake. This permit issued as additive to those rights granted in Volume XIII-A page 1 and page 2 rights and the Volume XI page 85 right. This permit issued for the following:

- 1) Additional supply for hydropower in the amount of 0.757 cfs to be diverted from either the natural or the stored waters of Cascade Lake, and an additional 61 ac-ft/yr to be diverted from the natural waters of Cascade Lake. This increased the total hydropower diversionary quantities to a maximum of 2.934 (2.177 + 0.757) cfs, 521 (460 + 61) ac-ft/yr from the natural waters of Cascade Lake, and 3.067 (2.31 + 0.757) cfs, 1170 ac-ft/yr (unchanged) from the stored waters of Cascade Lake. The permit stipulated that at no time shall the hydropower instantaneous rate exceed 3.067 cfs total for any or all rights. The rate of 3.067 cfs can only be used to obtain a maximum of 1170 ac-ft/yr, after which the diversion rate is limited to 2.934 cfs for the 521 ac-ft/yr from the combined rights.
- 2) Added 0.223 cfs, 110 ac-ft/yr for domestic supply for diversion from the pumping plant on Cascade Lake. This increased the total domestic diversionary quantities to 0.489 (0.133 + 0.133 + 0.223) cfs (approximately 220 gpm), 183 (34 + 39 + 110) ac-ft/yr from the natural and stored waters of Cascade Lake.
- 3) Irrigation (0.10 cfs, 5 ac-ft/yr), fire protection (as needed), and storage rights (1879 ac-ft/yr) remained the same.

An additional modification to the Volume XIII-A page 2 certificate was completed in 2002.

On March 21, 2002, a change to the Volume XIII-A page 2 certificate issued for the following:

- 1) Added community domestic supply to the certificate in the amounts of 0.25 cfs, 100 ac-ft/yr, from the pumping plant on Cascade Lake. Domestic supply from the Mountain Lake-Cascade Creek right, the 1989 change, permit S1-27616, and this change resulted in total domestic quantities of 0.739 (0.133 + 0.133 + 0.223 + 0.25) cfs, 283 (34 + 39 + 110 + 100) ac-ft/yr. The Page 1 rights remained unchanged.
- 2) Water for hydroelectric power was commensurately reduced by 0.25 cfs and 100 ac-ft/yr. Maximum allowable quantities were 2.684 (2.934 - 0.25) cfs and 421 (521 - 100) ac-ft/yr from the natural waters of Cascade Lake. Quantities for instantaneous diversion of the stored waters of Cascade Lake were also reduced to 2.817 (3.067 - 0.25) cfs. The annual amount of 1170 ac-ft/yr for use of stored waters remained the same.

The above change mistakenly altered the instantaneous rate for diversion of the stored waters of Cascade Lake for hydropower purposes. These quantities are actually a part of this Volume XI page 85 right, which was not changed in 2002. This error was corrected in the following 2008 set of changes.

On October 21, 2008, the following three changes were authorized.

A change was approved on the Volume XI page 85 certificate. The applicant had requested a change in the purpose of use of waters diverted from Cascade Creek. The change authorized the following:

- 1) Added domestic supply to the certificate in the amounts of 0.226 cfs and 90 ac-ft/yr of water diverted from the pumping plant on Cascade Lake. Domestic supply from the amount originally granted under the Mountain Lake-Cascade Creek right (Volume XI page 85), the 1989 change, the 2002 change and this change resulted in a total instantaneous rate of 0.965 (0.133 + 0.133 + 0.25 + 0.449) cfs. [NOTE: 0.449 cfs is itself a sum of the former domestic instantaneous quantity of 0.223 cfs originally authorized under S1-27616 now being converted from the page 2 right, plus an additional requested amount of 0.226 cfs for final build-out being converted from this page 85 right]. Annual quantities remained at 283 (34 + 39 + 100 + 110) ac-ft/yr, because the final 110 ac-ft/yr is being converted from page 2 and page 85 hydropower rights and the ac-ft/yr under permit S1-27616 is being cancelled, resulting in no net difference in the annual domestic quantity authorized. [NOTE: 110 ac-ft/yr is itself a sum of 20 ac-ft/yr being converted from the page 2 right and 90 ac-ft/yr being converted from this page 85 right.]
- 2) Water for hydroelectric power was commensurately reduced by 0.226 cfs and 90 ac-ft/yr while 0.757 cfs and 61 ac-ft/yr for hydropower under permit S1-27616 is to be cancelled. Quantities for diversion of the stored waters of Cascade Lake are 2.084 (3.067 – 0.757 – 0.226) cfs (0.226 cfs is the amount currently requested for build out) and 1080 (1170 – 90) ac-ft/yr.
- 3) Changed the place of use (as shown in Record A).

A change was approved on the Volume XIII-A page 1 certificate. The applicant requested a change in the purpose of use of waters stored in Cascade Lake. The change authorized the following:

- 1) Specified that 283 of the 1879 acre-feet of storage is for domestic water supply purposes. All provisions relating to the storage of water in Cascade Lake remained the same.

A change was approved on the Volume XIII-A page 2 certificate. The applicant requested a change in the purpose of use of waters diverted from Cascade Lake. The change authorized the following:

- 1) Added domestic supply to the certificate in the amounts of 0.223 cfs, 20 ac-ft/yr, from the pumping plant on Cascade Lake. Domestic supply from the Mountain Lake-Cascade Creek right (Volume XI page 85), the 1989 change, the 2002 change and this change will result in a total instantaneous rate of 0.965 (0.133 + 0.133 + 0.25 + 0.449) cfs. [NOTE: 0.449 cfs is itself a sum of the former domestic instantaneous rate of 0.223 cfs originally authorized under S1-27616 now being converted from this page 2 right, plus an additional requested rate of 0.226 cfs for final build-out being converted from the page 85 right]. The annual quantity will remain at 283 (34 + 39 + 100 + 110) ac-ft/yr, because the final 110 ac-ft/yr is being converted from page 2 and page 85 hydropower rights and the 110 ac-ft/yr under permit S1-27616 is to be cancelled, resulting in no net difference in annual domestic quantity authorized. [NOTE: 110 ac-ft/yr is itself a sum of 20 ac-ft/yr being converted from the page 2 right and 90 ac-ft/yr being converted from the page 85 right]
- 2) Water for hydroelectric power was commensurately reduced by 0.223 cfs and 20 ac-ft/yr, while 0.757 cfs and 61 ac-ft/yr for hydropower under permit S1-27616 is to be cancelled. Quantities for diversion of the natural waters of Cascade Lake will be 1.704 (2.684 – 0.757 – 0.223) cfs and 340 (421 – 20 – 61) ac-ft/yr.
- 3) Changed the place of use (as shown in Record A).

Total water rights following all the changes listed above (and prior to the subject change).

All Uses:	3.0, 2.0, 1.0, 0.5 cfs varying seasonally (1204 ac-ft/yr total) from Cascade Creek to Cascade Lake
Community domestic:	0.965 cfs, 283 ac-ft/yr
Hydroelectric power:	1.704 cfs, 340 ac-ft/yr from the natural waters of Cascade Lake 2.084 cfs, 1080 ac-ft/yr from the stored waters of Cascade Lake
Irrigation:	0.10 cfs, 5 ac-ft/yr
Fire Protection:	As needed
Storage:	1879 ac-ft/yr

Subsequent to the approval of the October 21, 2008, changes, permit S1-27616 was to be cancelled. As of this date, this cancellation is still pending due to the appeal (now resolved) of the change to the Volume XI page 85 certificate. It should be noted that total domestic, hydroelectric power, and irrigation purposes of use listed above add up to 1708 (283 + 340 + 1080 + 5) ac-ft/yr, as they did after the 1978 Cascade Lake adjudication.

Trust Water Right Calculations

The water requested for change from hydroelectric power production to trust water for instream flow, has been perfected, confirmed through adjudication, and is non-relinquishable as per RCW 90.14.140(2)(a) and RCW 90.16.050. Therefore, the full quantities requested for change are eligible for transfer.

Trust Water Place of Use

The place of use for the quantities of water placed into the TWRP shall be from the existing point of diversion downstream to Buck Bay.

Trust Water Management

The water placed into the TWRP (Record B) shall be recognized as a Class I right within the Mountain Lake-Cascade Creek drainage, although it shall be considered to be junior in priority to Record A.

Impairment Considerations

Impairment means to 1) adversely impact the physical availability of water for a beneficial use that is entitled to protection, and/or 2) to prevent the beneficial use of the water to which one is entitled, and/or 3) to adversely affect the flow of a surface water course at a time when the flows are at or below instream flows levels established by rule (POL-1200), and/or 4) degrade the quality of the source to the point that water is unsuitable for use by existing water right holders (WAC 173-150). Demonstration of impairment would require evidence of a substantial and lasting or frequent impact reflecting such conditions.

The proposed trust water has been evaluated as to the potential for impairment to existing water rights. There are no other existing rights on Cascade Creek that are located downstream of the historical point of diversion. Placing the requested water into the TWRP for instream flows therefore will not cause impairment of any existing rights. All other rights in the basin are located upstream. Proper management (by the basin water system operators and State Parks) of the outlet structure at the Mountain Lake dam will ensure the satisfaction of both Records A & B and all existing upstream users.

CONCLUSIONS

I conclude the quantities of water proposed to be placed into the TRWP are in good standing and are eligible for change. I also conclude there will be no impairment of existing rights.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend the request for change be approved in the amounts and within the limitations listed below and subject to the provisions beginning on page 3.

Trust Water Right Attributes (Record B)

0.25 cfs - June, July, August
0.50 cfs - September, October

For a total of 105.9 ac-ft/yr for instream flow purposes

Portion of Water Right Not Placed into Trust (Record A)

3.0 - January, November, December
2.0 - February, March
1.5 - October
1.0 - April, May
0.75 - June
0.50 - September
0.25 - July, August

974.1 ac-ft/yr for hydroelectric power
124 ac-ft/yr for domestic
For a total of 1098.1 ac-ft/yr

Point of diversion

NE¼ of Government Lot 1, within Section 5, Township 36 North, Range 1 West, W.M.

Place of Use

As specified on page 1 (Record B) and page 2 (Record A) of this Report of Examination.

Report by: Buck Smith
Buck Smith, Senior Hydrogeologist
Water Resources Program

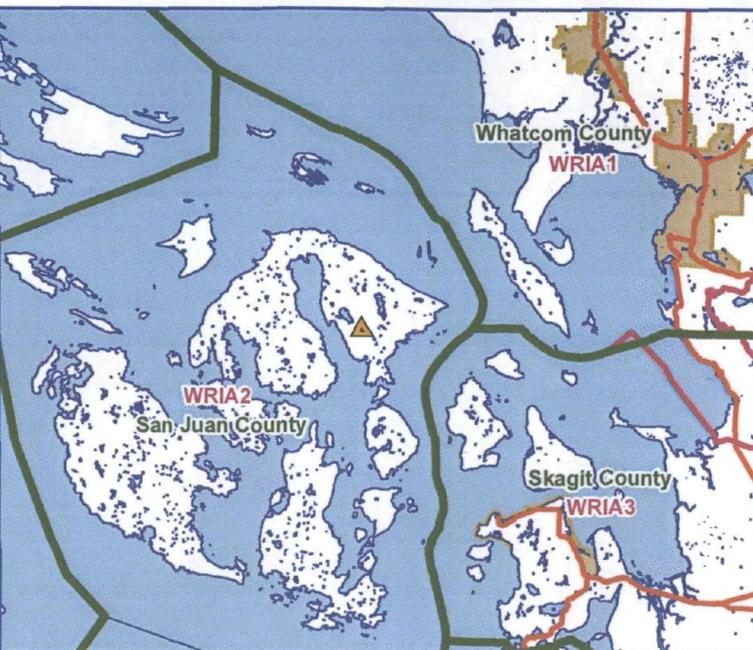
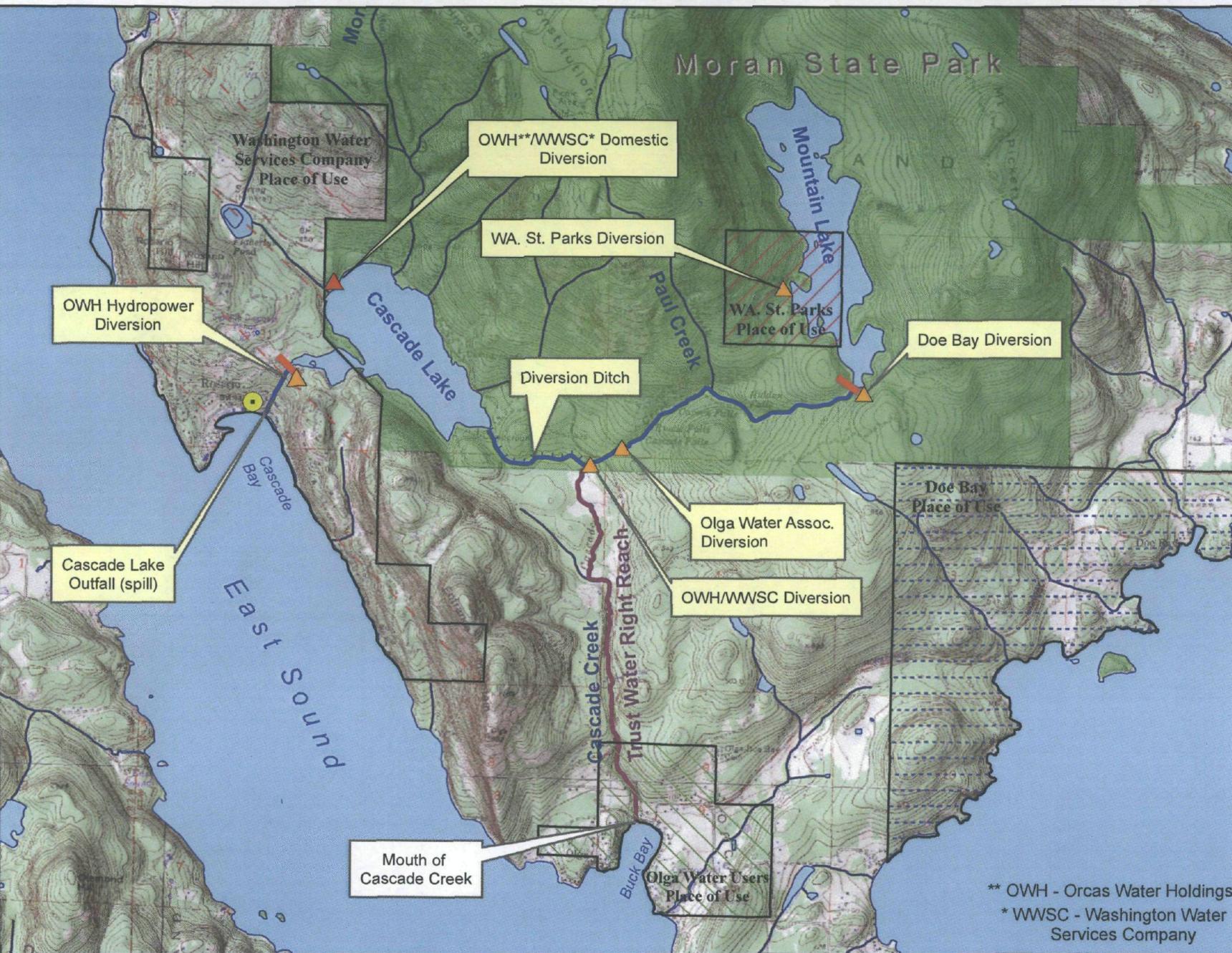
August 21, 2009
Date



J. R. "BUCK" SMITH

Licensed Geologist/Hydrogeologist No. 1479

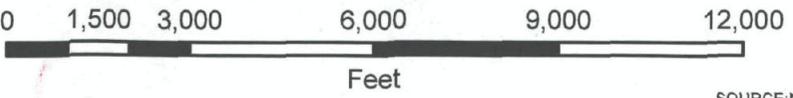
If you need this publication in an alternate format, please call the Water Resources Program at (425) 649-7000. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Legend

- Authorized Point of Diversion
- Authorized Place of Use
- Trust Water Right Reach
- Dam
- Hydropower Plant
- Diversion Ditch
- State Parks

** OWH - Orcas Water Holdings
 * WWSC - Washington Water Services Company



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.'