

Wyse, Lisa (UTC)

From: Moen, Nancy (UTC) on behalf of Sidran, Mark (UTC)
Sent: Thursday, September 27, 2007 10:24 AM
To: UTC DL Records Center
Cc: Danner, Dave (UTC)
Subject: FW: Rosario water rights questions
Attachments: 2820459592-Department of Ecology Amended Report of Examination.pdf

More for the Rosario docket.

*Nancy Day Moen, Executive Assistant to
 Mark Sidran, Chairman
 1300 S Evergreen Pk Dr SW
 PO Box 47250
 Olympia, WA 98504-7250
 360-664-1172
 Fax 360-664-3604*

From: Rosario Property [mailto:rpoa.board@yahoo.com]
Sent: Thursday, September 27, 2007 10:14 AM
To: Fabiniak, Paul (ECY); Smith, Buck (ECY)
Cc: Sidran, Mark (UTC); Jones, Philip (UTC); Oshie, Patrick (UTC); Trotter, Don (UTC); Herta Fairbanks
Subject: Rosario water rights questions

Hi. We have some questions we hope you can answer. In your amended examination (attached) on page 6 there is comment about a letter received from Ethan Moseng of DOH saying that he believed the "water system is currently exceeding its annual water rights allocation". The end result of this was that a permit for new water was issued, which has now been transferred to Rosario Utilities.

1. RU had/has many hydro rights. Why were not some of these converted into muni/domestic rights instead of issuing a new permit?
2. Were these permitted rights put to use?
3. Were these permitted rights some of the 283AFY that Oly Rose transferred out of Rosario Utilities earlier this year? (and later back in)
4. All of your documentation shows that Rosario Utilities was the owner of 283AFY water rights. Yet you allowed Oly Rose under the affiliate name of Rosario Utilities LLC to transfer them out of Rosario Utilities. If you show Rosario Utilities as the owner, why would you allow the transfer of these water rights out of the utility, and then the transfer of some of them (100 less AFY) back in?
5. They have transferred back in both junior and senior water rights. This creates a potential problem for customers if there is a drought...whose water potentially gets shut off...is this an issue for you or DOH? It also means that if there is a problem with the basin and it becomes closed, these junior rights could never become certificated.
6. Given that Eastsound is no longer negotiating with Oly Rose for the 305AFY, how many water rights will you allowed will you be allowing Oly Rose to convert from hydro to domestic? How do you determine how many rights can be converted to domestic?

Thanks.

Jobin Suthergreen

9/28/2007

RPOA Board

Pinpoint customers who are looking for what you sell.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

RECEIVED
BY: _____

AMENDED REPORT OF EXAMINATION
TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

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

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

PRIORITY DATE March 22, 1995	APPLICATION NUMBER S1-27616	PERMIT NUMBER	CERTIFICATE NUMBER
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NAME Rosario Utilities			
ADDRESS (STREET) One Rosario Way	(CITY) Eastsound	(STATE) Washington	(ZIP CODE) 98245

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Cascade Lake

TERMINARY OF (IF SURFACE WATERS)
East Sound

MAXIMUM CUBIC FEET PER SECOND 0.98	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR 171
---------------------------------------	----------------------------	-----------------------------------

QUANTITY, TYPE OF USE, PERIOD OF USE
 * 0.223 cfs, 110 afy for Community Domestic Supply - continuously *0.15194 cfs*
 * 0.757 cfs, 61 afy for Hydropower Production - when available *.08426 cfs*
 * Instantaneous and annual quantities are additive to existing rights

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
 Domestic POD: 750 feet North and 1336 feet East from center of Section 31
 Hydropower POD: 750 feet South and 725 feet East from center of Section 31

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) Dom. - SE¼ NE¼, Hydro. - NW¼ SE¼	SECTION 31	TOWNSHIP N. 37N	RANGE, (E. OR W.) W.M. 1W	W.R.L.A. 2	COUNTY San Juan
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RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
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LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Government Lots 1, 2, 3, 4 and 5 of Section 6, Township 36N, Range 1W, W.M.
 All of Section 31 except NW¼ of NW¼ and that portion lying within Moran State Park, Township 37N, Range 1W, W.M.
 SE¼ SE¼ of SW¼ N½ of SW¼ S½ of NW¼ and that portion of Government Lot 4 lying North of the county road, Section 30, Township 37N, Range 1W, W.M.
 NW¼ of SW¼ SW¼ of SW¼ SE¼ of SW¼, Section 5, Township 36N, Range 1W, W.M.
 Government Lots 1 and 2, Section 36, Township 37N, Range 2W, W.M.
 Portions of Government Lots 2 and 3, Section 25, lying East of county road, Township 37N, Range 2W, W.M.

DESCRIPTION OF PROPOSED WORKS

Domestic - Two 20-HP pumps (one is a backup), 8" pipe to treatment plant
 Hydropower - 10" penstock to Pelton waterwheel

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
1 year from permit issuance	2 years from permit issuance	10 years from permit issuance

REPORT

RECOMMENDATIONS:

I recommend approval for Rosario Utilities to fully utilize their existing storage rights from Cascade Lake. This request, if approved by the regional supervisor, will create an additional appropriative right of ~~6223~~ cubic feet per second (cfs), 110 acre-feet per year (afy) for community domestic supply and 0.757 cfs, 61 afy for hydropower production. If approved, the permit shall be issued subject to the following provisions.

Provisions:

X Under this right and all existing rights, domestic supply shall be limited to 0.489 cfs (approximately 220 gpm), 183 afy. $\rightarrow = 0.252 \text{ cfs}$

Hydropower use under this right shall be limited to 0.757 cfs, additive to the existing Cascade Lake water rights listed under Certificate of Adjudicated Water Right Certificates, Volume XIII-A, pages 1 and 2 (2.177 cfs, 460 afy). Under these combined rights, a maximum of 2.934 (2.177 + 0.757) cfs, 521 (460 + 61) afy, may be diverted from the natural waters of Cascade Lake.

Water for hydropower use under the Mountain Lake-Cascade Creek Certificate of Adjudicated Water Right, Volume XI, page 85, at 1170 afy, is diverted from Cascade Creek and stored in Cascade Lake as part of the Cascade Lake storage rights (Certificate of Adjudicated Water Right XIII, page 1 - this right includes the utilization of the natural and stored waters of Cascade Lake). This stored water is currently withdrawn from Cascade Lake at the rate of 2.31 cfs, as listed under Certificate of Adjudicated Cascade Lake Water Right No. XIII, page 2, utilization of storage rights. Under these combined rights, withdrawal of stored Mountain Lake water in Cascade Lake is to be increased to the rate of 3.067 cfs (2.31 + 0.757) for an annual total of 1170 afy.

At no time shall the hydropower instantaneous rate exceed 3.067 cfs total from any or all rights. The rate of 3.067 cfs can only be used to obtain a maximum of 1170 afy. Detailed records must be maintained whenever the diversion is operated at this higher flow rate. Once 1170 afy have been diverted at 3.067 cfs, the diversion rate shall be limited to 2.934 cfs for the 521 afy from the combined rights for natural waters of Cascade Lake.

Irrigation use shall remain at the quantity authorized under existing rights, 0.10 cfs, 5.0 afy. Fire protection also remains unchanged - as needed.

Existing storage rights shall remain at 1879 afy maximum. The total maximum annual appropriative quantity under all rights, for all purposes, shall be $183 + 521 + 1170 + 5 = 1879$ afy. ✓

This permit is subject to the implementation of the minimum requirements established in the Conservation Planning Requirements: Guidelines for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology and Conservation Programs, March 1994, which are enclosed.

At both points of diversion from Cascade Lake, approved measuring devices shall be installed and maintained in accordance with RCW 90.03.360 and WAC 508-64-020 through WAC 508-64-040 (Installation, operation and maintenance requirements enclosed). Meter readings shall be recorded monthly and this data shall be maintained and be made available to the Department of Ecology upon request.

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

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

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

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

PRIORITY DATE March 22, 1995	APPLICATION NUMBER S1-27616	PERMIT NUMBER S1-27616 P	CERTIFICATE NUMBER
---------------------------------	--------------------------------	-----------------------------	--------------------

NAME Rosario Utilities			
ADDRESS (STREET) One Rosario Way	(CITY) Eastsound	(STATE) Washington	(ZIP CODE) 98245

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Cascade Lake

TRIBUTARY OF (IF SURFACE WATERS)
East Sound

MAXIMUM CUBIC FEET PER SECOND 0.98	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR 171
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APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL
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Hydropower POD: 750 feet South and 725 feet East from center of Section 31

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION) Dom. - SE ¼ NE ¼, Hydro. - NW ¼ SE ¼	SECTION 31	TOWNSHIP N. 37N	RANGE, (E. OR W.) W.M. 1W	W.R.L.A. 2	COUNTY San Juan
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RECORDED PLATTED PROPERTY		
LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

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All of Section 31 except NW ¼ of NW ¼ and that portion lying within Moran State Park, Township 37N, Range 1W, W.M.

SE ¼ SE ¼ of SW ¼ N ½ of SW ¼ S ½ of NW ¼ and that portion of Government Lot 4 lying North of the county road, Section 30, Township 37N, Range 1W, W.M.

NW ¼ of SW ¼ SW ¼ of SW ¼ SE ¼ of SW ¼, Section 5, Township 36N, Range 1W, W.M.

Government Lots 1 and 2, Section 36, Township 37N, Range 2W, W.M.

Portions of Government Lots 2 and 3, Section 25, lying East of county road, Township 37N, Range 2W, W.M.

DESCRIPTION OF PROPOSED WORKS

Domestic - Two 20-HP pumps (one is a backup), 8" pipe to treatment plant
 Hydropower - 10" penstock to Pelton waterwheel

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
November 17, 1998	November 17, 1999	November 17, 2007

PROVISIONS

Under this right and all existing rights, domestic supply shall be limited to 0.489 cfs (approximately 220 gpm), 183 afy. $0.252 \text{ cfs} = 113 \text{ gpm}$

Hydropower use under this right shall be limited to 0.757 cfs, additive to the existing Cascade Lake water rights listed under Certificate of Change to Adjudicated Water Right Certificates, Volume XIII-A, pages 1 and 2 (2.177 cfs, 460 afy). Under these combined rights, a maximum of 2.934 (2.177 + 0.757) cfs, 521 (460 + 61) afy, may be diverted from the natural waters of Cascade Lake.

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At both points of diversion from Cascade Lake, approved measuring devices shall be installed and maintained in accordance with RCW 90.03.300 and WAC 508-64-020 through WAC 508-64-040 (Installation, operation and maintenance requirements enclosed). Meter readings shall be recorded monthly and this data shall be maintained and be made available to the Department of Ecology upon request.

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.

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

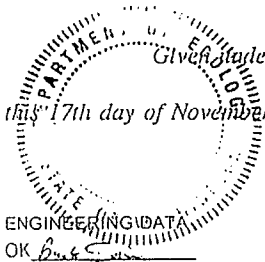
This permit does not relieve the applicant of any other applicable requirement of state or federal law, including Section 23 of the Federal Power Act (16 U.S.C. 791a-825f).

A certificate of water right cannot be issued until the permittee has provided proof of compliance with Section 23 of the Federal Power Act. Proof shall constitute a copy of an Order or other statement from the Federal Energy Regulatory Commission (FERC), which administers the Federal Power Act, that a license has been issued for the project or an exemption from licensing for the project has been granted, or that the project does not fall under the jurisdiction of FERC.

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Bellevue, Washington,

this 17th day of November, 1997.



Department of Ecology

by Daniel L. Swenson
 Daniel L. Swenson, Section Supervisor, Water Resources

Report Continued

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.

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

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BACKGROUND:

Surface Water Application #: S1-27616A
Name: Rosario Utilities
Priority Date: March 22, 1995
Source: Cascade Lake
Proposed use: Domestic supply - continuously
Hydropower, Fire Protection
Legal Notice Published: February 5 and 12, 1997
In The Islands Sounder
100 gpm (0.223 cfs) for domestic supply
2.023 cfs for hydropower - seasonally
No protests received

On August 7, 1997, Rosario Utilities requested the instantaneous quantity for hydropower be reduced from 2.023 cfs to 0.757 cfs.

INVESTIGATION:

During the course of investigation of this application, I discovered many mistakes and misconceptions involving the interpretation of existing rights held by Rosario Utilities. Hopefully through this report I can forever dispel and put to rest all previous confusion for the benefit of future investigators.

Rosario Utilities serves water and supplemental power to Rosario Resort and water to the neighboring community. The service area is located on the east lobe of Orcas Island in San Juan County.

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

- (1) the State Water Code;
- (2) existing certificates of water right held by Rosario Utilities;
- (3) existing applications and water rights held by other water systems within the drainages in question;
- (4) the Mountain Lake-Cascade Creek Adjudication and the Cascade Lake Adjudication decrees;
- (5) the 1995 Rosario Utilities Water System Plan;
- (6) the 1985 Water Assessment for San Juan County;
- (7) Department of Ecology Water Supply Bulletin No. 46;
- (8) topographic and local area maps;
- (9) a site visit on July 9, 1997; and
- (10) telephone conversations and meetings with Chris Vierthaler and John Cavalli from Rosario Utilities.

The Drainage Basins:

Any water appropriated under this application would be water commingled from the Mountain Lake-Cascade Creek drainage and the Cascade Lake drainage. Prior to human activities in the 1880's these two drainages were separate and distinct basins. Each basin is described separately in the following narrative (shown jointly in fig.1).

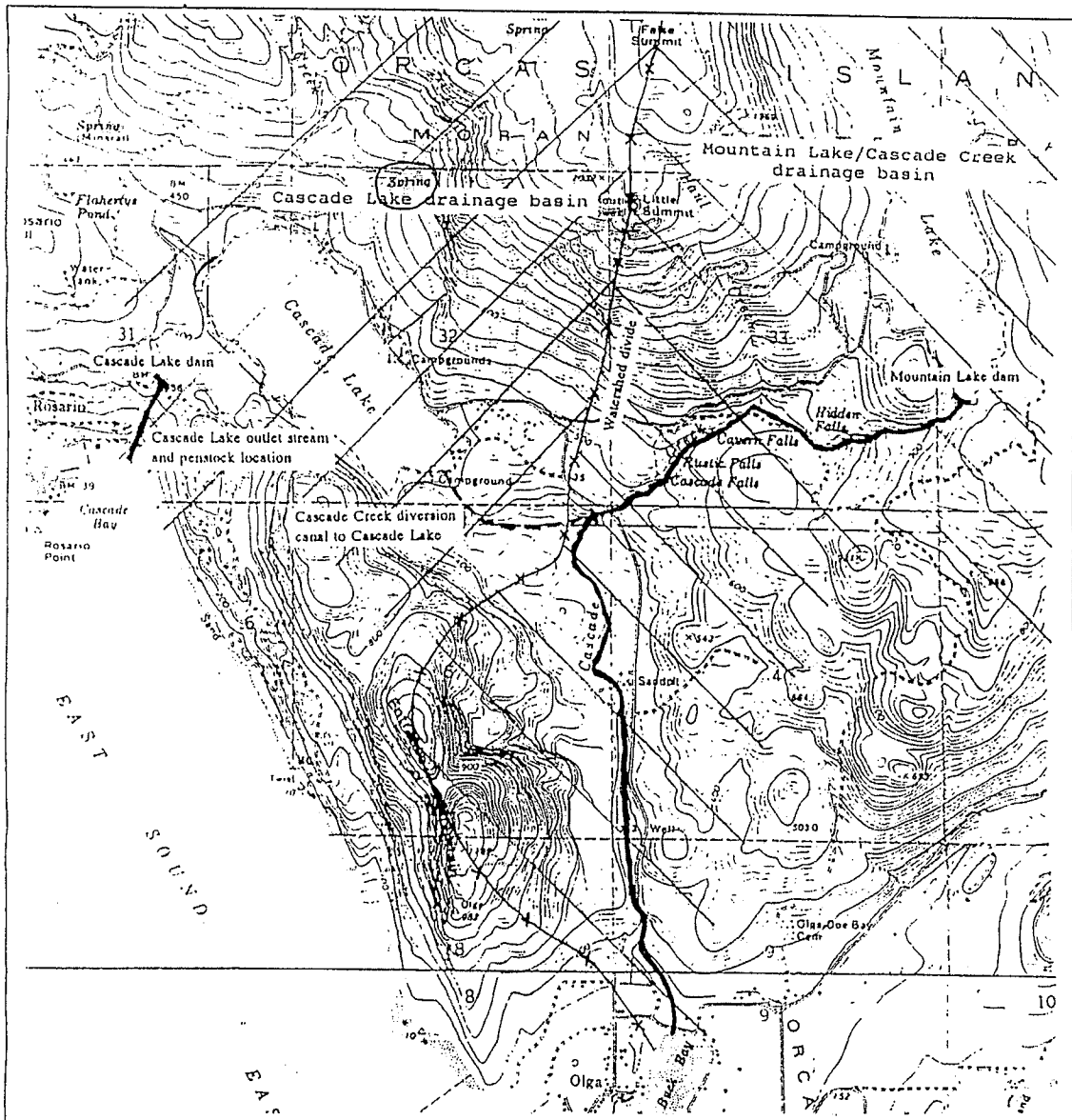


Figure 1 (U.S.G.S - Mt. Constitution & Blakely Island 7 1/2' Quadrangles)

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 above sea level. The lake has an estimated maximum depth of 100 feet. Estimated maximum storage capacity is 8,800 acre-feet.

A combination earth-fill concrete dam and controlling works at the south end of the 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. From the controlling works, Cascade Creek flows for approximately 1/4 mile, through Moran State Park, to the point of diversion for the Olga Water Users Association.

Approximately 1/2 mile further downstream is the Rosario Utilities diversion that shunts a portion of Cascade Creek water to the Cascade Lake drainage basin. This diversion consists of a 2-3 foot high dam, controlling works, pipeline and canal to Cascade Lake. Below the Rosario diversion, Cascade Creek meanders for approximately two more miles to where it discharges into Buck Bay.

Cascade Lakes:

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, by operation of Rosario Utilities domestic diversion, by operation of the hydropower plant, and by seasonal spillage.

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

Streams

History of Water Use:

Reports and records show appropriate water use from Cascade Creek has occurred more or less continuously since 1883 or 1884. Water was 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 Cascade Lake. Water was then apparently taken from Cascade Lake for operation of a lumber mill at Cascade Bay. Use of these water sources has been more or less continuous from that time period until present, although use of the water has changed from milling purposes to domestic, irrigation, fire protection and hydropower.

In 1904, Robert Moran bought the mill properties, diversion works, and appurtenant water rights for his use at his private estate. Moran constructed a mansion, the existing Cascade Lake dam and a hydroelectric plant. Moran's home and grounds were further developed in 1960 by Gilbert and Cleda Geiser into the current Rosario Resort. Resort ownership has changed several times in recent years. The resort is now owned by Rosario Resort Limited Partnership (RRLP). Rosario Utilities is an affiliate corporation of RRLP. All water rights established by previous property owners are now held by Rosario Utilities.

Existing Water Rights:

Rosario Utilities is currently operating under the authorizations confirmed by decree as a result of the Mountain Lake-Cascade Creek Adjudication (1970) and the Cascade Lake Adjudication (1978). A Certificate of Change issued in 1989 modified the Certificates of Adjudicated Water Right issued for Cascade Lake. The following is a summary of Rosario Utilities rights.

The Mountain Lake-Cascade Creek Adjudication (County Cause No. 2448) established the Geiser's (Rosario) as having the senior right to use water from the basin.

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: NE 1/4 of Government Lot 1, Section 5, Township 36 N, Range 1 W

Instantaneous quantities: 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 afy)

The Cascade Lake Adjudication (County Cause No. 3236) established the Geiser's as the senior right holders in this basin also. Two rights were confirmed for the Geiser's.

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 32, Township 37 N, Range 1 W

Storage quantity: 1879 acre-feet to lip of spillway at elevation 351 feet msl, filling may take place any time during the year when water is available, lake level must be maintained at no less than 347 feet above msl (4 feet below spillway) in years of average precipitation and no less than 345 feet above msl (6 feet below spillway) during low runoff years.

Reference number: Volume XIII-A, of Adjudicated Water Right Certificates, at page 2

Priority date: 1910 - Class 1

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 37 N, Range 1 W

Instantaneous quantities: 0.10 cfs for irrigation - April 15 to October 1
2.31 cfs power generation, maximum combined rate authorized for power generation, including rights from Mountain Lake through Cascade Creek
Fire protection as needed

Annual quantities: Irrigation - 5 afy
Power generation - 499 afy

Hydropower generation is a consumptive use of water as it relates to the Cascade Lake diversion. The Mountain Lake Adjudication did not segregate the quantities allowable for hydropower and domestic uses. The subsequent Cascade Lake Adjudication established 1669 afy for hydropower - 1170 afy from the Mountain Lake right and 499 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 afy. The Cascade Lake rights did not have a domestic component. Irrigation was and is limited to 5 afy. This makes a total annual water right of 1708 afy, from all existing rights. Hydropower and irrigation water are taken from the dam. Domestic supply is from a pumping plant facility on Cascade Lake.

Certificate of Change to Volume XIII-A (pages 1 and 2) Adjudicated Water Right Certificates, issued January 4, 1989. The applicant requested a change of point of diversion, to change the purpose of use and place of use of waters diverted from Cascade Lake as granted in Adjudicated Water Right Certificates, Volume XIII, pages 1 and 2. The change authorized the following:

Added domestic supply to the certificate in the amounts of 0.133 cfs, 39 afy - from the pumping plant on Cascade Lake. Domestic supply from this change and the prior Mountain Lake-Cascade Creek right increased certified domestic quantities to 0.266 cfs (0.133 + 0.133), 73 afy (34 + 39).

Water for hydropower was commensurately reduced (on the Cascade Lake rights only) by 0.133 cfs and 39 afy. Maximum allowable quantities are now 2.177 cfs and 1630 afy - from the dam on Cascade Lake, using the natural waters of Cascade Lake.

Irrigation, fire protection, and storage rights remained the same.

1170 MTN Lake
499 Cascade

1669
39

1630

161 afy

Current Request:

Rosario Utilities is seeking to fully utilize the capacity of their existing storage right. The current request is for an increase to existing appropriative rights, in the amounts of 0.223 cfs for domestic supply and 0.757 cfs for hydropower generation, for a total of 0.98 cfs, from the natural and stored waters of Cascade Lake. No additional quantities will be diverted from the Mountain Lake-Cascade Creek drainage basin.

SAS afy

Domestic Request:

On June 11, 1997, Ecology received a letter from Ethan Moseng of the Washington State Department of Health, requesting an expedited review of Rosario Utilities application. Mr. Moseng's letter stated the following:

"The water system is currently exceeding its annual water right allocation."

"The existing filtration treatment plant is at the end of its useful life."

"In addition to water quality deficiencies . . . the inability to meet system demands results in low pressures and ultimately in water outages. Low pressures and outages represent significant health risks due to the possibility of cross connections and backflow into the water system. Likewise, because the water system's existing water right is not adequate for existing users, an adequate quantity of water can not be assured, and low pressures or outages are likely."

"It appears that this project meets at least one of the public health criteria for prioritizing the review of the water right application."

As a result of the letter from Mr. Moseng, the processing of this application has been given priority over senior applications in Water Resource Inventory Area (WRIA) 2.

Existing Water Service Area:

Rosario Utilities provides water service to Rosario Resort, to a potential of 309 residential customers, and to two bulk water purchasers - Orcas Highlands Association and Vusario Maintenance Corporation. Both bulk water purchasers, which are community-owned, have installed and maintain their own pumps, piping and storage, and retail water to lot owners within their respective developments. Total service area for Rosario Utilities (including bulk purchasers) is shown in Figure 2.

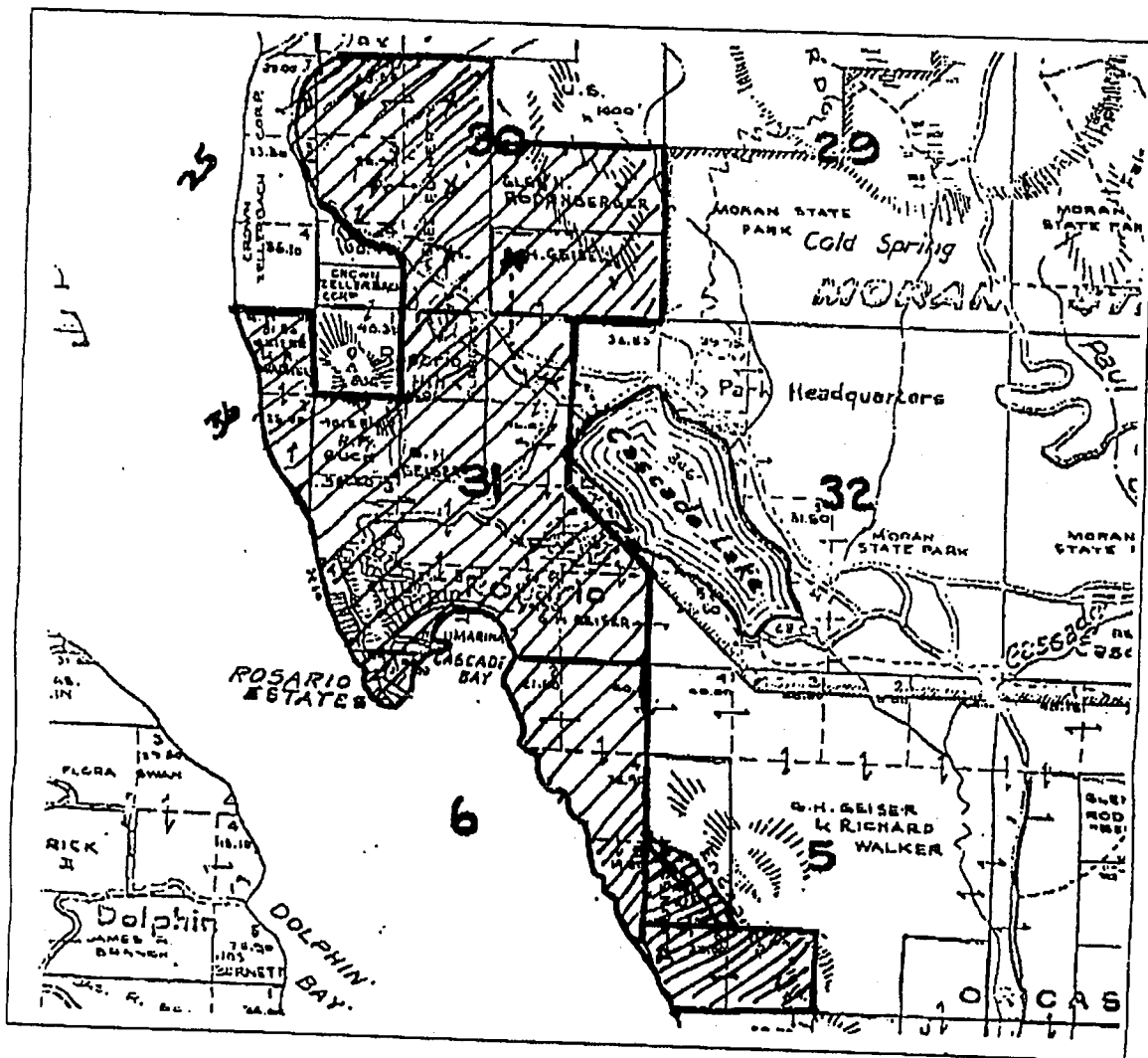


Figure 2 - Rosario Utilities Water Service Area

Growth in service area is not anticipated. Future growth is expected to be infill only, within the existing service area.

Description of Domestic Source:

All water supplied to Rosario Resort, residential customers, and wholesale customers, comes from Cascade Lake surface water. Raw water is withdrawn from the west side of the lake, through two 6-inch diameter PVC pipes and a 20-horsepower pump (with one 20-hp backup pump). When the new treatment plant is on-line, either pump will be capable of supplying 220 gpm. From the pump, water is conveyed by an 8-inch PVC pipe, narrowing to a 4-inch pipe, to the existing treatment plant. The 4-inch line will be eliminated when the new treatment plant is on-line.

From the treatment plant, water is pumped to the appropriate zonal storage tank. Rosario Utilities has four storage tanks, with a combined total of 362,000 gallons. Orcas Highlands Association has three tanks for a total of 120,000 gallons. Vusario Maintenance Corporation has one tank with a 30,000 gallon capacity.

Current and Potential Number of Connections:

Rosario Utilities currently provides water to the resort complex, which includes the mansion, marina, and 179 guest rooms. Resort use has been calculated to equal 109 residential connections.

Within Rosario's residential service area, there are 148 connected lots and 161 unconnected lots, for a total of 309 potential connections. The bulk water purchasers have 82 connected lots and 74 unconnected lots, for a total of 156 potential connections. Within Rosario Utilities Water Service Area, there are therefore a total of 465 potential residential connections.

The grand total of resort and residential connections is equal to 574 equivalent residential units (ERU).

Annual Domestic Allocation:

$$\begin{array}{r} 309 \\ 156 \\ \hline 465 \end{array}$$
Residential

$$\begin{array}{r} 465 \\ 109 \\ \hline 574 \end{array}$$
Resort

The annual domestic quantity recommended from this right and existing rights shall be 183 afy total. For the eventual 574 ERU, this works out to 0.32 afy per ERU, which is approximately 285 gallons per day/connection. Current average daily residential use is 310 gpd/connection. Through conservation, residential metering, and an aggressive leak detection program, 285 gpd/connection (or less) should be attainable.

Hydropower Request:

AVG MONTH (30 DAYS)

$$\frac{310 \text{ gal}}{30} \times 30 = 9300 \text{ gal/m}$$

PER RESIDENTIAL CONNECTION

$$\frac{9300 \text{ gal/m}}{3.3} = 2820 \text{ gal/m}$$

DATA IN RULLC

$$189 \text{ gal/m}$$

Rosario Utilities has requested an additional 0.757 cfs for hydroelectric power generation. The majority of hydropower production occurs during the winter months when excess water is available. The DC power produced is used for heating the Rosario Resort mansion and for minor outdoor lighting needs.

Description of Hydropower Operations:

The point of diversion for power generation is from the concrete dam at the southwest side of Cascade Lake. Water travels approximately 1300 feet through a 10-inch steel penstock to the hydroelectric plant located 345 vertical feet below. The falling water turns a Pelton waterwheel located in the powerhouse. The tailrace discharges the water through a pond into Cascade Bay on East Sound.

Annual Hydropower Allocation:

Under this right and all existing rights, Rosario Utilities shall be granted 1691 afy for hydropower production. Use of water for generating electrical power is a lower beneficial use of water (than domestic supply) in an area where water is a valuable and moderately scarce commodity. Rosario Utilities must be cautious in the use of water for hydropower, in order to maintain adequate supply for domestic purposes and minimum lake level. Since hydropower is used primarily for heating purposes (during the winter), water should normally be available.

$$\begin{array}{r} \text{gal/day} \quad 310 \quad 285 \\ \text{gal/yr} \quad 113,510 \quad 104,025 \\ \text{gal/afy} \quad 9,459 \quad 8,669 \end{array}$$

$$\begin{array}{r} 48,288 \quad 63,688 \\ 4024 \quad 5307 \\ 132 \quad 174 \end{array}$$

Annual Power Fees:

Rosario Utilities shall pay to the State of Washington, in advance, an annual hydropower license fee based upon the theoretical horsepower of the hydropower facility (RCW 90.16.050). The Department of Ecology shall bill Rosario Utilities or subsequent operators, \$12.00 annually for each year of hydropower operation. This fee is based on the following calculations:

$$\text{Theoretical Horsepower} = \frac{(\text{head in feet})(\text{cfs})}{8.8} = \frac{(345)(3.067)}{8.8} = 120$$

$$120 \text{ Theoretical HP} \times \$0.10 \text{ per HP} = \$12.00$$

Permit Fee:

2216-6 Afy
Is 3.067 correct? This permit fee based on cfs?

The permit fee for this application was computed in accordance with RCW 90.03.470. The one time only fee is \$44.00. This fee is based on the following calculations:

$$\text{Hydropower permit fee} = \$0.20 \text{ per theoretical horsepower} = \$0.20 \times 120 = \$24.00$$

$$\text{Domestic use permit fee} = \text{examination (application) fee} \times 2 = \$10.00 \times 2 = \$20.00$$

$$\text{Total permit fee} = \$24.00 + \$20.00 = \$44.00$$

Legal Tests For Decision-making:

Before Ecology may issue a permit authorizing the withdrawal of public ground waters, it must make a satisfactory determination of the following four tests (as set forth in RCW 90.03.290):

Water is available for appropriation.

Utilization will be for a beneficial use.

The appropriation if permitted will not impair existing rights.

The appropriation if permitted will not be detrimental to the public welfare.

Water Availability:

Annual precipitation in the Cascade Lake drainage basin is estimated at ranging between 30 and 45 inches from low elevation to high, with an estimated annual runoff between 6 and 27 inches. Average runoff to Cascade Lake storage is estimated at 3,000 afy. Water diverted from the Mountain Lake Basin adds an additional 1,200 afy to Cascade Lake.

Natural runoff and diversion flows should be more than adequate to satisfy this request during years of normal precipitation. Actual use will be controlled by allowable operational levels in Cascade Lake.

Beneficial Use:

Domestic use and hydroelectric power production are stated to be beneficial uses of water in RCW 90.54.020(1).

Impairment of Other Right Holders:

Rosario Utilities rate of diversion from Cascade Creek will remain the same, so there will not be any impact or impairment to other right holders within the Mountain Lake drainage basin. Rosario Utilities is the only right holder for water from Cascade Lake and its outlet stream to East Sound. Therefore there will be no impact or impair to other right holders within the Cascade Lake drainage basin.

Public Interest:

No detriment to public welfare could be identified with approval of this application.

Report Continued

CONCLUSION:

In accordance with Section 90.03 RCW, I find that there is water available for this beneficial appropriation from the source in question and that the appropriation as authorized will not impair existing rights or be detrimental to the public welfare. Therefore, a permit should issue subject to existing rights and indicated provisions.

REPORT BY: Buck Smith DATE: 10/1/97