File NR: CS4-02398CTCL@25
WR Doc ID: 4242365

DEPARTMENT OF ECOLOGY
State of Washington

State of Washington
Report of Examination for Water Right Change

PRIORITY DATE	WATER RIGHT NUMBER
June 30, 1888	S4-84828-J

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
Bruce Ball **800 N. Cottonwood Road** **Yakima, WA 98908**	

Total Quantity Authorized for Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AC-FT/YR)
0.34[1]	CFS	58.38[1]

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AC-FT/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Irrigation	0.34[1]		CFS	58.38[1]		04/15 – 07/10

REMARKS

Primary source for irrigation of 33.94 acres.

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
33.94			

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Yakima	Ahtanum Creek	Yakima River	37-Yakima

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Surface Diversion	171216-13002		12 N.	17 E.	16	SE NE	46.53102	-120.69426

Datum: NAD83/WGS84

[1] When water is available in excess of that needed to satisfy all confirmed water rights both on and off the Yakama Reservation and any water needed to satisfy the Yakama Nation's minimum instream flow right for fish and other aquatic life, an additional 0.34 cfs, 20.2 acre-feet per year can be diverted.

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)

171216-12408 and 171216-13002

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Lot 4 of Short Plat 84-224 and also beginning at the northwest corner of said Lot 4; thence east 163.04 feet; thence S 01°37'00" W 310.32 feet; thence N 89°04'28" W 156.19 feet; thence N 00°45'20" E to the point of beginning (aka Tract D ROS 7226778) (Parcel #171216-12408) and beginning at the southwest corner of Lot 4, Short Plat 84-224; thence S 00°13'20" E 591.12 feet; thence S 67°50'00" E 824.66 feet; thence S 89°38'00" E 510 feet; thence N 46°00'00" E 160 feet; thence N 71°40'00" E 670 feet; thence S 82°22'00" E 356.89 feet; thence N 00°22'20" W 1,011.97 feet; thence S 86°07'34" W 249.32 feet; thence S 09°44'00" W 320 feet; thence S 88°19'04" W 815.02 feet; thence N 787.11 feet; thence W 650.02 feet; thence S 821.52 feet; thence N 88°38'10" W 646.79 feet to the point of beginning (aka Tract A ROS 7226778)(Parcel #171216-13002) all being in the NE¼ of Section 16, T. 12 N., R. 17 E.W.M. Answer No. 38

Proposed Works

Change two points of diversion from points on Hatton and Ahtanum Creek to one point on Ahtanum Creek.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Begun	Completed	Completed

Provisions

Washington State Department of Ecology's (Ecology) findings as documented by this water right change decision are based on the Schedule of Water Rights presented in the Conditional Final Order, Subbasin No. 23, issued April 15, 2009 by the Yakima County Superior Court, and the current *Acquavella* Draft Schedule of Rights, which is periodically updated when changes are made by the Court. Ecology's decision is subject to any subsequent determination made by the Court, including the Final Decree in *Department of Ecology v. Acquavella*. Any changes to this water right made by the Court will be reflected on the final certificate of adjudicated water right, which will issue subsequent to entry of the Final Decree in *Department of Ecology v. Acquavella*.

1) Water may not be diverted at the new point of diversion, except during times when water is available for diversion at the old point of diversion. During periods of low flow, when water would not normally be available for the subject right at the old point of diversion, water withdrawal for the right at the new point of diversion must cease.

2) The water right holder may not call upon junior water right holders above the new point of diversion to cease using water during periods of low flow, unless that junior water right holder is also located above the old point of diversion. The water right holder may not make a call against any of the three junior intervening water right holders listed in the "Impairment Considerations" section of this report.

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

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

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

*Nothing here is intended to address anything about any party's duties or rights to regulate water use in Ahtanum Basin.

Measurement of Water Use	
How often must water use be measured?	Record the maximum rate of diversion: Weekly
How often must water use data be reported to Ecology?	Annually (By Jan 31 of the following year)
What volume should be reported?	Total annual volume in acre-feet
What rate should be reported?	Annual peak rate of diversion in cfs

4) **Department of Fish and Wildlife Requirement(s)**
The intake(s) must be screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.57.040). 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, or call (509) 575-2104 for the Yakima Construction Shop to obtain technical assistance for your project.
http://wdfw.wa.gov/conservation/habitat/planning/screening/

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

6) **Schedule and Inspections**
Department of Ecology personnel, upon presentation of proper credentials, will 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.

Findings of Facts

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

Therefore, I ORDER the requested change of point of diversion under Change Application No. CS4-02398CTCL@25, subject to existing rights and the provisions specified above.

Your Right To Appeal

This Decision may be appealed pursuant to RCW 34.05.514(3), RCW 90.03.210(2), and Pretrial Order No. 12 entered in *State of Washington, Department of Ecology v. James Acquavella, et al.*, Yakima County Superior Court No. 77-2-01484-5 (the general adjudication of surface water rights in the Yakima River Basin). The person to whom this Decision is issued, if he or she wishes to file an appeal, must file the notice of appeal with the Yakima County Superior Court **within thirty (30) days of receipt of this Decision.** Appeals must be filed with the Superior Court Clerk's Office, Yakima County Superior Court, 128 North 2nd Street, Yakima WA 98901, RE: Yakima River Adjudication. Appeals must be served in accordance with Pretrial Order No. 12, Section III ("Appeals Procedures"). The content of the notice of appeal must conform to RCW 34.05.546. Specifically, the notice of appeal must include:

The name and mailing address of the appellant;
Name and address of the appellant's attorney, if any;
The name and address of the Department of Ecology;
The specific application number of the decision being appealed;
A copy of the decision;
A brief explanation of Ecology's decision;
Identification of persons who were parties in any adjudicative proceedings that led to Ecology's decision;
Facts that demonstrate the appellant is entitled to obtain judicial review;
The appellant's reasons for believing that relief should be granted; and
A request for relief, specifying the type and extent of relief requested.

The "parties of record" who must be served with copies of the notice of appeal under RCW 34.05.542(3) are limited to the applicant of the decision subject to appeal, Ecology and the Office of the Attorney General.

All others receiving notice of this Decision, who wish to file an appeal, must file the appeal with the Yakima County Superior Court within **thirty (30) days of the date the Order was mailed.** The appeal must be filed in the same manner as described above.

Please send a copy of your appeal to:

Mr. Thomas Perkow
Water Resources Program
Ecology Central Regional Office
1250 W. Alder Street
Union Gap, WA 98903-0009

Signed at Union Gap, Washington, this 27TH day of JANUARY 2016.

Thomas Perkow, Acting Section Manager
Water Resources Program
Central Regional Office

To find laws and agency rules visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser

INVESTIGATOR'S REPORT
Mark Dunbar, Department of Ecology
Water Right Control Number CS4-02398CTCL@25
Certificate No. S4-84828-J; Court Claim 02398

BACKGROUND

On March 18, 2005 Bruce Ball filed an application with the Washington State Department of Ecology (Ecology) to change the points of diversion (PODs) under Court Claim No. 02398 in *The State of Washington, Department of Ecology v. James J. Acquavella, et al.* The application was accepted and assigned control No. CS4-02398CTCL@25. This report serves as the written findings of fact concerning Water Right Application Number CS4-02398CTCL@25.

EXISTING Water Right Attributes

Water Right Owner:	Bruce Ball
Priority Date:	June 30, 1888
Place of Use	Lot 4 of Short Plat 84-224 and also beginning at the northwest corner of said Lot 4; thence east 163.04 feet; thence S 01°37'00" W 310.32 feet; thence N 89°04'28" W 156.19 feet; thence N 00°45'20" E to the point of beginning (aka Tract D ROS 7226778) (Parcel #171216-12408) and beginning at the southwest corner of Lot 4, Short Plat 84-224; thence S 00°13'20" E 591.12 feet; thence S 67°50'00" E 824.66 feet; thence S 89°38'00" E 510 feet; thence N 46°00'00" E 160 feet; thence N 71°40'00" E 670 feet; thence S 82°22'00" E 356.89 feet; thence N 00°22'20" W 1011.97 feet; thence S 86°07'34" W 249.32 feet; thence S 09°44'00" W 320 feet; thence S 88°19'04" W 815.02 feet; thence N 787.11 feet; thence W 650.02 feet; thence S 821.52 feet; thence N 88°38'10" W 646.79 feet to the point of beginning (aka Tract A ROS 7226778)(Parcel #171216-13002) all being in the NE¼ of Section 16, T. 12 N., R. 17 E.W.M. Answer No. 38.

County	Waterbody	Tributary To	WRIA
Yakima	Hatton Creek and Ahtanum Creek	Yakima River	37

Purpose	Rate	Unit	AC-FT/YR	Begin Season	End Season
Irrigation	0.34[1]	CFS	58.38[1]	April 15	July 10

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Hatton Creek and Ahtanum Creek			12 N.	17 E.	17	NE¼NE¼ Government Lot 2		

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum in NAD83/WGS84.

[1] When water is available in excess of that needed to satisfy all confirmed water rights both on and off the Yakama Reservation and any water needed to satisfy the Yakama Nation's minimum instream flow right for fish and other aquatic life, an additional 0.34 cfs, 20.2 acre-feet per year can be diverted.

REQUESTED Water Right Attributes

Applicant Name:	Bruce Ball
Date of Application:	March 18, 2005
Place of Use	Lot 4 of Short Plat 84-224 and also beginning at the northwest corner of said Lot 4; thence east 163.04 feet; thence S 01°37'00" W 310.32 feet; thence N 89°04'28" W 156.19 feet; thence N 00°45'20" E to the point of beginning (aka Tract D ROS 7226778) (Parcel #171216-12408) and beginning at the southwest corner of Lot 4, Short Plat 84-224; thence S 00°13'20" E 591.12 feet; thence S 67°50'00" E 824.66 feet; thence S 89°38'00" E 510 feet; thence N 46°00'00" E 160 feet; thence N 71°40'00" E 670 feet; thence S 82°22'00" E 356.89 feet; thence N 00°22'20" W 1,011.97 feet; thence S 86°07'34" W 249.32 feet; thence S 09°44'00" W 320 feet; thence S 88°19'04" W 815.02 feet; thence N 787.11 feet; thence W 650.02 feet; thence S 821.52 feet; thence N 88°38'10" W 646.79 feet to the point of beginning (aka Tract A ROS 7226778)(Parcel #171216-13002) all being in the NE¼ of Section 16, T. 12 N., R. 17 E.W.M. Answer No. 38.

County	Waterbody	Tributary To	WRIA
Yakima	Ahtanum Creek	Yakima River	37

Purpose	Rate	Unit	AC-FT/YR	Begin Season	End Season
Irrigation	0.34[1]	CFS	58.38[1]	April 15	July 10

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
Ahtanum Creek	171216-13002		12 N.	17 E.	16	SE¼NE¼	46.53102	-120.69426

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section; WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum in NAD83/WGS84.

Legal Requirements for Requested Change

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

Public Notice

Public Notice of the application was given in the Yakima Herald-Republic on August 9 and August 16, 2006. No protests were received against this application.

Consultation with the Department of Fish and Wildlife

Ecology must give notice to the Department of Fish and Wildlife of applications to divert, withdraw, or store water. Subbasin 23 change applications were presented to the Yakima River Basin Water Transfer

[1] When water is available in excess of that needed to satisfy all confirmed water rights both on and off the Yakama Reservation and any water needed to satisfy the Yakama Nation's minimum instream flow right for fish and other aquatic life, an additional 0.34 cfs, 20.2 acre-feet per year can be diverted.

Working Group (WTWG) during monthly meetings from February 26, 2007 through October 1, 2007. The Department of Fish and Wildlife holds a chair in the WTWG. Ecology received a letter drafted

April 16, 2007 from the Department of Fish and Wildlife stating that WDFW is responsible for protecting all fish life, not just the cold-water salmonid species. Washington State Laws RCW 77.55.320, RCW 77.55.040, and RCW 77.55.070 require all diversions from waters of the state to be screened to protect fish.

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 foot 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.

Water Resources Statutes and Case Law

Chapter 90.03 RCW

The Washington Supreme Court has held that Ecology, when processing an application for change or transfer of water right is required to make a tentative determination of the extent and validity of the right. This is necessary to establish whether a water right is eligible for change (*R.D. Merrill Co. v. PCHB*, 137 Wn.2d 118, 969 P.2d 458 (1999); *Okanogan Wilderness League v. Town of Twisp*, 133 Wn.2d 769, 947 P.2d 732 (1997)). It is not within Ecology's authority to adjudicate or make a final determination of the extent and validity of any water right or claim to a water right, only the Superior Court has such authority. Therefore, Ecology's tentative determination in this Report of Examination for Change of Water Right is based upon the rulings of the Yakima County Superior Court made thus far in the Subbasin No. 23 (Ahtanum Creek) proceedings, in *Department of Ecology v. Acquavella*, the Yakima River Basin water rights adjudication.

INVESTIGATION

On March 18, 2005 Bruce Ball filed an application with Ecology to change the PODs under Court Claim No. 02398 in *The State of Washington, Department of Ecology v. James J. Acquavella, et al.* The application was accepted and assigned control No. CS4-02398CTCL@25. On March 16, 2015 the change application was assigned to Mark Dunbar. Mark Dunbar had previously visited the site with George Marshall of the Ahtanum Irrigation District (AID); the applicant, Bruce Ball; and Danielle Jansik of

Ecology, on February 24, 2015. Photographs and GPS coordinates for the proposed new POD were obtained during the site visit.

GPS coordinates for the new POD were recorded as 46.53102 and -120.69426 (see Figure 3). The new diversion, known as gravity diversion No. 14, was observed to be a concrete structure with a 24-inch Parshall flume, fish screen and bypass, and a 24 x 18 headgate on the creek (see Photos 1 & 2). Wheel lines and handlines were observed in the field.

The property is located within the Ahtanum Creek Subbasin No. 23, approximately 11 miles upstream from the confluence of Ahtanum Creek and the Yakima River. Decades of development in the subbasin have resulted in large tracts of property being divided, subdivided, and transferred to new ownership. The division of land into smaller parcels has made the use of private irrigation ditches impractical or impossible in most cases. With the advancement of technology and new materials available, land owners and irrigators have gradually changed their irrigation practices from gravity fed surface diversions and ditches to pumps located on the owner's property and pressurized sprinkler systems. The change from gravity fed diversions to pressurized systems generally resulted in a change in location of the POD, which in many cases went undocumented.

The Conditional Final Order (CFO) issued by the Superior Court April 15, 2009 indicates that the authorized POD for the subject water right is located within the NE¼NE¼ of Section 17 (Hatton Creek) and Government Lot 2 of Section 17 (Ahtanum Creek), in T. 12 N., R. 17 E.W.M. The applicant proposes to change the authorized location of the PODs to the actual position currently in use, which is located on Ahtanum Creek within the SE¼NE¼ of Section 16, T. 12 N., R. 17 E.W.M. The authorized POD on Hatton Creek is no longer used, and the location of the Ahtanum Creek diversion will be located approximately two miles further downstream.

The CFO confirms 0.34 cfs and 58.38 ac-ft/yr for the irrigation of 33.94 acres with a June 30, 1888 priority date. The place of use (POU) lies within the NE¼ of Section 16, T. 12 N., R. 17 E.W.M. When water is available in excess of that needed to satisfy all confirmed water rights both on and off the Yakama Reservation and any water needed to satisfy the Yakama Nation's minimum instream flow right for fish and other aquatic life, an additional 0.34 cfs, 20.2 ac-ft/yr can be diverted.

The CFO includes a schedule of rights which describes the Court's findings for each surface water right having a POD within the Ahtanum Creek subbasin. Subsequent to issue in 2009, the CFO has undergone several rounds of motions for reconsideration by the Court. The CFO remains under appeal at the time of this writing. There is no date available by which to expect a revision or affirmation of the 2009 CFO, nor is there a date available by which to expect the issuance of the final decree in *Department of Ecology v. Acquavella*.

For the purpose of this application for change, Ecology will utilize the schedule of rights published in the CFO and the Draft Schedule of Rights which is periodically updated when changes are made by the Court. **Ecology's findings as documented below are subject to the final determinations made by the Court. Any changes made by the Court will be reflected on the final Certificate of Adjudicated Water Right, which will be issued subsequent to entry of the final decree in *Department of Ecology v. Acquavella*.**

History of Water Use

Legal History

There is a long history of legal actions concerning water rights in the Ahtanum Creek drainage. Water right claimants can be divided into two major groups which have historically asserted the right to use water on Ahtanum Creek:

- Property owners on non-tribal land north of the creek (northside users).
- Property owners and the Yakama Nation on land south of the creek (southside users).

At least six legal proceedings have influenced the allocation of water rights on Ahtanum Creek[2]:

1. 1855 Treaty with the Yakama Nation
2. 1897 *Benton v. Johncox*
3. 1908 "Code Agreement"
4. 1925 *State of Washington v. Annie Wiley Achepohl et al.*
5. 1947 *United States v. Ahtanum Irrigation District*
6. 1977 – Currently in progress; *State of Washington Department of Ecology v. James J. Acquavella, et al.*

State of Washington Department of Ecology v. James J. Acquavella, et al. (Acquavella)

The *Acquavella* adjudication began in 1977 and is still in progress at the time of this writing. *Acquavella* is an adjudication of all surface water rights and claims within the entire Yakima River drainage basin, which includes 31 subbasins. The Ahtanum Creek drainage basin is Subbasin No. 23. Ahtanum is the last of the 31 subbasin proceedings in need of completion before a final decree for *Acquavella* can be issued by the Superior Court.

Due to the complex legal history of the Ahtanum Subbasin No. 23, the court established four criteria that must be met when evaluating the validity of Ahtanum claims:

1. The claimant's predecessor must have been a signatory to the *1908 Code Agreement*.
2. The claimant's predecessor must have participated in the 1925 *Achepohl* proceeding and must have provided evidence of compliance with state law.
3. The claimant, or their predecessor, must have filed an answer in *Ahtanum II*.
4. The claimant, or their predecessor, must have shown that water was beneficially used on the property after 1964, when *United States v. Ahtanum Irrigation District Civil Cause No. 312* was finalized by the *Pope Decree*.

The court concluded that it needed to adhere to both the 1964 *Pope Decree* and the 1925 *Achepohl* proceeding. Keeping that in mind, when the court evaluated claims where *Achepohl* certificates authorized more irrigated acreage than found in the *Pope Decree*, the court awarded a junior water right for the difference, provided there was no evidence of abandonment or relinquishment.

---

[2] *History taken from Report of the Court Concerning the Water Rights for the Subbasin 23 (Ahtanum Creek) Volume 48 – Part 1;* "b. Legal History" pp. 36-39; Yakima County Superior Court Cause No. 77-2-01484-5; January 31, 2002.

A junior right, in this case, had the same priority date as the senior portion of the right and, as stated in the Report of the Court, "...can only be exercised when the flow in Ahtanum Creek exceeds 62.59 cfs and no uses, including potential storage, are being made of the excess by water right holders on the reservation." The Court later revised its decision concerning junior rights and concluded that junior rights can not be confirmed.

During the *Acquavella* proceedings the legality of many of the current PODs was called into question. Many claimants were no longer using the PODs confirmed in *Achepohl*. In many cases landowners (or their predecessors) had switched from gravity-flow ditches to pumps placed directly into the creek on or adjacent to the property being irrigated. In many cases, the landowners (or their predecessors) had not fulfilled the legal requirements to change a POD under RCW 90.03.380. Thus, the Court requested that the claimants apply to Ecology to seek authorization to change their PODs from the historic point to the location currently in use. This application and many others were submitted to Ecology to satisfy this request of the Court.

Ahtanum Creek Subbasin Description

The Ahtanum Creek system is complex. According to the June 2005 Final Programmatic Environmental Impact Statement for the Ahtanum Creek Watershed Restoration Program, the Ahtanum Creek Subbasin can be described as three different reaches. First, the upper reach consists of the North and South Forks of Ahtanum Creek which flow to their confluence near Tampico. The upper reach flows through a combination of managed forest land (North Fork) and tribal land (South Fork). Second, the middle reach begins at the confluence of the North and South Forks and flows to Wiley City. And third, the lower reach starts at Wiley City and flows to confluence with the Yakima River. The majority of irrigation occurs in the middle and lower reaches of the creek, where pasture and hay are the predominant irrigated crops. The middle and lower reaches of Ahtanum Creek are made up of the main channel and two regulated side channels known as Bachelor Creek and Hatton Creek.

Ahtanum Irrigation District Description

It is important to understand the current relationship between the above mentioned channels in order to make sound determinations on changes in PODs in the Ahtanum system. Many of the irrigation water rights confirmed by the Court are diverted from the smaller channels of Bachelor Creek and Hatton Creek. These two creeks have historically been considered side channels of Ahtanum Creek, first originating from Ahtanum Creek, and then later joining back up to the main channel at two different points downstream.

In the early 1990s, Ahtanum Irrigation District (AID) physically combined the origination points of both Bachelor and Hatton Creeks and placed a head gate with a large fish screen just downstream of the location where the channel splits. The fish screen is located approximately 2,500 feet east and 2,350 feet south of the northwest corner of Section 13, being within the SW¼NW¼ of Section 13, T. 12 N., R. 16 E.W.M. This point is located approximately 3,500 feet downstream from the Wapato Irrigation Project (WIP) canal, which is the POD used for the water users on the Yakama Reservation. Once water flows through the fish screen, it continues through a common channel for approximately 3,800 feet, where there is a continuous-head orifice turnout, which serves as the origination point of Hatton Creek. This point is located approximately 200 feet east and 1,400 feet south from the northwest corner of Section 18, being within the SW¼NW¼ of Section 18, T. 12 N., R. 17 E.W.M. From this point water is

diverted though a pipeline, in a southeasterly direction, approximately 700-800 feet under a pasture where it is discharged into the natural flow channel of Hatton Creek.

Fish passage barriers are located on the lower reaches of Hatton and Bachelor Creeks just upstream from Ahtanum Creek. Although the fish passage barriers exist, Washington State Department of Fish and Wildlife Instream Flow biologist Paul LaRiviere found many fish species present in both Bachelor and Hatton Creeks.

The AID manages the distribution of water among Bachelor, Hatton and Ahtanum Creeks at the headgate. AID does not hold any water rights, or own any ditches. AID regulates the flow among the three creeks and then manages the diversions of its patrons along the creeks to ensure the priority system is followed. The current application for change falls within the boundaries of the AID.

Proposed Use

The applicant proposes to change from the two PODs authorized by the CFO to one point located approximately two miles downstream from the authorized diversion on Ahtanum Creek. The authorized POD on Hatton Creek will no longer be used. The purpose of use remains irrigation and the POU remains consistent with that authorized by the CFO.

Other Rights Appurtenant to the POU

There are four groundwater rights with places of use overlapping the subject surface water right:

- Groundwater Certificate GWC02836-A issued for 350 gpm, 280 ac-ft/yr from an infiltration trench for the irrigation of 80 acres.
- Groundwater Permit G4-29201P issued for frost control only as needed on 50 acres. The maximum annual quantity is limited to 28.3 ac-ft/yr, and the maximum rate of withdrawal is 1,600 gpm in combination with Certificate Nos. 5310-A and 5436-A as described below.
- Groundwater Certificate Nos. 5310-A and 5436-A are appurtenant to the same well and same place of use. Certificate No. 5310-A issued for 800 gpm, 320 ac-ft/yr, for the irrigation of 80 acres. Certificate No. 5436-A issued for 1,600 gpm, 708 ac-ft/yr, for the irrigation of 177 acres. The total combined instantaneous withdrawal rate from the well is limited to 1,600 gpm, including any frost water withdrawal under G4-29201P (above), which is also appurtenant to the same well.

The extent and validity of these groundwater rights is unknown and, being groundwater rights, these rights are not subject to the Yakima Basin Adjudication.

The POU for the subject water right lies within the boundaries of the Yakima Reclamation Project. The project, managed by the United States Bureau of Reclamation, includes 13 Certificates for the right to store and deliver water in the Yakima Basin. The Bureau of Reclamation rights have a priority date of May 10, 1905.

Hydrologic/Hydrogeologic Evaluation

The Ahtanum Creek watershed is part of an east-west trending synclinal trough, which extends from the foothills of the Cascade Range east to the Moxee valley (Figure 2). The Ahtanum-Moxee valley is a sub-feature of the Yakima Fold Belt and is bounded by Cowiche Mountain and Yakima Ridge to the north and Ahtanum Ridge and Rattlesnake Ridge to the south. Previous studies have divided the watershed

into upper, middle, and lower reaches based on the geography and land use (Foxworthy, 1962; Golder, 2004).

The upper reach of the Ahtanum Creek watershed is composed of forested lands with steep topography. Previous alpine glaciations generated broad "U" shaped valleys, which convey surface runoff and snowmelt to the stream system (Foxworthy, 1962). Golder (2004) characterized the high flows in the upper watershed as around 300 cfs during the spring and the low flows from 20 cfs in late summer to fall. There are two measurement points in the upper watershed, one on the South Fork (Maintained by Yakama Nation) and one on the North Fork (Maintained by Ahtanum Irrigation District) (Figure 1).

In the middle reach of the watershed, Ahtanum Creek passes a region known as "the Narrows," where the geology has confined the channel to a straight and narrow canyon. The stream transitions from a high energy forested system, through the narrow stream channel, to a low gradient alluvial fan. The land use is composed predominantly of irrigated agriculture. Recharge to the aquifer occurs by irrigation and infiltration to the aquifer through the streambed. According to Golder (2004) limited flow information is available on the central reach of Ahtanum Creek watershed. The lower reach of the watershed has light industrial, urban and agricultural land use.

For the purpose of this evaluation, the region of interest extends from the Yakama Nation and Ahtanum Irrigation District (AID) gaging stations (Figure 1) to the confluence of Ahtanum Creek with the Yakima River. Previous studies (Foxworthy, 1962; Golder, 2004) have established general classifications regarding the losing/gaining tendency for each of the stream reaches in the Ahtanum Creek watershed. Briefly, a losing reach indicates that the stream has a tendency to discharge water to the aquifer over a given reach. A gaining reach occurs when groundwater is discharging or adding water to a creek over a specific reach.

The tendency for each reach to lose or gain was determined by quantifying differences in flows between measurement points, after accounting for diversions. The primary measurement points were at the Yakama Nation Gage Station, the Ahtanum Irrigation District Gage Station, Wapato Irrigation Project Diversion (WIP), Carson Road, American Fruit Road, and the USGS Gage at Union Gap (Figure 1). There is limited or incomplete data available for each of the gages. Golder (2004) compiled and compared four years of data; their study indicated a consistent losing reach between the upper gage stations and American Fruit Road. Between Carson Road and American Fruit Road, a loss of 2 cfs was observed during the summer and fall. Based on stream measurement data, Golder (2004) concluded that there is a reach of continuous stream loss and infiltration between Carson Road and American Fruit Road (Figure 1). G. Marshall (2015, via personal communication) indicated that the reach between Carson Road and Marks Road took longer to "fill" than other areas in the stream reach (Orange Box, Figure 1).

During the irrigation season, Ahtanum Creek transitions from losing to neutral/gaining, east of Marks Road. Golder (2004) indicated that much of the lower portion of the watershed is a neutral reach, however Foxworthy (1962) suggested that the gaining portion may extend further west. The actual transition point from losing to neutral is dependent on seasonal flow and groundwater levels, which in turn affect the recharge location and rate.

Golder (2004) indicated that stream losses have been measured during the summer and stream gains have been measured during the spring, in the stretch between American Fruit Road Gage and the lower WIP diversion. The neutral and gaining reaches were not extensively discussed in Golder (2004). However, monitoring well data compiled by Foxworthy (1962) provides information regarding the

seasonal depth to groundwater in the alluvial aquifer. Alluvial aquifer wells located in the neutral reach have a hydrograph with a slight seasonal variation. For example, the monitoring wells in the neutral reach (Circle with a dot, Figure 1) had a 2 to 3 feet variation over the year. Groundwater depth ranged from 2.5 to 5 feet below ground surface (bgs). The monitoring well located in the gaining reach (Circle with a dot, Figure 1) had a groundwater depth of approximately 2 feet bgs and +/-1 foot of variation. The similarity between stream and groundwater elevation support the observation that the eastern portion of the watershed is a gaining reach.

Impairment Considerations

There are three intervening water rights between the authorized and proposed new PODs on Ahtanum Creek. The subject right has a priority date of June 30, 1888 and is Senior to all three intervening rights. The three intervening rights are:

- S4-84817-J; Priority Date June 30, 1891.
- S4-84818-J; Priority Date June 30, 1891.
- S4-84819-J; Priority Date June 30, 1891.

Senior Move Downstream on a Losing Reach

Ahtanum Creek is characterized as a losing stream within the reach between the authorized and proposed PODs (or withdrawal). Absent the effects of other water users, there would be less water physically available at the new POD than at the authorized POD. This would be particularly noted during the low flow conditions. Since this water right is relatively senior to the relatively junior rights within this losing reach, unconditionally authorizing a move downstream would lead to a call on relatively junior users on a more frequent basis than would have been the case if the POD remained at the authorized location.

Approval of this change request under Application for Change No. CS4-02398CTCL@25 could potentially impair other water users as described in the scenario above. The subject application can only be approved under two specific provisions:

1) Water may not be withdrawn at the new POD, except during times when water is available for withdrawal at the old POD. During periods of low flow, when water would not normally be available for the subject right at the old POD, water withdrawal for the right at the new POD must cease.

2) The water right holder may not call upon junior water right holders above the new POD to cease using water during periods of low flow, unless that junior water right holder is also located above the old POD. In other words, the water right holder may not make a call against any of the three junior intervening water right holders in listed above.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a change of POD be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

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:

Qi:
0.34[1] cfs

Qa:
58.38[1] acre-feet per year

Purpose and Period of Use:
Irrigation of 33.94 acres from April 15 through July 10.

Point of Diversion:
SE¼NE¼, Section 16, Township 12 North, Range 17 E.W.M. (Parcel #171216-13002)

Place of Use:
Lot 4 of Short Plat 84-224 and also beginning at the northwest corner of said Lot 4; thence east 163.04 feet; thence S 01°37'00" W 310.32 feet; thence N 89°04'28" W 156.19 feet; thence N 00°45'20" E to the point of beginning (aka Tract D ROS 7226778) (Parcel #171216-12408) and beginning at the southwest corner of Lot 4, Short Plat 84-224; thence S 00°13'20" E 591.12 feet; thence S 67°50'00" E 824.66 feet; thence S 89°38'00" E 510 feet; thence N 46°00'00" E 160 feet; thence N 71°40'00" E 670 feet; thence S 82°22'00" E 356.89 feet; thence N 00°22'20" W 1011.97 feet; thence S 86°07'34" W 249.32 feet; thence S 09°44'00" W 320 feet; thence S 88°19'04" W 815.02 feet; thence N 787.11 feet; thence W 650.02 feet; thence S 821.52 feet; thence N 88°38'10" W 646.79 feet to the point of beginning (aka Tract A ROS 7226778)(Parcel #171216-13002) all being in the NE¼ of Section 16, T. 12 N., R. 17 E.W.M. Answer No. 38.

1/13/16

Mark Dunbar, Report Writer *Date*

If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341.

[1] When water is available in excess of that needed to satisfy all confirmed water rights both on and off the Yakama Reservation and any water needed to satisfy the Yakama Nation's minimum instream flow right for fish and other aquatic life, an additional 0.34 cfs, 20.2 acre-feet per year can be diverted.

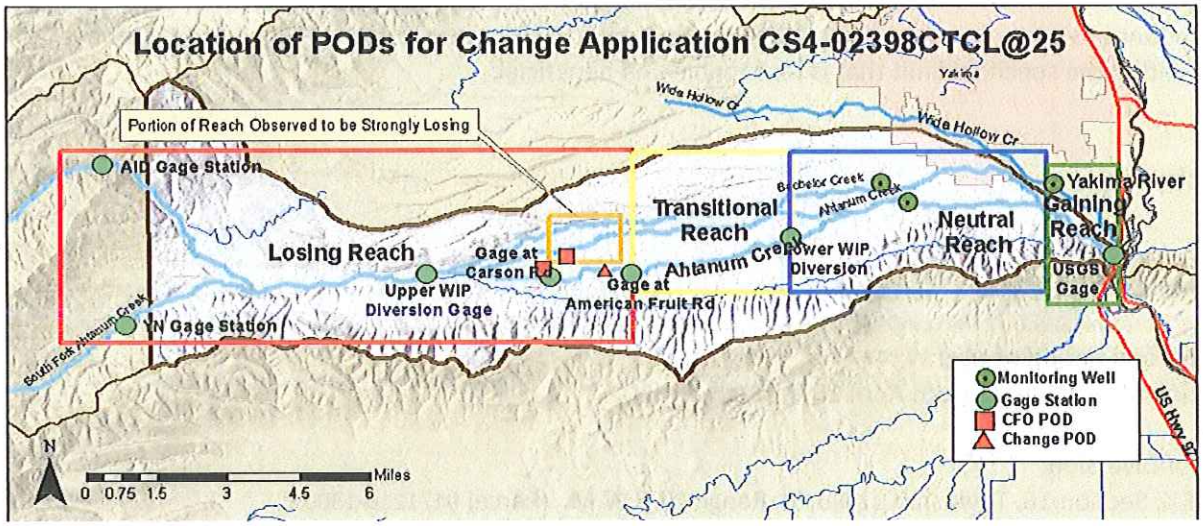

Figure 1: Hydrologic properties of Ahtanum Creek stream reaches from March through July.

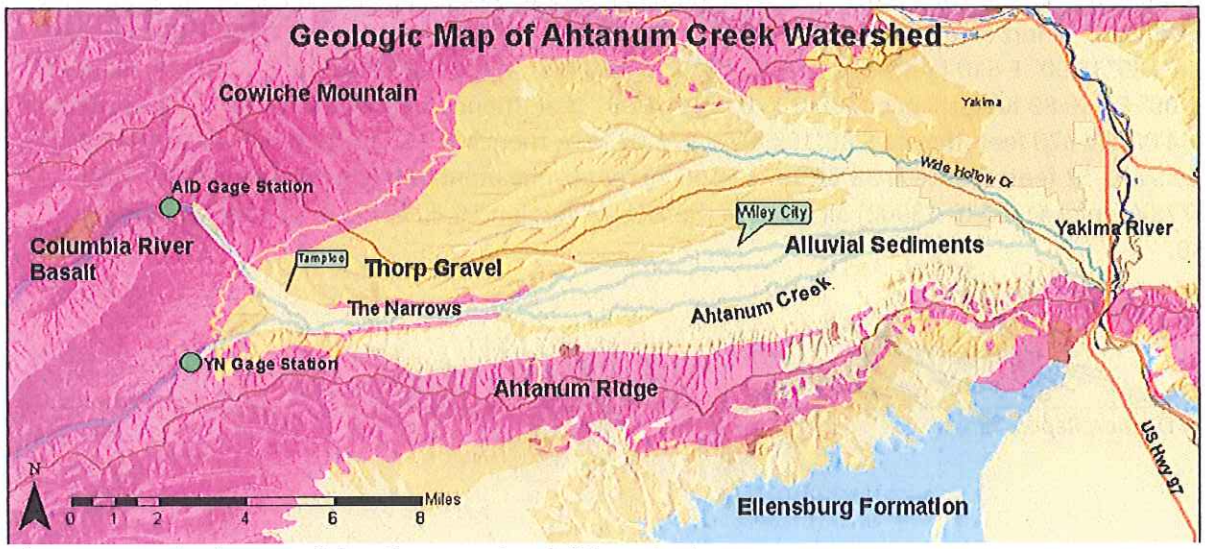

Figure 2: Geologic map of the Ahtanum Creek Watershed.

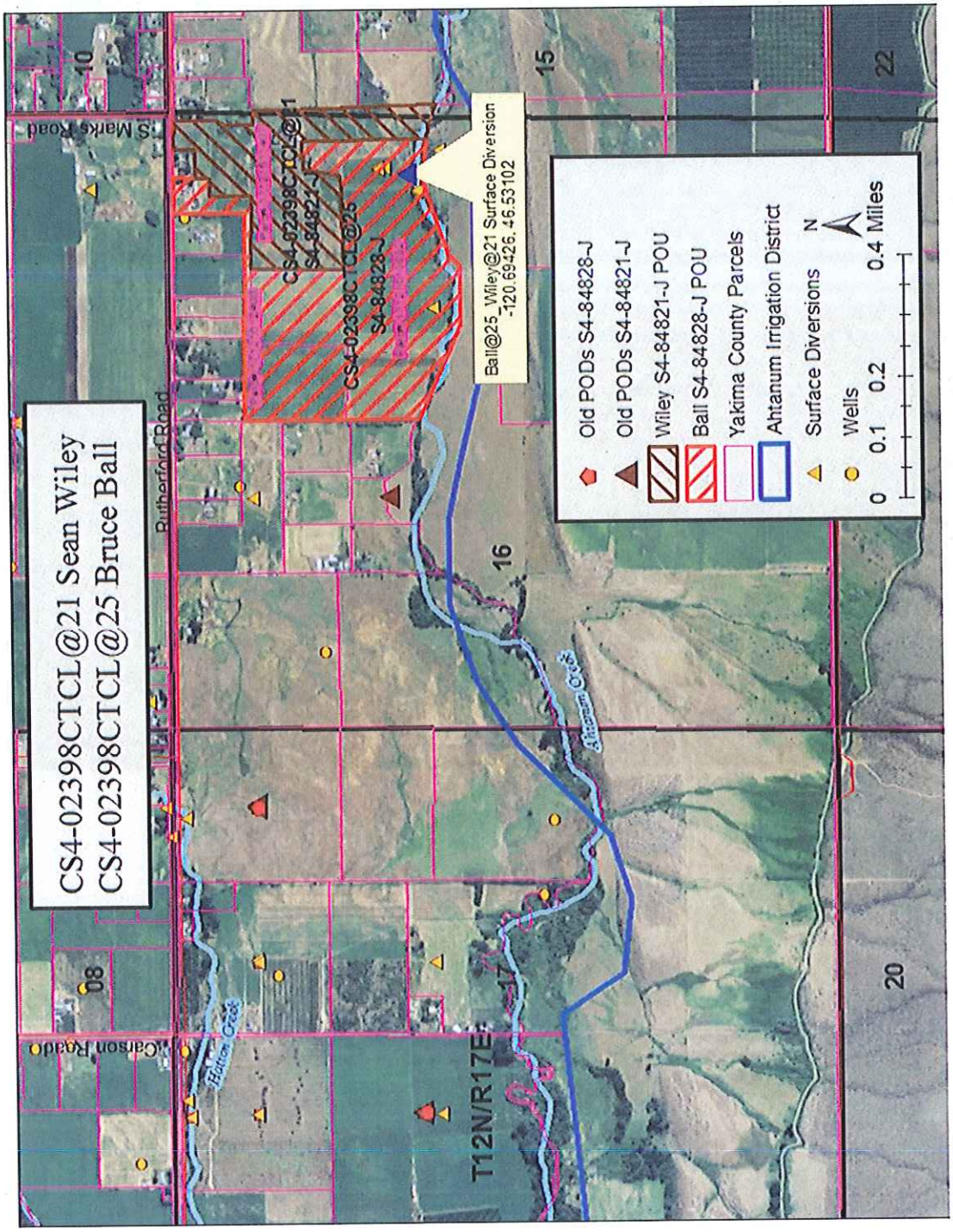

Figure 3: Sean Wiley CS4-02398CTCL@21 and Bruce Ball CS4-02398CTCL@25

Photograph 1: Gravity Diversion No. 14

Photograph 2: Gravity Diversion No. 14