WR File No.: CS4-02320sb23
WR Doc ID: 6460695

State of Washington
Report of Examination for Water Right Change

PRIORITY DATE	WATER RIGHT NUMBER
June 30, 1884	S4-84804-J

MAILING ADDRESS	SITE ADDRESS (IF DIFFERENT)
Karen L. Klingele **P.O. Box 9703** **Yakima, WA 98909-0703**	**6830 North Fork Ahtanum Rd.** **Yakima, WA 98903**

Total Quantity Authorized for Diversion

DIVERSION RATE	UNITS	ANNUAL QUANTITY (AC-FT/YR)
0.01	CFS	0.50

Purpose

PURPOSE	DIVERSION RATE			ANNUAL QUANTITY (AC-FT/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Irrigation	0.01		CFS	0.50		04/15 – 10/15

REMARKS

Primary source for irrigation of 0.25 acre

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
0.25			

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Yakima	N. Fork Ahtanum Ck.	Ahtanum Ck./Yakima R.	37-Yakima

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Surface Div./Pump	151208-34004		12 N.	15 E.	08	SE SW	46.54095	120.97894

Datum: NAD83/WGS84

Place of Use (See Attached Map)

PARCELS (NOT LISTED FOR SERVICE AREAS)
151208-34004

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE
The E 280 feet of the W 745 feet of that part of the E½SW¼ of Section 08, T. 12 N., R. 15 E.W.M., lying between the county road and North Fork Ahtanum Creek (Parcel No. 151208-34004).

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Proposed Works
Change the point of diversion to a point located on the owner's property, which is the same parcel as the place of use. Water will be diverted from the creek using an electric pump.

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 from the new point of diversion during any time when it would not normally be available for diversion at the original point of diversion.**

2) **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 Central Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Central Regional Office for forms to submit your water use data.

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.

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3) **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/

4) **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.

5) **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. CS4-02320sb23, 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:

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

Signed at Union Gap, Washington, this _____ day of _____ 2015.

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

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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 CS4-02320sb23
S4-84804-J

BACKGROUND

On January 26, 2015, Karen L. Klingele filed an application with the Washington State Department of Ecology to change the point of diversion under Court Claim No. 02320 in *The State of Washington, Department of Ecology v. James J. Acquavella, et al.* The application was accepted and assigned control No. CS4-02320sb23. This report serves as the written findings of fact concerning Water Right Application No. CS4-02320sb23.

EXISTING Water Right Attributes

Water Right Owner:	Karen L. Klingele
Priority Date:	June 30, 1884
Place of Use:	The E 280 feet of the W 745 feet of that part of the E½SW¼ of Section 8, T. 12 N., R. 15 E.W.M., lying between the county road and Ahtanum Creek (Parcel No. 151208-34004).

County	Waterbody	Tributary To	WRIA
Yakima	North Fork Ahtanum Ck.	Ahtanum Ck. / Yakima River	37-Yakima

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Irrigation	0.01	CFS	0.50	April 15	October 15

Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
North Fork Ahtanum Creek	151208-34004		12 N.	15 E.	08	SW¼SW¼		

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

REQUESTED Water Right Attributes

Applicant Name:	Karen L. Klingele
Date of Application:	January 26, 2015
Place of Use:	The E 280 feet of the W 745 feet of that part of the E½SW¼ of Section 8, T. 12 N., R. 15 E.W.M., lying between the county road and Ahtanum Creek (Parcel No. 151208-34004).

County	Waterbody	Tributary To	WRIA
Yakima	North Fork Ahtanum Ck.	Ahtanum Ck. / Yakima River	37-Yakima

Purpose	Rate	Unit	Acre-feet/yr	Begin Season	End Season
Irrigation	0.01	CFS	0.50	April 15	October 15

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Source Name	Parcel	Well Tag	Twp	Rng	Sec	QQ Q	Latitude	Longitude
North Fork Ahtanum Creek	151208-34004		12 N.	15 E.	08	SE¼SW¼	46.54095	-120.97894

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

INVESTIGATION

On January 26, 2015, Karen L. Klingele filed an application with the Washington State Department of Ecology to change the point of diversion under Court Claim No. 02320 in *The State of Washington, Department of Ecology v. James J. Acquavella, et al.* The application was accepted and assigned control No. CS4-02320sb23. The change application was assigned to Mark Dunbar on January 26, 2015, and a site visit was conducted on June 8, 2015, with Karen Klingele present. The residents of the home were not present during the site visit. Photographs and GPS coordinates for the new point of diversion were acquired at the site. GPS coordinates were recorded as 46.54095, -120.97894 and verified visually on an aerial photograph (see Figure 3). There was no pump installed at the time of the site visit, nor was an irrigation system observed (see Photographs 1 & 2). Mrs. Klingele stated that irrigation is accomplished by use of a small portable pump and garden hose. The limitations of the water right, Qi = 0.01cfs (approximately 4.5 gallons per minute), and Qa = 0.5 acre-ft/yr, for the irrigation of 0.25 acres of landscaping, corroborate the description of the irrigation system.

The property is located within the Ahtanum Creek Subbasin No. 23, approximately 25 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 point of diversion, which in many cases went undocumented.

The Conditional Final Order (CFO) issued by the Superior Court April 15, 2009 indicates that the authorized point of diversion for the subject water right is located within the SW¼SW¼ of Section 8, T. 12 N., R. 15 E.W.M. The applicant proposes to change the authorized point of diversion to a location within the SE¼SW¼ of Section 8, T. 12 N., R. 15 E.W.M. The new location is approximately 2000 feet downstream from the original point of diversion on the North Fork of Ahtanum Creek. There is one intervening point of diversion between the original authorized point of diversion and the proposed new point of diversion. The intervening water right has the same priority date as the water right subject to this change, June 30, 1884.

The CFO includes a schedule of rights which describes the Court's findings for each surface water right having a point of diversion within the Ahtanum Creek subbasin. The CFO confirms 0.01 cfs, 0.50 ac-ft/yr for the irrigation of 0.25 acres with a priority date of June 30, 1884. The place of use lies within the E 280 feet of the W 745 feet of that part of the E½SW¼ of Section 8, T. 12 N., R. 15 E.W.M., lying between the county road and Ahtanum Creek (Parcel No. 151208-34004). 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*.**

Legal Requirements for Requested Change

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

Public Notice

Public Notice of the application was given in the Yakima Valley Publishing, *Review-Independent* on March 26 and April 02, 2015. No protests were filed against this application.

Consultation with the Department of Fish and Wildlife

The Department 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 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 <u>all</u> 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.

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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 the Department of Ecology (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.

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,

[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.

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. 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 (ROC), "…can only be exercised when the flow in Ahtanum Creek exceeds 62.59 cubic feet per second and no uses, including potential storage, are being made of the excess by water right holders on the reservation."

During the *Acquavella* proceedings the legality of many of the current points of diversion was called into question. Many claimants were no longer using the points of diversion 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 point of diversion under RCW 90.03.380. Thus, the Court requested that the claimants apply to Ecology to seek authorization to change their points of diversion 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

The water right subject to this application for change lies in the upper reach of the Ahtanum Creek Subbasin, on the North Fork of Ahtanum Creek. The water right does not lie within the boundaries of the Ahtanum Irrigation District.

Proposed Use

The applicant proposes to change the authorized point of diversion to a location within the SE¼SW¼ of Section 8, T. 12 N., R. 15 E.W.M. The new location is approximately 2000 feet downstream from the original point of diversion on the North Fork of Ahtanum Creek.

Other Rights Appurtenant to the Place of Use

There are no other surface water rights appurtenant to the place of use for the subject right. The applicant stated that domestic water for the home is served by a hand-dug ring-well on the hillside to the south, across the creek from the home. Water is piped from the well down the hillside and under the bed of the creek to the home. The applicant stated that the property was formerly a resort, with recreational cabins and mineral baths, previous to her purchase in the 1960s, and had been a popular resort destination as far back as horse-and-wagon days. Two of the former resort cabins were observed on site. The applicant had previously been advised by Ecology staff that the ring-well, which supplies domestic water, is not subject to the adjudication process.

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 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 gaging stations (Figure 1) to the confluence of Ahtanum Creek with the Yakima River.

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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, 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

Approval of this change request under Application for Change No. CS4-02320sb23 will cause no impairment of existing rights. The proposed new point of diversion is approximately 2000 feet downstream from the original point of diversion on the North Fork of Ahtanum Creek. There is one intervening water right with a diversion located between the original authorized point of diversion and the proposed new point of diversion for the subject right. The intervening water right has the same priority date as the water right subject to this change, which is June 30, 1884. A downstream move to a location below the diversion for the intervening right, on a neutral or gaining reach, will have no impact on the availability of water at the intervening diversion. Because both water rights share the same

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priority date, the subject water right will have no authority to make a call on the intervening diversion during water-short years.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that this request for a change of point of diversion 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:
0.01 cfs (4.5 gallons per minute).

Qa:
0.50 acre-feet per year.

Purpose and Period of Use:
Irrigation of 0.25 acres of landscaping from April 15 through October 15.

Point of Diversion:
SE¼SW¼, Section 08, Township 12 North, Range 15 E.W.M. (Parcel No. 151208-34004).

Place of Use:
The E 280 feet of the W 745 feet of that part of the E½SW¼ of Section 08, T. 12 N., R. 15 E.W.M., lying between the county road and North Fork Ahtanum Creek (Parcel No. 151208-34004).

_____ _____

Mark Dunbar, Report Writer *Date*

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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.

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

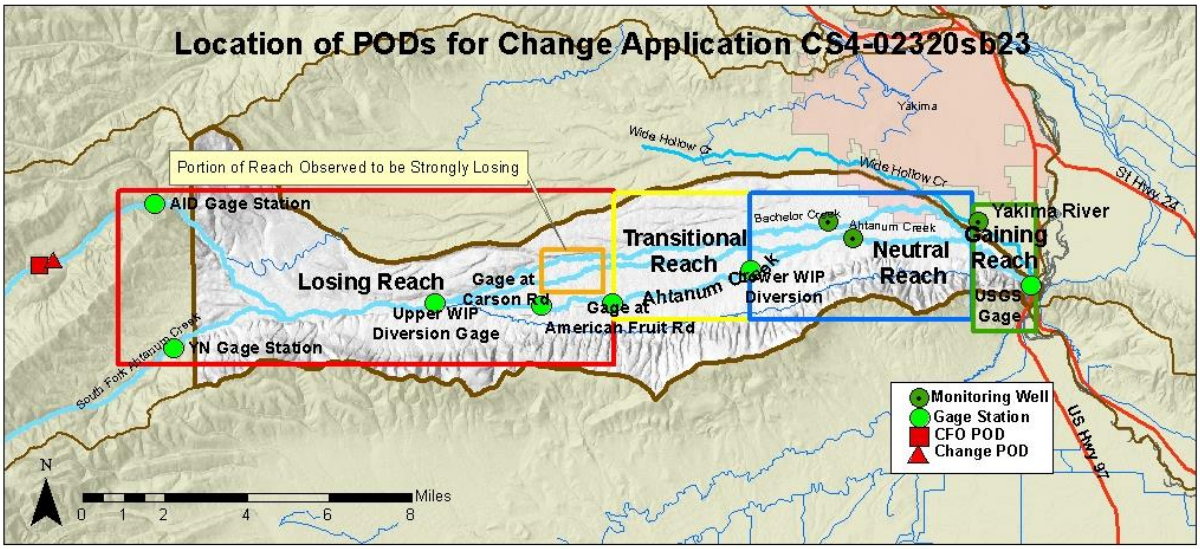

Figure 2: Geologic map of the Ahtanum Creek Watershed.

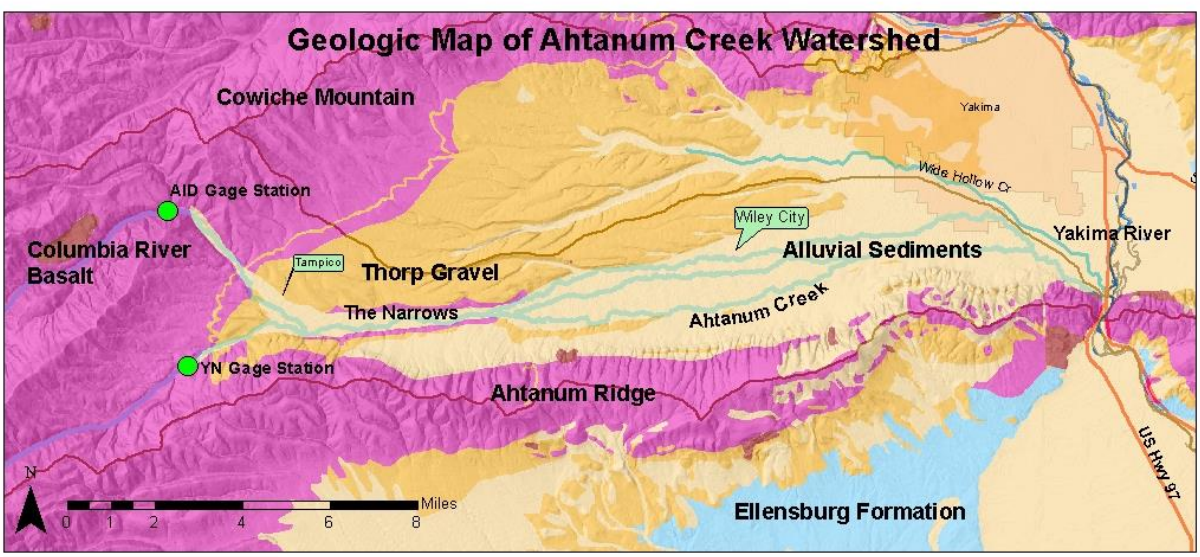

Figure 3: CS4-02320sb23 Change Point of Diversion

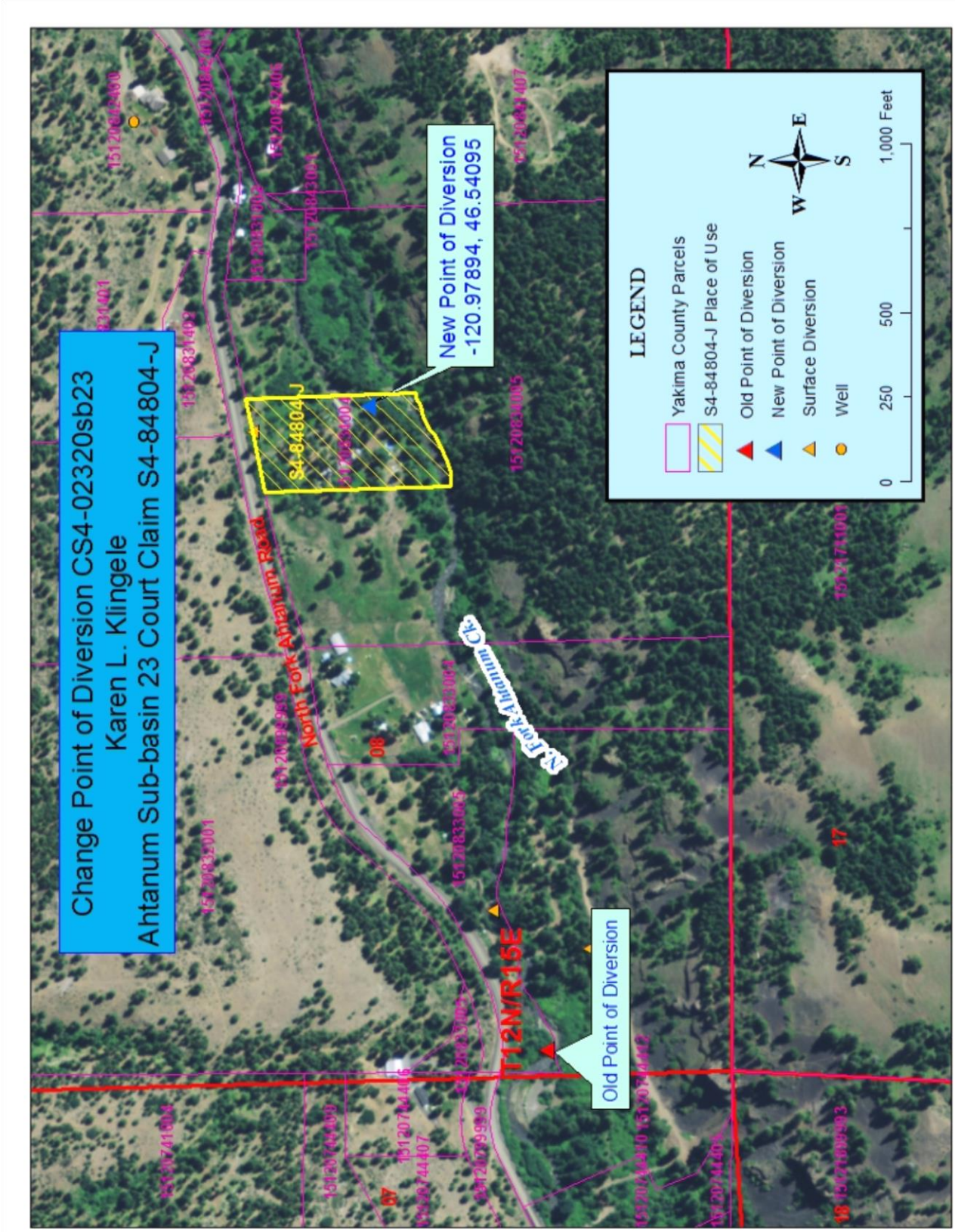

Photo 1: Location of new point of diversion, North Fork Ahtanum Creek.

Photo 2: Looking from new point of diversion N. towards residence and the place of use.