WR File No.: CS4-00176sb2@14
WR Doc ID: 6577646

DEPARTMENT OF ECOLOGY
State of Washington

State of Washington
Trust Water Right Report of Examination

Change Purpose of Use **Change Place of Use**

PRIORITY DATE	WATER RIGHT NUMBER
June 30, 1887	Yakima Adjudication Court Claim No. 00176

APPLICANT	CHANGE APPLICATION NO.
Washington Water Trust 1530 Westlake Avenue North, Suite 400 Seattle, Washington 98109	CS4-00176sb2@14

Purpose and Quantity

Up to 0.14 cubic feet per second (cfs) year round, and 101.47 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach
The following quantities are to be used for the purpose of instream flow:

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	0.90	1.75	1.29	0.93	0.01	0.01	0.01	0.01	0.01	0.01	4.95
	cfs	0.00001	0.00001	0.01502	0.02829	0.02085	0.01561	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Trust Water Right Place of Use (See Attached Map)

Primary Reach – Begins at the historic Big Creek point of diversion at a point 1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SW1/4SE1/4 of Section 29, T. 20 N, R. 14 E.W.M., and ends at a point 790 feet south and 1,700 feet west of the northeast quarter corner of Section 21, T. 20 N., R. 14 E.W.M.

Secondary Reach – at a point 790 feet south and 1,700 feet west of the northeast quarter corner of Section 21, T. 20 N., R. 14 E.W.M and continues down the Yakima River to the confluence with the Columbia River.

REACH	WATERBODY	RIVER MI	TWN	RNG	SEC	LATITUDE	LONGITUDE
Begin Primary Reach	Big Creek	2.3	20N	14E	29	47°14'45.62"N	120°51'28.41"W
Begin Secondary Reach	Big Creek / Yakima River	0.0	20N	14E	21	47°13'2.02"N	121° 5'51.72"W
End Secondary Reach	Columbia River	0.0	9N	28E	24	46°14'51.80"N	119° 14'23.2"W

Datum: WGS84

Findings of Facts

Upon reviewing the investigator's report, I find all facts relevant and material to Change Application No. CS4-00176sb2@14 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. CS4-00176sb2@14, be approved 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: Trevor Hutton, Section Manager
Water Resources Program
Ecology Central Regional Office
1250 W. Alder Street
Union Gap, WA 98903

Signed at Yakima, Washington, this 10th day of August 2016.

Trevor Hutton

Trevor Hutton, Section Manger
Water Resources Program
Central Region Office

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov
To find laws and agency rules visit the Washington State Legislature Website: http://www.leg.wa.gov/CodeReviser

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

INVESTIGATOR'S REPORT

NOTICE: Combined Report: The following investigation pertains to six Application Nos.:

CS4-00176sb2@12	CS4-00176sb2@13	CS4-00176sb2@14
CS4-00176sb2@15	CS4-00176sb2@16	CS4-00176sb2@17

BACKGROUND

Description and Purpose of Proposed Change

Washington Water Trust (WWT) of Seattle, Washington, filed six applications with the Washington State Department of Ecology (Ecology) to place portions of Yakima Adjudication Court Claim No. 00176 into the State of Washington's Trust Water Right Program (TWRP). WWT requests a permanent transfer to the TWRP from instream flow and mitigation purposes in Big Creek and the Yakima River. The applications were accepted and assigned Application Nos. CS4-00176sb2@12, CS4-00176sb2@13, CS4-00176sb2@14, CS4-00176sb2@15, CS4-00176sb2@16, and CS4-00176sb2@17. The applications were later amended to reflect overall project goals and water right processing constraints.

Court Claim No. 00176 was originally confirmed to C. Frederick (Fred) Darling under two different priority dates (June 30, 1887 and 1889). The 1887 portion of the claim included a maximum instantaneous diversion rate (Qi) of 1.50 cubic feet per second (cfs) and a cumulative annual quantity (Qa) of 360 acre-feet per year (ac-ft/yr) for the irrigation of 75 acres, May 1 through September 1, and 2 ac-ft/yr stockwater, year round. Similarly, the 1889 portion of the claim included 0.04 cfs and 9.6 ac-ft/yr for the irrigation of 2 acres, May 1 through September 1. Following the passing of Fred Darling in 2009, the 1887 portion of the claim was divided amongst 7 heirs by Yakima County Superior Court. The 1889 portion of the claim has a distinct place of use and was not considered as part of this investigation.

This report addresses Application Nos. CS4-00176sb2@12 through CS4-00176sb2@17, pertaining to 6 of the 7 portions Fred Darling willed to his heirs under the 1887 portion of the claim. WWT, working on behalf of the applicants, proposes to permanently transfer cumulatively, up to 1.49 cfs year round (1,079.38 ac-ft/yr) to instream flow for environmental benefit and mitigation for out-of-priority (new or junior) use. Attributes of each portion of the divided claim and pending applications are described in **Tables 1a** through **1f** below.

Table 1a : Attributes of Gayle Darling's Portion of Court Claim No. 00176 and Proposed Change Under No. CS4-00176sb2@12

Attributes	Existing	Proposed
Name	Gayle L. Darling	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1887	**Application Date** – April 13, 2015
Instantaneous Quantity	0.75 cfs	0.75 cfs
Annual Quantity	175.2 ac-ft/yr for irrigation; 0.4867 ac-ft/yr for stockwater	543.08 ac-ft/yr
Source	Big Creek	Big Creek
Point of Diversion	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SE¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M.	N/A
Purpose of Use	Irrigation of 36.5 acres; stockwater	Instream Flow and Mitigation
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater	May 1 through September 1 for 175.2 ac-ft/yr; continuously for 0.4867 ac-ft/yr
Place of Use	36.5 acres located within Lots 6, 7, 9, 14, 15, J and K of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, being a portion of the SE¼ of Section 20, T. 20 N., R. 14 E.W.M.	Big Creek and Yakima River

Table 1b: Attributes of David Darling's Portion of Court Claim No. 00176 and Proposed Change Under No. CS4-00176sb2@13

Attributes	Existing	Proposed
Name	David J. Darling	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1887	**Application Date** – May 12, 2015
Instantaneous Quantity	0.18 cfs	0.18 cfs
Annual Quantity	44.16 ac-ft/yr for irrigation; 0.1226 ac-ft/yr for stockwater	130.45 ac-ft/yr
Source	Big Creek	Big Creek
Point of Diversion	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SE¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M	N/A
Purpose of Use	Irrigation of 9.2 acres; stockwater	Instream Flow and Mitigation
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater	May 1 through September 1 for 44.16 ac-ft/yr; continuously for 0.1226 ac-ft/yr
Place of Use	9.2 acres located within Lots 11 and 20 of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, being a portion of the SE¼ of Section 20, T. 20 N., R. 14 E.W.M.	Big Creek and Yakima River

Table 1c: Attributes of Lona Darling's Portion of Court Claim No. 00176 and Proposed Change Under No. CS4-00176sb2@14

Attributes	Existing	Proposed
Name	Lona Jeannine Darling	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1887	**Application Date** – May 12, 2015
Instantaneous Quantity	0.14 cfs	0.14 cfs
Annual Quantity	34.56 ac-ft/yr for irrigation; 0.096 ac-ft/yr for stockwater	101.47 ac-ft/yr
Source	Big Creek	Big Creek
Point of Diversion	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SE¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M	N/A
Purpose of Use	Irrigation of 7.2 acres; stockwater	Instream Flow and Mitigation
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater	May 1 through September 1 for 34.56 ac-ft/yr; continuously for 0.096 ac-ft/yr
Place of Use	7.2 acres located within Lot 12 of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, being a portion of the SE¼ of Section 20, T. 20 N., R. 14 E.W.M.	Big Creek and Yakima River

Table 1d: Attributes of David Darling's Portion of Court Claim No. 00176 and Proposed Change Under No. CS4-00176sb2@15

Attributes	Existing	Proposed
Name	David J. Darling	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1887	**Application Date** – May 12, 2015
Instantaneous Quantity	0.14 cfs	0.14 cfs
Annual Quantity	34.56 ac-ft/yr for irrigation; 0.096 ac-ft/yr for stockwater	101.47 ac-ft/yr
Source	Big Creek	Big Creek
Point of Diversion	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SE¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M.	N/A
Purpose of Use	Irrigation of 7.2 acres; stockwater	Instream Flow and Mitigation
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater	May 1 through September 1 for 34.56 ac-ft/yr; continuously for 0.096 ac-ft/yr
Place of Use	7.2 acres located within Lot 13 of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, being a portion of the SE¼ of Section 20, T. 20 N., R. 14 E.W.M.	Big Creek and Yakima River

Table 1e: Attributes of Davida Burns' Portion of Court Claim No. 00176 and Proposed Change Under No. CS4-00176sb2@16

Attributes	Existing	Proposed
Name	Davida Lynne Burns	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1887	**Application Date** – May 13, 2015
Instantaneous Quantity	0.14 cfs	0.14 cfs
Annual Quantity	34.56 ac-ft/yr for irrigation; 0.096 ac-ft/yr for stockwater	101.47 ac-ft/yr
Source	Big Creek	Big Creek
Point of Diversion	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SE¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M.	N/A
Purpose of Use	Irrigation of 7.2 acres; stockwater	Instream Flow and Mitigation
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater	May 1 through September 1 for 34.56 ac-ft/yr; continuously for 0.096 ac-ft/yr
Place of Use	7.2 acres located within Lot 10 of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, being a portion of the SE¼ of Section 20, T. 20 N., R. 14 E.W.M.	Big Creek and Yakima River

Table 1f: Attributes of Patricia Darling Strong's Portion of Court Claim No. 00176 and Proposed Change Under No. CS4-00176sb2@17

Attributes	Existing	Proposed
Name	Patricia Darling Strong	Washington Water Trust
Priority Date | Date of Application for Change	**Priority Date** – June 30, 1887	**Application Date** – May 27, 2015
Instantaneous Quantity	0.14 cfs	0.14 cfs
Annual Quantity	34.56 ac-ft/yr for irrigation; 0.096 ac-ft/yr for stockwater	101.47 ac-ft/yr
Source	Big Creek	Big Creek
Point of Diversion	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SE¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M.	N/A
Purpose of Use	Irrigation of 7.2 acres; stockwater	Instream Flow and Mitigation
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater	May 1 through September 1 for 34.56 ac-ft/yr; continuously for 0.096 ac-ft/yr
Place of Use	7.2 acres located within Lot 8 of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, being a portion of the SE¼ of Section 20, T. 20 N., R. 14 E.W.M.	Big Creek and Yakima River

Expedited Processing

These applications qualify for expedited processing under WAC 173-152-050(2)(c)(ii) 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 Big Creek subbasin, as well as provide mitigation for future water uses.

Based on the provisions of RCW 43.21A.690 and RCW 90.03.265, these applications were processed by Aspect Consulting, LLC (Aspect Consulting) under Ecology Cost-Reimbursement Assignment No. ASP028 (Master Contract No. C1000185).

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change in the subject water right applications.

- **Public Notice**

  Public notice of the application was given in the Daily Record, Ellensburg, Kittitas County, Washington on February 26 and March 4, 2016. No protests were received during the 30 day protest period.

- **State Environmental Policy Act (SEPA)**

  Application No. CS4-00176sb2@12 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 February 24, 2016. No comments were received.

- **Water Resources Statutes and Case Law**

  A transfer to instream flows in the Yakima Basin is governed by chapter 90.38 RCW. RCW 90.38.040(1) states that all trust water rights acquired by 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 TWRP.

  The Washington Supreme Court has held that Ecology, when processing an application for change to a water right, is required to make a tentative determination of extent and validity of the claim or right. This is necessary to establish whether the claim or right is eligible for change. *R.D. Merrill v. PCHB* and *Okanogan Wilderness League v. Town of Twisp.*

INVESTIGATION

In consideration of this application, Aspect Consulting reviewed available documents pertaining to the historical water use, 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 diversion measurements, adjudication and water rights records, and water resource policy and guidance documents.

On January 27, 2016, Tyson Carlson (Aspect Consulting) completed a site visit to locate the original point of diversion, the ditch alignment, and observe the historic irrigated acreage.

This project was presented at the Water Transfer Working Group (WTWG) on May 2, 2016. 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 under Court Claim No. 00176 was confirmed to C. Frederick (Fred) Darling in the Yakima River Basin Water Rights Adjudication for Subbasin No. 2 (Easton), with a Conditional Final Order (CFO) signed on February 13, 1997. This claim is summarized below in **Table 2**. In addition to the annual quantities authorized for irrigation and stockwater, the supplemental report of referee for subbasin 2 discussed the need for 1.5 cfs year round for conveyance. This is to deliver irrigation and stockwater in the summer, and allow free flowing water in the wintertime for stock. In consideration of this conveyance water, the total annual quantity of the claim is 1,079.38 ac-ft/yr.

Table 2: Original Attributes of Court Claim No. 00176

Attributes	Existing
Name	C. Frederick Darling
Priority Date	June 30, 1887
Instantaneous Quantity	1.5 cfs
Annual Quantity	360 ac-ft/yr for irrigation; 2.0 ac-ft/yr for stockwater.
Source	Big Creek
Point of Diversion/Withdrawal	1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SW¼SE¼ of Section 29, T. 20 N., R. 14 E.W.M
Purpose of Use	Irrigation of 75 acres; stockwater
Period of Use	May 1 through September 1 for irrigation; continuously for stockwater
Place of Use	The southeast quarter of Section 20 lying north of Nelson Siding Road, EXCEPT, the north 1200 feet of west 700 feet and the east 400 feet thereof. ALSO, the northerly 300 feet of the westerly 1700 feet of that portion of the southeast quarter of Section 20 lying parallel to and southerly of the Nelson Siding Road; ALL being within Section 20, T. 20 N., R 14 E.W.M.

From Darling's Big Creek point of diversion, water was historically conveyed via an approximately 1-mile long ditch, which crosses the Kittitas Reclamation District (KRD) canal, until delivered onto the place of use described above. Once onsite, the water was used to flood irrigate pasture in the southeast quarter of Section 20 lying north of Nelson Siding Road with between 52 and 34 head of cattle, and a small 0.5 acre pasture on the south side of Nelson Siding Road. While the court awarded water for 75 acres, aerial photographs reveal the size of both pastures combined is approximately 59.16 acres. Water was typically diverted from ditches by placing boards into hand-dug laterals that transected the property.

The pastures were historically flooded from the south to north across the property. Following the application of water to the fields, tail water generally collected in the northeast corner of the property, coalesced in a small drainage, then flowed north, under the Iron Horse Trail, railroad, and Interstate 90. The drainage continues for a short distance before joining a small riparian/wetland complex immediately downgradient of Lavender Lake. The wetland then drains east before converging with the Yakima River at a point approximately 3,000 feet upstream of the Big Creek and Yakima River confluence.

In 2009, Fred Darling passed away and left his property to seven individual heirs. Court Claim No. 00176 was divided among the heirs in Yakima County Superior Court, as shown in Table 3. The owners of six of the seven properties entered into a contract with Ecology and WWT to sell their portions of Court Claim No. 00176 and place them into the TWRP. The portion of the claim awarded to Brian King is not being considered in this report.

Table 3: Summary of Division of Court Claim No. 00176

Name on Court Claim	Priority Date	Qi (cfs)	Qa Irrigation (ac-ft/yr)	Acres	Qa Stockwater (ac-ft/yr)	Place of Use
Gayle L. Darling	June 30, 1887	0.75	175.2	36.5	0.4867	36.5 acres located within Lots 6, 7, 9, 14, 15, J and K of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016
David J Darling	June 30, 1887	0.18	44.16	9.2	.1226	9.2 acres located within Lots 11 and 20 of Survey recorded under Kittitas County Auditor's Recording No. 201004130016
Lona Jeannine Darling	June 30, 1887	0.14	34.56	7.2	0.096	7.2 acres located within Lot 12 of Surveys, recorded under Kittitas County Auditor's Recording No. 201004130016
David J Darling	June 30, 1887	0.14	34.56	7.2	0.096	7.2 acres located within Lot 13 of Surveys, recorded under Kittitas County Auditor's Recording No. 201004130016
Davida Lynn Burns	June 30, 1887	0.14	34.56	7.2	0.096	7.2 acres located within Lot 10 of Surveys, recorded under Kittitas County Auditor's No. 201004130016
Patricia Darling Strong	June 30, 1887	0.14	34.56	7.2	0.096	7.2 acres located within Lot 8 of Surveys, recorded under Kittitas County Auditor's Recording No. 201004130016
Brian King	June 30, 1887	0.01	2.40	0.5	0.0067	0.5 acres located within Lot 5 and Parcel H of Surveys, recorded under Kittitas County Auditor's Recording No. 201004130016

Extent and Validity

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. In cases when a water right has had recent departmental action, including approval of a change application within the last 5 years, clarification is provided by *Water Resources Program Policy for Conducting Tentative Determination of Water Rights (POL-1120)*, indicating a simplified tentative determination may be conducted.

Since signing of the CFO for the Easton Subbasin in 1997, the water right has been exercised by irrigation of the place of use and stockwater through the 2008 irrigation season. Diversion records collected by Stan Isley, Court Appointed Stream Patrolman, indicate that the full instantaneous quantity of water was diverted continuously through 2008. These records are also referenced in a declaration provided by Greg McLaughlin (WWT).

Following Fred Darling's passing, an affidavit from the estate executor (Brian King) stated that because of difficulty in dividing the land between heirs, he ordered that all agricultural activities be stopped until the estate was divided. This period was from May 17, 2009 to December 2011. The applicants also provided a letter from Mr. King's attorney, Darrel Ellis, confirming the affidavit. This 3-year period of nonuse is a sufficient cause of nonuse as defined by RCW 90.14.140(1)(d).

On January 27, 2012, Yakima County Superior Court issued the final Order Dividing Water Rights and Substituting Parties for the claim. The portions of Court Claim No. 00176 considered in this report were temporarily transferred to instream flow through 2016 via an *Order of Pendente Lite* (OPL) signed on December 12, 2013 by Judge Gavin in Yakima County Superior Court (No. 77-2014845). A summary of the division is shown in **Table 4** below.

Review of aerial photos from the years 2003, 2005, 2006, 2009, 2011, 2012, and 2014 indicate that since issuance of the CFO, Fred Darling's authorized place of use has either been irrigated or fallowed (excused by sufficient cause or use for instream flows) as described above, although it should be noted that aerial photos indicate a rather low irrigation efficiency. This is consistent with Mr. Isley's statement that the coarse-grained pasture has poor water holding capacity. Irrigation and/or fallowing of the acreage was also generally supported by the review of Landsat imagery over a similar time span. Furthermore, historic water use was substantiated by a declaration provided by Greg McLaughlin, and an interview with Stan Isley.

In summary, under the portions of the claim being considered in this report Fred Darling irrigated up to 58.66 acres using flood irrigation techniques establishing a maximum diversion rate of 1.49 cfs in any five-year period. To determine the amount of irrigation associated with each portion of the divided claim, the six parcels were overlain on an aerial photograph as described in the Court division. Irrigable field acreage within each parcel was then determined. In two of the six portions identified by the court, the number of irrigated acres exceeds the number of irrigable acres on the parcel. In these instances, any water transferred to the TWRP must be limited to the amount awarded by the court during the division. In total, the six portions are limited to 56.96 acres of irrigation. Results of this analysis is also summarized in **Table 4**.

The portions of Court Claim No. 00176 also include stockwater. Based on additional information provided by Brian King, there were approximately 52 cattle on the property between 1998 and 2008. However, several head of cattle were sold early in 2009. At the time of Fred Darling's passing in May 2009, only 32 head remained. The supplemental report of referee stated Fred Darling had 45 cows on his property, for which he was awarded 1 ac-ft of water. The six applicants received 0.9933 ac-ft for stock water, and an additional 1.49 cfs of water for year-round conveyance. When calculated for the entire year, the 1.49 cfs of conveyance water is 1,079.38 ac-ft/yr. Based on this information and the previously discussed relinquishment exemption, the full extent of the stockwater portion of the claim was put to beneficial use as described in **Table 4**.

Table 4: Summary of Court Division and Irrigated Acreage by Water Right Application

Application No.	Division Quantities				Irrigation Quantities		
	Qi (cfs)	Qa Irrigation (ac-ft/yr)	Total Acres	Qa Stockwater (ac-ft/yr)	Historically Irrigated Acres	Irrigable Acres	Qa Irrigation (ac-ft/yr)
CS4-00176sb2@12	0.75	175.2	36.5	0.4867	31.40	31.40	150.72
CS4-00176sb2@13	0.18	44.16	9.2	0.1226	2.20	2.20	10.56
CS4-00176sb2@14	0.14	34.56	7.2	0.096	2.77	2.77	13.30
CS4-00176sb2@15	0.14	34.56	7.2	0.096	8.00	*7.20*	34.56
CS4-00176sb2@16	0.14	34.56	7.2	0.096	8.10	*7.20*	34.56
CS4-00176sb2@17	0.14	34.56	7.2	0.096	6.19	6.19	29.71
Total	**1.49**	**357.6**	**74.5**[1]	**0.9933**	**58.66**	**56.96**	**273.41**

Note: Italics indication claim portions are limited by total acres in the authorized place of use.

Land to be Fallowed

The proposed lands to be fallowed include the original 65.36 acre irrigated pasture being within Lot 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, J and K of Surveys recorded under Kittitas County Auditor's Recording No. 201004130016, all being within Section 20, T. 20 N., R. 14, E.W.M.

Other Rights Appurtenant to the Place of Use

The 1889 portion of Court Claim 00176 does not share a place of use with the 1887 portions of this claim. No other water rights for irrigation or stockwater purposes are appurtenant to the original authorized place of use, and following the division, each applicant owns a distinct portion of the original claim.

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 historic point of diversion and where any of the water diverted, but not historically consumed, returns to the river. 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.

[1] This does not include the 0.5 acres awarded to Brian King during the division.

The primary reach begins from the authorized point of diversion on Big Creek approximately 1,100 feet north and 750 feet east of the south quarter corner of Section 29, being within the SW¼SE¼ of Section 29, T. 20 N, R. 14 E.W.M. The portions of Court Claim No. 00176 being proposed for transfer into the TWRP will benefit the primary reach for the times and purposes described in **Tables 5a – 5g**.

Return flow from the place of use generally flows north across the property, under the Iron Horse Trail, railroad, and Interstate 90, until joining a small riparian/wetland complex immediately downgradient of Lavender Lake. The wetland then drains east before converging with the Yakima River at a point approximately 3,000 feet upstream of the Big Creek and Yakima River confluence. However, water is not eligible for protection above the confluence (discussed below). Therefore, the end of the primary reach and beginning of the secondary reach is at the confluence of Big Creek and the mainstem of the Yakima River, at a point 790 feet south and 1,700 feet west of the northeast quarter corner of Section 21, T. 20 N., R. 14 E.W.M. The secondary reach extends downstream on the Yakima River to the confluence with the Columbia River.

The consumptive use is eligible for protection as a trust water right in the secondary reach in the quantities described below. The consumptive portion of the trust water right may serve as instream flow and mitigation for out-of-priority water use from surface water sources and/or sources in continuity with the Yakima River.

Trust Water Right Calculations

This section describes how the quantities in the primary and secondary reaches were calculated to identify how much water will be transferred into the TWRP from fallowing 58.16 acres and ceasing stock water use. That water will then be managed in the TWRP for instream flow and mitigation.

The six portions of Court Claim No. 00176 discussed above authorize a total Qi of 1.49 cfs. The authorized Qi from May 1 through September 1 is for irrigation and stockwater. During the winter months (September through April), the Qi delivers only stockwater. As confirmed during the adjudication, both periods of use include conveyance quantities. Therefore, the total annual quantity is 1,079.38 ac-ft/yr, including 273.41 ac-ft/year for the irrigation (May 1 through September 1), 0.9933 ac-ft for stock water (year round), and up to 804.9767 ac-ft/yr conveyance (year round).

Primary Reach

To calculate irrigation quantities, Ecology uses various estimation methods such as the Washington Irrigation Guide (WIG). WIG data indicates 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 pasture in Cle Elum is 1.51 feet/acre.

Subbasin No. 1 (Easton) adjudicated water rights were confirmed for a period of use from May 1 through September 1. However, the WIG indicates an average growing season of June through September for pasture. This results in all irrigation water applied during May being available only in the primary reach.

The Court confirmed Total Irrigation Requirement (TIR) is 4.8 feet/acre. The TIR multiplied by the number of authorized irrigated acres (56.96) is the total quantity of water required to fully irrigate the authorized places of use (273.41 ac-ft/yr). The 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. The same analysis was completed for each portion of the claim. Note that the irrigation quantity is not in addition to the continuous stockwater quantity below.

The Court awarded year round stockwater (0.9933 ac-ft/yr) with a continuous conveyance diversion rate of 1.49 cfs for the six portions for stock water and irrigation, resulting in a calculated total annual quantity of 1,079.38 ac-ft.

Based on this analysis, the irrigation and stockwater quantities (discussed above) available to be transferred into the TWRP for instream flow and mitigation in the primary reach are summarized in **Tables 5a** through **5g** below.

Secondary Reach

Ecology's *Guidance Document, GUID-1210, Determining Irrigation Efficiency and Consumptive Use*, was used to calculate consumptive use quantities in the secondary reach. The application efficiency (Ea) was found by dividing the CIR (1.51 feet/acre) by the authorize TIR (4.8 feet/acre). This found an Ea rate of 31.5%, which is below the average Ea range provided in **Table 1 of GUID-1210**, but appears in line with the low efficiency identified during the investigation and discussed above in the Extent and Validity section of this report. In determining percent of consumptive use (%CU), 5 percent was added to the Ea to account for evaporative losses, totaling 36.5 %CU. Monthly consumptive use for irrigation was then calculated by multiplying the monthly TIR by the specified %CU and the area to be fallowed. Total consumptive use is the sum of the monthly consumptive use.

Stockwater 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 stockwater have been identified. Provisional stockwater use data available from the USGS Washington Water Science Center presents stockwater use by county in 1995. Based on these data, consumptive use associated with stockwater in Kittitas County is estimated at 87 percent. Therefore, the consumptive use associated with the stockwater of the claim portions considered in this report is 0.8642 ac-ft.

Based on the secondary reach calculations above, Tables 5a through 5g summarize the amounts of consumptive use being made available from fallowing of irrigable land and stockwater. The saved water proposed for use as instream flows and mitigation is quantified by month in the secondary reach.

Table 5a: Quantities Eligible for Protection in TWRP for No. CS4-00176sb2@12

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	44.63	46.11	44.63	46.11	46.12	44.39	46.11	44.63	46.11	46.11	42.02	46.11	543.08
	cfs	0.7500	0.7500	0.7500	0.7500	0.7500	0.7459	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	-
Secondary Reach (Consumptive)	ac-ft	0.03	0.04	10.16	19.74	14.56	10.56	0.04	0.03	0.04	0.04	0.03	0.04	55.31
	cfs	0.00005	0.00005	0.17024	0.32058	0.23626	0.17687	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-

Table 5b: Quantities Eligible for Protection in TWRP for No. CS4-00176sb2@13

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	10.71	11.07	10.71	11.07	11.09	10.72	11.07	10.71	11.07	11.07	10.09	11.07	130.45
	cfs	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	-
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	0.72	1.39	1.03	0.75	0.01	0.01	0.01	0.01	0.01	0.01	3.97
	cfs	0.00001	0.00001	0.01194	0.02247	0.01656	0.01240	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Table 5c: Quantities Eligible for Protection in TWRP for No. CS4-00176sb2@14

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	8.33	8.61	8.33	8.61	8.63	8.34	8.61	8.33	8.61	8.61	7.84	8.61	101.46
	cfs	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	-
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	0.90	1.75	1.29	0.93	0.01	0.01	0.01	0.01	0.01	0.01	4.95
	cfs	0.00001	0.00001	0.01502	0.02829	0.02085	0.01561	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Table 5d: Quantities Eligible for Protection in TWRP for No. CS4-00176sb2@15

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	8.33	8.61	8.33	8.61	8.63	8.34	8.61	8.33	8.61	8.61	7.84	8.61	101.46
	cfs	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	-
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	2.33	4.53	3.34	2.42	0.01	0.01	0.01	0.01	0.01	0.01	12.70
	cfs	0.00001	0.00001	0.03903	0.07351	0.05417	0.04055	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Table 5e: Quantities Eligible for Protection in TWRP for No. CS4-00176sb2@16

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	8.33	8.61	8.33	8.61	8.63	8.34	8.61	8.33	8.61	8.61	7.84	8.61	101.46
	cfs	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	-
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	2.33	4.53	3.34	2.42	0.01	0.01	0.01	0.01	0.01	0.01	12.70
	cfs	0.00001	0.00001	0.03903	0.07351	0.05417	0.04055	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Table 5f: Quantities Eligible for Protection in TWRP for No. CS4-00176sb2@17

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	8.33	8.61	8.33	8.61	8.63	8.34	8.61	8.33	8.61	8.61	7.84	8.61	101.46
	cfs	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	-
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	2.00	3.89	2.87	2.08	0.01	0.01	0.01	0.01	0.01	0.01	10.92
	cfs	0.00001	0.00001	0.03356	0.06320	0.04657	0.03487	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Table 5g: Cumulative Quantities Eligible for Protection in TWRP for Darling Applications

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Primary Reach (Total)	ac-ft	88.66	91.62	88.66	91.62	91.74	88.47	91.62	88.66	91.62	91.62	83.47	91.62	1,079.38
	cfs	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	-
Secondary Reach (Consumptive)	ac-ft	0.08	0.09	18.44	35.83	26.43	19.16	0.09	0.08	0.09	0.09	0.08	0.09	100.55
	cfs	0.00010	0.00010	0.30883	0.58155	0.42859	0.32085	0.00010	0.00010	0.00010	0.00010	0.00009	0.00010	-

Trust Water Management

Under Nos. CS4-00176sb2@12, CS4-00176sb2@13, CS4-00176sb2@14, CS4-00176sb2@15, CS4-00176sb2@16, and CS4-00176sb2@17, portions of Court Claim No. 00176 are being changed to instream flow and mitigation, which may be protected against diversion and use by junior priority water users from the authorized point of diversion to the confluence of the Yakima and Columbia Rivers.

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.

There are two court claims with points of diversion in Big Creek downstream of Fred Darling's diversion. Both claims are junior to Court Claim No. 00176. Court Claim No. 00756 is issued to Teanaway Ridge for instream flow and mitigation. Court Claim No. 04355 is held by the Church of Jesus Christ of Latter Day Saints for irrigation and stockwater on the Ensign Ranch.

The proposed change to instream flow will not cause a reduction in the availability of water in the Primary Reach for these two junior water rights. Similarly, no senior water right in the secondary reach will be negatively affected by increased instream flows during the irrigation season. Therefore, based on these considerations, transferring the subject portions of Court Claim No. 00176 to trust is not expected to impair other water users.

Consideration of Protests and Comments

No protest or comments were received for consideration.

CONCLUSIONS

Portions of Court Claim No. 00176 is appurtenant to the properties owned by the applicants. Review of the evidence provided within this report and proceedings within the Yakima River Basin Adjudication Court, indicate that the water right was historically and beneficially used under Court Claim No. 00176, including conveyance and stockwater quantities.

In accordance with chapter 90.38 RCW, the author makes a tentative determination that portions of Court Claim No. 00176 being considered in this report are valid rights to divert water from Big Creek in the quantities up to 1.49 cfs for irrigation of 56.96 acres, May 1 through September 1, and for stockwater, continuously. The annual quantity includes 273.41 ac-ft/year for the irrigation, 0.9933 ac-ft for stockwater, and up to 804.9767 ac-ft/yr conveyance.

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 from Application Nos. CS4-00176sb2@12, CS4-00176sb2@13, CS4-00176sb2@14, CS4-00176sb2@15, CS4-00176sb2@16, and CS4-00176sb2@17 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.

Change Application CS4-00176sb2@12

Primary Reach

Up to 0.75 cubic feet per second (cfs) year round, and 543.08 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.03	0.04	10.16	19.74	14.56	10.56	0.04	0.03	0.04	0.04	0.03	0.04	55.31
	cfs	0.00005	0.00005	0.17024	0.32058	0.23626	0.17687	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-

Change Application CS4-00176sb2@13

Primary Reach

Up to 0.18 cubic feet per second (cfs) year round, and 130.45 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	0.72	1.39	1.03	0.75	0.01	0.01	0.01	0.01	0.01	0.01	3.97
	cfs	0.00001	0.00001	0.01194	0.02247	0.01656	0.01240	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Change Application CS4-00176sb2@14

Primary Reach

Up to 0.14 cubic feet per second (cfs) year round, and 101.47 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	0.90	1.75	1.29	0.93	0.01	0.01	0.01	0.01	0.01	0.01	4.95
	cfs	0.00001	0.00001	0.01502	0.02829	0.02085	0.01561	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Change Application CS4-00176sb2@15

Primary Reach

Up to 0.14 cubic feet per second (cfs) year round, and 101.47 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	2.33	4.53	3.34	2.42	0.01	0.01	0.01	0.01	0.01	0.01	12.70
	cfs	0.00001	0.00001	0.03903	0.07351	0.05417	0.04055	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

Change Application CS4-00176sb2@16

Primary Reach

Up to 0.14 cubic feet per second (cfs) year round, and 101.47 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	2.33	4.53	3.34	2.42	0.01	0.01	0.01	0.01	0.01	0.01	12.70
	cfs	0.00001	0.00001	0.03903	0.07351	0.05417	0.04055	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-

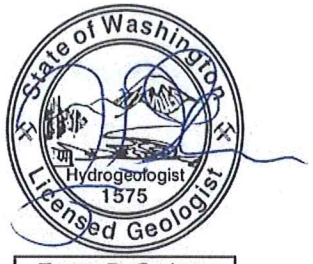
Change Application CS4-00176sb2@17

Primary Reach

Up to 0.14 cubic feet per second (cfs) year round, and 101.47 acre-feet per year (ac-ft/yr) to be used for the purpose of instream flow and mitigation.

Secondary Reach

Reach	Unit	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Secondary Reach (Consumptive)	ac-ft	0.01	0.01	2.00	3.89	2.87	2.08	0.01	0.01	0.01	0.01	0.01	0.01	10.92
	cfs	0.00001	0.00001	0.03356	0.06320	0.04657	0.03487	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-



Report by: _____ _____

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

Reviewed by: _____ 8/4/16

Kelsey Sinclair Collins — Date

Water Resources Program

To request ADA accommodation including materials in a format for the visually impaired, call Ecology Water Resources Program at 360-407-6872. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

CITATIONS

Ellis, Darrel. 2013. Letter from Ellis Law Office to Whom it May Concern describing the probation on water use during estate division. July 26, 2013.

Stan Isley, Big Creek Court Appointed Stream Patroller. Personal Communication. December 21, 2015 and May 24, 2016

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. 2 (Easton). Signed June 20, 1994.

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. 2 (Easton). Signed May 23, 1996.

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. 2 (Easton). Signed February 13, 1997.

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 and Donation of Darling Water Rights Re: Court Claim No. 00176, Subbasin No. 2. Signed December 13, 2013.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, Declaration of Estate Executor Regarding Preclusion of Water Use for Acquavella Claims 176 and 179 (Subbasin 2 – Easton) Under Kittitas County Superior Court Cause Number 09-4-00050-6 for the Settlement of the C. Frederick Darling Estate. Signed August 5, 2013.

State of Washington, Department of Ecology v. Acquavella, et al., Yakima County Superior Court Case No. 77-2-01484-5, Declaration of Gregory P. McLaughlin in Support of Petition for Order Pendente Lite RE: Lease and Donation of Darling Water Rights RE: Court Claim No. 00176. Signed October 17, 2013.

Washington State Department of Ecology, 2004. POL 1120, Water Resource Program Policy for Conducing Tentative Determinations of Water Rights. August 30, 2004.

Washington State Department of Ecology, 2005. GUID-1210, Water Resource Program Guidance, Determining Irrigation Efficiency and Consumptive Use. October, 11, 2005.

ATTACHMENT 1