STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

TRUST WATER RIGHT
REPORT OF EXAMINATION
Change of Purpose and Place of Use
WRTS File No.: *CS4-00425CTCL*

PRIORITY DATE	CLAIM NO.	PERMIT NO.	CERTIFICATE NO.
June 30, 1870	Court Claim No. 00425 Subbasin 18 Cowiche Creek		

NAME OF PARTY CONVEYING RIGHT TO TRUST WATER RIGHTS PROGRAM

C. James & Darlene F. Lust

ADDRESS/STREET	CITY/STATE	ZIP CODE
2904 Canterbury Ln	Yakima, Washington	98902

TRUST WATER RIGHT ATTRIBUTES

SOURCE

South Fork Cowiche Creek

TRIBUTARY OF (IF SURFACE WATERS)

Naches River, tributary of the Yakima River, tributary of the Columbia River

MAXIMUM CUBIC FEET PER SECOND (CFS)	MAXIMUM GALLONS PER MINUTE (GPM)	MAXIMUM ACRE FEET PER YEAR (AC-FT/YR)
0.80 cfs		148 ac-ft/yr

QUANTITY, TYPE OF USE, PERIOD OF USE

Instream flow in the primary reach:

0.80 cubic feet per second (cfs), 148 acre-feet per year (afy) for instream flow from April 1 to October 31.

Instream flow in the secondary reach:

	April	May	June	July	August	Sept.	October	Total
Avg. Qi (cfs)	0.144	0.298	0.373	0.474	0.379	0.249	0.096	
Qa (acre-feet)	2.28	18.31	22.17	29.08	23.25	14.82	5.16	115.07

DESCRIPTION OF PLACE OF USE
[Refer to map on page 8 for the trust water right location]

Primary Reach

The primary reach is an approximately 2.5-mile stretch on South Fork Cowiche Creek that begins at the current point of diversion (POD), which is located 1100 feet south and 1200 feet east of the north quarter corner of Section 4, being within the NW¼NE¼ of Section 4, T. 13 N., R. 17 E.W.M., Yakima County.

The primary reach ends at a point on the South Fork Cowiche Creek within the SW¼NE¼ of Section 11, T. 13 N., R. 17 E.W.M., being approximately 1435 feet south and 2060 feet west of the NE corner of Section 11, T.13 N., R. 17 E.W.M., Yakima County.

Secondary Reach

The secondary reach begins at a point on South Fork Cowiche Creek at a point located approximately 1435 feet south and 2060 feet west of the NE corner of Section 11, T. 13 N., R. 17 E.W.M. continuing to the confluence with the Naches River located within the NW¼SW¼ of Section 10, T.13, R. 18 E.W.M

PROJECT SUMMARY

The Cowiche Creek Water Users Association (CCWUA) will place their combined South Fork Cowiche Creek and Cowiche Creek water rights in the State Trust Water Rights Program (TWRP) for permanent augmentation of stream flow in South Fork Cowiche and Cowiche Creeks. New water rights will be issued from the Tieton River to provide irrigation water to individual CCWUA members to continue their historic irrigation and stock watering practices on the historic places of use. The new water rights, in amounts equal to the rights placed in the TWRP, will be delivered via existing Yakima-Tieton Irrigation District (YTID) infrastructure. The new rights will be provisioned to be exercised exactly as the adjudicated rights with priority dates ca. 1870s but will carry contemporary priority dates. A maximum of 7.83 cubic feet per second placed into the TWRP by CCWUA will be protected in the primary and secondary reaches of Cowiche Creek to the confluence with the Naches River where it then becomes replacement water for Yakima Basin Total Water Supply Available (TWSA), making the project water budget neutral at the Sunnyside Valley Irrigation diversion at Parker.

TRUST WATER RIGHT TERM

BEGIN DATE	END DATE
April 1, 2018	Permanent

PROVISIONS

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1. Exercise of this trust water right is provisioned on availability of this June 30, 1870 priority water right at the historic point of diversion located at that portion of South Fork Cowiche Creek.
2. This trust water right may be modified so that the user may exercise the Cowiche Creek water right should infrastructure failure prevent the diversion of water from the corresponding new water right from the Tieton River.
3. Location, installation, and monitoring of stream gages on Cowiche and South Fork Cowiche Creeks will be finalized by North Yakima Conservation District (NYCD) pursuant to Memorandum of Understanding No. 1425-09MU1U7157, issued April 9, 2009 between NYCD and CCWUA.

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 place and purpose of use under Trust Water Right Application No. CS4-00425CTCL, be approved subject to existing rights and the provisions specified in this report.

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.

Signed at Yakima, Washington, this _____ day of _____ 2012.

_____
Mark Kemner, LHG, Section Manager
Water Resources Program/CRO

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Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

BACKGROUND

Description and Purpose of Proposed Change

On October 11, 2006, the Cowiche Creek Water Users Association (CCWUA) of Cowiche, Washington, filed 15 applications to change place and purpose of use under Court Claim Nos. 00208 , 00212, **00425**, 00430, 00458, 00693, and 07180, in *The State of Washington, Department of Ecology v. James J. Acquavella, et. al. (Acquavella)*. The applications propose to permanently place a total of 7.915 cubic feet per second (cfs) and 1583.42 acre-feet per year (ac-ft/yr) of water into the Washington State Trust Water Rights Program (TWRP) for enhancement of fish habitat via increased stream flows in South Fork Cowiche and Cowiche Creeks. The CCWUA also filed 15 new water right applications for a total of 7.915 cfs, 1583.42 ac-ft/yr, of water from the Tieton River to be delivered to the historic places of use through existing Yakima-Tieton Irrigation District (YTID) infrastructure.

This Report of Examination for Change (ROE) will address Ecology's conclusions and recommendations related to this **Application for Change No. CS4-00425CTCL**. Separate reports will address the specific recommendations and provide conclusions for each Application for Change that make up the CCWUA trust water project. Although many elements of each ROE for the CCWUA project are similar or identical to this ROE, the evaluation process for authorizing the proposed changes in place and purpose of use will be considered individually.

Each water right in this project that will undergo a change to its purpose and place of use is proposed to receive a new appropriation from the Tieton River via the Yakima Tieton Irrigation District's infrastructure. Table 1, Summary of Applications filed with Ecology by the CCWUA, lists the change applications that were accepted by Ecology from the CCWUA and lists the corresponding new water right number assigned each change application within this project. Each new water right, if approved, will replace the existing irrigation use currently identified under each adjudicated Court Claim and each new water right will be issued based on past agricultural practices and water usage.

Table 1 – Summary of Applications filed with Ecology by the CCWUA – subject application in bold

Applicant Names	Trust Water Application No.	Court Claim No.	New Water Right Application No.
Stevenson	CS4-00208CTCL	00208/00214	S4-35112
Arreguin	CS4-00212CTCL@1	00212	S4-35124
Waymire Rowan	CS4-00212CTCL@2	00212	S4-35123
Stevenson	CS4-00212CTCL@3	00212	S4-35113
Stevenson	CS4-00425CTCL	00425	S4-35111
Lust	**CS4-00425CTCL**	**00425**	**S4-35110**
Lust	CS4-00425CTCL@1	00425	S4-35115
Lust	CS4-00430CTCL	00430	S4-35116
Lust	CS4-00430CTCL@1	00430	S4-35117
Lust	CS4-00430CTCL@2	00430	S4-35118
Lust	CS4-00430CTCL@3	00430	S4-35119
Tollefson	CS4-00458CTCL	00458	S4-35114
Lust	CS4-00693CTCL	00693	S4-35120
Feusner	CS4-07108CTCL	07108	S4-35121
Emmans	CS4-07108CTCL@1	07108	S4-35122

Expedited Processing

This application qualifies for expedited processing under WAC 173-152-050(2)(g) whereby the water right applications may be processed prior to applications submitted at an earlier date when the proposed water use is from a water budget neutral project as defined under WAC 173-152-020(18). The requested water right permits are an integral part of a larger irrigation water source substitution project and habitat restoration project with great potential for having a positive impact on the local fisheries. The project is supported by the CCWUA, Washington Water Project of Trout Unlimited (WWP-TU), the North Yakima Conservation District (NYCD), YTID, the United States Bureau of Reclamation (Reclamation), the Yakama Nation, the National Marine Fisheries Service (NMFS), the United States Fish and Wildlife Service (USFWS), the Washington Department of Fish and Wildlife (WDFW), and others.

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The project will create an unobstructed eight-mile trust water right in the lower reaches of the South Fork Cowiche and Cowiche Creeks. The Upper Lust diversion structure will be removed and the Lower Lust and Old Thornton diversion structures will be retired. The Upper Lust is located southwest of the intersection of Summitview and Mill Roads. The Lower Lust and Old Thornton diversions are located near the intersection of Pioneer and Mahoney Roads. The removal and retirement of these diversionary structures will open the Cowiche Creek system by providing fish passage to approximately 20 miles of habitat.

Based on low flows and the presence of fish passage barriers during the irrigation season, Ecology and the WDFW classified Lower Cowiche Creek with a high priority for stream flow restoration and acquisitions of water rights, as reported in Washington Water Acquisition Program, Finding Water to Restore Streams, (Adelsman 2003). "Cowiche Creek and its tributaries have significant production potential for salmonids and extensive habitat which are currently inaccessible due to low flows" (Adelsman 2003, pg. 102).

The Federal Clean Water Act Section 303(d) requires Washington State to list all surface waters with pollutant-impaired status. Cowiche Creek is consistently cited on Ecology's 303(d) list for high temperature, fecal coliform and low stream flow. The proposed trust water right in Cowiche Creek is expected to ease the pollution problem through decreasing the temperature and increase the dilution of suspended pollutants. To further help the elevated temperatures and limit fecal material in the creek, a separate but related project implemented by the NYCD will install root wads and log vanes to deal with severely sloughing creek banks, reduce sedimentation, to stabilize creek banks, form pools, and increase habitat diversity by adding instream structure. Native vegetation will be planted along both stream banks to improve riparian structure, minimize solar heating, increase root matrices, and provide a future source of course woody debris recruitment. Livestock management improvements include fencing to reduce fecal material introduced in the stream and protect the riparian area from further damage.

Attributes of Court Claim No. 00425 and Proposed Change

Table 2 - Summaries of Existing Attributes and Proposed Changes

Attributes	Documented	Proposed
Name	C. James Lust & Darlene F. Lust	No change
Priority Date | Date of Application for Change	June 30, 1870	October 11, 2006
Instantaneous Quantity	0.80 cfs	No change
Annual Quantity	160 acre-feet per year	No change
Source	South Fork Cowiche Creek	No change
Point of Diversion/Withdrawal	1100 feet south and 1200 feet east from the N¼ corner of Section 4, being within Government Lot 2 (NW¼NE¼) of Section 4, T. 13 N., R. 17 E.W.M.	No change
Purpose of Use	Irrigation of agricultural lands	Instream flow
Period of Use	April 1 to October 31 annually	No change
Place of Use	The NE¼SW¼ of Section 3, T. 13 N., R. 17 E.W.M.	From the documented POD on South Fork Cowiche Creek to the confluence with the Naches River

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in CS4-00425CTCL:

Public Notice

Notice of the applications and SEPA determination was published in the *Yakima Herald-Republic* on January 24, and January 31, 2007. The public notice was amended and published again in the Yakima Herald-Republic on February 6, and February 13, 2007. No letters of protest were received during the 30-day protest period.

State Environmental Policy Act (SEPA)

This project required SEPA review under WAC 197-11-800(4). The Department of Ecology (Ecology), acting as SEPA lead agency for this project, determined it will not have a probable significant adverse impact on the environment and issued a DETERMINATION OF NONSIGNIFICANCE (DNS) on January 23, 2007. The DNS

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included the adoption of a DNS issued by Washington State Department of Fish and Wildlife (WDFW) on October 9, 2006 for a portion of the project.

Water Resources Legal Citations and Case Law

- RCW 90.03.380(4) states that this section [RCW 90.03.380] does not apply to trust water rights acquired by the state through the funding of water conservation projects under chapter 90.38 RCW or RCW 90.42.010 through 90.42.070. The CCWUA project is a water conservation project funded by the state.
- RCW 90.38.020(1)(a) states that Ecology may acquire trust water rights by purchase, lease, gift, or other appropriate means other than by condemnation, from any person or entity or combination of persons or entities. Once acquired, such rights are trust water rights. A water right acquired by the state that is expressly conditioned to limit its use to instream purposes shall be administered as a trust water right in compliance with that condition.
- RCW 90.38.020(3) states that trust water rights may be acquired on a temporary or permanent basis.
- RCW 90.38.040(1) states that all trust water rights acquired by Ecology shall be placed in the Yakima river basin trust water rights program to be managed by Ecology. Ecology shall issue a water right certificate in the name of the state of Washington for each trust water right it acquires.
- RCW 90.38.040(2) states that trust water rights shall retain the same priority date as the water right from which they originated.
- RCW 90.38.040(3) states that trust water rights may be held by Ecology for instream flows.
- RCW 90.38.040(5)(a) states that no exercise of a trust water right may be authorized unless Ecology first determines that no existing water rights, junior or senior in priority, will be impaired as to their exercise or injured in any manner whatever by such authorization.
- RCW 90.42.100(1) states that Ecology is authorized to use the trust water rights program in the Yakima River basin for water banking purposes.
- RCW 90.42.100(2)(a) states that water banking may be used to mitigate for any beneficial use under chapter 90.03, 90.44. or 90.54 RCW, consistent with any terms and conditions established by the transferor, except that return flows from water rights authorized in whole or in part for any purpose shall remain available as part of the Yakima basin's total water supply available and to satisfy existing rights for other downstream uses and users.
- RCW 90.42.100(2)(b) states that water banking may be used to transfer water rights to and from the trust water rights program.
- WAC 173-152-050(2)(g) An application for change or transfer to an existing water right may be processed prior to competing applications provided the change or transfer, if approved, proposes a water budget neutral project as defined in WAC 173-152-020(18).

INVESTIGATION

This investigation included three on-site visits by personnel from Ecology, Trout Unlimited (TU) and the NYCD. These visits provided some spatial definitions and local, historic information relating to this project. The site visits occurred on April 25, 2006, March 22, 2007 and April 22, 2008. Aerial photographs from the years 2002, 2005 and 2006 provided confirmation that irrigation water has been consistently applied to the places of use under each change application. Additional information and supporting documentation for this investigation was obtained through the following:

- Documentation submitted with the applications.
- Conversations with:
  - WWP-TU director, Lisa Pelly
  - NYCD representatives, Mike Tobin and Ernie Gasseling
  - USBR representatives Stan Isley (Ecology's USBR liaison) and Stephen Fanciullo
  - Ecology staff, Bob Barwin, Darrell Monroe, Dan Haller and Melissa Downes
  - WDFW staff, Jonathan Kohr, Ryan Murphy and Paul LaRiviere
- Washington State Water Code and administrative rules and policies
- Unpublished WDFW Cowiche Creek streamflow data
- Digitized topographic maps and aerial photographs
- Yakima County Superior Court Reports of Referee on the Yakima River Basin Water Rights Adjudication for Subbasin No. 18 (Cowiche Creek)
- Publication No. 03-11-005, *Washington Water Acquisition Program, Finding Water to Restore Streams*

Local Hydrology & Water Use History

Cowiche Creek, located west of the City of Yakima, Washington discharges into the Naches River, a Yakima River tributary. Two forks of Cowiche Creek drain 115 square miles of watershed in the semi-arid climate east of the Cascade Range with approximately eight inches of rain each year. North Fork Cowiche Creek trends south-southeast through approximately ten square miles of basin before its confluence with the South Fork Cowiche Creek, and then creates the mainstem Cowiche Creek. South Fork Cowiche Creek gains flow in the upper reaches from snowmelt, runoff and baseflow. Where the valley widens and irrigated lands predominate, the reaches lose water to the alluvial sediments and

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to diversions for out-of-stream uses. At the lower end of the basin, the mainstem Cowiche Creek flows through a narrow bedrock canyon. Just upstream of the canyon the creek gains flow from upwelling ground water at the bedrock pinch point and flow continues to gain slightly through the bedrock canyon (Kohr 2007). The WDFW staff measure flow at four points on the Cowiche Creek system beginning upstream on the south fork to downstream near the mouth (Kohr 2007). The flow measuring data has shown that creek flows are greatest in early spring through June and lowest in August and September.

Water diverted from South Fork Cowiche Creek for irrigation began in the late 19th century. Cowiche Creek water right claims have been adjudicated twice. The more recent *Acquavella* adjudication confirmed approximately 65 diversionary water rights. Fifteen (15) of those water right holders grouped together to form the CCWUA. Some of the original CCWUA water right holders are deceased and their successors in interest have filed substitution papers with the Court. A *Conditional Final Order* for South Fork Cowiche Creek (Subbasin No.18) was signed on September 9, 2004; a final Order and certificates of water right have not been issued to date.

Table 3 lists the adjudicated CCWUA water rights and their attributes. The CCWUA irrigation and stock water rights listed in Table 3 utilize three points of diversion, an instantaneous water quantity of 0.02 cfs per acre and an annual water duty of 4 acre-feet per acre. The water rights are listed according to the diversion structure historically used: the Upper Lust, the Lower Lust, or the Old Thornton diversion. The Old Thornton Diversion has been retired and a centrifugal pump near the Dillon & Grappe property draws water from South Fork Cowiche Creek to exercise the water rights under Court Claim No. 07108.

Table 3 – CCWUA Adjudicated Water Rights – subject application in bold

TW Application No.	New WR Application No.	Applicant	Acres	Qa* ac-ft/yr	Qi** cfs	Court Claim No.	Priority Date	Diversionary Stock Water
UPPER LUST DIVERSION								
CS4-00208CTCL	S4-35112	Stevenson	8.25	33.0	0.165	00208[§]	1870	No
CS4-00212CTCL@1	S4-35113	Stevenson	31.53	126.12	0.6306	00212	1870	No
CS4-00212CTCL@2	S4-35123	Rowan	1.0	4.0	0.020	00212	1870	No
CS4-00212CTCL@3	S4-35124	Arreguin	1.47	5.88	0.0294	00212	1870	No
CS4-00216CTCL	S4-35111	Stevenson	59.0	236.0	1.180	00425	1870	No
CS4-00425CTCL	**S4-35110**	**Lust, J.**	**40.0**	**160.0**	**0.800**	**00425**	**1870**	**Yes**
CS4-00425CTCL@1	S4-35115	Lust, J.	38.0	152.0	0.760	00425	1871	Yes
CS4-00458CTCL	S4-35114	Tollefson	10.0	40.0	0.200	00458	1870	Yes
LOWER LUST DIVERSION								
CS4-00430CTCL	S4-35116	Lust, J.	74.6	298.4	1.490	00430	1872	Yes
CS4-00430CTCL@1	S4-35117	Lust, J.	48.5	194.0	0.970	00430	1873	Yes
CS4-00430CTCL@2	S4-35118	Lust, J.	50.0	200.0	1.000	00430	1873	No
CS4-00430CTCL@3	S4-35119	Lust, J.	19.5	78.0	0.390	00430	1873	Yes
CS4-00693CTCL	S4-35120	Lust, M.	4.0	16.0	0.080	00693	1873	No
OLD THORNTON DIVERSION								
CS4-07108CTCL	S4-35121	Feusner	5.0	20.0	0.100	07108	1871	No
CS4-07108CTCL@1	S4-35122	Emmans	5.0	20.0	0.100	07108	1891	No
	APPLICATION	**TOTALS**	**395.85**	**1583.40**	**7.915**			

*Qa refers to cumulative annual water quantity. **Qi refers to instantaneous quantity. [§] Court Claim Nos. 00208 and 00214 are combined as 00208.

Historic Water Use Specific to Court Claim 00425

This land was historically owned by Margaret Splawn. In the *State of Washington v. Alexander*, a water rights adjudication case that concluded on May 18, 1922, that court issued Certificate No. 267 for the water right claim appurtenant to this land.

On May 20, 2002, the *Report of Referee for Subbasin No. 18* was submitted in the adjudication case, *State of Washington v. Acquavella* confirming that this is a Class 1A water right authorizing 0.80 cubic feet per second to irrigate 40 acres. The places of use under court claim 00425 are shown in Figure 1.

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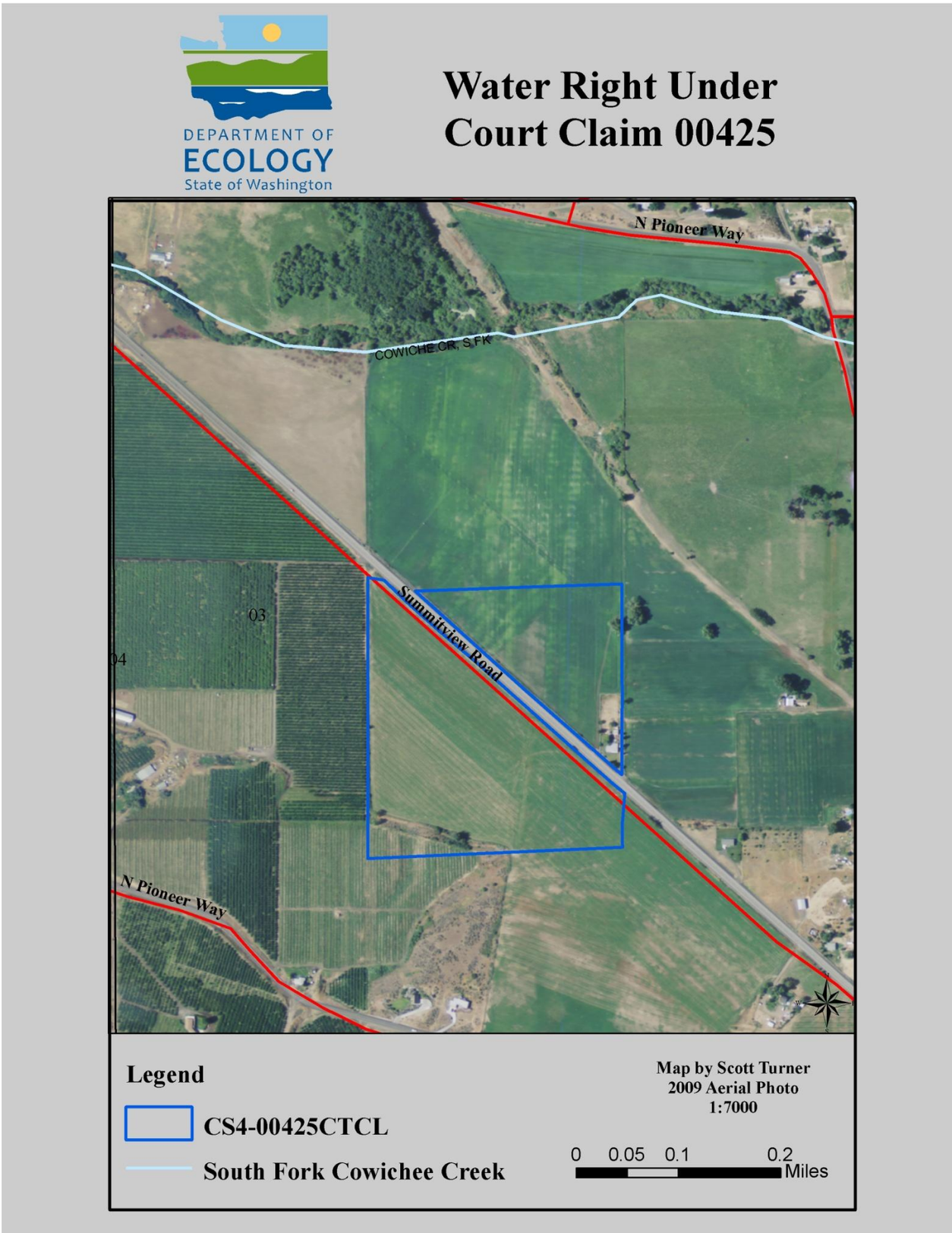

Figure 1. Place of Use under Court Claim 00425

On September 9, 2004, the adjudication case, *State of Washington v. Acquavella*, upheld the findings in *Alexander* while incorporating the adjustments ordered in the *Memorandum Opinion and Order RE: Exceptions to Report of Referee for Subbasin 18 (Cowiche Creek)* and issued their *Conditional Final Order, Subbasin No. 18 (Cowiche Creek)* in the quantities stated in the *Report of Referee Re: Subbasin No. 18 (Cowiche Creek)* and *Memorandum*.

During the collection of information for this report, a review of aerial photographs from years 2005, 2006 and 2009 demonstrated that 37 acres have been irrigated since the CFO was signed on September 9, 2004. As illustrated in Figure 1, Summitview Road runs in a northwesterly direction through the property. Thus the calculations shown in this report's tables reflect 37-acres of beneficial use.

In *Report of Referee for Subbasin 18 (Cowiche Creek)* the Court held the point of diversion (POD) was historically used for this place of use within the NW¼NE¼ of Section 4, or referred to locally as the Upper Lust. The water was historically diverted into the Masters Ditch. In approximately the early 70's (and currently) the ditch was replaced with a buried pipeline. From the POD, water is pumped into the pipeline where it enters a wheel line irrigation system for application.

The riparian property owned by the applicant also enjoys a non-diversionary stock water right as stipulated on page 4 in the *Yakima River Basin Water Rights Adjudication Report of Referee, Subbasin No. 18*. Non-diversionary stock water rights in this subbasin are senior to those for irrigation. The rights confirmed under Court Claim 00425 include a diversionary stock water right.

Other Court Claims Appurtenant to the Place of Use
No other court claims are appurtenant to the place of use for this water right.

Trust Water Rights

The place of use of an instream flow water right held in the Trust Water Right Program is normally described as a primary reach and a secondary reach. The primary reach includes water historically used both consumptively and non-consumptively, while the secondary reach includes the consumptive use associated with the historic use. The primary reach begins at the historic point of diversion and ends at the estimated point where water returned to the river or stream through subsurface and surface flows. Figure 2 illustrates these reaches for CS4-00425CTCL.

Trust Water Quantities

Water used for irrigation is not constantly diverted over the irrigation period. Water use often begins at a lower rate during the beginning of the growing season, ramps up during the warmer part of the season and decreases again in the later part of the season. Irrigation may also be interrupted while moving sprinklers or to dry and harvest the crops.

In the absence of water use records, Ecology uses various methods to estimate the amount of water used and consumed. One source of information often used is the State of Washington Irrigation Guide (WIG). The WIG data show estimated average amounts of water required by a crop in addition to the existing moisture in the root zone under average climatic conditions.

The crop irrigation requirement (CIR) for pasture/turf in Yakima is 37.28 inches or 3.1 acre-feet per acre for an average growing season. Ecology's guidance document (GUID 1210), *Determining Irrigation Efficiency and Consumptive Use*, is used to determine irrigation efficiency (Ea) and consumptive use (CU). Total water use is assumed to be the full Court-awarded quantity, which for this Court Claim is four acre-feet per acre. Ea is estimated by dividing the CIR by the total water use. Table 5 illustrates how water is used over the irrigation season. CU includes crop evapotranspiration (ET) and water evaporated during irrigation applications (i.e. spray, canopy and wind losses). Because there are no miscellaneous crop requirements such as frost protection or cooling for this location, ET equals CIR. Given the local growing conditions and the use of impact sprinklers on a wheel line, evaporative losses are estimated to be 10 percent on average.
The consumptive portion of Court Claim No. 00425 can therefore be calculated by adding the CIR and the evaporative losses, or stated in another way, the CU equals the CIR plus an additional 10 percent for losses due to water application practices. The remaining portion of water used which is not consumed is considered to be return flow (RF) thus RF equals diverted water minus CU.

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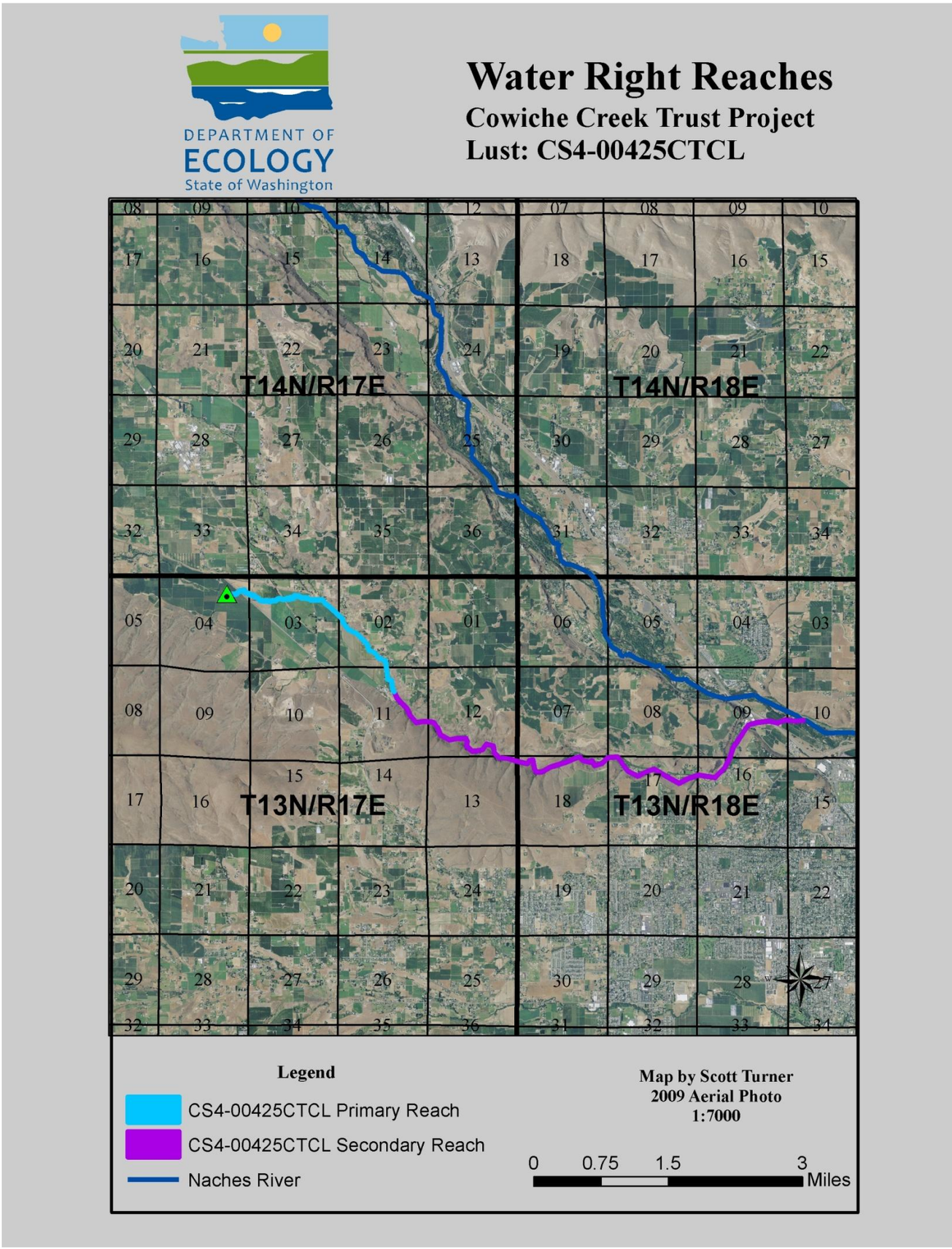

Figure 2 – Primary and Secondary Reaches on South Fork Cowiche Creek for CS4-00425CTCL

Trust Water Quantity Eligible for Transfer

The quantity of consumptively used water that may be transferred into the state's Trust Water Rights Program (TWRP) is determined by Ecology guidance document *Guidance for Processing and Managing Trust Water Rights* (GUID 1220). In the adjudication proceeding, *Department of Ecology v. Acquavella*, the Court recognized the place of use under this Court Claim as 40 acres. During the collection of information to write this report, a review of aerial photographs from the years 2005, 2006 and 2009 revealed that 37 acres have been irrigated since September 9, 2004. The Court awarded a water duty of 4 acre-feet per acre in the CFO under Court Claim No. 216. Therefore, 4 acre-feet per acre at 37 acres is equivalent to 148 acre-feet per year.

Water placed into the TWRP in the secondary reach is determined by quantifying the consumptive use of the crop beneficially used on the place of use, Ecology must recognize only the quantities actually put to beneficial use.

Therefore, 37 acres will be the basis for calculating the consumptive quantities that have historically existed in the secondary reach for transfer to the TWRP.

Table 5 below reflects the water usage based on historic farming practices on the 37 acre place of use.

Table 5 - Court Claim No. 00425 Estimated Consumptive Use (CU)

	April	May	June	July	Aug	Sept.	Oct.	Total
Avg. Qi (cfs)	0.144	0.298	0.373	0.474	0.379	0.249	0.096	
Qa (acre-feet)	2.28	18.31	22.17	29.08	23.25	14.82	5.16	115.07

CU is the consumptive portion of used water. It includes crop evapotranspiration and water evaporated during irrigation application.

Table 5 shows that historic consumptive usage of this water right increases sharply between April and May with a moderate increase that peaks in July during highest crop demand. Water usage then decreases as the growing season ends in October. Actual rates of diversion and the number of days diverted may vary due to crop demand, but instantaneous rates and the annual quantity must remain within the limits of the Court-awarded water right.

The full quantity of this water right, as adjudicated, will transfer into the Trust Water Rights Program; the consumptive and non-consumptive portions of the water right will be protected in the primary reach. For the secondary reach, only the consumptive quantities will be protected.

The primary reach is defined as that stretch of the creek between the original point of diversion and the last point where return flows reenter South Fork Cowiche Creek. This is at a point where Cowiche Creek enters Cowiche Canyon–a narrow bedrock feature that constricts groundwater flow including return flows.

The secondary reach is defined as the water downstream from the point where return flows cease reentering South Fork Cowiche Creek and continues to the confluence with the Naches River. The secondary reach begins at River Mile 5.9 on South Fork Cowiche Creek, and terminates at the confluence of Cowiche Creek and the Naches River. Each reach is illustrated in Figure 2.

The amounts available to be placed in trust:

- primary reach: 0.80 cfs and 148 acre-feet per minute (ac-ft/yr)
- secondary reach: 115.07 ac-ft/yr

Trust Water Management

Cowiche Creek Water Users Association Project Monitoring and Management Plan

The Washington Department of Fish & Wildlife, North Yakima Conservation District and the Yakima-Tieton Irrigation District has developed a water monitoring and management plan intended to accomplish two objectives:

1. To balance the water diverted from the Tieton River for use by the CCWUA with the water available at the historic and current points of diversion.
2. To ensure that the water in trust remains in South Fork Cowiche and Cowiche Creeks.

Because diversions from the Tieton River will be based on water availability at the historic points of diversion, YTID needs to have South Fork Cowiche and Cowiche Creeks flow data available from which to base diversion rates from the Tieton River. The trust water rights must be monitored instream past the historic points of diversion and the places of use to the end of the secondary reach to ensure that the water is not appropriated by other users. In compliance with a draft monitoring plan by the Washington Department of Fish and Wildlife, stream gages will be required at locations above and below each of the historic points of diversion to accomplish these goals. Fish counts and the appointment of a stream-patrolman are also included in the monitoring and management plan.

Other Elements of the Project

The U.S. Bureau of Reclamation (USBR) drafted a Basis of Negotiation that outlines the agreement between YTID and USBR regarding YTID's ability to divert more water from the Tieton River. The YTID infrastructure is federally-owned and therefore may not be used to carry non-federally owned water without a legal agreement. Additionally, YTID and USBR must ensure that this additional diversion from the Tieton River will not decrease flows in the Yakima River system, as managed by USBR. A contract between YTID, CCWUA and NYCD defines the agreement to exchange the Cowiche Creek water for Tieton water. Main points of the agreement are:

- Monitoring and Management Plan to ensure diversion rates and quantities match trust water rates and quantities.
- "Acts of God" provisions to allow CCWUA to return to diverting from Cowiche Creek system should a natural disaster render the YTID incapable from delivering water to CCWUA.
- Financial agreements between the three parties with regard to capital expenses and operation and management of new delivery and telemetric gaging systems.

Impairment Considerations

A water right change may not impair existing rights (RCW 90.03.380(1)) and a trust water right may be exercised only if it does not impair existing rights (RCW 90.38.040(5)(a) and 90.42.070). The CCWUA propose to change the purpose of use from irrigation to instream flow purposes. The diversions on South Fork Cowiche and Cowiche Creeks would be removed. Yakima-Tieton Irrigation District would replace the CCWUA's water supply with water from the Tieton River.

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By no longer diverting from South Fork Cowiche and Cowiche Creeks, water historically diverted will remain instream, increasing flow from the historic point of diversion downstream. If another water right is impaired by increasing flow in South Fork Cowiche and Cowiche Creeks, this trust water right shall be altered to eliminate impairment.

When considering impairment, thought must be given to the change in conveyance and irrigation practices. Return-flows have historically augmented the flow of Cowiche Creek downstream from the diversions and have been available for downstream users. CCWUA return-flows are generated through the deep percolation and runoff of water resulting from over-application, non-uniform application, and losses in the conveyance of water to the CCWUA lands. Because irrigation will continue to take place on the historic places of use, return flows will continue to augment flow in Cowiche Creek. However, the amount of water diverted from the Tieton River in replacement of CCWUA adjudicated rights for use on CCWUA lands will not include the replacement of conveyance water.

Public Interest Considerations

A trust water right may not impair the public interest (RCW 90.42.040(4)). Exercising the requested instream flow water right will increase flows from the historic point of diversion downstream to the confluence with the Naches River. Improving Cowiche Creek stream flows is anticipated to improve fish habitat.

Consideration of Protests and Comments

No protests or comments were received.

CONCLUSIONS

Court Claim No. 00425 was awarded 40 acres of irrigation. Since the Conditional Final Order signed on September 9, 2004, 37 acres have been irrigated and is eligible for change.

In accordance with RCW 90.03.380, the author makes a tentative determination that Court Claim No. 00425 represents a valid right to divert up to 0.80 cfs, 148 acre-ft/yr of water from the South Fork of Cowiche Creek.

The requested change of purpose of use will not impair existing rights, or impair the public interest under RCW 90.42.040(4)(a).

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change to Court Claim 00425 be approved in the amounts and within the limitations listed below and subject to the provisions listed in the Report of Examination for Change.

Trust Water Right Attributes

Primary Reach

The primary reach is an approximately 2.5-mile stretch on South Fork Cowiche Creek that begins at the current point of diversion (POD), which is located 1100 feet south and 1200 feet east of the north quarter corner of Section 4, being within the NW¼NE¼ of Section 4, T. 13 N., R. 17 E.W.M., Yakima County.

The primary reach ends at a point on the South Fork Cowiche Creek within the SW¼NE¼ of Section 11, T. 13 N., R. 17 E.W.M., being approximately 1435 feet south and 2060 feet west of the NE corner of Section 11, T.13 N., R. 17 E.W.M., Yakima County.

Secondary Reach

The secondary reach begins at a point on South Fork Cowiche Creek at a point located approximately 1435 feet south and 2060 feet west of the NE corner of Section 11, T. 13 N., R. 17 E.W.M. continuing to the confluence with the Naches River located within the NW¼SW¼ of Section 10, T.13, R. 18 E.W.M

For instream flow purposes, 115.07 ac-ft/yr, from April 1 to October 31 are distributed monthly as follows:

	April	May	June	July	Aug	Sept.	Oct.	Total
Avg. Qi (cfs)	0.144	0.298	0.373	0.474	0.379	0.249	0.096	
Qa (acre-feet)	2.28	18.31	22.17	29.08	23.25	14.82	5.16	115.07

Report by: _____ _____

Scott Turner, Water Resources Program Date

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