

STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**  
 APPLICATION FOR CHANGE  
**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 February 14, 1980	APPLICATION NUMBER G2-25490	PERMIT NUMBER G2-25490	CERTIFICATE NUMBER
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NAME Rainier View Water Company			
ADDRESS (STREET) PO Box 44427	(CITY) Tacoma	(STATE) Washington	(ZIP CODE) 98444

**PUBLIC WATERS TO BE APPROPRIATED**

SOURCE 6 Wells (Southwood System)		
TRIBUTARY OF (IF SURFACE WATERS)		
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE 2500	MAXIMUM ACRE FEET PER YEAR 616
QUANTITY, TYPE OF USE, PERIOD OF USE 616 Acre-feet per year	Multiple domestic supply	Year-round, as needed

**LOCATION OF DIVERSION/WITHDRAWAL**

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL  
 Well 1: 830 feet East and 850 feet North of the South quarter corner of Section 12.  
 Well 2: 1230 feet West and 530 feet North of the East quarter corner of Section 11.  
 Well 3: 890 feet East and 850 feet North of the South quarter corner of Section 12.  
 Well 4: 930 feet East and 850 feet North of the South quarter corner of Section 12.  
 Well 5: 800 feet East of the South quarter corner of Section 13.  
 Well 6: 200 feet South and 850 feet West of the North quarter corner of Section 8.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N. 18	RANGE, (E. OR W.) W.M. 3E	W.R.I.A. 11 & 12	COUNTY Pierce
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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**

The area served by Rainier View Water Company as described in a Department of Health approved water system plan located within Townships 18, 19 & 20 North, Ranges 3, 4 & 5 E.W.M., Pierce County, Washington.

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DESCRIPTION OF PROPOSED WORKS

Southwood #1, Southwood #2 (Bethel Ridge), Southwood #3, Southwood #4, Sally Hubert (#5), Spiritwood (#6).

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE: Started	COMPLETE PROJECT BY THIS DATE: February 1, 2002	WATER PUT TO FULL USE BY THIS DATE: February 1, 2003
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REPORT

BACKGROUND:

On July 12, 1999 the Rainier View Water Company filed an Application for Change to change the place of use associated with an existing water right permit. The application was accepted for processing under the original permit number G2-25490. The well sites covered by this water right are located in Water Resource Inventory Areas 11, the Nisqually River watershed, and WRIA 12, the Clover-Chambers watershed.

This application is being filed concurrently with the following Applications for Change:

G2-00631C	185 <sup>th</sup> Street (Sound System)
G2-25490P	Southwood Permit
G2-24960P	Indian Springs Permit
G2-26423P	Sound Water
6306-A	Quiet Village No. 1 (Southwood System)
7636-A	Quiet Village No. 2 (Southwood System)
G2-25906C	Thrift 1 (Southwood System)
G2-28204C	Thrift 2 (Southwood System)
G2-27454C	Chateau Wood (stand alone system)
G2-25831C	Behm 1
G2-26359C	Beverly Park (Southwood System)

Each of these requested changes is intended to reflect the newly merged Southwood, Sound, and Indian Springs water systems. Rainier View Water Company is the successor in interest to all three systems. A public notice of the proposed change was published, and no objections were received.

Under RCW 90.44.100, the Department of Ecology is permitted to change an existing ground water permit. The Department may issue such a change only after publication of a notice of the application and investigations as prescribed in the case of an original application. Pursuant to RCW 90.44.060 and RCW 90.03.290, the findings required by an original permit application are as follows: (1) water is available for appropriation/change; (2) the appropriation/change is for a beneficial use; (3) the appropriation/change will not impair existing water rights; and (4) the appropriation/change will not be detrimental to the public interest.

Based on the provisions of Chapters 90.03 and 90.44 Revised Code of Washington (RCW), and my investigation, I recommend issuance of a superseding permit for G2-25490.

INVESTIGATION:

In consideration of this Application for Change I reviewed the information submitted to me by the applicant, and their legal council and consulting engineer, and the Washington State Department of Health. The Department of Ecology's records of applicable hydrogeological reports and recorded water rights were also reviewed.

Water right permit G2-25490 was originally issued to the Richardson Water Company in the amount of 2500 gpm and 616 acre-feet per year for multiple domestic supply of the Southwood Water System. The points of withdrawal associated with the original permit are described as being 6 wells located within a broadly defined, several square mile service area.

In 1994 Rainier View acquired the Indian Springs Water System, and in 1997 the Sound Water Company was purchased. These two water systems were located adjacent to the Southwood System, and the purveyor has determined that in the interest of greater efficiency, all three systems should be combined.

The intent of this Application for Change is to modify the place of use from the originally specified place of use within the former Richardson Water Company, to reflect the new Rainier View service area. This change will allow the purveyor some flexibility in determining how water is distributed within the existing system, but the permit is not being enlarged or expanded as a result of this modification. A secondary purpose of this requested change is to designate final locations for the remaining production wells.

Current Use of Water Right Permit G2-25490

The Southwood portion of the new integrated Rainier View Water System serves water to approximately 4,900 connections. Prior to 1997 the system was not adequately metered, and production data for the system is still spotty and difficult to interpret. Total 1999 water production from the wells covered by this permit currently amounts to approximately 300 acre-feet per year.

This permit is in good standing and has been pursued with due diligence. Rainier View Water is an expanding water system that extends service to additional developments within their service area each year. In 1999, 252 new hookups were added to the Southwood portion of this system. The current development schedule allows for the notice of Completion of Construction to be filed in February 2002 with the final Proof of Appropriation to be filed in February 2003.

Locations of Wells

Water right permit G2-25490 authorized the use of 6 wells. Changes to the existing sources, wells 1 - 4, are not being proposed. However, instead of constructing two new wells, wells 5 and 6, Rainier View has proposed to designate two existing wells as the sources to be covered by this permit.

## Report Continued

Once this request is approved, permit G2-25490 will authorize the following wells:

Source	Well Name	Location
Well 1	Southwood 1	Section 12, T. 18 N., R. 3 E.W.M., SW ¼ SE ¼
Well 2	Southwood 2 Bethel Ridge	Section 11, T. 18 N., R. 3 E.W.M., SE ¼ NE ¼
Well 3	Southwood 3	Section 12, T. 18 N., R. 3 E.W.M., SW ¼ SE ¼
Well 4	Southwood 4	Section 12, T. 18 N., R. 3 E.W.M., SW ¼ SE ¼
Well 5	Southwood 5 Sally Hubert	Section 13, T. 18 N., R. 3 E.W.M., <del>SW ¼</del> SE ¼ SW ¼
Well 6	Southwood 6 Spiritwood	Section 8, T. 18 N., R. 3 E.W.M., NE ¼ NW ¼

Well 5, an existing well known as Sally Hubert, is currently in production under ground water certificate G2-26610 – a certificate that allocates a withdrawal of 200 gpm, and 200 acre-feet per year supplemental to the subject permit - G2-25490. Including this well on this permit will allow Rainier View to legally increase the withdrawal rate to the installed capacity of 240 gpm. This well has historically operated at this rate, and I do not anticipate any adverse impacts to neighboring water users.

Well 6 located at the Spiritwood development is an existing well that has been in production for a number of years without the benefit of a water right permit. Any effects associated with its continued use should be comparable to those effects that a new well would have on area wells.

Each production well in the Southwood system will be operated with variable frequency controls and the entire system operated so as not to exceed the allocated instantaneous withdrawal rate.

### Effects to Neighboring Ground Water Users and Instream Flows:

The 6 wells to be covered by this permit are located within a several square mile area. Southwood Well 2, Southwood Well 5 and Southwood Well 6 form the points of a triangle that stretches about two miles across, with Southwood Wells 1, 3 and 4 tucked in the triangle's west end. Permits of this large, somewhat undefined scope were issued frequently during the late 1970's and early 1980's, because it was more efficient and convenient for both the purveyor and Department of Ecology. However, today the great distance between the wells makes it difficult to evaluate potential impacts resulting from their use, especially since no restrictions were placed on the completion depths of the wells.

A general review of this region's hydrogeology indicates that the aquifer system in the Chambers/Clover Creek basin consists of alternating layers of higher and lower permeability deposits, outwash alternating with till of non-glacial clay and silt. In the Clover/Chambers Basin Ground Water Management Program (Brown and Caldwell, 1985) these layers are denoted as layers A through G. The major aquifers are the glacially deposited layers A, C, and E, while lower permeability aquitards B, D, and F are non-glacial in origin. The uppermost aquifer, layer A, was deposited by the Vashon glacier, and is one of the most productive aquifers in the watershed. It is commonly referred to as the "shallow aquifer". The highly permeable coarse sand and gravel deposits of the Vashon Advance and Recessional glacial outwash make the Shallow Aquifer the primary source for much of the area's water production. It is within this aquifer layer that the Southwood wells, and most of the neighboring wells are completed. Department of Ecology records indicate that over 200 wells have been constructed within the several square mile perimeter of the system's service area. The vast majority of these wells range in depth from 80 to 120 feet below ground surface.

This shallow aquifer system appears to extend to depths of approximately 200 feet below sea level. In general, surface water infiltrates to recharge the upper aquifer, and these upper units, in turn, provide recharge to the deeper aquifer through gradual leakage. The glacial material, however, is not homogeneous and localized layers of lesser permeable material limits some of the ground water movements. The general direction of ground water flow is towards the northwest. However, in this southern most part of the drainage system ground water moves under a very low hydraulic gradient and flow direction may deviate locally – especially near McChord Airforce Base.

South central Pierce County has experienced rapid development over the last 20 years, and much of the area served by Rainier View is a mixture of single domestic homes and residential developments – all served by ground water. While there have been no reports of problems related to physical water availability in the Graham-Thrift-Spanaway area, the additional allocation of new ground water will ultimately affect the amount of ground water discharging to surface water bodies in the watershed. For this reason, it is preferable to supply the existing Rainier View service area with water already authorized by water right permits and certificates. The subject permit is in good standing and is being pursued diligently. It is unlikely that continued use of the subject wells will impair the rights of neighboring water users - nor is the substitution of the Sally Hubert and Spiritwood wells likely to directly impair neighboring surface water bodies. This authorization will be provisioned with the condition that should unanticipated impairment occur as a result of this change, Rainier View will be required to cease further withdrawals from the new sources.

### Water Right Summary

The new Rainier View service area has been defined and mapped within the purveyor's most current water system plan. Rainier View's service franchise supplies water to residential and commercial developments, schools and other facilities within an area generally defined as south of Spanaway, bordered by Highway 7 to the west and the Orting-Kapowsin Road to the east. The new service area encompasses the former service areas of the Southwood System, Indian Spring System and the Sound System.

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Rainier View Water Rights

Water Right #	GPM	Ac-ft/year primary	Ac-ft/year Supplemental	Well
<b>Southwood</b>				
6306-A	40	79	0	Quiet Village 1
7636-A	80	0	79	Quiet Village 2
G2-25906	250	84	218	Thrift 1
G2-28204	250	200	0	Thrift 2
G2-25490 P	2500	616	0	Southwood – 6 wells
G2-26359	1500	500	0	3 well (Bev. Park)
G2-26610	200	0	200	Sally Hubert *Suppl. to G2-25490
G2-23719	100	0	138	Fir Meadows A
G2-00799	250	138	0	Fir Meadows B
G2-24864	155	125	0	Morrey Glen B
G2-26792	105	25	0	Country Park 2
G2-00591	85	27	0	Lauradel A
G2-25517	60	96	0	Lauradel B
G2-26399	250	134	0	Morrey Glen A
G2-21393	15	4	0	Barna Well 1
<b>Sub-total</b>	<b>5840</b>	<b>2028</b>	<b>635</b>	
<b>Sound Water</b>				
G2-00631	50	6.75	0	185 <sup>th</sup> Street
G2-25831	60	96	0	Behm 1
G2-26423 P	(3000)	(2016)	0	Sound Water – multiple wells
Amended	2940	1920	96	Partially supplemental to G2-25831
<b>Sub-total</b>	<b>3050</b>	<b>2022.75</b>	<b>96</b>	
<b>Indian Springs</b>				
G2-24960 P	600	403	0	Indian Spring Wells
<b>Other Systems</b>				
G2-27454	160	36	0	Chateau Woods
<b>Sub-total</b>	<b>760</b>	<b>439</b>	<b>0</b>	
<b>Total</b>	<b>9650</b>	<b>4489.75</b>	<b>731</b>	

Water Requirements And Demand Forecasting for New Rainier View Service Area

Within the new integrated service area the Rainier View Water Company currently provides water service to approximately 8,360 connections. In 1999, it appears that the integrated system produced approximately 3,261 acre-feet.

Conservation Planning

Under RCW 90.03.005 and 90.54.020(6), the Department of Ecology must emphasize conservation and water-use efficiency in management of the state's water resources and must reduce the waste of water as far as practicable. Rainier View will be required to develop an ongoing conservation program that will be reviewed by both the Department of Ecology and the Department of Health. Issuance of a superseding permit will require fulfillment of any conditions specified by DOH for approval of the plan and will require implementation of the approved program.

RCW 90.54.030 directs the Department of Ecology to be informed with regard to all phases of water resources of the state, in order to make sound resource management decisions. This permit will include detailed provisions for the collection and submittal of water production data.

Compared to production/consumption data for similarly sized systems, Rainier View Water has a relatively high rate of lost and unaccounted for water for many of their systems. The most likely cause of this situation is leaks in the distribution system. Rainier View has indicated that they will be pursuing a full water audit and leak detection survey of the distribution system and will repair any major leaks that are discovered.

As noted in the provisions, issuance of this approval is subject to the creation and implementation of a conservation plan, and to the submittal of an annual report of water production. The applicant is advised that the issuance of future development extensions are contingent on reducing the amount of unaccounted for water.

CONCLUSION AND FINDINGS:

- The original application for this permit found that was water available for the appropriation. This finding is not affected by this change application, and therefore applies here.
- The water will be put to beneficial use for multiple domestic water supply.
- The change is not expected to impair any existing water rights, whether junior or senior. If impairment of junior or senior water rights should occur, such impairment would be grounds for curtailment or cessation of any withdrawal resulting from the change which causes such impairment, or alternatively, Rainier View will mitigate to remedy the situation.
- The change will not be not detrimental to the public interest. The change is not expected to cause any detrimental environmental affects on the natural environment, and a condition is placed on the superseding permit to eliminate any adverse affect if at some future time a significant adverse affect were determined to result from the change. The change is also found to promote the public interest by improving system reliability and reducing the costs of infrastructure.

**RECOMMENDATIONS:**

I recommend approval of this *Application for Change*, and issuance of a Superseding Permit in the amount of 2500 gpm, and 616 ac-ft per year with a place of use designated as:

The area served by Rainier View Water Company as described in a Department of Health approved water system plan located within Townships 18, 19, and 20 North, Ranges 3, 4, and 5 E.W.M., Pierce County, Washington.

This superseding permit will authorize the withdrawal of ground water from the 6 wells identified on the cover page of this Report of Examination. Unique Well Identification tags must be attached to each well, and those numbers provided to the Department of Ecology prior to issuance of the superseding document.

The superseding permit is subject to all applicable state regulations and the following provisions:

**PROVISIONS:**

"If it can be determined that the recommended change in place of use under this permit causes any impairment of water rights existing at the time of a change, such impairment shall be grounds for curtailment, or cessation of any withdrawal resulting from the change, or in mitigation to remedy the situation."

The water appropriated under this application will be used for public water supply. The State Board of Health rules require public water supply owners to obtain written approval from the Office of Water Supply, Department of Health, 1112 SE Quince Street, PO Box 47890, Olympia, Washington 98504-7890, prior to any new construction or alterations of a public water supply system.

Installation and maintenance of an access port as described in Chapter 173-160 is required. An air line and gauge may be installed in addition to the access port.

The applicant is advised that the quantity of water allocated by this permit may be reduced at the time of final certification to reflect system capacity and actual usage.

Issuance of this water right is subject to the implementation of the minimum requirements established in the Conservation Planning Requirements, Guideline and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July 1994, and as revised.

Under RCW 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be emphasized in the management of the states water resources, and must be considered as a potential new source of water. Accordingly, as part of the terms of this water right, the applicant shall prepare and implement a water conservation plan approved by Department of Health. The standards for such a plan may be obtained from either the Department of Health or the Department of Ecology. The permittee is advised that the issuance of future development extensions are contingent on implementation of conservation measures.

Water production for all Rainier View wells along with a summary and analysis of the data, shall be submitted annually, or more frequently upon request, to Ecology's Southwest Regional Office Water Resources Program. The data shall be submitted in digital format.

For Water Use Reporting:

1. Measurement method (totaling meter, acoustic meter, etc.) for each well
2. Total volume pumped from each well by month in thousands or millions of gallons
3. Unique Well ID number

The applicant 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.

The Water Resources Act of 1971, Chapter 90-54 RCW specifies certain criteria regarding utilization and management of the waters of the State in the best public interest. Favorable consideration of this application has been based on sufficient waters available, at least during portions of the year. However, it is pointed out to the applicant that this use of water may be subject to regulation at certain times, based on the necessity to maintain water quantities sufficient for preservation of the natural environment.

REPORTED BY: *J. Mike Harris* Date: December 29, 2000

The statutory permit fee for this application is \$20.00.

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 superseding permit be issued under Ground Water Number G2-25490, subject to existing rights and indicated provisions, to allow appropriation of public ground water for the amount and uses specified in the foregoing report.

Signed at Olympia, Washington, this 29th day of December, 2000.

*J. Mike Harris*  
J. Mike Harris  
Water Resources Supervisor  
Southwest Regional Office

