STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

REPORT OF EXAMINATION

Change of Season of Use, Place of Use, and
Adding Points of Diversion and Municipal Purpose of Use
WRTS File No.: CG3-21081C@2

PRIORITY DATE	CERTIFICATE NO.
May 3, 1973	G3-21081C(A)

NAME

Bryan and Christy Boesel (the Boesels)

ADDRESS/STREET	CITY/STATE	ZIP CODE
PO Box 18	Malott WA	98829-0018

AND

NAME

Okanogan County Department of Public Works (Okanogan PW)

ADDRESS/STREET	CITY/STATE	ZIP CODE
1234-A 2nd Avenue South	Okanogan WA	98840-9723

PUBLIC WATERS TO BE APPROPRIATED

SOURCE

Boesels: Well
Okanogan PW: Okanogan and Columbia Rivers

TRIBUTARY OF (IF SURFACE WATERS)

Columbia River and Pacific Ocean

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE FEET PER YEAR
Okanogan PW: 0.17	**Boesels:** 87 **Okanogan PW:** 76	**Boesels:** 27.0 Consumptive 7.1 Non-Consumptive **Okanogan PW:** 22.5 Consumptive 7.5 Non-Consumptive*

QUANTITY, TYPE OF USE, PERIOD OF USE

Boesels: 87gallons per minute, 34.1 acre-feet per year from April 1 to October 1 for the irrigation of 10 acres and continuous domestic supply.

Okanogan PW: 22.5 acre-feet per year for the purpose of municipal supply in the monthly quantities stated below.

*The 7.5 acre-feet per year of non-consumptive water is retained by Okanogan County Department of Public Works, but is not available for use outside of the original place of use.

	Acre-Feet/Month
April	1.5
May	1.5
June	3.0
July	5.0
August	5.5
September	4.0
October	2.0
Total	**22.5** acre-feet per year

LOCATION OF DIVERSIONS/WITHDRAWALS

Boesels: 1360 feet south and 1505 feet west from the north quarter corner of Sec. 20, T. 32 N., R. 25 E.W.M.

Okanogan PW: The following 4 points of diversion:

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP	RANGE	WRIA	COUNTY
1) W½NW¼ Section 20, T 32 N, R 25 EWM	20	32 N	25 EWM	49	Okanogan
2) E½NE¼ Section 31, T 32 N, R 25 EWM	31	32 N	25 EWM	49	Okanogan
3) NW¼SE¼ Section 34, T 31 N, R 25 EWM	34	31 N	25 EWM	49	Okanogan
4) SW¼NE¼ Section 36, T 30 N, R 23 EWM	36	30 N	23 EWM	49	Okanogan

PARCEL NUMBER	LATITUDE	LONGITUDE	DATUM
1) To be determined 2) 3225310016 3) 0970021200 4) 2180010000			

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED
[Attachment 1 shows location of the authorized place of use and points of diversion]

Boesels: Government Lot 3 EXCEPT the south 660 feet, and EXCEPT the NE¼NE¼SW¼NW¼, within Section 20, T. 32 N., R. 25 E.W.M. and EXCEPT rights of way and EXCEPT that portion lying below and in a generally northwesterly direction from the Project Boundary line for the Wells Hydroelectric Power Project said line being at an elevation of 805.0 feet above sea level, United States Coast and Geodetic Survey (corrected 1947).

Okanogan PW: County roads and construction sites within Okanogan County.

DESCRIPTION OF PROPOSED WORKS

Boesels: A Well

Okanogan PW: Water will be withdrawn from the Okanogan River & Wells Pool of the Columbia River and transported in water trucks throughout Okanogan County to be used for dust control & soil compaction during county road construction, maintenance projects, & other county road related activities. To avoid exceeding the 76 gallons per minute pumping limit, the trucks may need to fill from above ground storage tanks.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	PUT WATER TO FULL USE BY THIS DATE
Completed	Completed	April 1, 2020

PROVISIONS

The following provisions pertain to both the Boesels and Okanogan PW unless otherwise noted.

1. **Retained Water Rights (Boesels only)**
   Only 87 gallons per minute, 34.1 acre-feet per year may be used for the purpose of irrigating up to 10 acres at the original place of use. Of that, the consumptively used portion shall not exceed 27 acre-feet per year.

2. **Voluntary Relinquishment (Boesels only)**
   The investigation for this water right change identified 14.8 acre-feet per year that was not beneficially used for five years or more and did not meet a sufficient cause for non-use outlined in RCW 90.14.140. A voluntary relinquishment form shall be filed with the Department of Ecology (Ecology) prior to issuance of a Superseding Certificate.

3. **Easement Right-of-Way**
   The water source and/or water transmission facilities are not wholly located on land owned by the applicant. Issuance of a Water Right Change Authorization by Ecology 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.

4. **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.

MEASUREMENTS, MONITORING, METERING AND REPORTING

5. **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", WAC 173-173. http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html

6. **Daily Log and Annual Reporting**
   Water use data shall be recorded weekly and maintained by the property owner. The maximum rate of diversion/withdrawal and the annual total volume shall be submitted to Ecology by January 31st of each calendar year. Okanogan County Public Works shall maintain a daily log of the number of trucks filled under this authorization. An annual report that summarizes daily water use shall be submitted and to Ecology by January 31st of each calendar year.

7. **Electronic Reporting**
   Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Ecology Central Region Office. If you do not have Internet access, you can still submit hard copies by contacting the Central Region Office for forms to submit your water use data.

8. **Metering Rule Description And Petition Info (Boesels only)**
   WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition Ecology for modifications to some of the requirements. Installation, operation and maintenance requirements are enclosed as a document titled "Water Measurement Device Installation and Operation Requirements". http://www.ecy.wa.gov/programs/wr/measuring/measuringhome.html

DEPARTMENT OF FISH AND WILDLIFE

9. **No Dam (Okanogan County Public Works only)**
No dam or weir shall be constructed in connection with this diversion.

10. **Fish Screening Criteria (Okanogan County Public Works only)**
The intake(s) shall be screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.10.57.040). Contact the Department of Fish and Wildlife, 600 Capitol Way N, Olympia, WA 98501-1091. Attention: Habitat Program, Phone: (360) 902-2534 if you have questions about screening criteria. http://www.wdfw.wa.gov/reg/regions.htm

MUNICIPAL SUPPLY AND PUBLIC WATER SYSTEMS

11. **Municipal Place of Use (Okanogan County Public Works only)**
If the criteria in RCW 90.03.386(2) are not met and a Water System Plan/Small Water System Management Program was approved after September 9, 2003, the place of use of this water right reverts to the service area described in that document. If the criteria in RCW 90.03.386(2) are not met and no Water System Plan/Small Water System Management Program has been approved after September 9, 2003, the place of use reverts to the last place of use described by Ecology in a water right authorization.

SCHEDULE AND INSPECTIONS

12. **Authority To Access Project**
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.

13. **Proof of Appropriation (Okanogan County Public Works only)**
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 water right. 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.

14. **Okanogan River Instream Flows (Okanogan County Public Works only)**
This authorization is subject to minimum flows for the month of April as defined in Chapter 173-549 WAC adopted in Olympia, Washington, August 14, 1976, and revised effective July 19, 1984. Instream flows are measured at the United States Geological Survey monitoring station on the Lower Okanogan River at Malott (No. 12.4472.00, Section 9, T. 32 N., R. 25 E.W.M.) and shall be maintained by regulation of diversions as set forth in said Chapter 173-549 WAC. Instream flow hydrographs, as represented in WAC 173-549-900, shall be used for definition of instream flows on those days not specifically identified in WAC 173-549-020(2). No diversion of water under this authorization shall take place when the stream flow at Okanogan River Mile 17, Malott Station, are less than the flow values listed below:

April 1	925 cubic feet per second
Apr 15	1100 cubic feet per second

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 purpose, season, place of use, and adding points of diversion under Change Application No. CG3-21081C@2 be approved 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 Hearing 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:	OR	Deliver your appeal in person to:
The Pollution Control Hearings Board PO Box 40903 Olympia WA 98504-0903		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:	OR	Deliver your appeal in person to:
The Department of Ecology Appeals & Application for Relief Coordinator PO Box 47608 Olympia WA 98504-7608		The Department of Ecology Appeals & Application for Relief Coordinator 300 Desmond Dr SE Lacey WA 98503

3. And send a copy of your appeal packet to:

Mark C. Schuppe, Section Manager
Water Resources Program, Dept. of Ecology
Central Region Office
15 W Yakima Ave Ste 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://www.leg.wa.gov/CodeReviser

Signed at Yakima, Washington, this 6TH day of May 2010.

Mark C. Schuppe

Mark Schuppe, Section Manager
Water Resources Program
Central Region Office

BACKGROUND

Description and Purpose of Proposed Change

Bryan and Christy Boesel submitted two applications to the Department of Ecology (Ecology) on March 24, 2008. The applications were accepted and assigned Application Nos. CG3-21081C@2 and CG3-21081C@3. This report addresses Application No. CG3-21081C@2, in which the Boesel's have requested to transfer 30 acre-feet per year (ac-ft/yr) to Okanogan County Public Works (Okanogan PW) to be used for dust control and related road construction. Application No. CG3-21081C@3 is a request to transfer 30 ac-ft/yr to the Trust Water Right Program (TWRP) for the purpose of instream flows.

These applications qualify for expedited processing under WAC 173-152-050(3)(a) whereby they may be processed prior to applications submitted at an earlier date. The project includes transferring a portion of water to instream flows that enhance or protect the quality of the natural environment.

The proposed future water used under Application No. CG3-21081C@2 consists of diverting water from the Okanogan River into water trucks and transporting it to construction and road building sites throughout Okanogan County.

Attributes of Certificate No. G3-21081C(A) and Water Right Change Application No. CG3-21081C@2

Attributes	Documented:	Proposed in Application:
Name	Bryan and Christy Boesel	Bryan and Christy Boesel
Dates	**Priority Date:** May 3, 1973	**Application Date:** March 24, 2008
Instantaneous Quantity	239.2 gallons per minute	65 gallons per minute
Annual Quantity	108.9 acre-feet per year	30 acre-feet per year
Source	A well	Okanogan River
Point of Diversion/Withdrawal	1360 feet south and 1505 feet west from the north quarter corner of Sec. 20, T. 32 N., R. 25 E.W.M.[1]	Multiple Points of Diversion along the lower Okanogan River and Wells Pool of the Columbia River
Purpose of Use	Irrigation of 25.44 acres	Municipal
Period of Use	April 1 to October 1 for irrigation; continuous for domestic supply	April 1 to October 1
Place of Use	Government Lot 3 EXCEPT the south 660 feet, and EXCEPT the NE¼NE¼SW¼NW¼, within Section 20, T.32 N., R. 25 E.W.M. and EXCEPT rights of way and EXCEPT that portion lying below and in a generally northwesterly direction from the Project Boundary line for the Wells Hydroelectric Power Project said line being at an elevation of 805.0 feet above sea level, United States Coast and Geodetic Survey (corrected 1947).	Roads and construction sites in Okanogan County

Note: The application was submitted by the Boesels, but the proposed change of place of use, season of use, and adding point of diversion and municipal purposes is on behalf of Okanogan PW. This report addresses proposed changes to the right as well as what will remain with the Boesels in an effort to clarify future issuance of superseding documents.

[1] While the original certificate referenced the historic point of diversion using the center of the section, this point is not surveyed; therefore, the north quarter corner is used as the reference point in all subsequent documents.

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in place of use, season of use, and adding points of diversion and municipal purposes.

- **Public Notice**
  Notice was published on May 21, 2008 and May 28, 2008, in the Omak-Okanogan County Chronicle, a general circulation newspaper in Okanogan County. The 30-day protest period ended on June 28, 2008. No protests or comments were received.

  A second notice was published to reflect the applicant's request to include two additional points of diversion. Notice was provided in the Omak-Okanogan County Chronicle on August 19, 2009 and August 26, 2009. The 30-day protest period ended on September 25, 2009. No protests or comments were received.

- **State Environmental Policy Act (SEPA)**
  In accordance with WAC 197-11-800(4), WAC 197-11-305, and RCW 43.21C.030(2)(c), this Water Right Change Application is categorically exempt from environmental review under SEPA.

- **Water Resources Statutes and Case Law**
  State law provides that a water right may be changed if the change can be made without detriment or injury to existing rights, and to the extent the right is valid and has been beneficially exercised without a break of more than five consecutive years.

INVESTIGATION

History of Water Use

Certificate No. G3-21081C was issued to W.M. and Doris A. Lauterbach on October 16, 1975. Bryan and Christy Boesel purchased a portion of the Lauterbach's property in May 2004. In an effort to delineate ownership of the property and water rights on the Lauterbach property, the Baines Title Company issued the *Barr Well Ownership, Water Right Allocation, and Easement Agreement* on May 24, 2004. This document states that the AgFirst Farm Credit Bank retained 25.44 acres of irrigation, which was later taken over by the Boesels.

The property appurtenant to Certificate No. G3-21081C lies within the Colville Confederated Tribes Reservation boundary. On October 7, 2005, Bryan and Christy Boesel filed Application No. 10-07-05-407G with the Colville Confederated Tribes to transfer 15 acres of irrigation under Certificate No. G3-21081C to a development at Crescent Bar in Grant County. The Colville Confederated Tribes' Water Administrator, Lois Trevino, initially authorized the transfer of a portion of the Boesel's water right in a letter dated November 2, 2005. But in a subsequent letter dated March 3, 2006, Ms. Trevino revoked that approval, citing the Boesels transfer would need to be considered by Ecology since the water right was issued by the State of Washington. Based on this letter and the Boesels non-member status, it is assumed this property did not retain federal water rights[2].

On March 28, 2006, the Boesels submitted Water Right Change Application No. CG3-21081C@1 to transfer 15 acres of irrigation to Riverview at Crescent Bar LLC (later changed to Sunserra LLC) for irrigation of their golf course. The Boesels withdrew this application on January 19, 2008. On April 2, 2008, the Boesels submitted Change Application Nos. CG3-21081C@2 (this report) and CG3-21081C@3. Water Right Change Application No. CG3-21081C@2 proposes to transfer 30 ac-ft/yr, 65 gallons per minute (gpm) to Okanogan County for dust control. These applications state the Boesels intend to retain 34.1 ac-ft/yr, 74 gpm to irrigate up to 10 acres.

On February 27, 2009, the Boesels applied to temporarily donate 60 ac-ft/yr, 74 gpm to the TWRP. The application was given No. CG3-21081C@4. The donation expires on April 1, 2010, or as soon as Ecology issues decisions for Water Right Change Application Nos. CG3-21081C@2 and CG3-21081C@3. Once the water right decisions have been made, the portion of the water right remaining with the Boesels at the original place of use is also described on the coversheet and in the Recommendations section of this report.

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[2] Ecology is required to identify any federal water rights that may be appurtenant to property cited in a Water Right Change Application. This requirement was established in the Boyd Walton case of the 1980's which states that tribal members have federal water rights on reservation land, but as soon as property is sold to a non-member, they have a reasonable amount of time (in most cases 15 years or less) to continue or establish water use on the property to secure federal water rights.

In December 2009, Ecology processed an administrative division of the water right upon request of all the property owners within the place of use of Certificate of Water Right No. G3-21081C. The Boesel's portion of the water right is now represented by Certificate No. G3-21081C(A) when the requirements set forth is this decision are met.

Site Visit

On February 9, 2007, Ecology staff including Kelsey Collins (author of this report), visited the Boesel's property for a field inspection. Bryan Boesel stated that in 2005 he grew hay, but there was no visible crop stubble or sprinkler system due to a foot of snow covering the property. The Boesel's point of withdrawal and source for Certificate No. G3-21081C(A) was located and static water level was measured. The water level in the well was measured at 66 feet below ground surface. The well is located at an elevation of approximately 850 feet above mean sea level.

The Okanogan River lies approximately 830 feet west of the Boesel's well. The elevation of the river's edge adjacent to the Boesel's property was also measured and compared with the static water level in the well. At approximately 790 feet above mean sea level, the river's edge is 60 feet below the ground surface of the well elevation; roughly equivalent to the static water level in the well.

Following the site visit, information was compiled from Ecology records and conversations with the applicant and their attorney. Air photos were used to decipher irrigated acres. The county parcel layer was used to verify land ownership.

Extent and Validity

Annual pumping records show the Boesels withdrew and applied their full annual water duty for 22 acres. The portion of the instantaneous quantity available for transfer to Okanogan PW is 76 gpm. This value was calculated using the Boesel's total water duty of 239.2 gpm ÷ 94.1 ac-ft/yr = 2.54 gpm/ac-ft/yr. Okanogan PW purchased 30 ac-ft/yr, so their portion of the instantaneous quantity is 76 gpm, (30 ac-ft/yr x 2.54 gpm/ac-ft/yr). Since Okanogan PW proposes to divert this water from the Okanogan River rather than pump it from a well, the instantaneous quantity is also listed as 0.17 cfs.

Air photos of the Boesel's property show it had been irrigated consistently from the time the original certificate was issued to the Lauterbachs until Bryan Boesel bought the property and removed the orchards in 2005. These observations were supported by the *Declaration of Rick DeLapp* submitted by the applicant, in which Mr. DeLapp states he managed the irrigation of orchard on the Boesel property in 2004. The orchard consisted of approximately 16.5 acres of apples and 5.5 acres of pears for a total of 22 acres. The Boesels decided to remove the orchard after the 2004 season due to old trees and a 30 year old irrigation system consisting of polypropylene pipes between the trees and undercover spinner sprinklers that were too out of date and inefficient. The amount available for transfer also depends on the Annual Consumptive Quantity Test discussed below.

An analysis of air photos confirmed that 22 acres were historically irrigated. The 2004 Barr Agreement identified the Boesel's portion of the water right as 25.44 acres of irrigation. The 3.44 acres that were not historically irrigated contain railroad and county road footprints. This difference in acres also corresponds to an annual quantity of 14.8 ac-ft/yr that could not be beneficially used on the property[3]. Ecology will require this additional water be voluntarily relinquished prior to issuing a Superseding Certificate to the Boesels (see Provision No. 2).

[3] The Boesel's portion of Certificate of Water Right No. G3-21081C equals 108.9 based on their 25.44 acre share of the right. However, the extent and validity analysis for this change showed the Boesels historically irrigated 22 acres with an annual volume of 94.1 ac-ft/yr. 108.9 ac-ft/yr - 94.1 ac-ft/yr =14.8 ac-ft/yr.

Annual Consumptive Quantity Test

RCW 90.03.380(1) states that a purpose of use may be added to a water right if the annual consumptive quantity (ACQ) would not increase. The ACQ is the average of the two highest years within the most recent five-year period of continuous beneficial use of the water right. According to declarations by the applicant and his orchard manager, the most recent period of continuous use of water occurred from 2000 to 2004. The two highest years of water use were 2003 and 2004. Since monthly pumping records were not available, consumptive use was calculated using crop requirement estimates from the U.S. Bureau of Reclamation's Agrimet website. Out of the 94.1 ac-ft/yr withdrawn in 2003 and 2004, the ACQ calculations below show that 72 ac-ft/yr were consumptively used and are, therefore, available for transfer. The table below describes how the consumptive use was calculated for each crop type.

Crop Type	Number of Acres	CIR÷Ea = TIR TIR (Total Irrigation Requirement) CIR (Crop Irrigation Requirement*) Ea (% Application Efficiency)	TIR × %CU = Consumptive Use TIR (Total Irrigation Requirement) CU (% Consumptive Use)	Total Consumptive Use CU × #of Acres = Total CU
Apples	16.5	2.94 ac-ft/ac ÷ 0.65 = 4.52 ac-ft/ac	4.52 × 0.75 = 3.39 ac-ft/acre	3.39 × 16.5 = 56 ac-ft/yr
Pears	5.5	2.50 ac-ft/ac ÷ 0.65 = 3.84 ac-ft/ac	3.84 × 0.75 = 2.88 ac-ft/acre	2.88 × 5.5 = 16 ac-ft/yr
Total	**22.0**			**72 ac-ft/yr**

*The crop duty is based on estimated duties from Agrimet, Omak station: http://www.usbr.gov/pn/agrimet/

Water Duty Remaining at Original Place of Use

The Boesels have requested to continue irrigating 10 acres of pasture. The extent and validity analysis discussed above identifies 94.1 ac-ft/yr had been historically used to irrigate 22 acres of orchard. Of this total water use, 30 ac-ft/yr has been transferred to the TWRP under Change Authorization No. CG3-21081C@3. An additional 30 ac-ft/yr has been proposed to be transferred to Okanogan PW under this authorization. The remaining 34.1 ac-ft/yr may be used to irrigate up to the requested 10 acres at the original place of use as long as the consumptive portion of the water use does not exceed 27 ac-ft/yr. The following table is a summary of the changes to the Boesel's water right and how the quantities break out:

	Instantaneous Quantity	Consumptive Use	Non Consumptive Use	Total
Boesels (retained portion) **Certificate No.** G3-21081C(A)	87 gpm	27 ac-ft/yr	7.1 ac-ft/yr	34.1 ac-ft/yr
Okanogan County Public Works Application No. CG3-21081C@2	76* gpm or 0.17 cfs	22.5 ac-ft/yr	7.5 ac-ft/yr	30.0 ac-ft/yr
Trust Water, Instream Flows Application No. CG3-21081C@3	varies monthly (max 40 gpm)	22.5 ac-ft/yr	7.5 ac-ft/yr	30.0 ac-ft/yr
Total		72.0 ac-ft/yr	22.1 ac-ft/yr	94.1 ac-ft/yr

*Okanogan PW applied for 65 gpm, however a higher instantaneous rate was identified as available for transfer following issuance of the Trust ROE for Application No. CG3-21081C@3.

Other Rights Appurtenant to the Place of Use

Certificate of Water Right No. 3987, issued to J.H. Ribbe, describes the Boesel's parcel as part of its place of use. The Report of Examination for the Lauterbach certificate (No. G3-21081C), states that, "The permit when issued shall be subject to existing rights including the Ribbe surface water Certificate No. 3987 and surface water Permit No. S3-00512P, which are appurtenant to the lands herein described. The total diversion from all sources for the irrigation of these lands shall not exceed 203 ac-ft/yr." At first glance this provision seems to limit the Lauterbach certificate to less than a full duty for the lands described, but a previous provision listed only on the Report of Examination indicates the certificate was intended to provide a full water duty to the 47.44 acre place of use. Furthermore, Permit No. S3-00512P was cancelled since the Lauterbach certificate was issued as its replacement so the Lauterbachs could irrigate from a well instead of a surface water diversion. Surface Water Certificate No. 3987 was issued for the entire Ribbe estate, including the parcel the Boesel's own, but has not been utilized on their property. Therefore, the Boesel's 22 acres have a full water duty under Certificate of Water Right No. G3-21081C.

Hydrogeologic Evaluation

A hydrologic evaluation was completed on July 10, 2009, for the related transfer to trust under Water Right Change Authorization No. CG3-21081C@3. The evaluation also applies to this application since the original point of withdrawal and quantities are the same. The following information is an excerpt from the results section of the hydrologic report, which is available upon request.

> The *Well Pumping Depletion Model* was used to approximate depletion from the Okanogan River due to pumping at the Boesel's well. The results of the model indicate the effects of pumping reach the river within the first month, reach a maximum in August, and decrease gradually into the late fall after the pump is turned off. The effects on the river follow a pattern similar to the well's pumping schedule, however, the magnitude is less and the timing is shifted approximately 6-8 weeks later because of groundwater lag. The groundwater time lag (residual effects) following the termination of pumping suggests that effects on the river drop to within 5% of the total seasonal volume pumped by around the beginning of November. This suggests the system likely achieves a complete recovery prior to the onset of the next irrigation season.
>
> Based on the model's estimate of pumping effects, the total volume depleted from the Okanogan River over the course of one irrigation season is approximately 25 ac-ft. However, this analytical model generally over predicts the amount of water depleted from the river due to pumping when there are variations between the model assumptions and the actual groundwater-surface water system.

Based on the hydrologic report, the original well is determined to be in continuity with the Okanogan River. If pumping ceases, water that was historically diverted will eventually travel from high head (original well) to low head (Okanogan River) and converge with surface water.

Water Quantities Available for Transfer

The Well Pumping Depletion Model predicted a maximum of 25 ac-ft/yr could have been depleted from the river due to historic pumping. However, only 22.5 ac-ft/yr is available for transfer based on what was consumptively used in the past (see ACQ Test above). The Well Pumping Depletion Model also predicted the pattern of stream depletion due to pumping during and after the irrigation season. The pattern of stream depletion was used to proportion and roughly mimic how the water right was historically used (shown in the first column of the table below). The proportioned values were rounded for ease in accounting (shown in the second column below).

After Ecology posted a draft of this report for comment on the internet, Okanogan PW requested to have April water use in lieu of November and December. They asserted that no construction would take place in the mid-winter months and, therefore, water could not be utilized for dust control at those times. Ecology's management agreed to this accommodation. To minimize the risk of impairment and to resolve the discrepancy between Okanogan PW's request and Ecology's estimation of water availability, April water use will be subject to the Okanogan Instream Flow Rule, WAC 173-549 (see Provision No. 14).

Month	Historic Withdrawals from well	Acre-feet Available for Transfer	Acre-feet Proposed for Transfer
April	0	0	1.5
May	3.50	1.5	1.5
June	3.90	3.0	3.0
July	4.32	5.0	5.0
August	4.51	5.5	5.5
September	4.49	4.0	4.0
October	1.78	2.0	2.0
November	0	1.0	
December	0	0.5	
Total	**22.5** ac-ft/yr	**22.5** ac-ft/yr	**22.5** ac-ft/yr

The monthly quantities being considered for transfer have been discussed in acre-feet, however Okanogan PW will also be required to measure water use in number of trucks (see Metering provisions). The number of trucks per month is listed in parenthesis with the corresponding acre-feet. These values are based on trucks with a 4000 gallon capacity.

Impairment

Impairment is an adverse impact to the physical availability of water for a beneficial use that is entitled to protection, i.e. a water right. Prior to considering a water right transfer, Ecology requires a public comment period, and the right must be shown not to impact existing water rights. To prevent impairment caused by water use under this change, Ecology managers have limited the withdraw of water from the Okanogan River by Okanogan PW to the number of acre feet per month listed in the table above and have required daily logs and annual reporting of water use. Impacts to instream flow rights and interruptible (junior) water users on the Okanogan River and in the Wells Pool of the Columbia River (Wells Pool) have been considered as part of this proposed transfer.

The Boesel's groundwater right has a priority date of May 3, 1973, which predates the Okanogan Instream Flow Rule (WAC 173-549) established on August 14, 1976. A records search in the water right database revealed that junior surface water users in the vicinity and to the south of the Boesel's well are considered in the Wells Pool and have been subject to minimum instream flows set on the Main Columbia River established on June 24, 1980.

Proposed Place of Use

The proposed use for this water right is dust abatement and road construction. The Department of Public Works is responsible for these activities throughout Okanogan County; therefore, the place of use is described as all of the lands within Okanogan County.

Public Interest Considerations

There were no protests or comments received during the comment period following public notice of this project. Transferring water to Okanogan County Public Works for road construction is consistent with WAC 173-522 and RCW 90.54.

CONCLUSIONS

In accordance with chapters 90.03 and 90.44 RCW, the author makes a tentative determination that Certificate of Water Right No. G3-21081C(A) is a valid right and is eligible for change. Approval of Change Application No. CG3-21081C@2, as provisioned above, will not cause impairment of existing water rights, will not enlarge the original water right, and will not be detrimental to public interest.

RECOMMENDATIONS

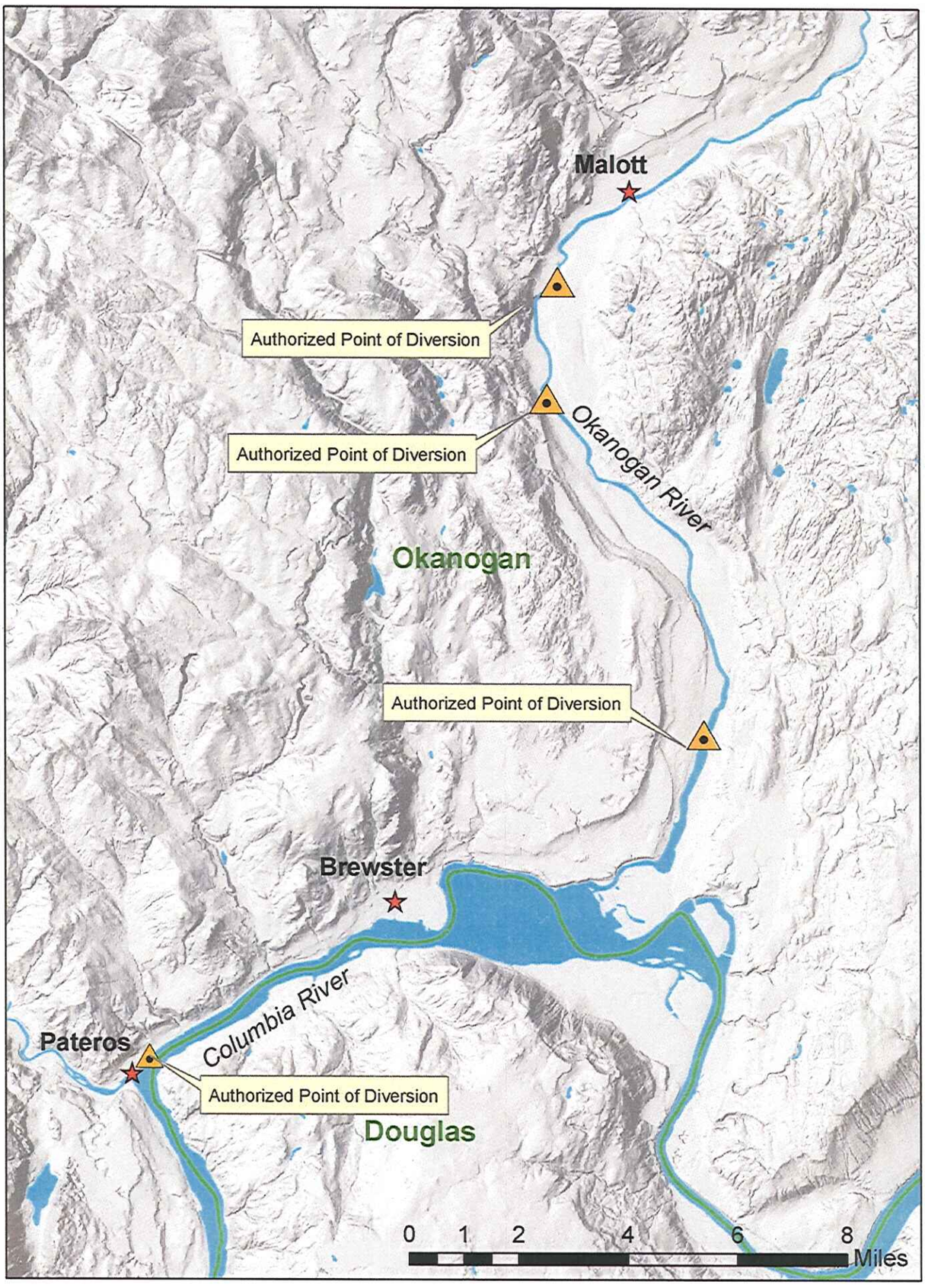
Based on the above investigation and conclusions, I recommend Water Right Change Application No. CG3-21081C@2 be approved in the amounts and within the limitations described on page 1and subject to the Provisions beginning on page 2 of this Report of Examination.

Report by: Kelsey Collins, Water Resources Program — Date: 5/5/10

Attachment 1

N

Applicant: Bryan and Christy Boesel
CG3-21081C@2
WRIA 49 - Okanogan County



Comments:
Place of use and points of withdrawal/diversions are as defined on the cover sheet under the heading 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'