State of Washington
DRAFT
Report of Examination for Water Right Change

CG2-GWC5393@2
4621417

Purpose ☒ Place of Use ☒ Point of Diversion/Withdrawal ☒ Season ☐ Consolidation ☐

PRIORITY DATE	WATER RIGHT NUMBER
December 17, 1964	Ground Water Certificate 5393-A

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
WHITE PASS SCHOOL DIST #303 516 SILVERBROOK RD RANDLE WA 98377	

Quantity Authorized for Withdrawal or Diversion

DIVERSION OR WITHDRAWAL RATE	UNITS	ANNUAL QUANTITY (AF/YR)
140	GPM	135

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Domestic multiple	140		GPM		135	01/01 - 12/31
Commercial & industrial						01/01 - 12/31

REMARKS

The annual quantity of this right (135 af/yr) is wholly non-additive to Ground Water Certificate G2-GWC1011(A) and Ground Water Permit G2-GWP1952(B). The annual withdrawal from all rights may not exceed 176 acre-feet collectively. The quantity allocated – 140 gallons per minute (additive) may be used for the purposes of domestic multiple and commercial/industrial use. Annual use for commercial and industrial purposes is limited to 70 acre-feet by G2-GWC1011(A).

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
		47000	

Source Limitations

SOURCE FACILITY/DEVICE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)			PERIOD OF USE (IF SOURCE SPECIFIC)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	A|S	
Well No. 4 (School Property)	50		GPM				05/01 - 09/30

A=Alternate; S=Standby/Reserve

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Lewis	Groundwater		26 Cowlitz

SOURCE FACILITY/DEVICE	PARCEL	WELL ID	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Well No. 1 (Hampton Well)	031752006000	922	12N	07 E	15	NE NW	46.5338	-121.91835
Well No. 2 (New Well Hampton Property)	031749007000	AGA118	12N	07 E	15	NW NE	46.53375	-121.91368
Well No. 4 (School Property)	031661003003	AFM973	12N	07 E	15	SW SW	46.53622	-121.928

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

LEGAL DESCRIPTION

The place of use of this water right is the Lewis County Water District #1 service area described in the 2006 Water System Plan Amendment approved by the Washington State Department of Health. The service area is located within the SE¼SW¼ , SW¼SE¼ , and SE¼SE¼ of Section 8; SE¼SE¼ , SW¼SE¼, SE¼SW¼, SW¼SW¼, NE¼SW¼, and NW¼SE¼ of Section 9; SW¼SW¼ and SE¼SW¼ of Section 10; NW¼NW¼, NE¼NW¼, SE¼NW¼, NW¼NE¼, SW¼NE¼, and NW¼SE¼ of Section 15; NE¼NW¼, NW¼NE¼, NE¼NE¼, and SW¼SW¼ of Section 16; NE¼SE¼, NW¼SW¼, NE¼SW¼, SE¼SW¼, NE¼NW¼, SW¼NW¼, SE¼NW¼, NW¼NE¼, NE¼NE¼, SW¼NE¼, SE¼NE¼, NW¼SE¼, SW¼SE¼, and the SE¼SE¼, of S. 17; NE¼NE¼, and NW¼NE¼ of Section 20; all in T12N, R07E.W.M.

Proposed Works

Well 1: Existing 8 inch diameter well approximately 100’ deep (Hampton Well)
Well 2: Existing 8 inch diameter well 102’ deep
Well 4: Existing 8 inch diameter well screened between 47-57 feet below ground surface

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
December 1, 2011	December 1, 2029	December 1, 2029

Measurement of Water Use

How often must water use be measured?	Weekly
How often must water use data be reported to Ecology?	Annually
What volume and rate should be reported?	Total Annual Volume Monthly Total Volume Peak Rate of Withdrawal (gpm or cfs)

Provisions

The water right will be subject to the following provisions:

1. The maximum cumulative withdrawal rate under water right Certificate G2-GWC1011(A), Permit G2-GWP1011(B)and 5393-A will not exceed 250 gpm and 176 acre-feet per year. Use under 5393-A is limited to 135 acre-feet per year (non-additive).

2. Lewis County Water District No. 1 will be responsible for operation and maintenance of the water system consisting of Wells 1 and 2, storage tanks, and associated transmission and distribution pipelines, and will be responsible for monitoring and reporting water use from Wells 1, 2 and 4.

Wells, Well Logs and Well Construction Standards
All wells constructed in the state shall meet the construction requirements of WAC 173-160 titled "Minimum Standards for the Construction and Maintenance of Wells" and RCW 18.104 titled "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard shall be decommissioned.

All wells shall be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag shall remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

Measurements, Monitoring, Metering and Reporting
An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

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.

Reported water use data shall be submitted via the Internet. To set up an Internet reporting account, access https://fortress.wa.gov/ecy/wrx/wrx/Meteringx/. If you do not have Internet access, contact the Region for forms to submit your data.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Department of Health Requirements
Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030, prior to beginning (or modifying) your project.

Easement and Right-of-Way
The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Water Use Efficiency
Use of water under this authorization shall be contingent upon the water right holder's maintenance of efficient water delivery systems and use of up-to-date water conservation practices consistent with established regulation requirements and facility capabilities.

Proof of Appropriation
The water right holder shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the superseding certificate. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections
Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Real Estate Excise Tax
This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. Phone: (360) 570-3265. The mailing address is: Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia WA 98504-7477 Internet: http://dor.wa.gov/. E-mail: REETSP@DOR.WA.GOV.

Findings of Facts
Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I find the change of water right as recommended will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER the requested change to purpose, place of use and points of withdrawal requested by Change Application No. CG2-GWC5393@2 subject to existing rights and the provisions specified above.

You have a right to appeal this decision. To appeal this you must:

- File your appeal with the Pollution Control Hearings Board within 30 days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.
- Serve your appeal on the Department of Ecology within 30 days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).

Be sure to do the following:

- Include a copy of this document that you are appealing with your *Notice of Appeal*.
- Serve and file your appeal in paper form; electronic copies are not accepted.

1. To file your appeal with the Pollution Control Hearings Board

Mail appeal to:

The Pollution Control Hearings Board
PO Box 40903
Olympia WA 98504-0903

OR

Deliver your appeal in person to:

The Pollution Control Hearings Board
4224 – 6th Ave SE Rowe Six, Bldg 2
Lacey WA 98503

2. To serve your appeal on the Department of Ecology

Mail appeal to:

The Department of Ecology
Appeals & Application for Relief Coordinator
P.O. Box 47608
Olympia WA 98504-7608

OR

Deliver your appeal in person to:

The Department of Ecology
Appeals & Application for Relief Coordinator
300 Desmond Dr SE
Lacey WA 98503

3. And send a copy of your appeal to:

Thomas Loranger
Section Manager
Water Resources Program -- Department of Ecology
Southwest Region
P.O. Box 47775
Lacey WA 98504-7775

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov. To find laws and agency rules visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser .

Signed at Lacey, Washington, this day of 2010.

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Section Manager
Water Resources Program
Southwest Region

INVESTIGATOR'S REPORT

BACKGROUND

Description and Purpose of Proposed Change

On April 17, 2009, the White Pass School District 303 of Randle, Washington, filed a change application for water right 5393-A with the Washington State Department of Ecology (Ecology) requesting to add points of withdrawal, and change the place and purpose of use as follows.

- Add three points of withdrawal in Township 12N, R07E W.M. (Figure 1):
  - An existing well in the NE ¼ of the NW ¼ of Section 15 (Well #1);
  - An existing well in the NW ¼ of the NE ¼ of Section 15 (Well #2);
  - A well to be located in the SW ¼ of the SW ¼ of Section 10, based on a well siting study (Well #3);
- Place of use to the existing service area of the Lewis County Water District #1 (Figure 2);
- Purpose of use for community domestic and commercial/industrial water supply.

The proposed points of withdrawal and place of use are near the confluence of Silver Creek and the Cowlitz River, in the Upper Cowlitz River Subbasin, within the Cowlitz River Water Resource Inventory Area (WRIA) 26, in Lewis County.

<u>Current Sources</u>

The White Pass School District 303 of Randle, Washington, holds three water rights: G2-GWC1011(A) (110 gpm, 70 acre-feet/year) and G2-GWP1952(B) (110 gpm non-additive and 106 af/yr) and 5393-A (140 gpm additive, and 135 afy non-additive). Both water rights are currently exercised at the same well (Well #4). The water rights are managed by Lewis County Water District #1 (LCWD #1) according to a long-term agreement between the School District and Water District. The total additive water rights held by the White Pass School District are for 250 gpm and 176 afy (Table 1).

Table 1
Attributes of White Pass School District 303 Water Rights
(well in the SW ¼ of the SW ¼ of Section 10, T12N, R7E)

Water Right #	Name	Priority Date	Purpose	Add. Qi	Non-Add Qi	Add. Qa	Non-Add. Qa
Certificate G2-GWC1011(A)	Consolidated School District #214 of Morton	June 6, 1951	Domestic supply, fire protection	110		70	
Permit G2-GWP1011(B)	Consolidated School District #214 of Morton	June 6, 1951	Domestic supply, fire protection		110	106	
5393-A	White Pass	December 17, 1964	Domestic supply,	140			135

	School District #3	fire protection		
Total			**250**	**176**

Note: Add. = additive. Non-Add. = non-additive.

Community Context

LCWD #1 is located in the unincorporated community of Randle in Lewis County, an economically distressed county. LCWD #1 has operated the public water system since 1957. In 1974 the White Pass School District No. 303 and the USFS wells were connected to the water system under long term agreements with LCWD #1.

In 2001 the LCWD #1 Water System Plan identified insufficient fire flow and storage as a critical issue that must be resolved in order to assure public health and safety in the community. The 2006 Water System Plan Amendment reiterated the need to resolve this issue.

The 2001 Water System Plan also identified source susceptibility issues at the existing School well and the USFS well; Washington DOH has determined that these wells are threats to public health.

Water right changes and new appropriations are needed to resolve these issues and maintain a safe and reliable water system in Randle.

Hampton Lumber Mills-Washington, Inc., in Randle holds 2 groundwater rights exercised at the Facility well; this well has no source susceptibility issues. The Hampton water system includes a pump station and 345,643 gallon storage tank.

To resolve the community water supply issues identified in the 2001 and 2006 water system plans, LCWD #1 and Hampton agreed to enter into a long-term agreement for water supply from the Hampton well to serve the Water District. The agreement includes provisions for a long-term lease of Hampton's water rights, well, pump station, storage tank and [1]associated infrastructure to LCWD #1. This lease agreement provides for sufficient fire flow storage and improves water quality. Additionally, Hampton and LCWD #1 have cooperated in the design and construction of a new transmission main to connect the Hampton well and storage tank with the LCWD#1 distribution system. This cooperative effort was accomplished with funding from Hampton for a portion of the costs as well as a Community Development Block Grant from the State.

The LCWD #1 water system upgrade will be completed through additional agreements between the Water District, Hampton, and the School District. Hampton is gifting a parcel of land to the School District for a new well that has no source susceptibility issues and will provide pumping capacity for fire protection. Design and construction of this well, pump station and associated infrastructure, and connection to the LCWD #1 distribution system, is a cooperative effort between the School District,

[1] G2-GWC1011(A) and G2-GWP1952(B) represent superseded versions of Water Right Certificate 1011-A, which was rescinded and split into a new certificate, representing the perfection portion, and a permit, representing the inchoate portion, in January 2010 pursuant to an Order of Rescission by the Department of Ecology, Docket No. 7333..

Hampton and the Water District. LCWD #1 and the School District have agreed to enter into an amended long-term lease of this new School well as a source of supply.

This appropriation is evaluated in conjunction with applications for change of the Hampton and School District water rights, and new appropriations to LCWD #1. Upon approval of the water rights, the system will be connected to the new transmission line, Hampton well and storage tank, and new School well. The existing School well will be used for non-potable irrigation of the School grounds and athletic fields. The USFS well will not be used as a source of water supply by LCWD #1. LCWD #1, under long-term agreements with Hampton and the School District, will be responsible for the operation of the system and reporting water use at all wells.

Summary

LCWD #1 currently operates the School Well (Well #4) under the School's combined water rights. Both water rights withdraw water from a single well. Aged underground storage tanks containing petroleum products are located within 20 feet of the well. The Washington Department of Health has determined that the current conditions present a threat to human health.

This change application will enable LCWD #1 to: 1) secure a reliable public water supply for the community of Randle; 2) establish and use sources that are not susceptible to contamination and thereby maintain public health and safety; and, 3) provide sufficient fire flow for public health and safety as required by the Washington State Department of Health.

Attributes of the Certificate and Proposed Change

Table 2
Summary of Proposed Changes to Water Right No. 5393-A

Attributes	*Existing*	*Proposed*
Name	White Pass School District 303 (Consolidated School District #214 of Morton)	White Pass School District 303
Priority Date | Date of Application for Change	December 17, 1964	March 5, 2009
Instantaneous Quantity	140	140
Annual Quantity	135 (non-additive)	135 (non-additive)
Source	Groundwater	Groundwater
Point of Diversion/Withdrawal	Well #4	Wells #1, #2, #3 & #4
Purpose of Use	Domestic supply and fire protection	Community domestic and commercial/industrial
Period of Use	Year round	Continuous
Place of Use	SE ¼ of Section 9, SW ¼ of Section 10, S ½ of Section 8, portions of Section 17, and NE ¼ of Section 20, all in Township 12N, Range 7 E.W.M.	Lewis County Water District #1 Service Area (Figure 2)

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in 5393-A:

- **Public Notice**
  Notice of the proposed change application was published in The East County Journal of Morton, Washington, on April 29 and May 6, 2009. No protests were received by Ecology.

- **State Environmental Policy Act (SEPA)**
  This application is categorically exempt from SEPA according to WAC 197-11-800(4).

- **Water Resources Statutes and Case Law**

RCW 90.44.100 allows Ecology to amend a ground water permit to (1) allow the user to construct a replacement or additional well at a new location outside of the location of the original well, or to (2) change the manner or place of use of the water, if:

(a) The additional or replacement well taps the same body of public ground water as the original well. RCW 90.44.100(2)(a),

(b) Where a replacement well is approved, the user must discontinue use of the original well and properly decommission the original well. RCW 90.44.100(2)(b),

(c) Where an additional well is constructed, the user may continue to use the original well, but the combined total withdrawal from all wells shall not enlarge the right conveyed by the original permit or certificate. RCW 90.44.100(2)(c),

(d) Other existing rights shall not be impaired. RCW 90.44.100(2)(d).

The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp.

RCW 90.03.380(1) states that a purpose of use may be added to a water right if the annual consumptive quantity is not increased. The annual consumptive quantity is the average of the two highest years within the most recent five-year period of ongoing beneficial use of the water right.

A change in the place of use, point of diversion, and or purpose of use of a water right to enable irrigation of additional acreage or the addition of new uses may be permitted if the change results in no increase in the **annual consumptive quantity** of water used under the water right.

Annual Consumptive Quantity means the estimated or actual amount of water diverted in a year, allowed under a water right, reduced by the estimated yearly amount of water that returned to the water cycle by evaporation or percolation. This quantity is then averaged using the greatest two years of use within the most recent five-year period of continuous beneficial use of the water right.

Long Term Leases and Agreements

On November 11, 1974, the White Pass School District leased to LCWD #1 the right to withdraw water from the School well for a period of 50 years, with an optional renewal term of 25 years. White Pass School District and LCWD #1 are amending this lease agreement and extending the term of the lease for 50 years to 2059. The amended lease will allow LCWD #1 to withdraw water at the new well #2, thereby removing the threat of contamination of the community water supply.

Hampton Lumber Mills-Washington, Inc., holds groundwater certificates G2-27504 and *8483 exercised at its well that has no record of contamination. In 2006 LCWD#1 amended its Comprehensive Plan to integrate the Hampton Lumber Mill into the water supply system. On March 5, 2009, Hampton filed applications to add points of withdrawal, change the purpose of use to community domestic and commercial/industrial, and the place of use to the LCWD #1 service area. Hampton and LCWD #1 have agreed to lease Hampton's water rights, well, pump station, storage tank and associated infrastructure, and a wellhead protection easement to LCWD #1 for a term of 50 years to 2059.

Hampton is gifting a parcel of Mill property to the School District for Well #2 as an additional point of withdrawal under the School water rights. The existing School well will be disconnected from the LCWD #1 potable water supply system. The School District will use the existing School well for non-potable irrigation of school grounds and athletic fields under a portion of its water rights.

INVESTIGATION

In consideration of this application, available documents pertaining to the application's site conditions, projected water demand, agreements among the parties, and the potential effect on existing water right holders and proposed minimum instream flows were reviewed. This included the information submitted by the applicant and pertinent Ecology records including well logs, water rights records, and well construction and design reports.

Deb Hunemuller and Tom Culhane of Ecology visited the site on February 20, 2007, and met with Bill McMahan (chairman of the LCWD #1) David Like (environmental manager of the Hampton Lumber Mill) and Chris Pitre (Golder). During the site visit they inspected the current point of withdrawal, proposed points of withdrawal for Wells 1 and 2, and the proposed place of use, and interviewed the applicant.

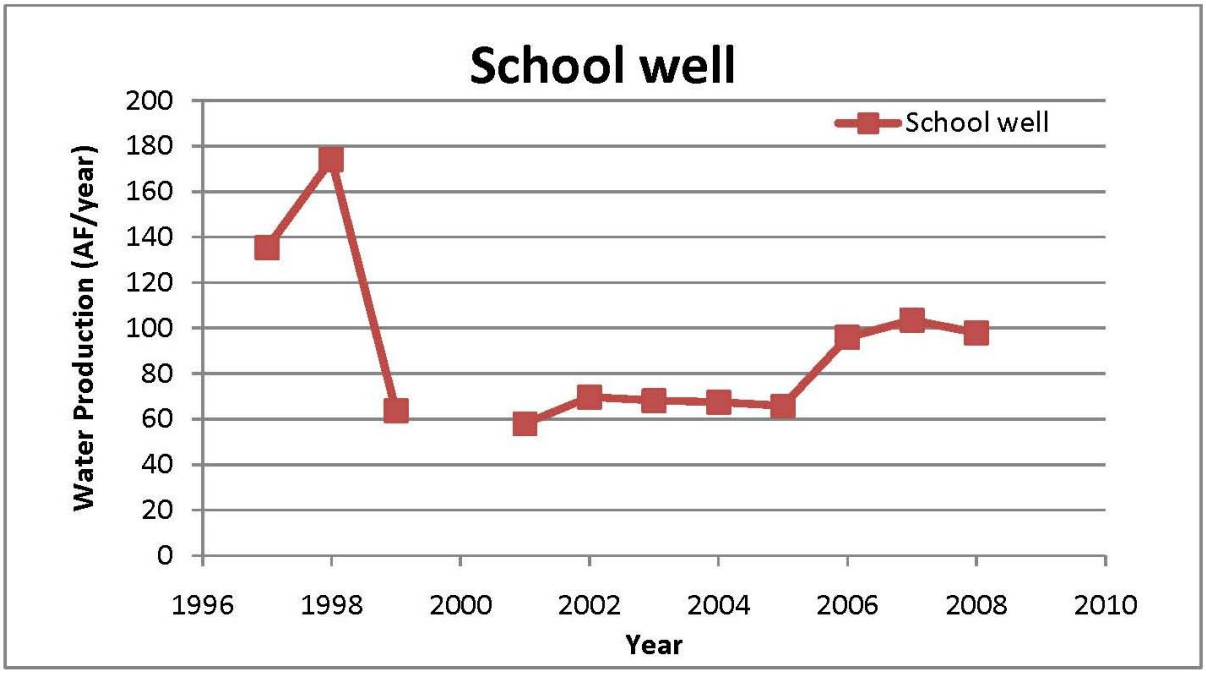
History of Water Use

This water right was issued on December 17, 1964 to White Pass School District #303 to supply the school. In 1974 the School District entered into an agreement with Lewis County Water District #1 for community water supply from the well located on the School property. This well has been used continuously as a source of supply for the community including the school.

Meter readings are not available prior to 1997. The historic water use at the School Well (Well #4) from 1997 to 2008 is summarized in the following table and graph.

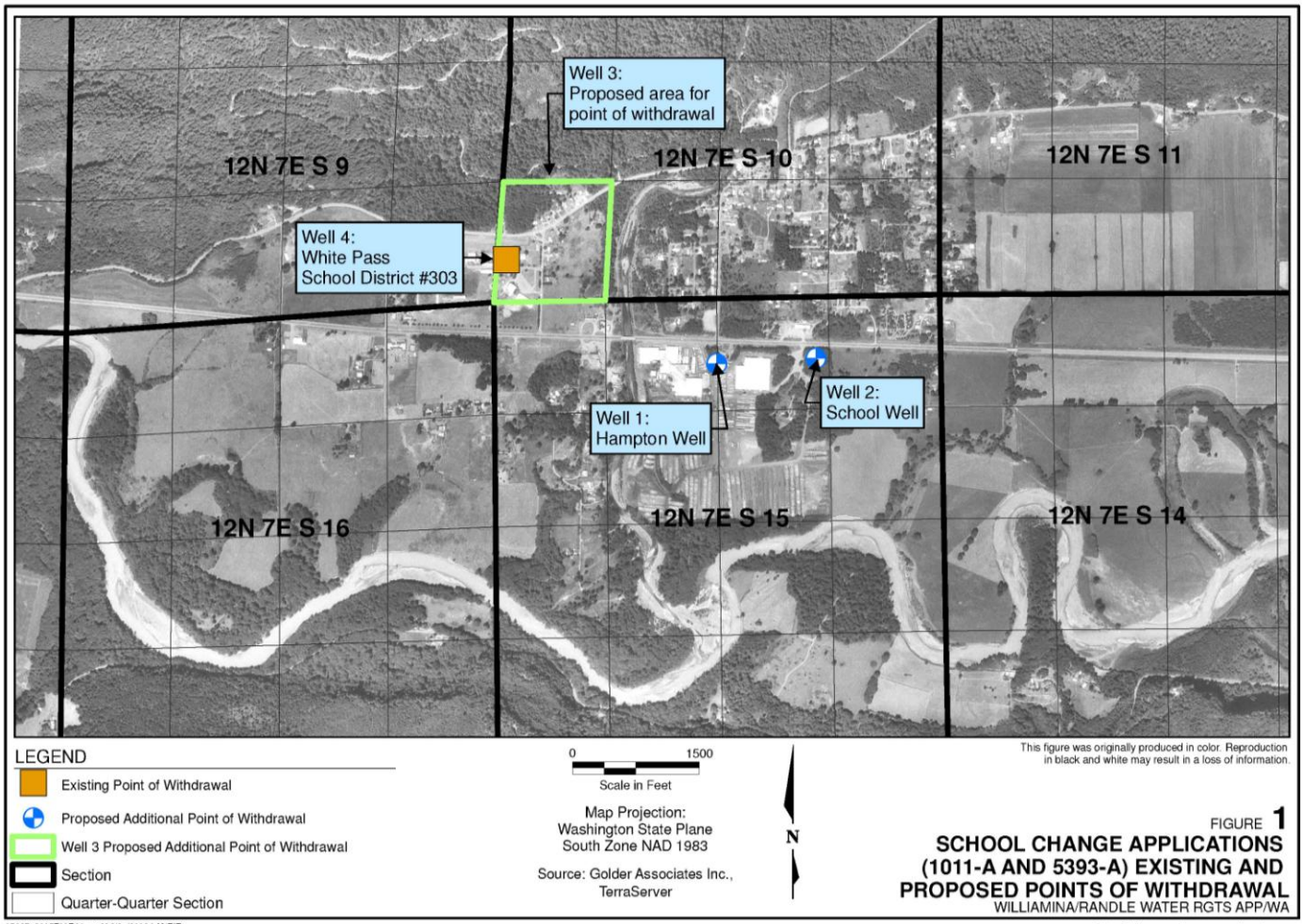
Table 3
Well #4 Historic Water Use

Year	Annual Production (AF/yr)	Comment
1997	135	Water line leak
1998	174	
1999	64	
2000	No data.	
2001	58	
2002	70	
2003	68	
2004	67	
2005	66	
2006	96	Increased irrigation by School, or water line leak
2007	103	
2008	98	



Points of Withdrawal

Figure 1 shows the current and proposed additional points of withdrawal.



Well #1: The first point of withdrawal is the existing well (well tag # AFM 922) owned by Hampton Lumber, located on the east side of the NE ¼ of the NW ¼, Section 15, Township 12 North, Range 7 East (Parcel #031752006000). Well #1 is an eight-inch diameter well approximately 100 feet deep (no well log exists for this well). Groundwater is withdrawn from this well by Hampton Lumber under Groundwater Certificate Number G2-27504C with an annual quantity of 42 afy and an instantaneous rate of 350 gpm, and Surface Water Certificate Number 8483A (changed in 2006 to allow withdrawal from groundwater) with an annual quantity of 12 afy.

Well #2: The second point of withdrawal is a new well (well tag #AGA 118) installed on the east side of the NW ¼ of the NE ¼, Section 15, Township 12 North, Range 7 East (Parcel #031749007000). The well, located approximately 2,100 feet east of Silver Creek, is an 8-inch diameter well 102 feet deep. The well log is on file at Ecology under well tag #AGA 118. Drilling, installation, development and testing of the well occurred between July 14 and September 3, 2008. The results of the aquifer testing indicate that the aquifer in the vicinity of the new well is very permeable (180,000 ft^2/d). With a design pumping rate of 350 gpm, the long-term drawdown is expected to be in the range of 3 to 4 feet (Golder, 2008).

Well #3: The third proposed point of withdrawal is a potential well to be located in the SW ¼ SW ¼ Section 10, Township 12 North, Range 7 East. The exact point of withdrawal is expected to be defined when a well siting study has been completed.

Well #4: The fourth well (well tag # AFM 973) is constructed with an 8-inch production casing, with a screened interval between 47-57 feet below ground surface. The well has historically been pumped at a rate exceeding 300 gpm. Historical demand for school use alone for irrigation during the summer has been between approximately 40 gpm and 50 gpm (Bill McMahan, personal communication, July 13, 2009).

Proposed Use

Wells #1 and #2 will pump water into the main east-west transmission main along US Route 12 to the LCWD #1 service area, the proposed place of use (Figure 2; Table 5). Well #3, if installed, would provide system redundancy and reliability in the event of disruption of supply from Well #1 or #2. Well #4 will be disconnected from the LCWD #1 distribution system and will be used only for non-potable irrigation of school grounds and athletic fields at a maximum rate of 50 gpm.

Figure 2
Place of Use: Lewis County Water District #1

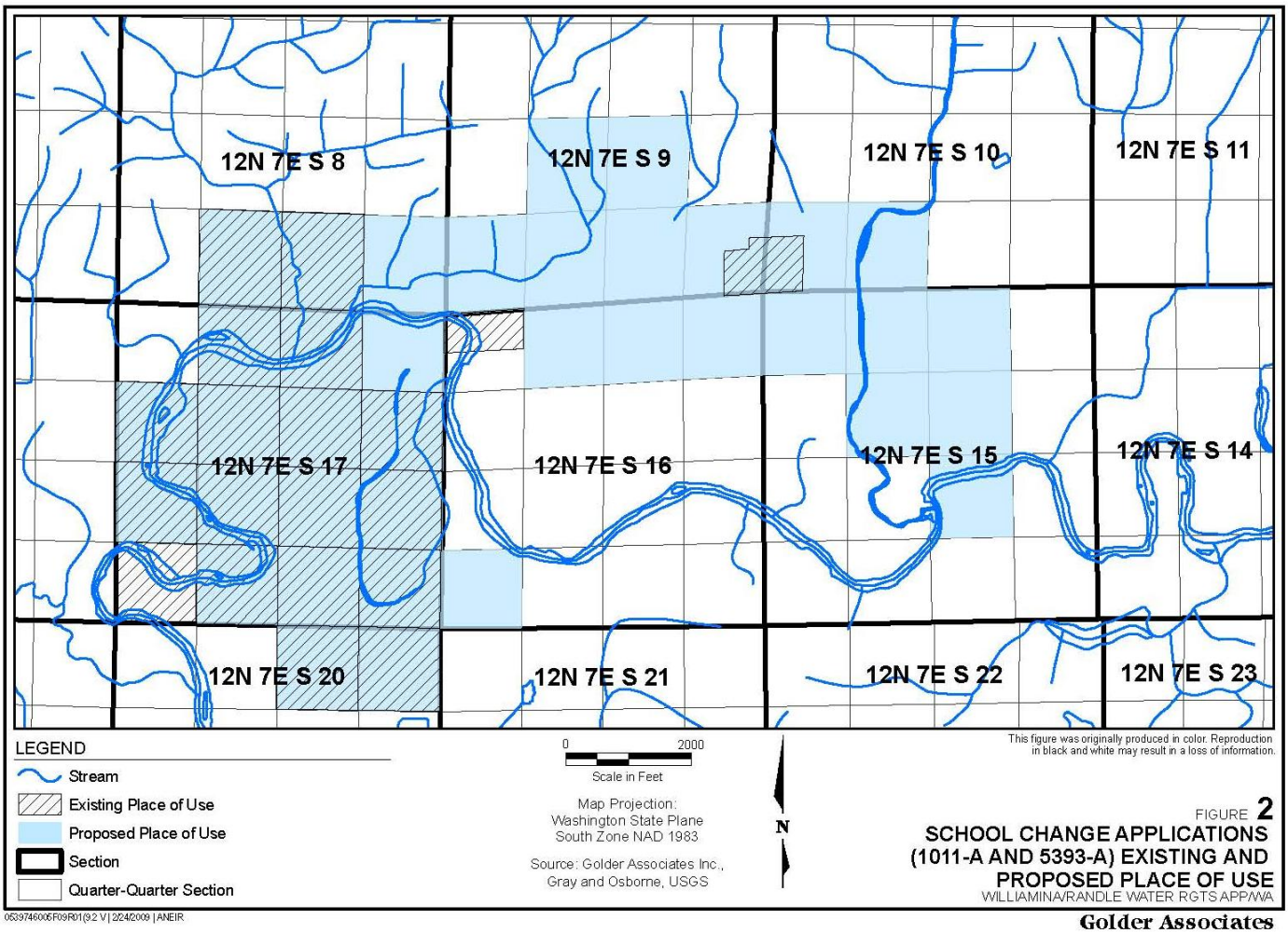


Table 5
Place of Use: Lewis County Water District #1
(T12N, R07E)

¼	¼	Section
SE	SW	8
SW	SE	
SE	SE	
SE	SE	9
SW	SE	
SE	SW	
SW	SW	
NE	SW	
NW	SE	
SW	SW	10
SE	SW	
NW	NW	15
NE	NW	
SE	NW	
NW	NE	
SW	NE	
NW	SE	

¼	¼	Section
NE	NW	16
NW	NE	
NE	NE	
SW	SW	
All	NE	17
All	SE	
NW	SW	
NE	SW	
SE	SW	
NE	NW	
SW	NW	
SE	NW	
NE	NE	20
NW	NE	

Water Rights Appurtenant to the Place of Use

Application to change Certificate 5393-A is evaluated in conjunction with the following water rights as sources of supply for LCWD # 1.

Table 6
Water Rights Appurtenant to the Place of Use

Water Right Holder/Applicant	Original Water Right Number	Quantity	
		Qi (gpm)	**Qa** (afy)
Hampton (Cowlitz Stud Company)	G2-27504	350+	42+
Hampton (Cowlitz Stud Company)	*8483	350	12+
White Pass School District	G2-GWC1011(A)	110+	70+
White Pass School District	G2-GWP1952(B)	110	106+
White Pass School District	5393-A	140+	135
Total	**600+**		**230+**

+ Additive quantities.

A portion of water rights G2-GWC1011(A) and G2-GPP1011(B) and 5393-A may be exercised at the existing School well (Well #4) for irrigation of school grounds and athletic fields only; this well will be disconnected from the drinking water system. LCWD #1 will be responsible for reporting water use from all wells in comprehensive water system planning documents provided to the Washington Departments of Health and Ecology.

Projected Water Demand

The Water District's 2006 Water System Plan Amendment calculated future water needs for a planning horizon to 2020. Using an updated 20-year planning horizon to 2029 with an annual population growth rate of 1.33% (based on the Lewis County Growth Management Plan), and projected demand for the Mill based on predicted maximum lumber production, the twenty-year projection for total water demand for the integrated system is 230 afy and 792 gpm.

Hydrologic/Hydrogeologic Evaluation

Chris Pitre, a licensed hydrogeologist in the State of Washington, provided findings dated January 31, 2007, supplemented with information from pumping tests conducted during the installation of Well #2. Some of that information, including a hydrogeologic interpretation, is included here. Additionally, Tom Culhane, a licensed hydrogeologist in the State of Washington, performed his own investigation and that analysis, incorporated in a memo dated March 7, 2007, is also included below.

Ecology well logs from Sections 10, 11, 14 and 15, T12N, R7E were used to provide a local characterization of the hydrogeological stratigraphy and groundwater resource.

Table 7
Well Logs from Ecology's On-Line Well Log Database Used in the Hydrogeologic Assessment

Section (T 12N, R 7 E)	**Number of Wells Completed in Quaternary Sediments**	
	Well Logs	**With Usable Pumping Test Data**
10	36	24
11	5	3
14	0	0
15	14	8
Total	**54**	**34**

The hydrogeology of the Upper Cowlitz Subbasin is characterized by shallow Quaternary alluvial sediments filling the bottom of valleys set in Tertiary Volcanic bedrock. The greatest documented thickness of Quaternary sediments is 118 feet, and forms the principal aquifer in the area. The uppermost 50 feet of sediments are generally lower permeability silty and clayey sediments typical of overbank fluvial deposits. Most wells are completed in sand and gravel at depths greater than 50 feet below ground surface. The depth to water in wells completed in the Quaternary sediments is generally 36 feet to 40 feet below ground surface (average and median, respectively).

The median specific capacity of wells completed in the Quaternary sediments is 11 gpm/ft. However, there is a marked gradation of increasing specific capacity from the edge of the alluvial valley to the center. Wells within approximately 1,500 feet of the volcanic bedrock outcrop have a median specific capacity of 9 gpm/ft. Those further away from the bedrock outcrop and closer to the middle of the valley (*e.g.*, in Section 15), and within the alluvial deltaic deposits of Silver Creek within which the proposed points of withdrawal are located, have a median specific capacity greater than 50 gpm/ft (in some cases greater than 100 gpm/ft; pumping rate ranging from 25 gpm to >400 gpm, and associated drawdown ranging from not measurable to three feet). A specific capacity of 50 gpm/ft equates to an approximate aquifer transmissivity of 100,000 gallons per day per foot (gpd/ft; Driscoll, 1986). The proposed points of withdrawal are within the alluvial deltaic deposits of Silver Creek; therefore, an aquifer transmissivity in excess of 100,000 gpd/ft is considered representative in the vicinity of the proposed points of withdrawal.

The only quantitative pumping test in the area to evaluate aquifer properties was conducted during installation of Well #2 (Golder, 2008). A pumping test was conducted on Well #2 at a rate of 406 gpm for 24.22 hours. Drawdown of water levels in the well stabilized at approximately 3.1 feet after approximately 10 hours of pumping. Well efficiency was estimated to be 43% efficient using the Hantush-Biershenck method (Kruseman and deRidder, 1992). Therefore, drawdown immediately outside of the well (*e.g.*, at a radius of one foot) is estimated to be approximately 1.2 feet when

adjusted for a pumping rate of 350 gpm, as is requested in this change application. Drawdown at the nearest well will be less.

The distribution of well yield is consistent with the presence of a highly permeable deltaic formation along the length of Silver Creek from the point that it discharges from bedrock outcrop to its confluence with the Cowlitz River. The typical hydrology of a stream discharging from a bedrock watershed to an alluvial valley setting is a perched losing stream. This is corroborated by a static water level in Well #2 of approximately 26 feet below ground surface, which is lower than the elevation of Silver Creek reaches and approximately equivalent to the elevation of the Cowlitz River (USGS, 1989).

Groundwater Quality

Water quality in Wells #1 and #2 is excellent.

Organic materials (*e.g.*, peat and wood) are reported in well logs in the vicinity, which may cause slightly elevated concentrations of iron or manganese. This is generally associated with lower permeability materials outside of the Silver Creek alluvial delta.

Underground petroleum storage tanks are located within 20 feet of Well #4; petroleum product contaminants have been detected at this well. Continued use of this well will be for irrigation only.

Impairment Considerations

Assessment of Proposed Well #1 Point of Withdrawal: Well #1 (Hampton well) is permitted to withdraw 350 gpm under water rights G2-27504 and *8483. Adding this well as an additional point of withdrawal to water right 5393-A will not increase the instantaneous rate of withdrawal from Well #1. Because there is no proposed increase in the instantaneous rate of withdrawal from Well #1, no impacts are predicted to occur on other groundwater users or surface waters as a result of the requested change in point of withdrawal.

Assessment of Proposed Well #2 Point of Withdrawal: The existing School well (Well #4) is located approximately 1,300 feet west of Silver Creek. The new Well #2 is located approximately 2,000 feet east of Silver Creek. Therefore, any potential impacts of withdrawal at the new Well #2 point of withdrawal on Silver Creek will be less than current impacts. Impacts on the Cowlitz River from the existing School well and new Well #2 points of withdrawal are expected to be similar.

Based on a pumping test conducted on Well #2, drawdown immediately outside of the well (*e.g.*, at a radius of one foot) is estimated to be approximately 1.2 feet when the well is pumped at a rate of 350 gpm. Drawdown at the nearest well will be less. Therefore, no impairment on other groundwater users is predicted.

Assessment of Proposed Well #3 Point of Withdrawal: The purpose of requesting a new point of withdrawal in this area is to provide a point of withdrawal on the west side of Silver Creek in order to maintain potable water supply to the community should flooding of Silver Creek disrupt normal supply from Wells #1 and #2 on the east side of Silver Creek. This well will be installed when funding becomes available.

The proposed Well #3 is located within the same ¼ ¼ as the existing point of withdrawal (Well #4). Well #4 has been pumped at rates of approximately 300 gpm. The nearby USFS well has been pumped at rates of between 50-80 gpm, for a combined pumping rate of the School and USFS wells of between 350-380 gpm by LCWD #1 to supply the community of Randle. No reports of impairment are known to exist.

Assessment of Proposed Well #4 Point of Withdrawal: Well #4 has been the historical point of withdrawal for water rights G2-GWC1011(A) G2-GPW1011-A(B)and 5393-A and has been pumped at rates of approximately 300 gpm since approximately the 1950s. No reports of impairment are known to exist. Therefore reducing the pumping rate of a well in this location to the proposed rate of 50 gpm is not predicted to cause any impairment to other groundwater users or surface waters.

Impairment of Other Rights

Drawdown interference is estimated to be approximately 1.2 feet at a distance of one foot from the wells; drawdown interference at greater distances from the pumped well is estimated to be less than 1.2 feet. Evaluation of potential impairment is conducted within the following areas (Table 8).

Table 8
Areas of Potential Impairment of Groundwater Users

Well	**Area Considered** (all within T12N, R7E)
Well #2	North half of the NE ¼, Section 15
Well #3	East half of the SE ¼, Section 9 SW ¼, Section 10 North half of the NW ¼, Section 15 North half of the NE ¼, Section 16

These areas are selected because:

- Well #2 is located in the middle of the ¼-¼ section in the north-south aspect. No impairment is predicted in areas south or north of the ¼-¼ section. The well is located on the eastern boundary of the ¼-¼ section. Therefore, potential impairment is evaluated on groundwater users in the same ¼-¼ section, and the ¼-¼ section immediately to the east.
- Potential impairment is evaluated on groundwater users in all adjacent ¼-¼ sections.

Potential impairment near Well #1 is not considered because no increase in the instantaneous withdrawal rates is proposed.

Identification of other groundwater users relies primarily on data contained in Ecology's Water Rights Application Tracking System (WRATS) database of 2009. The assessment assumed the location of potentially affected wells within the described area to be at the closest point to the proposed point of withdrawal. This assessment predicted maximum potential impairment. Actual impairment as a

function of the location is expected to be less than predicted because the wells are more likely to be located further from the proposed point of withdrawal.

Evaluation of Potential for Impairment of Existing Groundwater Right Certificates & Permits
There are no existing groundwater right certificates & permits in the area considered around Well #2. The WRATS database lists one active groundwater certificate that may be within the area considered for Well #3.

Table 9
Groundwater Certificates and Permits Within a ¼-¼ of the Proposed Well #3 Proposed Point of Withdrawal
(Ecology WRATS database, 2009)

Name	Water Right	TRS	Quad	Priority Date	Qi (gpm)	Qa (afy)
Larson, Edward E	G2-26914C	T12N/R07E-15	SW/NW	May 22, 1986	15	2.0

The Larson water right is registered in the SW ¼ of the NW ¼ of Section 15. However, the well is registered in the SW ¼ of the SW ¼. For the purposes of assessment, the location closer to the proposed point of withdrawal was assumed (i.e., the SW ¼ of the NW ¼). The pumping test conducted on the Larson well when installed indicated an excess available drawdown of 41 feet when pumped at the full instantaneous rate allowed by the associated water right. The maximum interference drawdown from the proposed point of withdrawal on the Larson well is less than 1.2 feet (assuming a minimum distance from the pumped well of 1 foot). Therefore, no impairment of the Larson water right is predicted to occur as a result of exercising the new point of withdrawal.

Evaluation of Potential for Impairment of Existing Groundwater Right Claims and Wells
Claims in the WRATS database are only located to the resolution of a section (*i.e.*, ¼-¼ information is not provided. Therefore, all claims in Sections 9, 10, 15 and 16 of T12N, R7E are considered for potential impairment. There are 97 claims within these sections (61 long form claims, and 36 short form claims), most of which may be outside of the area of consideration.

A review of Ecology's on-line well log database identified 46 wells in Sections 9, 10, 15 and 16 that may be located within the area considered for potential impairment. Some of these may be associated with water right certificates, permits or claims, or private exempt wells. Ecology required registration of wells beginning in 1974. Therefore, there may be additional wells not registered in Ecology's well log database that were installed before 1974.

WAC 173-150-060 requires that the impairment test be applied to "qualifying withdrawal facilities". Qualifying groundwater withdrawal facilities are defined as those wells that are adequately constructed. An adequately constructed well is one that fully penetrates the saturated thickness of an aquifer and can accommodate reasonable variation in seasonal pumping water levels (WAC 173-150). As such, even if any neighboring wells are significantly interfered with, legal impairment would not occur unless those wells were drilled deep enough to fully penetrate the aquifer. The aquifer is on the order of 100 feet thick. Most wells are on the order of 50 – 60 feet deep. Drawdown interference is less than 1.2 feet Therefore, no impairment of existing groundwater users is predicted.

Based on the collective information, no impairment of existing water rights is predicted from the full use of the requested quantity at the proposed points of withdrawal.

Public Interest Considerations

Water right 5393-A is currently being used to provide public drinking water supply to the community of Randle. Underground storage tanks containing petroleum are located with 20 feet of the wellhead. Petroleum products have been detected in water quality samples collected from this well. The Washington Department of Health has identified this as a public health concern and recommended priority processing of water right changes to allow the withdrawal of public drinking water supplies from alternative sources under this water right.

The 2006 Water System Plan Amendment for LCWD #1 describes the service area of the community of Randle including the Hampton Mill. The School water rights and associated wells will be managed by LCWD #1 to provide potable water to the community.

This change application will enable LCWD #1 to: 1) establish sources that are not susceptible to contamination and thereby maintain public health and safety; 2) provide sufficient fire flow for public health and safety as required by the Washington State Department of Health; and, 3) secure a reliable public water supply for the community of Randle.

Consequently, issuance of this water right change will not be detrimental to the public welfare.

Consideration of Protests and Comments

Notice of the proposed change application was published in The East County Journal of Morton, Washington, on April 29 and May 6, 2009. No protests were received by Ecology.

Potential for Enlargement / Relinquishment

<u>Quantities to be Associated with the Water Right</u>
Table 3 summarizes historic water use under Certificates G2-GWC1011(A), G2-GWP1952(B)and 5393-A for Well #4 for the period 1997 through 2008. Records of earlier water use are not available. The Certificates provide for a maximum pumping rate of 250 gpm at an annual duty of 176 afy for Well #4.

The records demonstrate continuous use of water during the reported period, at a maximum instantaneous rate of 300 gpm, ranging from 64 acre-feet in 1999 to 103 acre-feet in 2007, with evidence of water leaks in the earlier recording period. The instantaneous quantity of this right has been fully perfected and is eligible for change in its entirety.

The annual quantity of this right is non-additive to GWC-1011(A) and GWP-1011(P). Because it is non-additive, there is no enlargement over the quantities authorized by the underlying rights. This right essentially authorizes a higher pumping rate, but does not authorize any additional annual allocation over what is valid under the underlying water rights.

Water Availability

Source of Water Proposed for Appropriation

The applicant seeks to add three new points of withdrawal of groundwater (all in Township 12 North, Range 7 East): Well #1 in the NE ¼ of the NW ¼, Section 15; Well #2 in the NW ¼ of the NE ¼, Section 15; and Well #3 to be located based upon a well siting study. All of these wells are expected to be completed within the same highly transmissive Silver Creek delta, which is considered the same body of groundwater.

The Hampton well (Well #1) has produced water at a permitted rate of 350 gpm for many years. Well #2 has been tested at a rate of 406 gpm. Measured aquifer transmissivity is in excess of 100,000 gpd/ft. Wells in the area requested for Well #3 have similar well yields and aquifer transmissivity. Well #4 (the existing point of withdrawal) has withdrawn 300 gpm and the USFS well has withdrawn between 50-80 gpm, for a total of 350-380 gpm. Therefore 350 gpm is physically available for appropriation at the new well sites.

Beneficial Use

This appropriation will serve as the primary source of water for the Water District. In accordance with RCW 90.54.020(3), appropriation for community domestic and commercial/industrial purposes is a beneficial use of water.

CONCLUSIONS

In accordance with chapters 90.03 and 90.44 RCW, I conclude that Certificate 5393-A is a valid right and eligible for change. I have determined that the requested changes will not enlarge the right and the water use will be beneficial. Approval of this change request will not impair existing rights or be detrimental to the public interest, and will enhance public health and safety.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change to Certificate 5393-A be approved in the amounts and within the limitations listed below, as well as subject to the provisions beginning on Page 3 *et seq.*

Purpose of Use and Authorized Quantities

The amount of water recommended under this change approval is a maximum limit and the applicant may only use an amount of water within the specified limit that is reasonable and beneficial. LCWD #1 shall be responsible for metering, monitoring and reporting water use at each well.

- The maximum instantaneous withdrawal rate is limited to 140 gallons per minute, additive to G2-GWC1011(A).

- The combined maximum instantaneous withdrawal rate (Qi) from all wells is not to exceed the additive quantities of the water rights listed in Table 6.
- Total annual withdrawal (Qa) under Certificate 5393-A is not to exceed 135 acre-feet per year, wholly non-additive to G2-GWC1011(A) and G2-GWP1952(B)
- The combined maximum annual withdrawal from all wells is not to exceed the additive quantities of the water rights listed in Table 6.
- Purpose of use is community domestic, commercial/industrial, year-round as needed.
- Industrial use is limited to 70 af/yr (non-additive to G2-GWC1011(A)).
- Well # 4 will be used only for non-potable irrigation at a maximum withdrawal rate of 50 gpm between 5/01 and 9/30.

Points of Withdrawal

- Well #1: Existing Hampton Well in NE ¼, NW ¼ Section 15, Township 12 North, Range 7 E.W.M.
- Well #2: School Well in NW ¼, NE ¼ Section 15, Township 12 North, Range 7 E.W.M.
- Well #4: Existing School Well in SW ¼, SW ¼ Section 10, Township 12 North, Range 7 E.W.M.

The Proposed Well No. 3 is not authorized at this time because it is speculative and no firm plans exist. A well sitting study has not been conducted. At such time as the District has firm plans to drill a Well #3, it may file a Showing of Compliance pursuant to RCW 90.44.100(3) or, if necessary, file an application for change of water right to add an additional point of withdrawal.

Place of Use

- Service Area of Lewis County Water District #1 (Figure 2 of this Report of Examination).

CITATIONS

The State Water Code

Comprehensive Water System Plan Amendment for LCWD #1, 2006

Cooper, H.H. Jr., and C.E. Jacob, 1946. A generalized graphical method for evaluating formation constants and summarizing well field history. *Trans. Amer. Geophys. Union,* 27, pp. 526-534.

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Golder Associates, Inc. (Golder). 2008. Technical Memorandum RE: Lewis County Water District 1 - Randle Production Well Installation and Testing. October 17, 2008.

HDR and Economic and Engineering Service, Inc. 2006. Grays-Elochoman and Cowlitz Watershed Management Plan. Prepared for the Lower Columbia Fish Recovery Board. July 21, 2006.

Kruseman, G.P. and N.A. deRidder, 1992. Analysis and Evaluation of Pumping test data. International Institute of Land Reclamation and Improvement Publication 47, Wageningen, The Netherlands.

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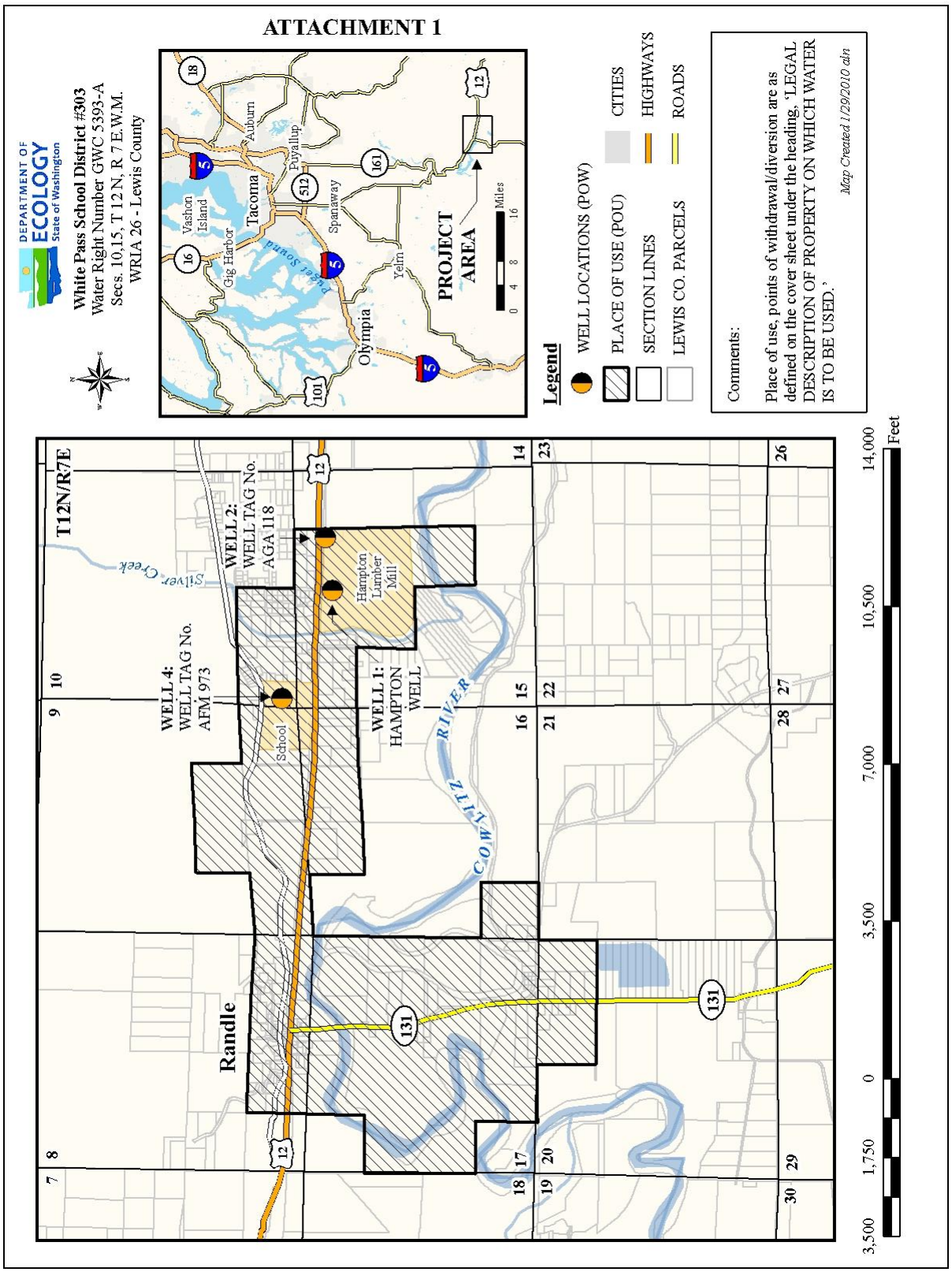
ATTACHMENT 1
DEPARTMENT OF ECOLOGY State of Washington
White Pass School District #303
Water Right Number GWC 5393-A
Secs. 10,15, T 12 N, R 7 E.W.M.
WRIA 26 - Lewis County
Vashon Island
Gig Harbor
Tacoma
Puyallup
Auburn
Spanaway
Puget Sound
Olympia
Yelm
PROJECT AREA
Miles
0 4 8 16
Legend
WELL LOCATIONS (POW)
PLACE OF USE (POU)
SECTION LINES
LEWIS CO. PARCELS
CITIES
HIGHWAYS
ROADS
Comments:
Place of use, points of withdrawal/diversion are as defined on the cover sheet under the heading, 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'
Map Created 1/29/2010 aln
T12N/R7E
Randle
Silver Creek
WELL 4: WELL TAG No. AFM 973
WELL 2: WELL TAG No. AGA 118
WELL 1: HAMPTON WELL
Hampton Lumber Mill
School
COWLITZ RIVER
Feet
3,500 1,750 0 3,500 7,000 10,500 14,000