STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION
Change of: Point of Diversion to Point of Withdrawal
WRTS File No. CS4-WRC144676@1

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
December 3, 1910	144676		

NAME
Russell Griffith

ADDRESS/STREET	CITY/STATE	ZIP CODE
5746 Entiat River Road	Entiat, Washington	98822

PUBLIC WATERS TO BE APPROPRIATED

SOURCE

A Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND (cfs)	MAXIMUM GALLONS PER MINUTE (gpm)	MAXIMUM ACRE FEET PER YEAR (ac-ft/yr)
	200	50

QUANTITY, TYPE OF USE, PERIOD OF USE

A maximum of 200 gallons per minute, 50 acre-feet per year, for the irrigation of 12.5 acres from April 15 to October 31.

Total withdrawals under both CS4-WRC144674@1 and CS4-WRC144676@1 shall not exceed a maximum of 200 gpm, 52 ac-ft/yr, for the irrigation of 20 acres.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL

500 feet east and 150 feet north of the southwest corner of Section 11, Township 25 N., Range 20 E.W.M.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE	WRIA	COUNTY
SW¼SW¼	11	25 N.	20 E.W.M.	46	Chelan

PARCEL NUMBER	LATITUDE	LONGITUDE	DATUM
2520113300250	47.6719°	-120.3035°	WGS84

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
N/A	N/A	N/A

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED
[Attachment 1 shows location of the authorized place of use and point(s) of diversion or withdrawal]

Within the SW¼ of Section 11, located below elevation 1,200 feet mean sea level and above elevation 900 feet mean sea level, mostly within the bottom of Saunders Canyon.

DESCRIPTION OF PROPOSED WORKS

The Griffin Well (Well ID No. AEG336) is an 8” diameter drilled well completed and drilled to a depth of 85 feet. The well is equipped with a 10 horsepower submersible pump and a Siemens MAG8000 flow meter.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
Begun	Completed	October 31, 2010

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PROVISIONS

1. **Measurements, Monitoring, Metering and Reporting**

   1.1. 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", Chapter 173-173 WAC.

   1.2. Water use data shall be recorded weekly. The maximum rate of diversion/withdrawal and the annual total volume shall be submitted to the Department of Ecology by January 31st of each calendar year.

   1.3. 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.

   1.4. 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 the Department of 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". http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html

   1.5. Ecology prefers water use data submitted via e-mail in the form on an electronic spreadsheet. However, hard copies are still accepted. In the future, recorded water use data may be submitted via the Internet. Contact the Central Region Office for forms or information on available options for submittals.

2. **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.

3. **Non-Additive to Confirmed Claims**
   The water use authorized under this filing shall be considered non-additive to any water rights confirmed for said claim as a result of a general adjudication through Superior Court, should adjudication be undertaken.

4. **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.

5. **Easement 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 determination 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.

FINDINGS OF FACT AND ORDER

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

Therefore, I ORDER approval of the recommended change to a point of withdrawal proposed under Change Application No. CS4-WRC144676@1, subject to existing rights and the provisions listed above.

You have a right to appeal this ORDER. 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 in RCW 43.21B.001(2).

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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 and Application for Relief Coordinator
PO Box 47608
Olympia, WA 98504-7608

OR

Deliver your appeal in person to:

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

3. And send a copy of your appeal to:

Mark Schuppe, Section Manager
Water Resources Program
Department of Ecology
Central Regional Office
15 West Yakima Ave - Suite 200
Yakima, WA 98902-3452

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 Yakima, Washington, this _____ day of _____ 2009.

_____
Mark Schuppe, Section Manager
Water Resources Program
Central Region Office

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BACKGROUND

Description and Purpose of Proposed Change

On November 22, 2006, Russell G. Griffith of Entiat, Washington in conjunction with the Cascadia Conservation District and Washington Rivers Conservancy filed two *Applications for Change* with the Department of Ecology (Ecology) requesting authorization to change the point of diversion for Water Right Claim Nos. 144674 and 144676 from the Entiat River to a nearby well. The applications were accepted and assigned Change Application Control Nos. CS4-WRC144674@1 and CS4-WRC144676@1. This Report of Examination (ROE) includes the investigation of the changes proposed in CS4-WRC144676@1 only; a separate ROE will include an investigation of the changes proposed in CS4-WRC144674@1.

Mr. Griffith's *Applications for Change* were filed in conjunction with change applications from adjoining property owners Bruce Wick and Ed Tippen. All three parties used the same surface water diversion point on the Entiat River and have elected to shift to two wells located approximately 100 feet from each other on property owned by Ed Tippen (Assessor No. 252011330250). The well sites are located 50 feet from the Entiat River. Mr. Griffith will use one of the wells and the second will be shared by Mr. Tippen and Mr. Wick. This project site is located 4 miles upstream from the mouth of the confluence of the Entiat River with the Columbia River in WRIA 46.

The claimed point of diversion (POD) consisted of a push-up dam that diverted water into an off-channel pond. Water was then pumped into a pressurized system for irrigation. Mr. Griffith's land is presently being irrigated for fruit production and pasture and these uses will continue in the future.

The *Applications for Change* state that the project is located in the Entiat River Sub-basin and will benefit Upper Columbia steelhead, spring Chinook and bull trout. Discontinuing the direct surface water diversion will prevent ESA listed juvenile salmon and other fish from entrainment death by being sucked into the irrigation system and eliminate water quality impacts associated with the annual maintenance of the instream pushup dam. This project is consistent with the goals of the Entiat WRIA 46 Watershed Management Plan approved in 2004 as well as the draft Upper Columbia Salmon Recovery Plan.

Based on the provisions of RCW 43.21A.690 and RCW 90.03.265, Pacific Groundwater Group (PGG) prepared a first draft this report under contract to Ecology. PGG reviewed all available documents pertaining to this and other related *Applications for Change*, including site conditions, hydrogeological considerations, historical water use, and standing of existing rights. Taylor C. Horne of Ecology significantly modified and enhanced the report to produce the final version of this Report of Examination for Change of Water Right.

Previous Changes

Both Water Right Claim Nos. 144674 and 144676 have been previously changed in a single *Amended Finding of Facts and Decision.* On August 20, 1987 Russell Griffith filed an *Application for Change* No. CS4-WRC144676 to change the claimed point of diversion, located approximately 2 miles upstream, to a location on the Tippen property – 660 feet east and 100 feet north of the southwest corner of Section 11, T. 25 N., R. 20 E.W.M.

Ecology noted in its 1993 *Amended Finding of Facts and Decision* that while the property described by the original water right claims covered approximately 170 acres, based on staff review of aerial photos, it appeared that only 32 acres was actually being irrigated. Additionally, Ecology noted that the number of acres in cultivation had increased between 1962 and 1979 from 20 to 32 acres.

Ecology's *Finding of Fact and Decision* stated the following:

> *The Department of Ecology recognizes that the final determination of the validity and extent associated with a claim registered in accordance with RCW 90.14 ultimately lies with the Superior Court through the general adjudication process provided for by Sections 90.03.110 through 90.03.240 RCW. However, to meet our statutory obligation to regulate state waters and to make decisions related to applications for permit and applications for change of the various parameters of a water right or claim, we must in the course of business make an administrative judgment as to the probable extent of the water right associated with the water right claim.*
>
> *Due to evidence presented in the photos, the Department can only authorize the change to the extent it has historically been used. The historical irrigated acres indicated by the photos is 20 acres.*

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Ecology recommended the issuance of a superseding document limiting the two claims to a combined total of 200 gpm, and 52 ac-ft/yr, based on a water duty of 10 gpm per acre, and 2.6 ac-ft/yr.

A Certificate of Change has not been issued under the 1987 filing, and this ROE, if approved, will serve to supersede the previous transfer.

This report will address the changes proposed in Change Application No. CS4-WRC144676@1.

In the application, Mr. Griffith proposes to change the point of diversion from the Entiat River to a well constructed adjacent to the river. The intent of this change is to reduce possible impact on fish and wildlife habitat, and make it easier for the applicant to irrigate his property.

Attributes of the Claim and Proposed Change

Table 1 Summary of Proposed Changes to Water Right Claim No. 144676

Attributes	Existing	Proposed
Name	Russell G. Griffith	Russell G. Griffith
Priority Date | Date of Application for Change	December 3, 1910	November 15, 2006
Instantaneous Quantity	1.0 cfs	275 gpm
Annual Quantity	50 ac-ft/yr	52 ac-ft/yr
Source	Entiat River	Well
Point of Diversion/Withdrawal	SW¼NE¼ of Section 10, T. 25 N., R. 20 E.W.M.	Section 11, T. 25 N., R. 20 E.W.M.
Purpose of Use	Irrigation of 12.5 acres.	Irrigation of 20 acres
Period of Use	April 15 to November 1	No Change
Place of Use	SE¼NW¼ and SW¼ all in Section 11, T. 25 N., R. 20 E.W.M.	No Change

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change from a point of diversion to point of withdrawal.

Public Notice
A public notice of the proposed changes was published in the Wenatchee World on October 2 and 9, 2008. No protests or comments were submitted during the thirty-day protest period.

State Environmental Policy Act (SEPA)
A water right application is subject to a SEPA threshold determination (i.e., an evaluation whether there are likely to be significant adverse environmental impacts) if any one of the following conditions are met.

- It is a surface water right application for more than 1 cubic feet per second, unless that project is for agricultural irrigation, in which case the threshold is increased to 50 cubic feet per second, so long as that irrigation project will not receive public subsidies;
- It is a groundwater right application for more than 2,250 gallons per minute;
- It is an application that, in combination with other water right applications for the same project, collectively exceed the amounts above;
- It is a part of a larger proposal that is subject to SEPA for other reasons (e.g., the need to obtain other permits that are not exempt from SEPA);
- It is part of a series of exempt actions that, together, trigger the need to do a threshold determination, as defined under WAC 197-11-305.

Because this application does not meet any of these conditions, it is categorically exempt from SEPA and a threshold determination is not required.

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Water Resources Statutes and Case Law

- The validity and extent of a claim can only be determined by a Superior Court in an adjudication. Any tentative determination made on a claim by Ecology as part of an application for change investigation is not an adjudication of the claim.

- RCW 90.03.380(1) states that a water right that has been put to beneficial use may be changed. The point of diversion, place of use, and purpose of use may be changed if it would not result in harm or injury to other water rights.

- 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.*

- Under the provisions of the Instream Flow Rule established for the watershed (WAC 173-546-110), no changes to, or transfers of, existing surface and ground water rights in the Entiat River basin shall hereafter be granted if they conflict with the purpose of this chapter. Any change or transfer proposal can be approved only if there is a finding that existing rights, including the instream flows established in WAC 173-546-050, will not be impaired.

INVESTIGATION

Information for this investigation was obtained during a site visit conducted on October 22, 2008, by Jill Van Hulle and Doug Kelly of Pacific Groundwater Group, and Ecology representative Taylor C. Horne. Applicant Russell Griffith was present during the site investigations and provided information regarding the historical and current use of water on his site. Additional information was obtained from:

- Applicable RCW and WAC chapters,
- Ecology records,
- Historical aerial photographs and maps,
- Geographic Information System (GIS) data,
- Chelan County records
- Documents listed in the References section of this report.

History of Water Use

The Griffith farm is located in the Entiat River valley approximately 4 river miles upstream of the Entiat River's confluence with the Columbia River, Water Resource Inventory Area (WRIA) 46.

Water Right Claim No. 144676 was filed on June 26, 1974 by Russell G. Griffith, asserting a right to 1.0 cubic feet per second (cfs), 50 acre-feet per year (ac-ft/yr), for the irrigation of 12.5 acres from April 15 through October 31 from a POD on the Entiat River. The claimed date of first putting water to use was December 3, 1910. The claimed place of use (POU) is the SE¼NW¼ and the SW¼ of Section 11, T. 25 N., R. 20 E.W.M.

The claim refers to Chelan County Auditor Book 78 Page 346, dated December 3, 1910, which states:

> "TO ALL WHOM IT MAY CONCERN: Notice is hereby given that the undersigned MARION SANDERS appropriates and claims the water lying, being or flowing in the Entiat River, in Chelan County, Washington, to the extent of one cubic foot of water per second of time.
>
> Said waters are for the purpose of irrigation of lands owned by me, the said Marion Sanders, and the same is to be used thereon, to-wit:
>
> Southwest quarter of the Southwest quarter of section eleven in township twenty five north of range twenty East of W.M. in said Chelan County, Washington,
>
> It is the intention of the undersigned, said Marion Sanders, to take said waters out of the said Entiat River at the place where this notice is posted, to-wit, at or near the southeast corner of the southwest quarter of the northeast quarter of section ten in township twenty five, north of range twenty east of W. M., and to conduct the same in a southeasterly direction through the east half of the southeast quarter of said section ten to the said south west quarter of the southwest quarter of said section eleven, and to so conduct the same through pipes, flumes and ditches by gravety (sic) flow to the said above described lands of the undersigned, where said waters has been used by me for the past several years."

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The claimed POD location was within the SW¼NE¼ of Section 10, T. 25 N., R. 20 E.W.M., approximately 0.75 miles upstream from the proposed POW. An *Amended Findings of Fact and Decision* issued in 1993 authorized the transfer of the POD to a location near Entiat River mile 4, within the SW¼SW¼, Section 11, T. 25 N., R. 20 E.W.M, adjacent to the proposed point of withdrawal (POW).

The Griffith orchard follows the contours of Saunders Canyon, currently with fruit trees planted in two main blocks – an "upper block" of approximately 3.2 acres of pears, and a "middle block" of approximately 5.7 acres of pears and cherries. In 2003 the applicant removed from production approximately 15.3 acres of apple trees on the "lower block"; Mr. Griffith plans on replanting 10.5 acres in orchard. In anticipation of future orchard establishment, the applicant has irrigated turf grass on the lower block. Previous to Russell Griffith, his family owned and farmed the property.

Historic Points of Diversion

The historical source of water for Water Right Claim No. 144676 is a POD on the Entiat River. Water was originally diverted at a POD located 2,500 feet south and 1,700 feet west from the NE corner of Section 10, T. 25 N., R. 20 E.W.M., as stated on Water Right Claim No. 144676. Water was diverted into an irrigation canal that conveyed water in a southeasterly direction to the applicant's parcel.

At the time the first *Application for Change* No. CS4-WRC144676, was filed in 1987 the canal was no longer in use and the applicant had shifted his diversion to a push-up dam adjacent to property owned by neighbor Ed Tippen. The POD consisted of a 5 horsepower (hp) centrifugal pump which discharged to a 2,000 gallon tank, from which a 25 hp pump distributed water to the Griffith property. A booster pump brought water to the uppermost field. The 1993 *Amended Findings of Fact and Decision* authorized a change in POD from the canal to the push-up dam POD; the authorized push-up dam POD has not been used since 2007 and is decommissioned.

Proposed Point of Withdrawal

The well has been constructed for this project for use by Russ Griffith. Construction of the well was completed in September 2006, and the well was used for the 2007 and 2008 irrigation seasons. Pumping tests suggest that the Griffith well may produce 275 gpm.

The irrigation system consists of a standard configuration of mainlines that are used to convey water across the property. A buried undertree system is installed to irrigate the orchards using Rainbird sprinklers. The pasture is irrigated with solid set lines.

Place of Use

Historical aerial photographs indicate that as many as 32 acres of orchard lands had been irrigated by the applicant. Currently 9.5 acres are planted in fruit trees (pears and cherries), and an additional 10.5 acres are maintained as irrigated pasture land that Mr. Griffith intends to replant into fruit trees in the near future, pending improved finances.

Based on our review of these rights it appears that Mr. Griffith's currently irrigated property is all located within the place of use described in the original claims, and no changes to the place of use are proposed.

Proposed Use

No change in purpose of use is proposed in the application. Agricultural irrigation is considered a beneficial use of water (RCW 90.54.020(1)).

Water Quantities

The 1993 *Findings of Fact and Decision* for Water Right Claim Nos. 144674 and 144676 authorized total diversions under these two claims in the amount of 200 gpm, and 52 ac-ft/yr for the irrigation of 20 acres. A review of the decision indicates that the authorized diversion rate is based on the assumption that 10 gpm per acre of irrigated property was generally considered a reasonable instantaneous water duty. The annual quantity of water authorized for change was calculated by assuming a total irrigation requirement of 2.6 acre-feet per acre.

The quantities authorized by the 1993 *Amended Findings of Fact and Decision* do not address the installed capacity at either the original diversion site, or the new site that was established downstream. Likewise the annual quantity assigned assumes a crop irrigation requirement of 2.6 acre-feet per acre, and while an efficiency factor of 75% was referenced, additional water was not identified to calculate the total irrigation requirement.

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A 1998 aerial photograph indicates that 24.2 acres of fruit trees were irrigated on the Griffith orchard, exceeding the 20 acres of irrigation authorized in 1993. Aerial photographs from 2005 and 2006 indicate that 8.9 acres of fruit trees were irrigated. The 2005 and 2006 photographs indicate that no irrigation occurred on the 15.3 acres of orchard on the lower block that were removed in 2003.

During the site visit, Mr. Griffith indicated that he has been irrigating 15.3 acres of pasture on the lower block. The site visit occurred after the irrigation season; therefore, no active irrigation was evident. However, irrigation risers and sprinklers were in place and chaff was present in the field, indicating that pasture grass had been grown on the lower block during the 2008 season. 2007 and 2008 aerial photographs were not available for this investigation.

Information gathered from aerial photographs, discussions with Mr. Griffith, and a field investigation indicate that 15.3 acres of pasture grass and 8.9 acres of fruit trees have been irrigated in the most recent 5 year period. Using the CIR for the Entiat area established in WAC 173-546 and a 75% irrigation efficiency rating, a reasonable estimate of the annual quantity of water used to irrigate Mr. Griffith's land in the past 5 years is 91.1 ac-ft/yr [(3.11 ac-ft/yr / 0.75 * 8.9 acres) + (2.64 ac-ft/yr / 0.75*15.3) = 91.1 ac-ft/yr].

The quantities of water authorized in this ROE cannot exceed the quantities originally claimed and the quantities authorized by the *Amended Findings of Fact and Decision* for Water Right Claim Nos. 144674 and 144676, issued in 1993. The validity and extent of a claim can only be determined by a Superior Court in an adjudication. Any tentative determination made on a claim by Ecology as part of an application for change investigation is not an adjudication of the claim.

We note that while the previous change decision estimated water use at 200 gpm, 52 acre-feet, for the irrigation of 20 acres, the true measure of this right will be determined by an adjudication proceeding based on an evaluation of the continuous beneficial use established prior to enactment of the 1917 water code and beneficial use extending to the time of the adjudication.

Other Rights Appurtenant to the Place of Use

There are four additional water right claims associated with the Griffith property, all within the POU description of subject claim Water Right Claim No. 144676:

- Water Right Claim No. 144672 was filed in 1974 by Russell G. Griffith asserting a surface water right to divert 0.25 cfs, 32 ac-ft/yr from Rocky Point Springs for irrigation of 7½ acres. The POD is claimed to be located within the SW¼NE¼ of Section 11, T. 25 N., R. 20 E.W.M. The date of first putting water to use was June 1, 1898.

- Water Right Claim No. 144673 was filed in 1974 by Russell G. Griffith asserting a surface water right to divert 1.9 cfs, 100 ac-ft/yr from an unnamed spring for irrigation of 25 acres continuously. The date of first putting water to use is June 1, 1898. The claimed POD is located within SW¼NE¼ of Section 11, T. 25 N., 20 E.W.M.

- Water Right Claim No. 144675 was filed in 1974 by Russell Gilbert Griffith asserting a ground water right to withdrawal 3 gpm, 2 ac-ft/yr, continuously for domestic supply from a well located within the SW¼SW¼ of Section 11, T. 35 N., R. 20 E.W.M. This claim most likely applies to the domestic water used in the Griffith residence.

While we did note the presence of a domestic well for the applicant's home, during the site visit, we saw no evidence that the above referenced spring sources were being used for irrigation. Mr. Griffith did not indicate that he was using any spring sources of water to irrigate his property.

- Water Right Claim 144674 was filed on June 25, 1974, by Russell G. Griffith. The claim asserts a right to 2.0 cfs, 100 ac-ft/yr), for the irrigation of 25 acres from April 15 through October 31 from a point of diversion on the Entiat River. The claimed date of first putting water to use is April 20, 1893. The claimed place of use (POU) is the SE¼NW¼ and the SW¼ of Section 11, T. 25 N., R. 20 E.W.M. The claimed point of diversion (POD) location was within the SW¼NE¼ of Section 10, T. 25 N., R. 20 E.W.M. The 1993 *Amended Finding of Facts and Decision* authorized a change in POD for Water Right Claim Nos. 144676 and 144674 to the currently authorized POD located within the SW¼SW¼, Section 11, T. 25 N., R. 20 E.W.M. The decision also combined the quantities of water authorized for diversion at the POD to a total diversion of 200 gpm, 52 ac-ft/yr, for the irrigation of 20 acres from April 15 to October 31 under both claims. Mr. Griffith submitted Application for Change No. CS4-WRC144674@1, proposing a change to the same POW as proposed in the application considered in this report. The change proposed in CS4-WRC144674@1 is the subject of a separate report.

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Hydrologic/Hydrogeologic Evaluation

Impairment Considerations

Impairment of Minimum Instream Flow Water Rights

Adopted in 2005, Chapter 173-546 WAC established a minimum instream flow for the three stream management units in the Entiat River Basin, WRIA 46. The applicant's project is located within the Lower Entiat stream management unit that extends from the confluence of the Entiat and Columbia Rivers to Entiat river mile 16.2. The 1910 claimed date of first use for this irrigation water predates the September 3, 2005 priority date of the minimum instream flow; therefore, withdrawals asserted under the claims are not subject to curtailment when minimum instream flow levels are not met.

Impairment of Other Water Right Holders

As discussed in the hydrogeologic evaluation, during the irrigation season, the river is likely receiving recharge from the adjacent unconsolidated aquifer. Thus water pumped from the proposed point of withdrawal (well) will either be water that would have ended up in the river shortly thereafter, or could in fact be water that is being pulled from the river if hydraulic gradients are reversed by pumping. In either case, no significant change in the overall water budget is expected downstream from the point of withdrawal regardless of whether the irrigation water is removed via surface water diversion or the groundwater point of withdrawal, if the proposed change is approved.

The Department of Ecology's water right database lists the following records for rights (permits and certificates) issued within an approximate one mile radius.

Cert#	Person	Date	Purpose	Qi	Qa	# Acres	TRS	QQ/Q	1stSrc
117	McArthur Fruit Co	8/6/1919	IR,DM	1.77 cfs		55	25.0N 20.0E 10	NW/NE	ENTIAT RIVER
971	Entiat Water Co Inc	1/3/1935	MU	1.25 cfs			25.0N 21.0E 17		UNNAMED SPRING
1593	FREEL J F	5/10/1935	IR,DM	0.5 cfs		25	25.0N 20.0E 23	NE/NW	MILLS CNYN CR
S4-24994C	McArthur & Son Inc	3/15/1977	IR,FP	1.5 cfs	55	10	25.0N 20.0E 13	SE/NE	ENTIAT RIVER
G4-25856C	McArthur & Son Inc	4/18/1978	IR,FP	1070 gpm	175	50	25.0N 20.0E 14	NW/NW	WELL
S4-27566C	Russ Bradford	7/17/1981	IR,DS	0.004 cfs	3.2	5	25.0N 20.0E 12	NE/NW	CHERRY SPRING #2
G4-27931C	Naumes Inc*	5/13/1982	IR	270 gpm	100	25	25.0N 20.0E 14	NW/NW	WELL
S4-29932	Small * Jon	1/12/1989	IR	0.11 cfs	20.8	8	25.0N 20.0E 10		ENTIAT RIVER
G4-30453	Deatherage Jack	10/3/1990	IR,DS	140 gpm	37.4	14	25.0N 20.0E 10	SW/NE	WELL
S4-30761	Small * Jon	5/20/1991	IR	0.11 cfs	13	5	25.0N 20.0E 10		ENTIAT RIVER
S4-30763	Small * Jon	5/20/1991	WL,ST	0.025 cfs	0.2		25.0N 20.0E 10		UNNAMED SPRING
S4-31206	Summerfield Michael	3/30/1992	IR,DM	0.4 cfs	47.8	18	25.0N 20.0E 14		UNNAMED SPRING

The nearest wells to the project site are those domestic wells owned by Bruce and Sandra Wick and Ed and Pat Tippen themselves, and none of the parties have indicated a decline in availability of water.

It addition to certificates and permits, Ecology's records document the filing of the following claims to water directly from the Entiat River.

File #	Person	Purpose	UOM	TRS	1stSrc
S4-160189CL	HANAN ROBERT W	IR	CFS	25.0N 20.0E 14	ENTIAT RIVER
S4-158608CL	BORTZ JOHN A	IR	CFS	25.0N 20.0E 11	ENTIAT RIVER
S4-153189CL	BORTZ JOHN A	IR	CFS	25.0N 20.0E 11	ENTIAT RIVER
S4-144676CL	*Griffith Russell*	*IR*	*CFS*	*25.0N 20.0E 10*	*ENTIAT RIVER*
S4-117526CL	DEPPNER DONALD J	IR	GPM	25.0N 20.0E 14	ENTIAT RIVER
S4-110312CL	WHITEHALL MARVIN T	ST,IR	GPM	25.0N 20.0E 10	ENTIAT RIVER
S4-093534CL	SMALL ZIMRI	IR	GPM	25.0N 20.0E 14	ENTIAT RIVER
S4-025182CL	SELF LEONARD	IR	GPM	25.0N 20.0E 10	ENTIAT RIVER
S4-300555CL	Chelan Cnty PUD 1	IR	CFS	25.0N 20.0E 13	ENTIAT RIVER
S4-020664CL	Entiat Irrigation District	IR	CFS	25.0N 20.0E 14	ENTIAT RIVER
S4-069703CL	Detwiler Hannan Knapp Ditch	IR	CFS	25.0N 20.0E 10	ENTIAT RIVER
S4-069701CL	Keystone Fruit Co LLC	ST,IR	GPM	25.0N 21.0E 18	ENTIAT RIVER

Of these claims only, the Hanan, Small and Keystone Fruit filings represent downstream diversions, the rest represent diversion points located upstream of the proposed point of withdrawal site. Of the downstream filings, none predate the purported date of first use under the applicant's claim.

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Regulation of Water Rights

All water rights are subject to curtailment based on the priority system, whereby senior rights must be satisfied before a junior right may divert water. In order to preserve the integrity of the priority system when a surface water diversion is changed to a well, water use at the new well must be managed in the same manner as the original point of diversion.

If a situation occurs in which the priority system mandates that surface water diversions under the subject claim must be curtailed, all withdrawals from the authorized well must be curtailed until all senior water rights downstream of the original intake are fulfilled. Given the close connection of ground water and surface water in this project, stopping withdrawals from the well is expected to have a fairly immediate effect on stream flows. We note that it appears that water shortages and curtailment of junior water rights in favor of senior rights has not occurred in the Entiat River basin, and this proposed change is unlikely to result in any new supply problems.

Public Interest Considerations

The project is located in the Entiat subbasin and will benefit Upper Columbia steelhead, spring Chinook and bull trout. Discontinuing the direct surface water diversion will prevent ESA listed juvenile salmon and other fish from death by being sucked into the irrigation system and eliminate water quality impacts associated with the annual maintenance of the instream pushup dam. This project is consistent with the goals of the Entiat WRIA 46 Watershed Management Plan approved in 2004 as well as the draft Upper Columbia Salmon Recovery Plan.

In general, removing instream structures from a river has a positive impact on aquatic habitat. Diversions and instream pumps require frequent servicing that involves entering the river to repair structures, remove silt and debris from screens, and maintain pushup dams. Use of the new well alleviates the need for repeated construction in the river and the associated disturbances from increased silt loading and streambank modifications.

CONCLUSIONS

After consideration of the facts presented in this report, the author makes the following conclusions

- Water has been put to beneficial use as asserted under Water Right Claim No. 144676.
- The subject water right claim will not be enlarged by approving the change to a point of withdrawal. The quantity of water withdrawn at the authorized points of withdrawal is limited to the quantities historically put to beneficial use, as listed on the cover page of this report.
- A change to a point of withdrawal of water for beneficial use is allowed by law.
- The proposed changes will not impair existing water rights or claims.
- The proposed changes are not detrimental to the public interest.

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RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend the request for change to Water Right Claim No. 144676 as modified by the Amended Findings of Fact and Decision dated June 23, 1993, be approved in the amounts and within the limitations listed below and subject to the provisions beginning on Page 2.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

- 200 gpm
- 50 ac-ft/yr
- Irrigation of 12.5 acres from April 15 through October 31

Total withdrawals under both CS4-WRC144674@1 and CS4-WRC144676@1 shall not exceed a maximum of 200 gpm, 52 ac-ft/yr, for the irrigation of 20 acres.

Points of Withdrawal

A well located 500 feet east and 150 feet north of the southwest corner of Section 11, in the SW¼SW¼ of Section 11, T. 25, R. 20 E.W.M.

Place of Use

Within the SW¼ of Section 11, located below elevation 1,200 feet mean sea level and above elevation 900 feet mean sea level, mostly within the bottom of Saunders Canyon.

Report by: _____ _____
Taylor C. Horne Date

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REFERENCES

Chelan County Conservation District (NOTE: Renamed "Cascadia Conservation District"). *Detailed Implementation Plan, Entiat Water Resource Inventory Area (WRIA) 46 (EWPU DIP).* February 2006. <http://www.cascadiacd.org/files/documents/Entiat_FinalDIP_022106.pdf>.

Dixon, R.M. 2003. *Use of a GIS-based Hydrogeologic Database to Estimate Groundwater Storage Volumes and Annual Recharge Volumes within the Entiat River Valley, Chelan County, Washington.* Washington Department of Ecology draft unpublished report. Prepared for the Entiat WRIA Planning Unit. Yakima, WA: WDOE Central Regional Office.

Entiat Watershed Planning Unit. *Entiat WRIA 46 Plan & Appendices*. October 2004. <http://www.cascadiacd.org/index.php?page_id=255>.

USFS WNF. 1996. *Watershed assessment Entiat analysis area, v2.0.* US Forest Service Wenatchee National Forest, Entiat Ranger District, Entiat, WA.

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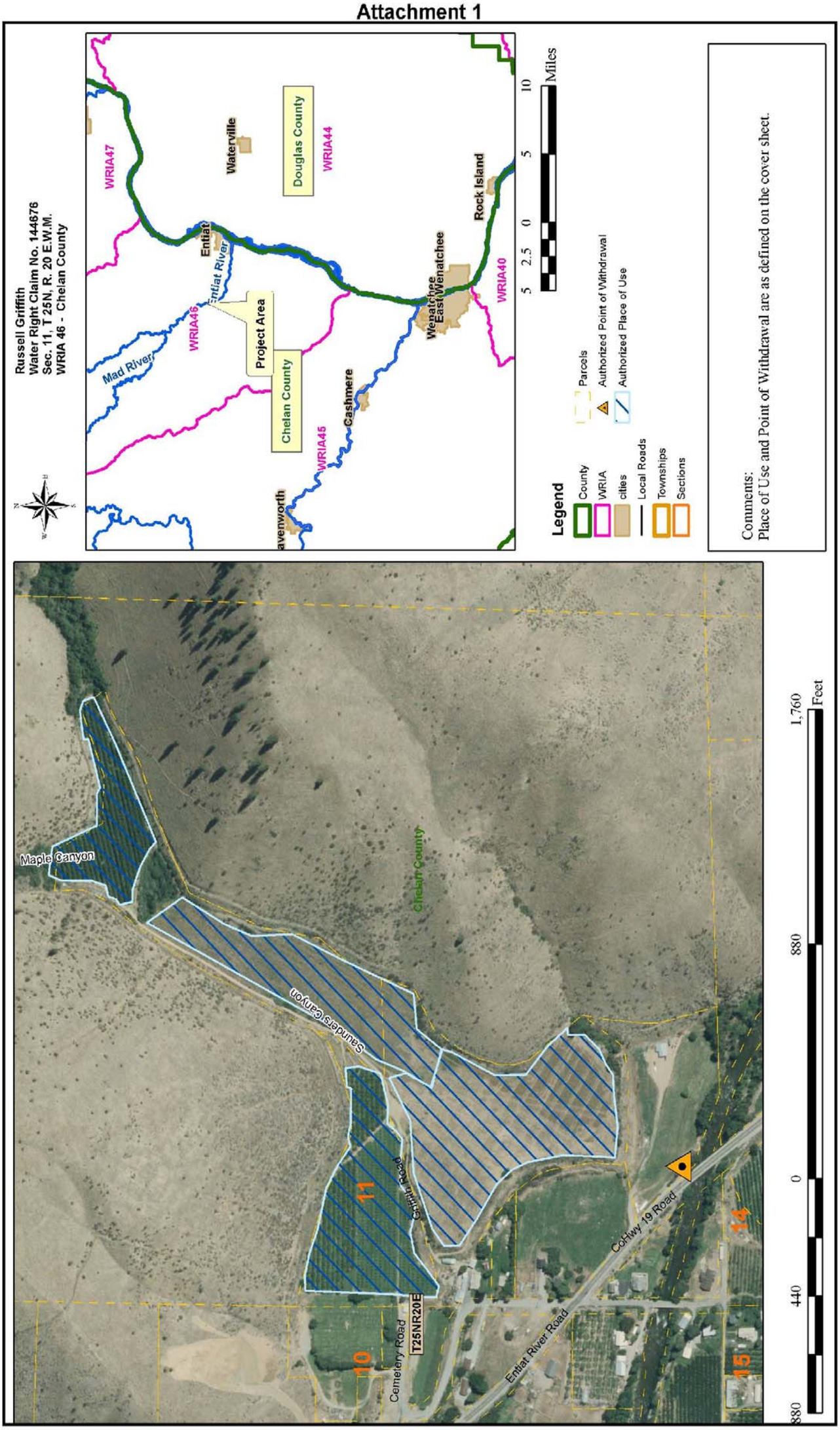
Attachment 1