



STATE OF WASHINGTON
 DEPARTMENT OF ECOLOGY
IRRIGATION EFFICIENCIES PROGRAM
 TRUST WATER RIGHT
 REPORT OF EXAMINATION
Change of Purpose and Place of Use
 WRTS File No. CS4-WRC200033@3

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
1905			WRC 200033

NAME OF PARTY CONVEYING RIGHT TO TRUST WATER RIGHTS PROGRAM		
Whitley Farms LLC c/o Ben Whitley		
ADDRESS/STREET	CITY/STATE	ZIP CODE
PO Box 907 / 497 Spring Coulee Road	Okanogan, WA	98840-0907

TRUST WATER RIGHT ATTRIBUTES

SOURCE		
Salmon Creek		
TRIBUTARY OF (IF SURFACE WATERS)		
Okanogan River		
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
N/A*		15.4

QUANTITY, TYPE OF USE, PERIOD OF USE

15.4 acre-feet per year for the purpose of instream flows within Salmon Creek, permanently.

*Water saved and stored in Conconully Lake during the irrigation season will be pulsed at the rate of 7.8 cubic feet per second for one day according to fish migration needs as determined by the Colville Confederated Tribe Fish and Wildlife Department.

PLACE OF USE and AFFECTED REACHES
 [See Attachment for map of the trust water right location]

APPROXIMATE LOCATION OF HISTORIC DIVERSION					
Primary Reach					
Beginning: Approximately 445 feet south and 385 feet west from the northeast corner of Section 36, T. 34 N., R. 25 E.W.M., within the NE¼NE¼ of Section 36, T. 34 N., R. 25 E.W.M.					
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE	WRIA	COUNTY
	36	34 N.	25 E.W.M.	49	Okanogan
PARCEL NUMBER	LATITUDE	LONGITUDE	DATUM		
	48.40908	-119.62704	WGS84		

Ending: Approximately 2410 feet south and 1670 feet east from the northwest corner of Section 31, T. 34 N., R. 26 E.W.M., within the SE¼NW¼ of Section 31, T. 34 N., R. 26 E.W.M.

Salmon Creek: Approximately between river miles 3.8 and 4.5.

PROJECT SUMMARY

This irrigation efficiencies project consists of the conversion of 43.8 acres of hand/wheel lines to pivot sprinkler irrigation system with drop-tubes and micro-sprinklers. The remaining 10.2 acres will be converted to a solid-set micro-sprinkler system. The conserved non-consumptive water, estimated at 15.4 acre-feet per year, will be placed in the Washington State Trust Water Rights Program to augment instream flow in Salmon Creek.

TRUST WATER RIGHT TERM

BEGIN DATE	END DATE
May 1, 2011	Permanent

PORTION OF WATER RIGHT

NOT PLACED INTO TRUST

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
1905			WRC 200033

NAME		
Whitley Farms LLC c/o Ben Whitley		
ADDRESS/STREET	CITY/STATE	ZIP CODE
497 Spring Coulee Road	Okanogan, WA	98840

WATER RIGHT CLAIM ATTRIBUTES

SOURCE		
Well		
TRIBUTARY OF (IF SURFACE WATERS)		
MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
	325	147.1

QUANTITY, TYPE OF USE, PERIOD OF USE
 325 gallons per minute May 1 to September 30 and 147.1 acre-feet per year for the irrigation of 54 acres.

LOCATION OF WITHDRAWAL

APPROXIMATE LOCATION OF WITHDRAWAL					
Approximately 520 feet west and 30 feet south from the northeast corner of Section 36, within the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 36, T. 34 N., R. 25 E.W.M.					
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE	WRIA	COUNTY
NE $\frac{1}{4}$ NE $\frac{1}{4}$	36	34 N.	25 E.W.M.	49	Okanogan
PARCEL NUMBER					
3425360008					

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 USED

[See Attachment for map of the place of use and point of withdrawal]

54 acres within the E $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, the SW $\frac{1}{4}$ NE $\frac{1}{4}$, the E $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 36 and the S $\frac{1}{2}$ S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 25; all lying west of Spring Coulee Road within Township 34 N., Range 25 E.W.M., in Okanogan County.

DESCRIPTION OF WATER SYSTEM

A mainline installed at the well location to center pivots with drop tubes and micro-sprinkler heads, along with solid-sets at the field corners.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
Started	11/01/2010	11/01/2011

PROVISIONS

TRUST WATER RIGHT provisions:

INSTREAM FLOW

Consistent with 90.42.080(1)(a), this trust water right shall be managed by the Department of Ecology as an instream flow right for Salmon Creek, as described in this trust water report.

TRUST WATER MANAGEMENT PLAN

The Colville Confederated Tribes Fish and Wildlife Department shall determine the day trust water is to be released each year. If the plan deviates from the one day pulse flow as approved through this Report of Examination, the Department of Ecology shall be notified 30 days in advance.

Provisions related to PORTION OF WATER RIGHT NOT PLACED INTO TRUST:

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

WATER AVAILABILITY

Water is limited to the authorized quantities of Whitley Farms LLC water right claim less the amounts placed into the trust program.

METER INSTALLATION

An approved measuring device shall be installed and maintained for each of the sources authorized by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", chapter 173-173 WAC. <http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html>

RECORD WEEKLY, REPORT ANNUAL TOTALS

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.

AUTHORITY TO ACCESS DATA AND MEASURING DEVICE

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 provisions, and to inspect at reasonable times any measuring device used to meet the above provisions.

AUTHORITY TO ACCESS PROJECT

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 wells or diversions and associated distribution systems for compliance with water law.

CONSERVATION

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.

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 or detrimental to the public interest.

Therefore, I ORDER the requested change of point of withdrawal, change of place and purpose of use for a portion of Surface Water Claim No. 200033 under Trust Water Application No. CS4-WRC200033@3 to be approved, subject to existing rights and the provisions specified above.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
<p>Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey WA 98503</p> <p>Pollution Control Hearings Board 1111 Israel Road SW, Ste 301 Tumwater WA 98501</p>	<p>Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia WA 98504-7608</p> <p>Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903</p>

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://www.leg.wa.gov/CodeReviser>

Signed at Yakima, Washington, this 19th day of October 2010.



 Mark Schuppe, Section Manager
 Water Resources Program
 Central Region Office

INVESTIGATOR'S REPORT

BACKGROUND

Applications

A Trust Water Application for Surface Water Claim No. S4-200033CL (Claim No. 200033) was submitted by Bob Clark of the Okanogan County Conservation District on behalf of Ben Whitley, Whitley Farms LLC, to the Department of Ecology (Ecology) on November 24, 2009 as Draft, and on February 22, 2010 as Final. The application number was assigned as CS4-WRC200033@3 in the Water Right Tracking System. The applicant proposes to permanently place a portion of the water right claim into the state's Trust Water Rights Program (TWRP) for the purpose of instream flow to be used exclusively for instream flows within Salmon Creek and to change the point of diversion to a well.

Water right change applications may be processed prior to applications submitted at an earlier date when the proposed water use, if approved, would substantially enhance or protect the quality of the natural environment (WAC 173-152-050(3)(a)). This application has been determined to meet WAC 173-152-050(3)(a) criteria and has therefore been afforded priority processing.

Description and Purpose of Proposed Changes for the Irrigation Efficiencies Project

The project site is located approximately three miles northwest of Okanogan, along Spring Coulee Road within Section 25 and 36, Township 34 N., Range 25 E.W.M., within Water Resource Inventory Area (WRIA) 49. Funding for the project has been approved from the Natural Resource Conservation Service (NRCS) and the Colville Tribal Fisheries.

This irrigation efficiencies project proposal includes the conversion of hand and wheel lines with impact sprinklers to pivots with drop-tubes and micro-sprinklers and solid-set micro-sprinklers on the corners. The point of diversion is proposed to change to a point of withdrawal (one well) approximately 380 feet north and 140 feet west of the diversion on Salmon Creek. A start card has been filed to drill a well adjacent to the existing one and there are plans to decommission the existing well. The well will be approximately 70 feet deep with a static level of approximately 30 feet. This modification in well depth will support a new more efficient pump system. A mainline will be installed from the pump/well to new center pivots with drop tubes and micro-sprinkler heads for the irrigation of 43.8 acres out of the 54 acres authorized. The remaining acres would have solid-sets. Also proposed is a soil moisture monitoring system under one of the pivots to "fine tune" the application rate.

One hundred percent of the saved water from this project will be placed into trust in perpetuity to increase flows and habitat restoration within Salmon Creek, identified as a priority stream for instream flow restoration. The variable surface runoff in the Salmon Creek Basin is so great that surface runoff from the upper watershed is often insufficient to fill Conconully Reservoir. A substantial portion of Salmon Creek flows are diverted and stored within the reservoir. The system is significantly over-allocated and flows are a significant limiting factor to salmonid production. Trust water will benefit summer steelhead, a species currently listed as "threatened" under the Endangered Species Act.

This project is directly upstream of the Okanogan Irrigation District (OID) diversion dam and Whitley Farms is the last irrigator on the Creek before the OID diversion. Changing the diversion to a well would allow for surface water within the creek to remain. There will be 15.4 acre-feet of savings stored in Conconully Reservoir from this project over an irrigation season. Although small in quantity, it would provide a pulse flow at peak fish migration from Salmon Creek to the Okanogan River. The Colville Tribe Fisheries Department will make the determination each year when the water is pulsed. There are two other trust water agreements being held in Conconully Reservoir by the U.S. Bureau of Reclamation (USBOR) for instream flow benefits. Each addition to the pulse flow increases surface flows for fish passage.

The original place of use description for the claim included lands not irrigated under this water right claim. Through this change the place of use will be narrowed to the actual acres under new pivots and the remaining acres under solid sets.

Attributes of the Claim and Proposed Change for the Irrigation Efficiencies Project

The following table summarizes the attributes of Claim No. 200033 and the proposed quantities to place into the TWRP.

Table 1
Summary of Attributes and Proposed Changes to Whitley Farms LLC Claim No. 200033

	Existing Attributes of Claim	Proposed Changes to Trust
Name	Whitley Farms LLC	Whitley Farms LLC (Ben Whitley)
Priority Date Date of Final Application for Trust	1905	February 22, 2010
Instantaneous Quantity (Qi)	0.72 cfs	Pulse flow at a rate 7.8 cubic feet per second for one day each year during fish critical migration
Annual Quantity (Qa)	162.5 acre-feet	15.4 acre-feet
Period of Use	May 1 through September 30	May 1 to September 30
Source	Salmon Creek	Salmon Creek
Point of Diversion/ Withdrawal	Section 36, T. 34 N., R. 25 E.W.M.	Section 36, T. 34 N., R. 25 E.W.M.
Purpose of Use	Irrigation of 54 acres	Instream Flow
Place of Use	NE¼ of Section 36 and the SW¼SE¼SE¼ of Section 25, all within T. 34 N., R. 25 E.W.M.	Approximately 3790 foot primary reach extending from the existing point of diversion on Salmon Creek to the Okanogan Irrigation District diversion within Section 31, T. 34 N., R. 26 E.W.M.

Statement of Authorities

The state law that governs claims (chapter 90.14 RCW) provides that water users whose uses were initiated prior to the water code and not represented by a state issued permit or certificate were to file a water right claim or the right was considered to be waived (90.14.071 RCW). Typically, claims represent water uses that pre-date the adoption of the state water code, chapter 90.03 RCW, on June 6, 1917. The state water code provides under 90.03.460 RCW that water use projects that were under development at the time of the adoption of the water code were unaffected by the new statutory framework and did not have to comply with the permit provisions of the code, provided that reasonable diligence was used in completing the project. The Supreme Court held in Brown v. Chase, 125 Wash. 542, 217 P. 23 (1923), that a riparian landowner has a “reasonable time” after adoption of the Surface Water Code to put water to beneficial use. In Proctor v. Sim, 134 Wash. 606, 236 P. 114 (1925), the Supreme Court held that the water code protected existing rights, the “beneficial use of which are either directly or prospectively, within a reasonable time, proper and necessary for the irrigation of their lands...” In Ecology v. Abbott, 103 Wn.2d 686, 694 P.2d 1071 (1985), the Supreme Court held that the length reasonable time was ultimately determined to be 15 years from the enactment of the Water Code, of up until 1932.

Though the trust water right would prevent impairment against existing water rights, it cannot be regulated for without an adjudication of the basin (Rettkowski v. Ecology, 122 Wn.2d 219, 858 P.2d 232).

Trust water rights are governed state-wide by chapter 90.42 RCW and in the Yakima River Basin, by chapter 90.38 RCW. The statutes¹ limit the portion of a water right eligible for transfer to the TWRP to the extent the water right was exercised in the five years prior to application. A water right accepted into the TWRP may not be enlarged. When a portion of a water right is accepted in the TWRP, the portion remaining with the landowner and the portion in trust combined may not exceed the greatest amount exercised within the last five years before application. Any trust water right found to impair an existing water right will be modified to prohibit impairment.

¹ RCW 90.38.020(4), 90.38.020(6), 90.42.080(4) and 90.42.080(8)

Legal Requirements for Proposed Change for the Irrigation Efficiencies Project

The following is a list of requirements that must be met prior to authorizing the proposed change in purpose of use and point of diversion:

- **Public Notice**

A notice of application was duly published in accordance with RCW 90.42.040(5) in the Okanogan Valley Gazette-Tribune on April 1st and April 8th, 2010. No protests or objections were received.

- **State Environmental Policy Act (SEPA)**

This application is exempt from the provisions of the State Environmental Policy Act (SEPA) of 1971, chapter 43.21 RCW, due to the fact that the cumulative quantities of water for this project under all water rights, including those proposed for trust water herein, constitute a diversion of less than one cubic foot per second.

- **Water Resources Statutes and Case Law**

Tentative Determination/Extent and Validity

Ecology cannot adjudicate a claim to a water right; only the Superior Courts have this authority. However, 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*.

INVESTIGATION

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

- The State Water Code, administrative rules, and policies
- Other recorded water rights in the vicinity
- A site visit conducted on by Ecology staff, Laurie Dahmen
- Correspondence and conversations with Bob Clark of the Okanogan County Conservation District
- Correspondence and conversations with Jack Myrick of the Conservation Commission
- Correspondence with Ecology staff
- Correspondence with Paul LaRiviere of the Department of Fish and Wildlife
- Correspondence with Ben Whitley
- Topographic and local area maps
- Aerial photographs of the site

History of Water Use

Historic use data was calculated by Bob Clark of the Okanogan County Conservation District. Mr. Clark calculated the historic quantity of water used on the acres for this project based on information provided by Mr. Whitley and through the Report of Examination completed by the Okanogan County Water Conservancy Board on March 3, 2004. An extent and validity determination of the water right claim, including aerial photograph review and project review, was conducted by Laurie Dahmen from Ecology. The water right claim is tentatively determined valid and has been used to the full extent for the irrigation of 54 acres. Water savings were calculated by Mr. Myrick of the Conservation Commission.

Proposed Use

The purpose of instream flow is to enhance instream flows for fish maintenance and habitat enhancement within Salmon Creek.

Other Rights Appurtenant to the Place of Use

A review of Ecology records was conducted for existing surface and ground water rights in the surrounding area. In order to evaluate the pending trust water applications, it is necessary to review all water rights appurtenant to the place of use (POU) described under Claim No. 200033. There are eight water rights/claims within the original place of use description. The following describe each water right/claim and their relationship to Claim No. 200033:

Water Right/Claim	Priority Date	Source	Name	Qi/Qa	Purpose of Use	Place of Use	Relation to Claim No. 200033
SW Certificate No. 228	9/8/1921	Unnamed Spring	Victor Ruffonagh	0.025 cfs/ Ac-ft not given	Irrigation of 1.5 acres	Lot 5 w/in NW¼SW¼ of Sec. 30, T. 34 N., R. 26 EWM	Does not overlap Claim No. 200033 irrigated acres; No relationship
GW Claim No. 137793	3/1930	Well	Ernest Carpenter	10 gpm/ 6 ac-ft	Domestic supply	SE¼SE¼ of Sec. 25, T. 34 N., R. 25 EWM	No relationship
GW Permit No. 27280	1/30/1981	Well	Ernest Carpenter	10 gpm/ 2 ac-ft	Domestic supply	S½SE¼SE¼ of Sec. 25, T. 34 N., R. 25 EWM	No relationship
SW Claim No. 125815	Prior to 1910	Unnamed Springs	E.V. Carpenter	0.111 cfs 50 gpm/ 22 ac-ft	Stockwater & seasonal irrigation of 5 acres	NW¼NE¼ & SW¼NE¼ of Sec. 36, T. 34 N., R. 25 E.W.M.	Additional irrigated land; does not overlap Claim No. 200033 irrigated acres
SW Claim No. 125814	Prior to 1910	Unnamed Spring	E.V. Carpenter	0.111 cfs 50 gpm/ 20 ac-ft	Stockwater & seasonal irrigation of 2 acres	SW¼NE¼ of Sec. 36, T. 34 N., R. 25 EWM	Additional irrigated land; does not overlap Claim No. 200033 irrigated acres
GW Certificate No. 715-D Claim No. 834	1938	Well	Okanogan County	200 gpm/ 96 ac-ft	Domestic supply and irrigation of 24 acres	Part of the NE¼NE¼ of Sec. 36, T. 34 N., R. 25 EWM	Standby/Reserve; less amount available from Salmon Creek Water Right
GW Certificate No. 654-D Claim No. 866	1925	Well	Ernest Carpenter	300 gpm/ 52 ac-ft	Irrigation of 13 acres	Part of the E½NE¼ of Sec. 36, T. 34 N., R. 25 EWM	Standby/Reserve; less amount available from Salmon Creek Water Right
GW Certificate No. 627-D Claim No. 723	1924	Well	Clara Carpenter	400 gpm/ 120 ac-ft	Domestic supply and irrigation; acres not stated	Part of the S½NE¼ of Sec. 36, T. 34 N., R. 25 EWM	Standby/Reserve; less amount available from Salmon Creek Water Right(s)

*SW = Surface Water; GW = Ground Water; cfs = cubic feet per second; ac-ft = acre-feet; Sec. = Section.

Ground Water Certificate No. 715-D, filed by the County of Okanogan Commissioners, overlaps a portion of the place of use for Claim No. 200033. Domestic supply and the irrigation of 24 acres are authorized. Of the 24 acres, there are approximately 4.2 acres that overlap Claim No. 200033. This is a standby/reserve water right that is used when Claim No. 200033 cannot sufficiently fulfill irrigation requirements.

Ground Water Certificate No. 654-D, filed by Ernest V. Carpenter, overlaps a portion of the place of use for Claim No. 200033. The irrigation of 13 acres is authorized. Of the 13 acres, there are approximately 11.6 acres that overlap Claim No. 200033. This is a standby/reserve water right that is used when Claim No. 200033 cannot sufficiently fulfill irrigation requirements.

Ground Water Certificate No. 627-D, filed by Clara E. Carpenter, overlaps a portion of the place of use for Claim No. 200033. Domestic supply and irrigation are authorized, however the number of acres were not identified. There are 40.95 acres within the legal description of place of use. Of this, there are approximately 28 acres of irrigation that overlap Claim No. 200033. This is a standby/reserve water right that is used when Claim No. 200033 cannot sufficiently fulfill irrigation requirements.

These three water rights are standby/reserve to cover land that is in this irrigation efficiencies project under Claim No. 200033 when water from Salmon Creek is unavailable. The well authorized for Ground Water Certificate No. 654-D does not have enough water for irrigation purposes. It is only now used as a domestic well for a home adjacent to it with an estimated maximum withdrawal of 25 gallons per minute (gpm). The standby/reserve irrigation portion is withdrawn from the well authorized under Ground Water Certificate No. 715-D and is used as a replacement well.

Essentially the overlapping water rights are all now tied together into one irrigation system. The new irrigation system will use a maximum of 550 gpm from the new well authorized through this trust water change. There are three water rights from this well: Claim No. 200033 with 325 gpm, 715-D with 500 gpm, 654-D with 300 gpm. It is unclear as to why the gpm vary for each claim. The instantaneous quantities are additive totaling 1225 gpm. By combining the water rights for this well and using the maximum of 550 gpm to run the irrigation system there is a reduction of 675 gpm. The annual quantities are non additive; the total quantity was based off of an irrigation crop requirement of 4 acre-feet per acre. The acre-feet requirement was reevaluated through the change application approved on March 3, 2004 for Claim No. 200033 and reduced to actual irrigation crop requirement of three acre-feet per acre for a maximum of 162.5 acre-feet. The well from 627-D operates at a maximum of 300 gpm (authorized up to 400 gpm) and is tied into the new irrigation system.

No other overlapping water rights for the acres in this irrigation efficiency project were found.

Department of Fish and Wildlife Project Evaluation

The mainstem Salmon Creek is 42.4 miles with an additional tributary habitat of 104.2 miles. Snow melt and stream flows end up in Conconully Reservoir with 15 miles of stream below the reservoir. Salmon Creek is classified as a priority based on the number of salmonid species listed as endangered or threatened under the Endangered Species Act (ESA), the status of various salmonids, existing habitat conditions and the period when seasonal low flows occur. According to local biologists anadromous access was probably limited to the lower 15 miles of Salmon Creek. Bull trout were documented decades ago at the mouth of Salmon Creek. Spring Chinook are assumed to have utilized the system. Recovery efforts are primarily for the use of steelhead. Life history includes spring spawning, fry emergence, and smolt outmigration.

Christopher Fisher with the Colville Confederated Tribes, and Paul LaRiviere with the Washington State Department of Fish and Wildlife (WDFW) assessed the project for benefits to Salmon Creek.

In a letter to Laurie Dahmen (Ecology) dated December 22, 2009, Mr. Fisher states that the result of this project will likely benefit summer steelhead and that the Colville Tribes are interested in participating in this project and others that directly benefit the reestablishment or enhancement of anadromous salmonid populations.

A long-term water lease program in Salmon Creek began in 2005 from the OID to provide 1,200 acre-feet annually. It is released to maximize benefits for successful fish migration. There is a schedule for water release downstream of the OID diversion dam. Basically the savings from this irrigation project would add one more day of scheduled water release in the amount of 7.8 cubic feet per second (cfs). A staff gage is used at the discharge to develop a curve rating of acre-feet per hour. Based on the curve rating, the weir can be set to release water at a set rate over a period of time. *See file for Long-Term Water Lease Program in Salmon Creek Schedule of Water Release.*

In a letter to Laurie Dahmen (Ecology) dated March 22, 2010, Mr. LaRiviere states that water savings from this project is small and difficult to measure, but is important in a cumulative fashion that will benefit fish and habitat over time and also improve water quality.

Hydrologic/Hydrogeologic Evaluation

John Kirk of Ecology, Hydrogeologist, provided the following analysis for Salmon Creek area:

Geology

The Salmon Creek drainage is fairly narrow at the Whitley Farms location, the valley floor is about 1500 feet wide and bounded on both the east and west by metamorphic gneiss and quartzite bedrock that rises more than 1000 feet over the valley floor on both sides. The bedrock on the west side of the valley occurs at a distance of about 900 feet from the proposed well site. The valley fill is composed of glacial sediments. Most wells in the immediate area are about 50 feet deep or less, and the sediments encountered during drilling were primarily sand and gravel. The total depth to bedrock at the proposed site is unknown. There is some indication in well report data that at depths greater than 50 feet the sediments become finer grained, with clay and silt becoming more abundant.

Hydrogeology

The Whitley Farms point of diversion on Salmon Creek is at an elevation of about 1395 feet, and the proposed well site appears to be about 1425 feet (USGS topography map). Several wells owned by Whitley Farms are located near the proposed well site. These well logs report water levels of about 30 feet below land surface which is very similar to the water level elevation of Salmon Creek. One of the wells is a dug well, and shortly after its construction in 1948 it reportedly produced 260 gpm. Other dug wells in the area have yielded as much as 800 gpm. The specific yield for these types of sediments is estimated to be 0.2, while the transmissivity for a 60 foot well with a saturated thickness of 30 feet of sand and gravel is conservatively estimated to be around 60,000 g/d/ft (gallons per day per foot).

There is no report of silt, clay, hard pan, or other fine grained material within the upper 50 feet of sediments at the Whitley Farm location and it is likely this section of creek is incised into sand and gravel. Considering the hydrogeology of the area, it is reasonable to conclude that if a well at the proposed site is constructed into the sand and gravel the cone of depression from a well pumping at the proposed site will reach the creek and induce water to flow from the creek into the aquifer, and eventually to the well bore itself.

Modeling was used to simulate a continuous pumping scenario from May 1 through September 30. The modeled pumping rate was set to 217.3 gpm in order to fully utilize the 147.1 acre-feet claimed by the applicant. This is not the pumping schedule that will actually be used, but it is reasonable for estimating pumping impacts on the creek assuming full usage of the claimed annual quantity of water. The model can estimate the time it takes for stream depletion (due to groundwater pumping) to cease when the well would be turned off on September 30. When stream depletion stops, the groundwater level has recovered and aquifer storage replaced.

The modeling results show that full aquifer recovery will occur at some point prior to the end of December, in fact, the modeling indicates that most of the aquifer recovery will occur by the end of October. Therefore, it is concluded that there is sufficient hydraulic continuity to move from the surface water diversion to the proposed well site. The well must be constructed within the glacial sediments and not into the underlying bedrock.

Well impairment

Well interference is estimated using the Theis non-equilibrium equation. This is done in order to estimate whether or not the cone of depression from the new well will result in excessive drawdown in any existing wells. In some cases, new wells can cause impairment to senior groundwater rights by reducing the saturated thickness and yield in neighboring wells.

In this case, Whitley Farms has selected a proposed well site that is closer to Salmon Creek than the nearest well not owned by the applicant. The nearest well to the proposed well site that is not owned by the applicant is located about 750 feet to the north, while the creek is only 350 feet to the east. The cone of depression will encounter the creek first, and therefore, not result in impairment to existing water rights.

Trust Water Right Calculations

While an entire water right (or water right claim), or portion thereof, may be accepted into trust, the extent to which that water right may be exercised is based on the highest water use within the last five years that will be foregone for the period of trust. The calculation for the extent to which a water right may be exercised as a Trust Water Right is not a tentative determination of the water right and is not a finding of relinquishment or abandonment. Water use records indicate that the subject water right claim has been used to the full extent during the last five (5) years on the subject acres for this irrigation efficiency project. Therefore, the entire quantity of water savings may be exercised during the period of trust.

Bob Clark from the Okanogan County Conservation District provided water use information and Jack Myrick from the Washington State Conservation Commission calculated projected water use from the new irrigation system as requested by Mr. Whitley.

There are 0.724 cfs and 162.5 acre-feet appurtenant to the 54 acres authorized in Claim No. 200033. Of this there are 41.4 acres in the final irrigation efficiencies design under pivots. Mr. Myrick designed a system to be operated at optimum efficiency reducing the annual quantity to a maximum of 147.1 acre-feet, a savings of 15.4 acre-feet annually over the period of May 1 to September 30 on the 54 acres. The pumping system will still need 325 gpm along with overlapping water rights Ground Water Certificate Nos. 715-D, 654-D and 627-D to operate. Over the course of the irrigation season a more efficient system will allow for a savings equivalent to 0.724 cfs when the system is not on. The actual rate at which the saved water is passed down Salmon Creek and the timing of release will be at the discretion of the Colville Tribal Fisheries staff when flows are needed for fish migration, the end of March through the end of May. This is coordinated with other water leases and pulse flows as listed in the schedule to release water (*in file*).

Table 2

Quantities in trust and remaining for use on the 43.8 acres in this IEGP project plus the 10.2 acres outside the project for Whitley Farms LLC in perpetuity

In Trust	Remaining for Use
7.8* cfs	325 gpm
15.4 acre-feet	147.1 acre-feet
May 1 to September 30	May 1 to September 30

*At the discretion of the Colville Tribal Fisheries staff. Water Release Schedule release for one day at approximately the rate of 7.8 cfs.

Trust Water Place of Use

Trust Water use for instream flow are generally split into primary and secondary reaches in order to distinguish the contribution of return flows from a water use and the benefits of any reduction in consumptive water use. The annual quantity placed into Trust is calculated differently for the primary reach and secondary reach due to the effects of return flows. The primary reach of a stream is the portion that benefits from both the reintroduction of return flows and any reduced consumptive water use. It is considered to be the reach starting at the point of diversion for the subject right/claim, and extending downstream to a point on the stream where return flows from the irrigated lands have rejoined the stream. The secondary reach is that portion of the stream that benefits by the reintroduction of water that would otherwise be lost to consumptive use and extends from the end of the primary reach to such point downstream as it is practical and feasible to regulate for the subject right. Because this irrigation efficiency project did not reduce consumptive use for this water right claim, there is no benefited secondary reach of the stream.

Primary Reach

The trust water right for the primary reach begins from the point water has been historically diverted and ends at the point where return flows are estimated to have returned to the river. For this project the primary reach is approximately 3791.5 feet of lower Salmon Creek beginning at approximate River Mile 4.5 at the point of diversion for Whitley Farms and ending approximately at River Mile 3.8, the point of diversion for the Okanogan Irrigation District.

Secondary Reach

There is no secondary reach in this trust water right.

Trust Water Management

Consistent with 90.42.080(1)(a), this Trust Water Right shall be managed by Ecology as an instream flow right for Salmon Creek, as described in this Trust Water Report.

Impairment Considerations

“Impair” or “impairment” means to: 1) adversely impact the physical availability of water for a beneficial use that is entitled to protection, and/or; 2) to prevent the beneficial use of the water to which one is entitled, and/or; 3) to adversely affect the flow of a surface water course at a time when the flows are at or below instream flows levels established by rule (POL-1200), and/or; 4) degrade the quality of the source to the point that water is unsuitable for use by existing water right holders (WAC 173-150). Demonstration of impairment would require evidence of a substantial and lasting or frequent impact reflecting such conditions.

The proposed trust water has been evaluated as to the potential for impairment to existing water rights in the area. The water retained instream from this Trust Water Right will be available to other water rights in accordance with seniority and no impairment of any water right will occur.

This water right is the last irrigation right on Salmon Creek before the OID diversion. All water right users above this diversion have water to fulfill their rights. The primary reach only extends to the OID diversion and has been designated in part to avoid potential impairment to existing water rights.

No Enhancement of the Original Water Right Claim

No diversion of water over and above what has been historically put to beneficial use would be authorized through approval of this change. Total water between trust and that portion remaining with the water right claim holder will not exceed the greatest use within the last five years of water use nor will the total exceed the historical extent of the water right claim.

Consideration of Protests and Comments

No protests or comments were received.

CONCLUSIONS

It is the conclusion of this examiner that, in accordance with 90.42 RCW, the applications for trust water through an irrigation efficiencies project under Surface Water Claim No. 200033 (CS4-WRC200033@3) will not impair existing rights provided the terms and conditions below are followed.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change in purpose of use and place of use for transfer of water to the TWRP under Surface Water Claim No. 200033 (CS4-WRC200033@3) be approved, within the limitations listed below and subject to the Provisions section of this report.

Portion of Water Right Claim Placed into Trust

For instream flow as a pulse flow during the irrigation season May 1 through September 30 in the primary reach permanently:

The instantaneous quantity will be in the form of pulse flow for one day each year at approximately 7.8 cfs and at the discretion of the Colville Tribal Fisheries staff in the amount of 15.4 acre-feet per year for instream flow during fish migration periods in Salmon Creek.

The primary reach begins at the Whitley Farms point of diversion site located approximately 445 feet south and 385 feet west from the northeast corner of Section 36, T. 34 N., R. 25 E.W.M., within the NE¹/₄NE¹/₄ of Section 36, T. 34 N., R. 25 E.W.M. at River Mile 4.5 and ending approximately 3791.5 feet downstream at River mile 3.8, the location of the Okanogan Irrigation District diversion.

There is no secondary reach in this project for this water right.

Portion of Water Right Claim Not Placed into Trust

This is the remaining quantity listed under Claim No. 200033 after subtracting out this Irrigation Efficiencies Project trust water savings from Application No. CS4-WRC200033@3.

The portion of water available for Whitley Farms is 325 gpm, 147.1 acre-feet per year for irrigation of 54 acres May 1 through September 30.

Point of Withdrawal

Approximately 518 feet west and 275 feet south from the northeast corner of Section 36, within the NE¹/₄NE¹/₄ of Section 36, T. 34 N., R. 25 E.W.M.

Place of Use

54 acres within the E¹/₂NW¹/₄NE¹/₄, the SW¹/₄NE¹/₄, the E¹/₂NE¹/₄ of Section 36 and the S¹/₂S¹/₂SE¹/₄SE¹/₄ of Section 25; all lying west of Spring Coulee Road within Township 34 N., Range 25 E.W.M. in Okanogan County.

Report by: 
Laurie Dahmen
Water Resources Program

Date: 10/19/10

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Attachment 1

