State of Washington
Trust Water Right Report of Examination

DEPARTMENT OF ECOLOGY
State of Washington

Add or Change Purpose of Use
Change Place of Use

PRIORITY DATE	WATER RIGHT NUMBER
June 30, 1883	Yakima Adjudication No. 01467
APPLICANT	**MAILING ADDRESS**
Washington Water Trust	1530 Westlake Ave Ste 400 Seattle WA 98109

Purpose and Quantity

Primary Reach

To be used for the purpose of **instream flow** in the Teanaway River: 0.85 cubic feet per second (cfs), 147.00 acre-feet per year (ac-ft/yr) from May 1 through September 15; and

To be used for the purpose of **mitigation** for out of priority uses in the Teanaway and Yakima Rivers: 0.335 cfs, 49.035 ac-ft/yr from May 1 through September 15; and 0.045 cfs, 0.075 ac-ft/yr from September 16 through April 30.

Secondary Reach

Purpose	Unit	May	Jun	Jul	Aug	Sept 1-15	Sept 16 - April 30	Total
Instream Flow	af	0	20.42	39.46	29.19	21.17	0	110.25
(average)	cfs	0	0.34	0.64	0.47	0.36	0	-
Mitigation	af	0.002	6.812	13.152	9.732	7.061	0.015	36.77
(average)	cfs	0.001	0.111	0.211	0.161	0.121	0.001	-

Note: The annual consumptive quantity (ACQ) under the trust right may not exceed 147.02 acre-feet.

Trust Water Right Place of Use (See Attachment 1)

Primary Reach – Begins at a point 650 feet south and 1,140 feet west from the northeast quarter corner of Section 34, T. 20 N., R. 16 E.W.M., and ends at a point 2,200 feet south and 420 feet east of the northwest quarter corner, of Section 3, T. 19 N., R. 16 E.W.M.

Secondary Reach (for the instream flow portion)– Begins at a point 2,200 feet south and 420 feet east of the northwest quarter corner, of Section 3, T. 19 N., R. 16 E.W.M. and continues down the Teanaway River to the confluence with the Yakima River, and continues down the Yakima River to the confluence with the Columbia River, and continues downstream to the confluence of the Columbia River and the Pacific Ocean.

Secondary Reach (for the mitigation portion) – Begins at a point 2,200 feet south and 420 feet east of the northwest quarter corner, of Section 3, T. 19 N., R. 16 E.W.M. and continues down the Teanaway River to the confluence with the Yakima River, down to USBR Gage at Parker,Yakima River mile 106.7, in the SW¼SW¼ of Section 17, T. 12 N., R. 19 E.W.M.

REACH	WATERBODY	RIVER MI	TWN	RNG	SEC	LATITUDE	LONGITUDE
Begin Primary Reach	Teanaway River	2.0	20N	16E	34	47°11'14.82"N	120°49'9.76"W
End Primary Reach and Begin Secondary Reach	Teanaway River	0.1	19N	16E	3	47°10'7.47"N	120°50'4.08"W
End Secondary Reach	Pacific Ocean						

Provisions Related to the Trust Water Right

Mitigation

When any portion of the mitigation is not being used, quantities will be added to target flows at Parker Dam and continue to the confluence with the Columbia River and downstream to the Pacific Ocean. If the water is used to offset consumptive use contingent on this mitigation, this instream flow right will be considered instream at least to Parker Dam in order to offset impacts to the total water supply available.

Real Estate Excise Tax

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. E-mail: REETSP@DOR.WA.GOV Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia WA 98504-7477, (360) 570-3265, http://dor.wa.gov/.

PORTION OF WATER RIGHT
NOT PLACED INTO TRUST UNDER
WRTS File #: CS4-01467@11sb3a

PRIORITY DATE	WATER RIGHT NUMBER
June 30, 1883	Yakima Adjudication No. 01467

NAME OF PARTY CONVEYING RIGHT TO TRUST	MAILING ADDRESS
Estate of Harry Masterson; and Laura M. Masterson	381 Masterson Rd, Cle Elum WA 98922; and 16504 63rd Ave W, Lynwood WA 98037

Remarks

A portion of Court Claim No. 01467 (including provision for surplus quantaties) has been transferred to the TWRP under No. CS4-01467@10sb3a, in addition to what is being considered in this report: No. CS4-01467@11sb3a.

Purpose and Quantity

Masterson Portion: 2.21 cfs and 379.75 ac-ft/yr for the irrigation of 155 acres, May 1 through September 15. The annual consumptive quantity (ACQ) under the irrigation right may not exceed 284.82 acre-feet.

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Kittitas	Teanaway River	Yakima River	39

SOURCE FACILITY/DEVICE	PARCEL	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Point of Diversion No. 2	20-16-34010-0009	**20**	**16**	**34**	NE¼NE¼	47°11'14.82"N	120°49'9.76"W

Point of Diversion No. 2 - 650 feet south and 1,140 feet west from the northeast quarter corner of Section 34, being within the northeast quarter of the northeast quarter of Section 34, T. 20 N., R. 16 E.W.M.

Place of Use (See map Attachment 1)

Those portions of the E1/2SW1/4SW1/4 of Section 28, the E1/2NW1/4NW1/4 of Section 33, and the SE1/4SW1/4, SW1/4SE1/4 of Section 28 and NE1/4NW1/4, NW1/4NE1/4 of Section 33, lying southerly and westerly of Masterson Ditch, ALL being within T. 20 N., R. 16 E.W.M., Kittitas County, Washington.

Description of Water System

The point of diversion (No. 2) consists of two 75 horsepower (hp) pumps equipped with a self cleaning intake screen, each capable of diverting approximately 900 gallons per minute (gpm). From the point of diversion, water is conveyed through a 10-inch pipe west to the Masterson Ditch alignment. The conveyance pipe continues in the ditch for a total distance of 2.5 miles to the Masterson property. At the Masterson Property, the mainline bifurcates into a series of laterals with riser connections for the wheel line irrigation system. A series of wheel lines irrigate 4 separate pastures.

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Annually, by January 31st of each calendar year.
What volume should be reported?	Total Annual Volume
What rate should be reported?	Monthly Peak Rate of Diversion in cfs.

Provisions Related to the Portion of the Water Right Not Placed in Trust

The Masterson portion of Court Claim No. 01467 shall be reduced to a maximum of 2.21 cfs and 379.75 ac-ft/yr for irrigation of 155 acres, May 1 through September 15. The annual consumptive quantity (ACQ) of the irrigation right shall not exceed 284.82 acre-feet.

Water Diversions under Court Claim No. 01467 shall be done in compliance with the *Order Requiring Metering Measuring, and Reporting Requirements, All Subbasins (1-31) in Benton, Kittitas, and Yakima Counties* entered September 15, 2005, in the Yakima Adjudication. A copy of the order is included with hard copies. The order may be viewed at the following web site: http://www.ecy.wa.gov/programs/wr/measuring/images/pdf/order772014845.pdf.

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above provisions, and to inspect at reasonable times any measuring device used to meet the above provisions.

The intake(s) shall be screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.57.040). Contact the Department of Fish and Wildlife, 600 Capitol Way N, Olympia, WA 98501-1091. Attention: Habitat Program. Phone (360) 902-2534 if you have questions about screening criteria. http://www.wdfw.wa.gov/reg/regions.htm

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 detrimental to the public interest.

Therefore, I ORDER the requested change of place and purpose of use under Trust Water Right Application No. CS4-01467@11sb3a, be approved subject to existing rights and the limits, rates, purposes, and 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.

Signed at Yakima, Washington, this 28 day of MARCH 2012.

Mark Kemner, Section Manger
Water Resources Program/CRO

BACKGROUND

Description and Purpose of Proposed Change

On April 28, 2011, Washington Water Trust (WWT) of Ellensburg, Washington, filed an application with the Washington State Department of Ecology (Ecology) to place a portion of water used under Yakima Adjudication Court Claim No. 01467, Subbasin No. 3, into the State of Washington's Trust Water Right Program (TWRP). WWT requests a permanent transfer to the TWRP for instream flow purposes in the Teanaway River and mitigation for out of priority water use in the Yakima Basin. The application was accepted and assigned Application No. CS4-01467@11sb3a.

Court Claim No. 01467 was confirmed to Harry James Masterson and Mary Lou Masterson (Masterson), and neighboring Wilbur H. Mundy and Mary Ann Mundy (Mundy). Masterson's portion of the claim included a maximum instantaneous diversion rate (Qi) of 4.8 cubic feet per second (cfs) and a cumulative annual quantity (Qa) of 1,527.50 acre-feet per year (ac-ft/yr) for irrigation of 235 acres and stock water, May 1 through September 15. Mundy's portion includes 0.90 cfs (Qi) and 292.50 ac-ft/yr (Qa) for irrigation of 45 acres and stock water, May 1 through September 15. Masterson and Mundy share 1.0 cfs and 5.0 ac-ft/yr (consumptive use) for stock water, September 16 through April 30. In addition, when surplus water is available in excess of what is needed to satisfy all existing rights, the claim is provisioned to allow for the diversion of up to 7.60 cfs (Masterson) and 1.80 cfs (Mundy). These surplus quantities are not additive and the total diversion rate for Court Claim No. 01467 may not exceed 7.60 cfs at any time. The surplus water is typically only available during the spring freshet (May to mid-July).

This report is specific to Application No. CS4-01467@11sb3a, pertaining to Masterson's portion of Court Claim No. 01467. WWT proposes to transfer 0.66 cfs and 149.40 ac-ft/yr (fallowing 61 acres) to instream flows. In addition, WWT proposed to transfer 0.22 cfs and 48.98 ac-ft/yr (fallowing 20 acres) and 0.045 cfs and 0.11 ac-ft/yr (stock water consumptive use) to the TWRP for mitigation for out of priority water use. The application was later admended to include fallowing of only 60 acres for instream flow; quantaties for mitigation and stockwater were unchanged. In the end, the claim will retain quantities required to irrigate 155 acres of timothy hay with wheel lines.

Mundy's portion of Court Claim No. 01467 will not be affected by the proposed transfer.

Table 1: Attributes of Court Claim No. 01467 and Proposed Change

Attributes	Existing*	Proposed
Name	Harry James Masterson and Mary Lou Masterson	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1883	**Application Date** – April 28, 2011
Instantaneous Quantity	3.35 cfs for irrigation; 0.045 cfs stock water*.	**Trust Water Portion**: 0.66 cfs for instream flow; 0.22 (irrigation)+0.045 (stock water) cfs for mitigation. **Remaining Portion**: 2.47 cfs for irrigation.
Annual Quantity	575.75 ac-ft/yr for irrigation; 0.11 ac-ft/yr stock water (consumptive use)*.	**Trust Water Portion**: 149.40 ac-ft/yr for instream flow; 48.98 (irrigation)+0.11 (stock water) ac-ft/yr for mitigation. **Remaining Portion**: 377.18 ac-ft/yr for irrigation.
Source	Teanaway River	Teanaway River
Point of Diversion/Withdrawal	No. 2 - NE¼NE¼ Section 34, T. 20 N., R. 16 E.W.M.	**Trust Water Portion**: N/A **Remaining Portion**: No. 2 - NE¼NE¼ Section 34, T. 20 N., R. 16 E.W.M.
Purpose of Use	Irrigation and stock water	**Trust Water Portion**: Instream Flow and Mitigation **Remaining Portion**: Irrigation
Period of Use	May 1 through September 15 for irrigation; continuous for stock water.	**Trust Water Portion**: May 1 through September 15 for instream flow and mitigation; September 16 through April 30 for mitigation **Remaining Portion**: May 1 through September 15 for irrigation.
Place of Use	See Attachment 1	**Trust Water Portion**: Teanaway and Yakima Rivers. **Remaining Portion**: See Attachment 1

* Quantities based on the tentative determination completed for CS4-01467@10sb3a (a previous change authorization for Masterson issued on August 9, 2011).

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in Water Right Change Application No. CS4-01467@11sb3a.

- **Public Notice**
  Notice of the proposed appropriation was published in the *Daily Record* of Ellensburg, Washington, on April 2 and 9, 2011. No protests were received by Ecology.

- **State Environmental Policy Act (SEPA)**
  This project required a SEPA review under WAC 197-11-800(4). Ecology, acting as the SEPA lead agency for this project, determined that it will not have a probable significant adverse impact on the environment and issued a Determination of Nonsignificance (DNS) on April 2 and 9, 2011.

- **Water Resources Statutes and Case Law**
  A transfer to instream flows in the Yakima Basin is governed by RCW 90.38. RCW 90.38.040(1) states that all trust water rights acquired by the Department of Ecology (Ecology) shall be placed in the Yakima River Basin Trust Water Right Program to be managed by Ecology. Ecology shall issue a Certificate of Water Right in the name of the state of Washington for each trust water right it acquires. 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 document water right transfers to and from the Trust Water Rights Program.

- **Expedited Processing**
  This application qualifies for expedited processing under WAC 173-152-050(3)(a) whereby water right change applications may be processed prior to applications submitted at an earlier date when the proposed water use, if approved, would substantially enhance or protect the quality of the natural environment. This proposed change would increase instream flows, improving fish access to habitat in the upper Teanaway River basin, as well as provide mitigation for future water uses. Based on the provisions of RCW 43.21A.690 and RCW 90.03.265, this application has been processed by Aspect Consulting, LLC (Aspect Consulting) under Ecology Cost-Reimbursement Assignment No. ASP010 (Master Contract No. C1000185).

INVESTIGATION

In consideration of this application, Aspect Consulting reviewed available documents pertaining to the historic use of water, site conditions, WWT's calculations, and the potential effect on existing water rights. This included information submitted by the applicant and pertinent Ecology records including stream gage data, adjudication and water rights records, and water resource policy and guidance documents.

On February 4, 2011, Tyson Carlson of Aspect Consulting met with Jason McCormick of WWT , Kelsey Sinclair Collins (Ecology), and Stan Isley (the Ecology and Court Appointed Water Master for the Teanaway River) to locate the point of diversion, place of use, and observe Masterson's irrigated acreage.

This project was last presented at the Water Transfer Working Group (WTWG) on June 27, 2011. This group represents private, federal, state and tribal groups interested in water right changes in the Yakima Basin. No objections were received from the WTWG.

History of Water Use

A water right with attributes described in Table 1 above was confirmed under Court Claim No. 01467 to Harry James Masterson and Mary Lou Masterson, in the Yakima River Basin Water Rights Adjudication for Subbasin No. 3, Teanaway River drainage basin, with a Conditional Final Order (CFO) signed on February 8, 2001. A water right was also confirmed to Wilbur H. Mundy and Mary Ann Mundy under the same priority date and claim number.

In order to make a water right change decision, Ecology must make a tentative determination on the extent and validity of the right. Under RCW 90.14.160 any portion of a water right or water right claim not exercised for a period of five successive years, without sufficient cause, shall be relinquished and revert to the state.

Court Claim No. 01467 includes a provision that authorizes Masterson and Mundy to divert additional water during the spring freshet. Masterson and Mundy together are limited to an additional 7.60 cfs of which Mundy is limited to 1.80 cfs. Inspection of available flow data from the Bureau of Reclamation for the lower Teanaway River over the last 6 years indicate the spring freshet on the Teanaway River typically begins by late March, peaking at around 650 to 800 cfs, then declining to summer baseflow condition by mid-July (approximately 20 cfs). During the 6-year period, the additional 7.60 cfs is estimated to be available at least 75 days (beginning May 1). 69 days (through July 6) of diverting at 7.60 cfs are required to satisfy the full annual quantities confirmed to Masterson and Mundy. Therefore, the full claim would be satisfied in most water years.

In 2001, Masterson leased 1,527 acre-feet (af) to the Roza Irrigation District to offset their use during the statewide drought emergency. This transaction was authorized in an *Order Pendente Lite (OPL)* signed on May 24, 2001. Since 2001, Masterson's water right has been exercised through leases that placed the right temporarily into the TWRP. In 2005, Ecology leased 1,514.50 acre-feet for instream flow in the Teanaway River, documented by an *OPL* signed on April 28, 2005. Authorization for irrigation of up to 2 acres from a well was subsequently authorized in an Emergency Drought Permit (No. CS4-01467CTCL@3) for 20 gpm (0.04 cfs) and 4.6 acre-feet (dated June 8, 2005). Approximately 8.4 acre-feet was not protected in 2005 (difference between the surface and groundwater adjudicated water duty). In 2009 and 2010, WWT leased the entire 1,527.50 acre-feet for instream flow purposes. The *OPL*(s) were signed on June 11, 2009 and April 8, 2010, respectively.

During the intervening years between leases, the Mastersons irrigated portions of the 235 acre place of use, utilizing a maximum of 267.79 acre-feet as supported by metering records. In 2009, the Teanaway River again flooded and destroyed the electrical service to the pumps, concrete pad, and associated lines and piping for the newly established point of diversion. The damaged infrastructure has since been repaired and the pumps are ready for installation when needed.

Review of aerial photos from the years 2003, 2005, 2006, and 2009 indicate that since issuance of the CFO, Masterson's authorized place of use has either been irrigated or fallowed (under lease) as described above. Irrigation and/or fallowing of the acreage was also supported by the review of Landsat imagery over a similar time span.

Since 1996, the Mastersons used stock water from the surface water diversion from May 1 to September 15, and a well from September 16 to April 30. Over the previous five year period (2006 to present), a maximum of 9 horses have been on farm, year round. Although the Mastersons did not seek to change the point of diversion and add the well (this stock watering use is otherwise consistent with the requirements of the ground water code under the permit exemption). A-de facto change from surface water to groundwater for stock watering from September 16 to April 30 is consistent with Water Resources Program Policy POL-1120.

The withdrawal rate of the well is approximately 20 gallons per minute (or 0.045 cfs). Stock water use estimates are based on the water demand requirements listed in the Washington State Department of Health Water System Design Manual (DOH 2009). The listed stock water requirement for horses is 12 gallons per day per head. Therefore, based on the maximum number of stock on farm (year round) in the last five years, the annual stock water use is estimated at 0.12 acre-feet (or 0.010 acre-feet per month).

In July 2011, WWT purchased the nonconsumptive portion of the claim associated with leakage from the earthen 3.0-mile long Masterson Ditch, and the reduction of on-farm demand by switching from flood to wheel line irrigation. These quantities were transfered to the TWRP to benefit instream flows in the Teanaway River under Application No. CS4-01467@10sb3a.

On April 15, 2011, the Masterson Estate, represented by Kathleen Masterson, entered into an agreement with WWT to sell additional quantities of Court Claim No. 01467. On January 13, 2012, the agreement was amendend to reflect divison of the Masterson Estate, including the 19 acres now owned by Laura M. Masterson. The final agreement included a combined 60 acres of land to be fallowed for instream flow purposes (6.25 acres from Laura M. Masterson; 53.75 from Masterson Estate) and 20 acres to be fallowed for future mitigation, including 0.045 cfs and 0.11 ac-ft/yr (consumptive use) of stockwater (both from the Masterson Estate).

Proposed Use

The applicant proposes to transfer a portion of Court Claim No. 01467 to trust for the purposes of instream flow in the Teanaway River and mitigation of future water use.

Land to be Fallowed

The proposed lands to be fallowed (80 acres) are located in portions of the SW1/4SW1/4 of Section 28 and NW1/4NW1/4 of Section 33, the portions of parcels numbered 293236, 093236, and 063236 in the N1/2SW1/4 of Section 28 lying south of the tree line, and portions of the SE1/4SW1/4, SW1/4SE1/4 of Section 28 and NE1/4NW1/4, NW1/4NE1/4 of Section 33, ALL being within T. 20 N., R. 16 E.W.M., Kittitas County, Washington.

Other Rights Appurtenant to the Place of Use

No other water rights for irrigation purposes are appurtenant to the Masterson's 235 irrigated acres.

However, in addition to the claim described above, additional authorization was confirmed under the same claim number to divert from an unnamed spring in the SW1/4NW1/4 of Section 21, approximately 675 feet north and 450 feet east from the west quarter corner, T. 20 N., R. 16 E.W.M. The claim was confirmed for 0.0022 cfs and 1.6 ac-ft/yr for continuous stock watering. The place of use is approximately that of the spring, limited to the NW1/4SW1/4NW1/4 of Section 21.

Trust Water Right Calculations

This section describes how the nonconsumptive and consumptive water use values were calculated to identify how much water will be transferred into the TWRP from 1) fallowing of 60 acres for the purposes of instream flow; and 2) fallowing 20 acres and reducing stock water for the purposes of future mitigation. These quantities under Court Claim No. 01467 were first evaluated by WWT and later updated by Aspect during this investigation.

Ecology uses various estimation methods such as the Washington Irrigation Guide (WIG) to estimate water use. The WIG data show the estimated average amount of water required by a crop above the portion of the requirement that might be met by antecedent moisture in the root zone under average climatic conditions (the amount of water a crop needs in excess of rainfall). The monthly WIG data indicate that the Crop Irrigation Requirement (CIR) for clover – the surrogate crop used for timothy hay near Cle Elum area – begins June 3 and ends October 7. The CIR for clover is 1.59 ac-ft/yr. Teanaway River adjudicated water rights were confirmed for a period of use from May 1 through September 15.

Using Ecology's *Guidance Document, GUID-1210, Determining Irrigation Efficiency and Consumptive Use, Table 1*, average application efficiency (Ea) for the Masterson's wheel line irrigation system was specified at 65 percent. The total irrigation demand (TIR) was then calculated based on the monthly CIR for clover in the Clem Elum area (TIR = CIR/Ea). The sum of the monthly TIR multiplied by the number of acres to be fallowed (60 acres for instream flow; 20 acres for mitigation) is the total quantity of water available to transfer into the TWRP, equaling 147.00 and 49.00 ac-ft/yr, respectively. The monthly TIR (in acre-feet) is converted to an instantaneous rate (in cfs) by dividing by the number of days in each respective month, then by the conversion factor 1.9834 ac-ft/day/cfs.

Together, the irrigation and stock water quantities (discussed below) available to be transferred into the TWRP for each proposed purpose of use are presented in Table 2 below.

Table 2 – Quantities Eligible for Protection in TWRP (Primary Reach)

Purpose	Unit	May	Jun	Jul	Aug	Sept 15	Sept 16 - April 30	Total
Instream Flow	af	0	27.23	52.62	38.92	28.23	0	147.00
	cfs	0	0.46	0.85	0.63	0.47	0	-
Mitigation	af	0.010	9.090	17.550	12.980	9.410	0.075	49.11
	cfs	0.045	0.195	0.335	0.255	0.205	0.045	-

Monthly consumptive use for irrigation was then calculated by multiplying the TIR by the specified %CU and the area to be fallowed. Total consumptive use is the sum of the monthly consumptive use.

Stock water is mostly consumptive, through respiration and evaporation, but a small portion of return flow is associated with animal waste. Limited data on the consumptive use of stock water have been identified. Provisional stock water use data available from the USGS Washington Water Science Center presents stock water use by county in 1995. Based on this data, consumptive use associated with stock water in Kittitas County is estimated at 87 percent. Therefore, the consumptive use associated with the Masterson nine horses is estimated to be 0.11 ac-ft/yr.

In accordance with RCW 90.03.380(1), Ecology is required to determine that the annual consumptive quantity under a water right proposed for a change to add purposes of use is no greater after the change. Annual Consumptive Quantity (ACQ) means the estimated or actual annual amount of water diverted pursuant to the water right, reduced by the estimated annual amount of return flows, averaged over the two years of greatest use within the most recent five-year period of continuous beneficial use of the water right.

The most recent five-year period of continuous beneficial use occurred from 2006 through 2010, through a combination of on-farm irrigation and lease. Two of the five years (2009 and 2010) were leased to WWT in full, equating up to 431.81 af of consumptive use assuming wheel line irrigation of 235 acres. During these years, a maximum of 2 horses were kept on farm year round, totaling approximately 0.023 af of consumptive use. Therefore, the ACQ of Court Claim No. 01467 is calculated to be 431.84 ac-ft/yr, of which approximately 147.02 ac-ft/yr (consumptive use) has been proposed for transfer into trust and 284.82 ac-ft/yr (consumptive use) will remain on farm to irrigate up to 155 acres.

Based on this analysis, Table 3 summarizes the amount of consumptive use from fallowing of 60 acres for instream flows and fallowing 20 acres and reducing stock water for mitigation for out of priority use that will be transferred to the TWRP.

Table 3 – Consumptive Use (Secondary Reach)

Purpose	Unit	May	Jun	Jul	Aug	Sept 15	Sept 16 - April 30	Total
Instream Flow	af	0	20.42	39.46	29.19	21.17	0	110.25
	cfs	0	0.34	0.64	0.47	0.36	0	-
Mitigation	af	0.002	6.812	13.152	9.732	7.061	0.015	36.77
	cfs	0.001	0.111	0.211	0.161	0.121	0.001	-

Water Not Placed in Trust

The portion of Court Claim No. 01467 which has not been sold and is not placed in trust will be retained. Therefore, the remaining portion of Court Claim No. 01467 described above will continue to be diverted from the Teanaway River at the current point of diversion (No. 2) for the irrigation of 155 acres of timothy hay with wheel lines.

Trust Water Place of Use

Ecology typically manages its trust water rights by defining a primary and a secondary reach. The primary reach is the length of stream between the point of diversion and where any of the water diverted, not consumed, returns to the stream. The secondary reach begins at the downstream end of the primary reach and is defined as that length of stream which benefits from a reduction in consumptive use.

The primary reach under this application begins from the authorized point of diversion (No. 2) on the Teanaway River being approximately 650 feet south and 1,140 feet west from the northeast quarter corner of Section 34, T. 20 N., R. 16 E.W.M. The portion(s) of the Masterson claim being proposed for transfer into the TWRP trust will benefit the primary reach for the times and purposes to which they were prescribed as presented in Table 2.

Return flow from the Masterson place of use drains in one of two small drainages. The drainages merge, continue toward the southeast, and eventually converge with the Teanaway River immediately upstream of the State Highway 10 bridge, approximately 550 feet upstream from the confluence with the Yakima River. It is assumed that no irrigation water, either surface or shallow groundwater, from the place of use returns back to the Teanaway River upstream of this point. Therefore, the secondary reach begins on the Teanaway River at the State Highway 10 bridge, at a point 2,200 feet south and 420 feet east of the northwest quarter corner, of Section 3, T. 19 N., R. 16 E.W.M. The secondary reach extends downstream on the Teanaway River to the confluence with the Yakima River, and downstream to the confluence of the Yakima and Columbia Rivers, and downstream to the Pacific Ocean.

The consumptive use associated with a right is eligible for protection as a trust water right in the secondary reach as described in Table 3 above. A portion of the trust water right may serve as mitigation for out of priority water use from surface water sources and/or sources in continuity with the Yakima River. Any new appropriations seeking to mitigate with this right must show that they are water budget neutral with respect to the total water supply available (TWSA). Any portion of this claim used as mitigation will be managed in the Yakima River to the USBR Parker Gage.

Trust Water Management

A portion of Court Claim No. 01467 is being changed to instream flow and mitigation for out of priority water use. As a condition of placing this water right into the State Trust Water Rights Program, a portion of the water placed into trust may be available as mitigation to address the issue of impairment consistent with WAC 173-539A. These quantities will be managed by Ecology as outlined in the project's Trust Water Right Agreement.

Instream flows in the Teanaway River in the Primary Reach may be measured at the newly established Bureau of Reclamation's Lambert Road gage.

Impairment Considerations

Under RCW 90.38.040(5)(a), a trust water right may be exercised only if Ecology first determines that the authorization will not impair or injure any other water rights.

From the point of diversion, water is tight-lined to the Masterson place of use, beyond the topographic divide located near Teanaway Heights Drive. Once water was conveyed beyond the subtle change in slope, the topographic divide directs water away from the Teanaway River. Local surface water (and shallow groundwater) west of this divide drains in one of two small drainages toward the southeast. The drainages merge, continue to the southeast, and eventually converge with the Teanaway River immediately upstream of the State Highway 10 bridge, approximately 550 feet from the confluence with the Yakima River.

It is assumed that leakage from the conveyance piping from the point of diversion to the place of use is negligible. In addition, no return flow (surface or shallow groundwater) returns to the Teanaway River within in Primary Reach. Therefore, based on this rational, downriver diverters (or instream flows) will not experience a reduction in the availability of water due to the subject transfer; therefore, transferring a portion of Court Claim No. 01467 to trust will not impair other water rights.

Consideration of Protests and Comments

No protest or comments were received for consideration.

CONCLUSIONS

A portion of Court Claim No. 01467 is appurtenant to the subject property. Review of the evidence provided within this report and proceedings within the Yakima River Basin Adjudication Court indicate that a total of 235 acres have been historically and beneficially used under Court Claim No. 01467.

In accordance with Chapter 90.38 RCW, the author makes a tentative determination that the Masterson portion of Court Claim No. 01467 represents a valid right to divert water from the Teanaway River in quantities up to 3.35 cfs and 575.75 acre-feet for the irrigation of 235 acres, from May 1 through September 15; and 0.045 cfs and 0.11 ac-ft/yr (consumptive use) for stock water, year round.

Approval of this water right change request as provisioned will not enlarge the water right or impair existing water rights.

RECOMMENDATIONS

Based on the above investigation and conclusions, I recommend that the request for change to CS4-01467@11sb3a be approved in the amounts and within the limitations described on page 1 and subject to the provisions beginning on page 2 of this Report of Examination.

Primary Reach

To be used for the purpose of instream flow in the Teanaway River: 0.85 cubic feet per second (cfs), 147.00 acre-feet per year (ac-ft/yr) from May 1 through September 15; and

To be used for the purpose of mitigation for out of priority uses in the Teanaway and Yakima Rivers: 0.335 cfs, 49.035 ac-ft/yr from May 1 through September 15; and 0.045 cfs, 0.075 ac-ft/yr from September 16 through April 30.

Secondary Reach

Purpose	Unit	May	Jun	Jul	Aug	Sept 15	Sept 16 - April 30	Total
Instream Flow	af	0	20.42	39.46	29.19	21.17	0	110.25
	cfs	0	0.34	0.64	0.47	0.36	0	-
Mitigation	af	0.002	6.812	13.152	9.732	7.061	0.015	36.77
	cfs	0.001	0.111	0.211	0.161	0.121	0.001	-

Note: The annual consumptive quantity (ACQ) under the trust right may not exceed 147.02 acre-feet.

State of Washington Hydrogeologist 1575 Licensed Geologist

Report by: Tyson D. Carlson 3/27/12

Tyson D. Carlson, LHG, Aspect Consulting, LLC Date

Reviewed by: Kelsey S. Collins 3/27/12

Kelsey Sinclair Collins, Water Resources Program 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.

CITATIONS

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Report of Referee*, Subbasin No. 3 (Teanaway River). Signed January 25, 1996.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Supplemental Report of Referee*, Subbasin No. 3 (Teanaway River). Signed March 29, 1999.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, Second *Supplemental Report of Referee*, Subbasin No. 3 (Teanaway River). Signed August 3, 2000.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Conditional Final Order*, Subbasin No. 3 (Teanaway River). Signed February 8, 2001.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Third Order Approving Roza Irrigation District and Sunnyside Valley Irrigation District Motion for Order Pendente Lite for 2001 Drought Temporary Water Transfers*. Signed May 24, 2001.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Order Pendente Lite* Re: Water Right Claim No. 01467, Subbasin No. 3. Signed April 28, 2005.

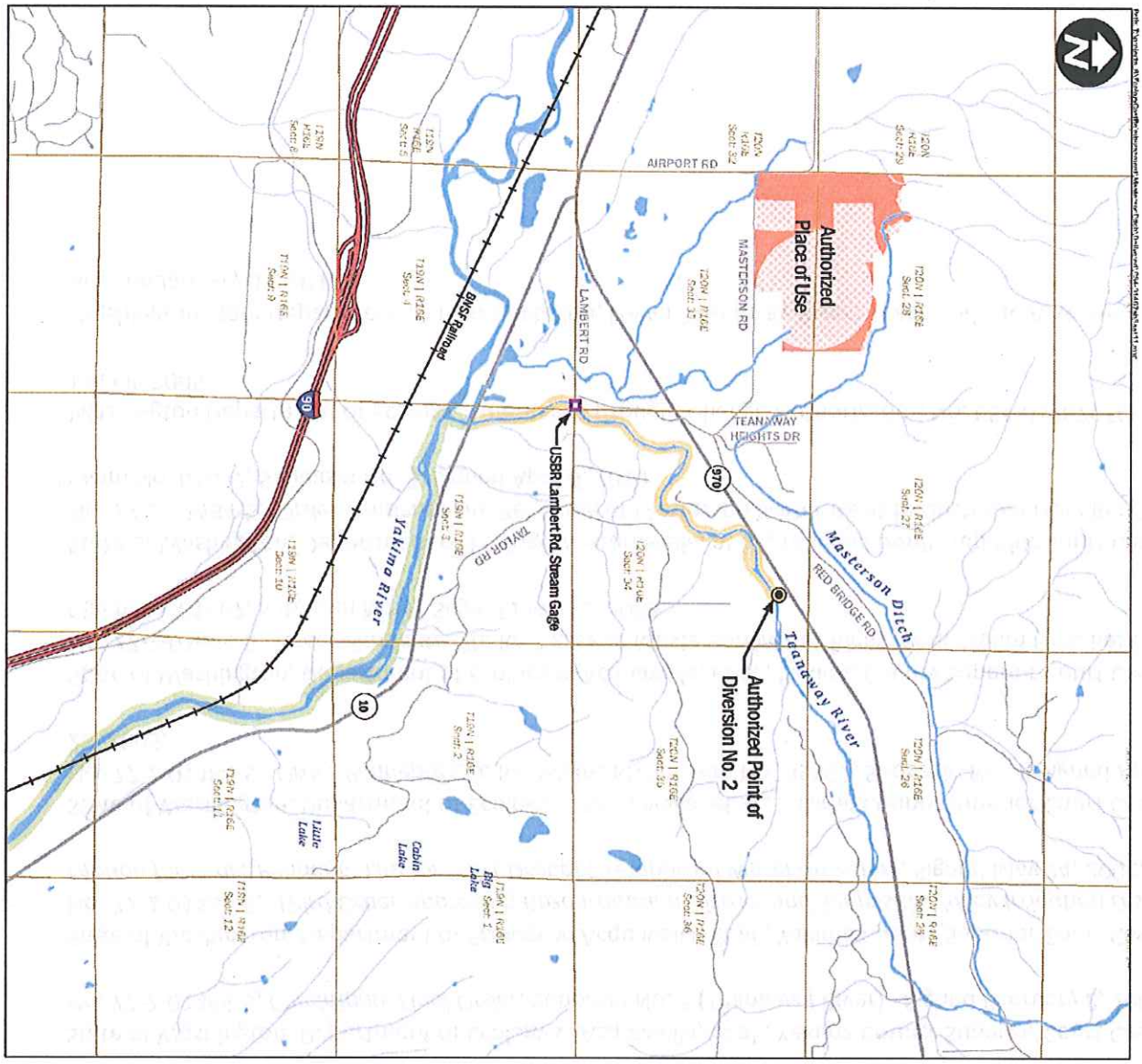
State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Order Pendente Lite* Re: Lease of Masterson Water Right for Instream Flow Re: Court Claim No. 01467, Subbasin No. 3. Signed June 11, 2009.

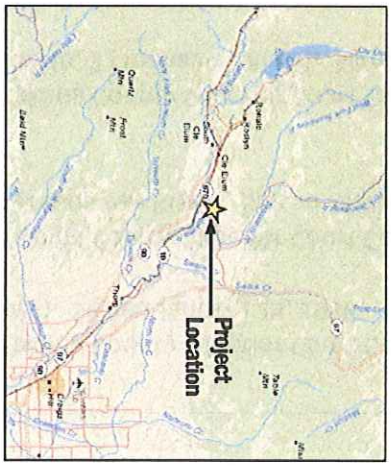
State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, *Order Pendente Lite* Re: Lease of Masterson Water Right for Instream Flow RE: Court Claim No. 01467, Subbasin No. 3. Signed April 8, 2010.

Washington Department of Ecology, Emergency Drought Change Authorization No. CS4-01467CTCL@3, June 8, 2005.

Washington State Department of Transportation, Lower Teanaway River: Reach and site Assessment. Revised January 31, 2011.

ATTACHMENT 1





Comments: *Place of use and point of diversion are defined on the cover sheet under the heading "LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED."*

- Authorized Place of Use
- Land to be Fallowed
- Authorized Point of Diversion
- Primary Reach
- Secondary Reach *(extends to Wapato Diversion Dam at RM 106.7)*
- USBR Lambert Rd. Gage
- Local Road
- Highway
- Interstate
- Railroad
- Sections (TRS)

0 1,250 2,500 5,000 Feet

No. CS4-01467@11sb3a
(Washington Water Trust)
WRIA 39
Kittitas County, Washington

Aspect CONSULTING

Aug. 2011		ATTACHMENT NO.
090150	TDC / EAH	1