STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
June 29, 2007	S2-30416		

NAME
Jim Greene

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
6245 49th Lane NW	Olympia	Washington	98502

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Summit Lake

TRIBUTARY OF (IF SURFACE WATERS)
Kennedy Creek

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
0.02		0.34

QUANTITY, TYPE OF USE, PERIOD OF USE		
0.34 Acre-feet per year	Single domestic supply (In-house use only)	Year-round, as needed

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION--WITHDRAWAL

1174 ft East and 24ft South of the SW corner of Section 7 (Longitude: -123.11185 by Latitude: 47.05666).

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SW¼ SW ¼	7	18	3W	14	Thurston

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
33	Waterfront	North Shore Summit Lake

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Plat NORTH SHORE SUMMIT LAKE LT 33 Document 011/083; TOGETHER WITH SHORELANDS IN FRONT

Tax Parcel No. 65400003300

Address: 2227 NW Summit Lake Shore Road

If you require this publication in an alternate format, please contact Water Resources at (360) 407-6300, or TTY (for the speech or hearing impaired) 711 or 800-833-6388.

DESCRIPTION OF PROPOSED WORKS

A screened intake, 2" water line, 1 ½ horsepower pump, uv and card filter, pressure tank, and delivering water to a single house.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Begun	Complete	June 1, 2011

REPORT

BACKGROUND:

On June 29, 2007, Jim Greene of Olympia, Washington, filed an application for a permit to appropriate public surface waters for single domestic use from Summit Lake. The application was accepted and assigned number S2-30416.

A legal notice was made for the application in *The Olympian* on August 29th and September 5th, 2007. No protests were received as a result of this notice.

INVESTIGATION:

An investigation has been conducted in response to Surface Water Application No. S2-30416 in the Summit Lake basin of Thurston County. This application is to supply water to a private single family home from the north shore of Summit Lake in the amount of .02 cfs (about 9 gallons per minute) and 0.34 acre-feet per year. Summit Lake is approximately nine miles west of Olympia in Thurston County, located in Kennedy/Goldsborough WRIA Number 14. Summit Lake discharges water to Kennedy Creek, which is closed to further appropriation, except for single domestic withdrawals.

The Washington Department of Fish and Wildlife (WDFW) commented on all pending applications for surface water permits from Summit Lake, Kennedy Creek, and its tributaries in a letter dated January 10, 2005. With this letter WDFW recognized that Summit Lake contributes a significant part of Kennedy Creek flow necessary for chum, coho, steelhead, and cutthroat. They further recognized that Summit Lake supports a variety of resident fish, including trout and kokanee (land-locked sockeye salmon). They stated that Kennedy Creek low flows in the summer and fall already limit fish production. The WDFW believes further reductions will be detrimental to the production of fish and the cumulative impact of numerous small diversions from Summit Lake will reduce flow in Kennedy Creek. However, Chapter 173-514 WAC, which closes Kennedy Creek to withdrawals from May to November, contains an exemption for single domestic diversions where no other water sources exist. Because there are no public water supply sources available for hookups in this area, the WDFW did not object to new permits for in-house single domestic use. Steven Boessow of WDFW was contacted in August 2006 and he verified that the earlier information was still applicable.

Investigation of the proposed appropriation included a review of Department of Ecology water rights and claims in the Kennedy Creek basin, a site visit to Summit Lake, a review of Chapter 173-514 WAC, and an interview with the applicant.

Location

The diversion site is located on the north shore of Summit Lake. The lakeshore is generally densely developed with single-family residences and vacation cabins. Most of the western shoreline belongs to a Boy Scout camp and is relatively undeveloped. The level of development decreases rapidly away from the lakeshore such that the hills surrounding the lake are mostly forested with light development.

Summit Lake is located in a steep, forested valley. The valley was formed by erosion into Tertiary basalt and the lake is caused by natural damming of the valley by fluvial and glaciofluvial terrace deposits. These terrace deposits occur at the western end of the lake.

The lake's outlet is at the northern end of the west shore of the lake and is controlled by flashboards within a small dam. The dam is owned and maintained by the Department of Fish and Wildlife, was constructed of earthfill in 1955, has a crest length of 90 feet, and is three feet high. The outlet empties into Kennedy Creek.

Inflow to the lake is from small intermittent and ephemeral streams resultant from seeps, springs and runoff in the surrounding hills. According to information on Ecology's lake water quality website, the lake has a drainage area of 2.82 square miles, a surface area of approximately 530 acres, a volume of approximately 28,090 acre-feet, and is at an elevation of approximately 500 feet above mean sea level. The U.S.G.S. topographic map places the lake elevation at approximately 460 feet.

Project Description

There is currently a 1600 square foot house on property where the water is used.

Other Appurtenant Water Rights

A review of water rights records found no other existing water right permits, claims, or certificates for the intended place of use.

Water Availability

Summit Lake

Summit Lake has a volume of approximately 28,090 acre-feet. According to the Kennedy-Goldsborough Watershed (WRIA 14) Phase II – Level 1 Assessment, the upper Kennedy creek watershed, which contains Summit Lake, receives an annual average precipitation of approximately 74 inches. Consequently, the Summit Lake basin, with an area of approximately 2.82 square miles, receives an annual average precipitation of approximately 11,130 acre-feet.

The Phase II – Level 1 Assessment estimates the average evapotranspiration in the upper Kennedy watershed at 29 percent of the precipitation, the average runoff at 62 percent, and the average ground water recharge at 9 percent. Because Summit Lake itself takes up a significant portion of the basin (approximately 30 percent), the average evapotranspiration percentage and the average ground water recharge percentage in the Summit Lake basin are lower than the averages for the watershed. Consequently, the runoff percentage in the basin is higher. Assuming all precipitation hitting the lake goes directly to runoff, the runoff percentage is estimated at 73 percent. Using 73 percent and assuming all the runoff in the basin enters the lake, the lake receives an average annual inflow of approximately 8,125 acre-feet.

Public Water Systems

The Washington State Department of Health reports that the only Group A water system in the Summit Lake area is Transient Non-Community system belonging to the Boy Scout camp. Three Group B systems exist in the area, one in the southern shoreline area belonging to the Turkey Road Water System, and two southwest of the lake belonging to the Summit Lake Community Church and the Summit Lake Community Club. The Turkey Road Water System currently supplies twelve homes. The place of use for the proposed appropriation is not available for hookup to any of these water systems. Discussions with the City of Olympia indicate that the City does not currently have plans to extend their water system to the Summit Lake area as the lake is outside the City's Urban Growth Area (UGA).

Instream Flows

Under Chapter 173-514 Washington Administrative Code (WAC), minimum flows have been established for Kennedy Creek, to which Summit Lake is tributary. Kennedy Creek is closed to all consumptive appropriations from May 1 through November 15 and is subject to minimum flows throughout the rest of the year. Minimum instream flows range from 7 cfs (from August 1 to October 14) to 60 cfs (from November 15 to April 14).

Single domestic use is exempt from the minimum flow provisions established in Chapter 173-514 WAC. However, WAC 173-514-060 specifies that if cumulative impacts of numerous single domestic diversions would significantly affect the quantity of water available for instream uses, then only single domestic in-house use shall be exempt if no alternative source is available.

Existing Rights

The following records of surface water use on Summit Lake, downstream unnamed streams, and downstream on Kennedy Creek are on file with the Department of Ecology. These water rights and claims are located in Township 18 N., Range 3 W.W.M, Sections 5-8 and 17-18; Township 18 N., Range 4 W.W.M, Sections 1-3 and 10-14; Township 19 N., Range 3 W.W.M, Sections 31-32; and Township 19 N., Range 4 W.W.M, Section 36. Certificates and permits that were within the search area but clearly not in the Summit Lake basin or were clearly upstream in the Kennedy Creek drainage are not included in the totals given below.

- As of October 2006, 233 certificates and 61 permits have been issued for Summit Lake, authorizing a total diversion of 4.85 cfs and 108.16 acre-feet per year. All but five of these certificates and permits are for single domestic uses.
- Five downstream certificates have been issued on Kennedy Creek, authorizing a total diversion of 1.10 cfs and an estimated total amount of 222 acre-feet per year. The annual allowed withdrawal is estimated due to three of the rights not reporting maximum allowed annual withdrawals. The allowed withdrawal for two of these rights is based upon an assumed irrigation usage of 2 feet per acre over a total acreage of 110 acres. The third is estimated a 0.5 acre-feet per year for a domestic single use.
- Two downstream certificates have been issued on unnamed streams that may be influenced by surface and/or groundwater flows from Summit Lake. These authorize a total of 0.03 cfs and 2.0 acre-feet per year.
- 93 surface Water Right Claims are recorded that list the water source as Summit Lake. Another 14 claims are recorded that may have either Summit Lake as a source or other surface water sources downstream of Summit Lake.

The actual consumption of water from Summit Lake is probably considerably less than the amount authorized by water right. Many residences at the lake are vacation/weekend cabins and are used only periodically or seasonally. Consequently, water authorizations based upon year-long occupancy may overestimate the amount of water actually used. However as the regional population grows there is likely to be a gradual shift for many of the properties from seasonal to full time use.

The majority of water used by lake residents enters their septic systems, especially for the many authorizations that are restricted to in-house use only. The vast majority of water entering septic systems (approximately 85 to 90 percent) becomes recharge to either Summit Lake or the groundwater system in the bedrock. It might be reasonable to estimate that of the 108.16 acre-feet authorized for withdrawal from Summit Lake approximately 85 acre-feet or more is either never taken from the lake or re-enters Summit Lake or the surrounding bedrock via return flow from septic systems. Most of the remaining water would be lost to evapotranspiration. In fact, given the slopes and soil surrounding Summit Lake, the portion of withdrawn water lost to evapotranspiration is probably much less and that portion that reenters the lake and groundwater system is likely even greater. The exact amount lost to evapotranspiration will vary according to the operating efficiency of the septic systems.

Water Requirements

The water requirement for in-house, single domestic use should not exceed an instantaneous rate of 0.02 cfs and a total of 300 gallons per day, or 0.34 acre-feet per year.

CONCLUSIONS:

The applicant does not have an alternate source of water. Due to small lot sizes and limited groundwater availability along the shores of Summit Lake, private wells are not a viable alternate water source for most properties. Similarly, public water systems are not currently available to residents seeking a new water source. Only one public system serving domestic residences exists at the lake and the applicant cannot connect to this system.

Chapter 173-514 WAC, which closes Kennedy Creek to withdrawals from May to November, contains an exemption for single domestic diversions where no other water sources exist. Because there are no public water supply sources available for connection in this area, the WDFW did not object to new permits for in-house single domestic use.

Because this right is approved based on the current lack of other water sources, this right should be relinquished once a public water source becomes available.

Beneficial Use

The requested use of water for continuous single domestic supply is a beneficial use.

Water Availability

Summit Lake contains a significant volume of water and accepts a large amount of runoff each year. Water is available for appropriation for in-house single domestic supply from Summit Lake under the provisions of Chapter 173-514 WAC.

Impairment of Existing Rights
The diversion of 0.02 cfs and 0.34 acre-feet per year will not impair existing rights. The diversion may impact minimum instream flows in Kennedy Creek. However, the proposed appropriation is allowed under the in-house domestic exemption under the provisions of Chapter 173-514 WAC.

Public Interest
Approval of application S2-30416 to divert water from Summit Lake for in-house single domestic supply is not detrimental to the public welfare.

RECOMMENDATIONS:

Based upon the information gathered and the conclusions drawn, it is recommended that a permit in the amount of 0.02 cubic feet per second, 0.34 acre-feet per year be authorized for diversion from Summit Lake for continuous, in-house, single domestic supply.

A construction schedule is included with this authorization to allow the installation of the meter required as a provision of this permit.

This permit should be subject to existing rights and the following provisions:

PROVISIONS:

Use of water authorized under this permit/certificate shall be limited to in-house use only.

At such a time that a public water supply becomes available to the place of use of this permit/certificate, the water right shall be relinquished.

An approved measuring device shall be installed and maintained for the source identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC.

Water use data shall be recorded annually and maintained by the property owner for a minimum of five years, and shall be promptly submitted to Ecology upon request.

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document entitled "Water Measurement Device Installation and Operation Requirements".

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions.

The permit is issued subject to Washington Department of Fish and Wildlife screening criteria as outlined in a hydraulic project approval. Please contact the Department of Fish and Wildlife, 600 Capital Way North, Olympia, Washington, 98501-1091, Attention: Habitat Management Division, (360) 902-2534, to obtain specific requirements for your project.

The Permittee is advised that notice of Proof of Appropriation of water (under which the final certificate of water right is issued) should not be filed until the permanent distribution system has been constructed and that quantity of water allocated by the permit to the extent water is required, has been put to full beneficial use.

This authorization shall in no way excuse the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including those administered by other programs of the Department of Ecology and those administered by local agencies.

REPORTED BY: Phil Crane Date: 10/6/09

FINDINGS OF FACT AND DECISION

Upon reviewing the above report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I find water is available for appropriation and the appropriation as recommended is a beneficial use and will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER a permit be issued under Surface Water Application Number S2-30416, subject to existing rights and indicated provisions, to allow appropriation of public surface water for the amount and uses specified in the foregoing report.

Signed at Olympia, Washington, this 13th day of October, 2009.

Thomas Loranger
Water Resources Section Manager
Southwest Regional Office