



Grant County
PUBLIC UTILITY DISTRICT
Excellence in Service and Leadership

Priest Rapids Coordinating Committee Meeting

Wednesday, August 27, 2014
9:00 am – 12:00 pm
SeaTac Radisson Hotel

Audio: 1-800-977-8002 Bridge: 45582544

Webinar Instructions:

<https://grantpud.webex.com/grantpud/j.php?MTID=m3050f8f5182b6caafb34510f58f0210e>

PRCC Members

Scott Carlon, Bryan Nordlund, Justin Yeager, NMFS
Bob Rose, YN
Jeff Korth, C. Andonaegui, P. Verhey, WDFW
Tom Dresser, Curt Dotson, GCPUD

Jim Craig, USFWS
Kirk Truscott, CCT
Tom Skiles, CTUIR
Denny Rohr, Facilitator

Meeting Agenda

- I. Welcome and Introductions
- II. Meeting Minutes Affirmation and Approval:
 - A. Affirmation of Approvals Received – B. Rose, April 22, 28, May 1, 5, 6, 9, 19, 2014. J. Korth (for C. Andonaegui), T. Skiles, May 28, 2014.
 - B. July 23, 2014
- III. Agenda Review
- IV. Action Items Review – June 25, 2014 Meeting
- V. Update of Wanapum Dam Activities (T. Dresser)
- VI. Affirmation of Approval by B. Rose for Contract Change Order for the Chewuch River Permanent Instream Flow Project for an additional \$24,859.00. (D. Rohr)
- VII. Affirmation of Approval by B. Rose for Grant PUD relocating the Rocky Coulee release site facilities to Priest Rapids Hatchery (D. Rohr)
- VIII. Spill Report for 2014 (C. Dotson)

IX. Updates

- C. Inland Avian Predation Activities (Goose Island / NW Rocks Follow Up) (C. Dotson)
- D. Priest Rapids Bypass Operation (C. Dotson, T. Dresser)
- E. Hatchery Construction Activities (T. Dresser)
 - 1. Carlton Acclimation Facility
 - 2. Nason Creek Acclimation Facility
 - 3. PR Hatchery Modifications
- F. Hatchery Permits (Section 10 for Summer Chinook and Section 7 Consultation for Bull Trout. (T. Dresser)
- G. NNI Funded Projects
 - 1. Real Time Research Avian Study (C. Dotson)
 - ** Including "Comprehensive Assessment of Total Smolt Mortality in Relation to Avian Predation on the Mid- and Lower Columbia River: Spatial and Temporal Analysis of Reservoir-Specific Smolt Losses"
 - 2. Supplementary Tags and Tagging for Assessment of Predation Losses of Subyearling Chinook Salmon in the lower Hanford Reach and Upper McNary Reservoir (C. Dotson)
 - 3. Upper Columbia Fish Screen Monitoring Program Phase I Contract Extension (J. Korth)
 - 4. Upper Columbia Fish Screen Monitoring Program Phase II – (J. Korth)
 - 5. Lower Wenatchee Instream Flow Enhancement Project Phase II – (J. Korth)
 - 6. Mid-Columbia River Intake Screen and Diversion Assessment (B. Nordlund, T. Dresser)
 - 7. Methow Valley Irrigation District (MVID) Instream Flow Improvement Project (T. Dresser)
- H. Committee Reports (D. Rohr)
- I. NNI and Habitat Funds Report (D. Rohr)
- J. Other
- X. Review of Next Month's Agenda Topics (D. Rohr)
- XI. Next Meeting – September 24, 2014, Location to be determined (D. Rohr)

Action Items from July 23, 2014:

- 1. T. Dresser to check on the differences between the fish ladder count numbers for Sockeye at Priest Rapids and Wanapum dams versus John Day and McNary dam Sockeye ladder counts.
- 2. D. Rohr to contact B. Rose regarding approvals of today's decisions plus past meeting minutes needing his approval.



Priest Rapids Coordinating Committee Meeting

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9:00 am – 12:00 pm
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PRCC Members

Scott Carlon, Bryan Nordlund, Justin Yeager, NMFS	Jim Craig, USFWS
Bob Rose, YN	Kirk Truscott, CCT
Jeff Korth, C. Andonaegui, P. Verhey, WDFW	Tom Skiles, CTUIR
Tom Dresser, Curt Dotson, GCPUD	Denny Rohr, Facilitator

Attendees

Jim Craig, USFWS	Kirk Truscott, CCT (Via phone)
Jeff Korth, WDFW	Tom Dresser
Curt Dotson, GCPUD	Debbie Williams, GCPUD (Via phone)
Denny Rohr, Facilitator	

Distributed Items:

1. Final Agenda 08-27-2014
2. Habitat and NNI Funds Report for July, 2014
3. Chewuch Final Narrative
4. FCWG Briefing Report, Aug 2014
5. PRFF Briefing Report, Aug 2014

Decision Summary:

1. Rohr affirmed that Rose approved the Contract Change Order for the Chewuch River Permanent Instream Flow Project for an additional \$24,859.00.
2. Rohr affirmed that Rose approved Grant PUD relocating the Rocky Coulee release site facilities to Priest Rapids Hatchery.

Final Meeting Minutes

- I. **Welcome and Introductions**
- II. **Meeting Minutes Affirmation and Approval:**
 - A. Affirmation of Approvals Received – B. Rose, April 22, 28, May 1, 5, 6, 9, 19, 2014. J. Korth (for C. Andonaegui), T. Skiles, May 28, 2014. Rohr affirmed that all listed meeting minutes have been approved.
 - B. July 23, 2014 – Approved subject to approval from Craig, Skiles, Carlon and Korth.
- III. **Agenda Review** – No additions were made to the agenda.
- IV. **Action Items Review** – July 23, 2014 Meeting – All action items were complete.
- V. **Update of Wanapum Dam Activities** (T. Dresser) – Based on Rock Island Dam counts, Dresser reported that more than 700,000 adult salmonids have passed Wanapum Dam. Over the course of the past 2 weeks aquatic vegetation buildup on the intake screens of the four 90 hp. pumps located at the left bank Wanapum fishway has become problematic. To address this issue, divers will clean the left bank fish ladder exit pump screens three days a week. In addition, dive crews are available to respond on non-scheduled days as well. Fishways are not dewatered while pumps are cleaned, but are out of criteria for 20 minutes because of lower water levels. Last week, the auxiliary water supply also became plugged with aquatic vegetation; divers were splashed to clean the screen.

Volitional lamprey passage, as well as trap and transport, is going extremely well. 4,188 adult lamprey have been documented passing Priest Rapids Dam via the video count system, and 1600 adults have been trapped and transported upstream of Rock Island Dam. The Priest Rapids Fish Forum is discussing whether to continue trap and transport after Sept 1st.

Grant PUD continues to work on the Wanapum Spillway fracture as well as development of a refill plan. The plan will allow the pool to be operated from 558' to 562'. Although the target refill time has not been determined, it is likely to occur between October and December 2014. Prior to implementation, the refill plan must be approved by the Board of Consultants and FERC. The expected full pool target date is Memorial Day 2015.
- VI. **Affirmation of Approval by B. Rose for Contract Change Order for the Chewuch River Permanent Instream Flow Project for an additional \$24,859.00.** (D. Rohr) – Rohr affirmed Rose's approval.
- VII. **Affirmation of Approval by B. Rose for Grant PUD relocating the Rocky Coulee release site facilities to Priest Rapids Hatchery** (D. Rohr) – Rohr affirmed Rose's approval.
- VIII. **Spill Report for 2014** (C. Dotson) Dotson reported that based on the Rock Island count index, spill is still going on at Priest Rapids and Wanapum dams. Total fish spill at Wanapum Dam is 20 kcfs (5 kcfs through the bypass and 15 kcfs divided amongst Gates 12 through 7 on the Wanapum spillway). Large aquatic vegetation mats near the entrance to the bypass created a large eddy that was pulling the mats towards the powerhouse. Spill was concentrated at Gate 12 in order to rectify the situation. This plan was approved by the 2014 PRCC Spill Representatives.

IX. Updates

- A. Inland Avian Predation Activities (Goose Island / NW Rocks Follow Up)** (C. Dotson) – Dotson reported that the Goose Island dissuasion program was successful and now that the nesting season is over, tags on the island are being gathered. A draft report is expected in October. As of August 12th, data from Real-Time Research showed satellite tags located in the following locations: 6 in the Columbia Plateau, 3 in Washington/British Columbia, 4 in Central Oregon/Southern Idaho, 9 at the Salton Sea in California, and 3 in Sonora, Mexico. Satellite tags show the extensive travel range of a Caspian tern. Dissuasion activities will be maintained in the future, with the proposal for dissuasion action taken at NW Rock. Korth said that WDFW is still maintaining the feeding ponds in the Potholes Reservoir. For additional information on terns, visit Bird Research.com.
- B. Priest Rapids Bypass Operation** (C. Dotson, T. Dresser) – Fish spill is ongoing. Dotson noted that receivers for the 3-D route specific behavior study of steelhead and Chinook through the bypass were pulled on August 8th and are being downloaded. A draft report is expected in October. Preliminary survival numbers were provided during last month's meeting, and those numbers haven't changed; John Skalski will review all data. Blue Leaf Environmental and Skalski will be in attendance in October to discuss the data.
- C. Hatchery Construction Activities** (T. Dresser)
- 1. Carlton Acclimation Facility** – Fish will be on station 10/1. Working with WDFW on outstanding items at this facility. This is the second year fish have been on station.
 - 2. Nason Creek Acclimation Facility (NCAF)** – Facility is complete, working on punch list. Fish will be on station at the end of September. WDFW noted that the NCAF personnel meant to live at this location will be leaving WDFW and they are working to fill the position.
 - 3. PR Hatchery Modifications** – Modifications identified by Grant PUD and WDFW are being worked on. Jackson Creek modifications at the fish trap are slated to be done by September 29th; the finger weir is currently being installed and the crowder system is complete. Flows through the adult trap and how to manage them have been determined. 56,000 fall Chinook are estimated to return this year, compared to 40,000 last year. The facility was watered on September 1st. Broodstock collection will continue until the first of December.

Dresser reported that PNNL will be conducting biological testing and experimenting with the Whooshh transport system. In mid-October, WDFW will transport ~200 fall Chinook to the raceway for the experiment. Dresser will let folks know when the experiment will take place.
- D. Hatchery Permits (Section 10 for Summer Chinook and Section 7 Consultation for Bull Trout)**. (T. Dresser) – Dresser reported that Grant PUD doesn't foresee any issues with the Section 7 Consultation for bull trout, but does have questions for NOAA on the Section 10 permit that could possibly slow the process down a little bit. Draft HGMP's have been distributed for Methow spring Chinook. Douglas PUD has the lead on that program.

E. NNI Funded Projects

1. Real Time Research Avian Study (C. Dotson)

** Including "Comprehensive Assessment of Total Smolt Mortality in Relation to Avian Predation on the Mid- and Lower Columbia River: Spatial and Temporal Analysis of Reservoir-Specific Smolt Losses" – See discussion under IX-A, above.

2. Supplementary Tags and Tagging for Assessment of Predation Losses of Subyearling Chinook Salmon in the lower Hanford Reach and Upper McNary Reservoir (C. Dotson) – Battelle is analyzing data collected from the 200 subyearling Chinook tagged with JSATS tags. A draft report is expected in October.

3. Upper Columbia Fish Screen Monitoring Program Phase I Contract Extension (J. Korth) – Korth had no update on the screening program, but did report that no screens were lost in the Carlton Complex fire. Debris from recent rains is causing issues.

4. Upper Columbia Fish Screen Monitoring Program Phase II – (J. Korth) – No update provided.

5. Lower Wenatchee Instream Flow Enhancement Project Phase II – (J. Korth) – No update provided.

6. Mid-Columbia River Intake Screen and Diversion Assessment (T. Dresser) – Divers will conduct surveys on the Priest Rapids Reservoir in October after irrigation has been suspended for the season. Dresser will contact D. Didricksen to schedule.

7. Methow Valley Irrigation District (MVID) Instream Flow Improvement Project (T. Dresser) – Dresser reported that the contract is complete and has been signed by Trout Unlimited and Grant PUD.

F. Committee Reports (D. Rohr) – FCWG and PRFF reports were distributed by Rohr.

G. NNI and Habitat Funds Report (D. Rohr) – As of July 31, 2014.

Fund	Balance	Unencumbered Balance
No Net Impact Fund 601	\$6,395,099	\$2,872,904
Habitat Supplemental Fund 602	\$5,210,968	\$3,838,616
Habitat Fund 603	\$1,218,639	\$ 780,124
Total	\$12,824,706	\$7,491,644

X. Review of Next Month's Agenda Topics (D. Rohr) – Standard items

XI. Next Meeting – September 24, 2014, via Webinar conference.

PA Date	PA Project Number	PA Project Name	PA Document No.	Vendor Name	Item Description	Total Cost
2/5/2014	60100008H	Fish Screen Monitor Program	RCT00000000091066	WASHINGTON ST DEPT OF FISH & WILDLIFE	601-8H FISH SCREEN MONITORING	\$27,263.43
2/13/2014	60100015H	Chewuch River Instream Flow	RCT000000000091597	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H CHEWUCH RIVER FLOW PRO	\$3,800.00
2/26/2014	60100011H	Geochemical Analysis S F Rays	RCT000000000092388	BATTELLE-NORTHWEST CORP	601-11H	\$8,832.27
2/26/2014	60100011H	Geochemical Analysis S F Rays	RCT000000000092345	BATTELLE-NORTHWEST CORP	601-11H GEOCHEMICAL ANALYSIS O	\$16,031.76
2/26/2014	60100011H	Geochemical Analysis S F Rays	RCT000000000092344	BATTELLE-NORTHWEST CORP	601-11H GEOCHEMICAL ANALYSIS O	\$8,201.08
3/6/2014	60100008H		RCT000000000092806	WASHINGTON ST DEPT OF FISH & WILDLIFE	601-8H	\$29,832.39
3/17/2014	60100012H		RCT000000000093591	OSU OREGON STATE UNIVERSITY	601-12H	\$8,510.17
3/17/2014	60100012H		RCT000000000093589	OSU OREGON STATE UNIVERSITY	601-12H	\$32,142.36
3/19/2014	60100012H		RCT000000000093707	OSU OREGON STATE UNIVERSITY	601-12H CASPIAN TERN M & E GOO	\$17,864.13
3/20/2014	60100017H		RCT000000000093811	BATTELLE-NORTHWEST CORP	JSATS SURVIVAL STUDY LOWER HAN	\$39,953.00
5/6/2014	60100008H		RCT000000000096977	WASHINGTON ST DEPT OF FISH & WILDLIFE	601-8H	\$38,176.47
4/8/2014	60100008H		RCT000000000094921	WASHINGTON ST DEPT OF FISH & WILDLIFE	601-8H	\$40,478.31
5/28/2014	60100012H		RCT000000000098928	OSU OREGON STATE UNIVERSITY	601-12H	\$145,721.58
4/28/2014	60100015H		RCT000000000096535	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$3,000.00
5/28/2014	60100015H		RCT000000000098925	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$128,910.15
5/28/2014	60100018H		RCT000000000098756	BLUE LEAF ENVIRONMENTAL, INC	601-18H	\$19,096.41
5/28/2014	60100018H		RCT000000000098755	BLUE LEAF ENVIRONMENTAL, INC	601-18H	\$23,174.40
6/10/2014	60100008H		RCT000000000099670	WASHINGTON ST DEPT OF FISH & WILDLIFE	601-8H	\$25,340.55
6/17/2014	60100012H		RCT000000000100291	OSU OREGON STATE UNIVERSITY	601-12H	\$71,643.42
6/12/2014	60100014H		RCT000000000099933	MIDWEST LAKE MANAGEMENT, INC	CONTROL BOX CASE	\$385.00
6/12/2014	60100014H		RCT000000000099933	MIDWEST LAKE MANAGEMENT, INC	SPHERE ANODES	\$1,860.00
6/12/2014	60100014H		RCT000000000099933	MIDWEST LAKE MANAGEMENT, INC	GPS SONAR PER ATTACHED	\$2,157.00
6/12/2014	60100014H		RCT000000000099933	MIDWEST LAKE MANAGEMENT, INC	MODEL 18CV ELECTROFISHING BOAT	\$115,949.00
6/17/2014	60100015H		RCT000000000100294	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$215,995.75
6/24/2014	60100017H		RCT000000000100885	BATTELLE-NORTHWEST CORP	601-17H	\$29,229.79
6/3/2014	60100018H		RCT000000000099120	SKALSKI STATISTICAL SERVICES	430-3768	\$1,864.20
7/7/2014	60100008H		RCT000000000101592	WASHINGTON ST DEPT OF FISH & WILDLIFE	601-8H	\$18,322.79
7/1/2014	60100012H		RCT000000000101374	OSU OREGON STATE UNIVERSITY	601-12H	\$50,308.63
7/1/2014	60100014H		RCT000000000101313	WA ST DEPT OF LICENSING-GRANT COUNTY	2014 CLARK ALUM BOAT AND TRLR	\$9,545.48
7/1/2014	60100018H		RCT000000000101334	BLUE LEAF ENVIRONMENTAL, INC	601-18H	\$18,260.03
7/22/2014	60100018H		RCT000000000102724	BLUE LEAF ENVIRONMENTAL, INC	430-3733	\$27,288.28
7/1/2014	60100018H		RCT000000000101332	BLUE LEAF ENVIRONMENTAL, INC	430-3733	\$38,830.01
7/29/2014	60100018H		RCT000000000103168	BLUE LEAF ENVIRONMENTAL, INC	601-18H	\$94,970.87
					Fund 601 - Total Expenditures Year to Date Through 07/31/2014	\$1,312,938.71
1/22/2014	60200017H	Robinson Acquisition	RCT000000000090167	METHOW SALMON RECOVERY FNDN	602-17H	\$241.50
2/19/2014	60200016H	Roaring Ck Restor/Div Removal	RCT000000000091911	TROUT UNLIMITED - WASH. WATER PROJECT	602-16H	\$708.73
2/26/2014	60200020H	Entiat Riv Cottonwood Phs 2	RCT000000000092308	CHELAN-DOUGLAS LAND TRUST	602-20H	\$5,000.00
3/7/2014	60200006H		RCT000000000092941	OKANAGAN NATION ALLIANCE	602-6H	\$82.11
3/7/2014	60200012H		RCT000000000092942	OKANAGAN NATION ALLIANCE	602-12H	\$13,258.07
4/28/2014	60200010H		RCT000000000096514	CHELAN-DOUGLAS LAND TRUST	602-10H	\$1,142.63
4/28/2014	60200010H		RCT000000000096506	CHELAN-DOUGLAS LAND TRUST	602-10H	\$3,772.53
4/28/2014	60200016H		RCT000000000096525	TROUT UNLIMITED - WASH. WATER PROJECT	602-16H	\$2,400.00
5/15/2014	60200006H		RCT000000000097769	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.	602-6H	\$4,976.02
5/15/2014	60200012H		RCT000000000097768	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.	602-12H	\$7,980.10
5/20/2014	60200007H		RCT000000000098095	METHOW SALMON RECOVERY FNDN	602-7	\$319.00
5/20/2014	60200016H		RCT000000000098123	TROUT UNLIMITED - WASH. WATER PROJECT	602-16H	\$1,181.30
6/16/2014	60200022H		RCT000000000100131	STRICKLAND, HEISCHMAN & HOSS, INC	APPRAISAL SERVICES	\$20,000.00
6/17/2014	60200012H		RCT000000000100278	OKANAGAN NATION ALLIANCE	602-12H	\$882.57
6/17/2014	60200014H		RCT000000000100277	OKANAGAN NATION ALLIANCE	602-14H	\$41,787.06
6/24/2014	60200014H		RCT000000000100734	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.	602-14H	\$69,490.27
7/8/2014	60200010H		RCT000000000101807	CHELAN-DOUGLAS LAND TRUST	602-10H	\$10,000.00
7/8/2014	60200010H		RCT000000000101808	CHELAN-DOUGLAS LAND TRUST	602-10H	\$535,211.32
7/11/2014	60200006H		RCT000000000101991	OKANAGAN NATION ALLIANCE	602-6H	\$252.05
7/11/2014	60200012H		RCT000000000101992	OKANAGAN NATION ALLIANCE	602-12H	\$3,227.66
7/15/2014	60200010H		RCT000000000102229	CHELAN-DOUGLAS LAND TRUST	602-10H	\$10,372.59
7/15/2014	60200024H		RCT000000000102251	OKANAGAN NATION ALLIANCE	602-24H	\$33,572.50
7/29/2014	60200015H		RCT000000000103118	CASCADIA CONSERVATION DISTRICT	602-15H	\$34,055.56
					Fund 602 - Total Expenditures Year to Date Through 07/31/2014	\$799,913.57
1/20/2014	60300024H	Barkley Irrigation Diversion	ML000000000005495			(\$11,167.86)
1/22/2014	60300022H	White River Gage Station	RCT000000000090183	WASHINGTON ST DEPT OF ECOLOGY	603-22H WHITE RIVER GAGE STATI	\$13.82
2/5/2014	60300016H	Libby Ck Riparian Acquisition	RCT000000000091068	WASHINGTON ST DEPT OF FISH & WILDLIFE	603-16H	\$408.51
2/19/2014	60300027H	Iceicle Irr Pump Exch Analysis	RCT000000000091872	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H ICICLE-PESHASTIN IRRIG	\$4,285.00
2/26/2014	60300022H	White River Gage Station	RCT000000000092387	WASHINGTON ST DEPT OF ECOLOGY	603-22H	\$3,233.43
3/17/2014	60300022H		RCT000000000093607	WASHINGTON ST DEPT OF ECOLOGY	603-22H	\$1,081.97
3/17/2014	60300027H		RCT000000000093598	TROUT UNLIMITED - WASH. WATER PROJECT	ICICLE-PESHASTIN ANALYSIS FOR	\$12,720.00
1/31/2014	60300024H	Barkley Irrigation Diversion		reversed ML5495. It was done incorrectly. So reversed and corrected.		\$11,167.86
1/31/2014	60300024H	Barkley Irrigation Diversion				\$11,167.86
5/20/2014	60300022H		RCT000000000098092	WASHINGTON ST DEPT OF ECOLOGY	603-22H	\$1,336.73
4/28/2014	60300022H		RCT000000000096536	WASHINGTON ST DEPT OF ECOLOGY	603-22H	\$1,655.10
5/9/2014	60300026H		RCT000000000097360	COLVILLE CONFEDERATED TRIBES	603-26H	\$13,430.00
5/20/2014	60300027H		RCT000000000098121	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$21,630.00
4/28/2014	60300027H		RCT000000000096537	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$30,006.90
6/23/2014	60300022H		RCT000000000100593	WASHINGTON ST DEPT OF ECOLOGY	603-22H	\$748.43
6/17/2014	60300026H		RCT000000000100280	COLVILLE CONFEDERATED TRIBES	603-26H	\$13,430.00
6/17/2014	60300027H		RCT000000000100298	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$17,733.75
7/7/2014	60300016H		RCT000000000101594	WASHINGTON ST DEPT OF FISH & WILDLIFE	603-16H	\$23.81
7/28/2014	60300022H		RCT000000000103097	WASHINGTON ST DEPT OF ECOLOGY	603-22H	\$647.59
7/29/2014	60300027H		RCT000000000103144	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$13,443.75
7/15/2014	60300028H		RCT000000000102230	WASHINGTON ST DEPT OF FISH & WILDLIFE	603-28H	\$213.01
					Fund 603 - Total Expenditures Year to Date Through 07/31/2014	\$147,209.66

PRCC - Habitat Funds
 Report of Unencumbered Fund Balances
 As of July 31, 2014

No Net Impact (NNI) Fund 601:

Cash & Investments Fund Balance per Monthly Report

\$ 6,395,099

<u>Less remaining balance with Open Project ID's:</u>		<u>Project Balance</u>
1. Open	60100008H Fish Screen Monitor Program	780,837
2. Open	60100009H Juv NPM Population Control	40,204
3. Open	60100011H Geochemical Analysis of Scales & Fin Rays	990
4. Open	60100012H Goose Is. Terns Eval & Behavior	667,951
5. Open	60100014H Electrofishing Boat	(4,896)
6. Open	60100015H Chewuch River Instream Flow	65,791
7. Open	60100016H Mid-Columbia Intake Screen & Diversion Assess	102,839
8. Open	60100017H JSATS Subyearling Survival Study Lower Hanfor	10,723
9. Open	60100018H WAN Drawdown Migrat Study	1,516
10. Open	60100019H Lw Wenatchee Instream Flow Ph II	456,241
11. Open	60100020H Methow Valley Irrigation District Instream Flow	1,400,000
		3,522,195 →
Fund 601 Unencumbered Balance		\$ 2,872,904

Habitat Supplemental Fund 602:

Cash & Investments Fund Balance per Monthly Report

\$ 5,210,968

<u>Less remaining balance with Open Project ID's:</u>		<u>Project Balance</u>
1. Open	60200003H Trinidad Creek	\$ 32,149
2. Open	60200006H ORRI Spawning Hab Improvement	8,570
3. Open	60200007H Methow Sugar Dike Acquisition I	15,402
4. Open	60200008H Nason Ck LWP B+ Enhance	160,000
5. Open	60200009H Wen Nutrient Enhance Treatment	175
6. Open	60200010H Entiat Stormy Rch Phs III Acq	132,381
7. Open	60200012H ORRI Construction Phase II	73,426
9. Open	60200014H Shuttleworth Crk Diversion and Well Implement	45,312
10. Open	60200015H Tyeer Ranch Conservation Easement	0
11. Open	60200016H Roaring Ck Restor/Div Removal	151,577
12. Open	60200017H Robinson Acquisition	8,320
13. Open	60200020H Entiat Riv Cottonwood Phs 2	5,000
14. Open	60200021H Barkley Irr Co. Diverson	299,380
15. Open	60200022H Natapoc Appraisal	-
14. Open	60200023H Fish Jump Passage McIntyre	33,032
15. Open	60200024H ORRI-Spawning Platforms in Pentiction Channel	357,628
16. Open	60200025H Primary Appraiser Land Acq & Conservation Ea	50,000
		1,372,352 →
Fund 602 Unencumbered Balance		\$ 3,838,616

Habitat Fund 603:

Cash & Investments Fund Balance per Monthly Report

\$ 1,218,639

<u>Less remaining balance with Open Project ID's:</u>		<u>Project Balance</u>
1. Open	60300016H Libby Ck Riparian Acquisition	64,405
2. Open	60300022H White River Gage Station	9,520
3. Open	60300024H Barkley Irrigation Ditch Diversion Project	17,228
4. Open	60300025H Methow River 1890's Side Channel Acquisition	90,000
5. Open	60300026H Okan River Discharge Monitor	64,092
6. Open	60300027H Icicle IRR Pump Exch Analysis	26,385
7. Open	60300028H Icicle Creek Boulder Pit Tag Array	166,885
		438,515 →
Fund 603 Unencumbered Balance		\$ 780,124

Total Unencumbered Balance for all PRCC Funds**\$ 7,491,644**

PRCC - Habitat Funds
 No Net Impact (NNI) - Fund 601
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 Activity Detail and Project Balance

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100008H	Open	601-08	Fish Screen Monitor Program			1,377,873.21
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100008H	7/9/2012	RCT00000000053545	WASHINGTON ST DEPT OF FISH & WILDLIFE		FISH SCREEN PROGRAM	\$1,279.33
60100008H	8/28/2012	RCT00000000056803	WASHINGTON ST DEPT OF FISH & WILDLIFE		FISH SCREEN PROGRAM 2012	\$13,009.44
60100008H	10/22/2012	RCT00000000060120	WASHINGTON ST DEPT OF FISH & WILDLIFE		FISH SCREEN MONITORING PROGRA	\$21,226.09
60100008H	11/28/2012	RCT00000000065971	WASHINGTON ST DEPT OF FISH & WILDLIFE		FISH SCREEN MONITORING PROGRA	\$5,756.11
60100008H	12/19/2012	RCT00000000063920	WASHINGTON ST DEPT OF FISH & WILDLIFE		301-8H	\$24,811.09
60100008H	12/19/2012	RCT00000000063916	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$26,254.18
60100008H	12/31/2012	RCT00000000065812	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8 2012	\$17,711.55
60100008H	12/31/2012	RCT00000000065892	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$1,485.73
60100008H	12/31/2012	RCT00000000065893	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$2,017.63
60100008H	12/31/2012	RCT00000000065807	WASHINGTON ST DEPT OF FISH & WILDLIFE		FISH SCREEN MONITORING PROGRA	\$3,217.73
60100008H	2/7/2013	RCT00000000067195	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$22,288.85
60100008H	3/21/2013	RCT00000000070233	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$18,690.24
60100008H	4/4/2013	RCT00000000071048	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$56,047.79
60100008H	5/1/2013	RCT00000000072948	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$20,834.05
60100008H	5/15/2013	RCT00000000073824	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$7,985.66
60100008H	7/2/2013	RCT00000000076894	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$38,105.82
60100008H	7/9/2013	RCT00000000077071	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$45.49
60100008H	7/9/2013	RCT00000000077070	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$303.84
60100008H	7/9/2013	RCT00000000077069	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$218.03
60100008H	7/9/2013	RCT00000000077068	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$333.56
60100008H	7/9/2013	RCT00000000077050	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$35,777.12
60100008H	7/9/2013	RCT00000000077040	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$71.20
60100008H	7/9/2013	RCT00000000077039	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$176.34
60100008H	7/9/2013	RCT00000000077036	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$226.24
60100008H	7/9/2013	RCT00000000077038	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$80.92
60100008H	9/4/2013	RCT00000000080739	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$10,818.54
60100008H	9/4/2013	RCT00000000080741	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$241.13
60100008H	10/1/2013	RCT00000000082565	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SCREEN MONITORING	\$4,244.69
60100008H	10/8/2013	RCT00000000083198	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$12,190.94
60100008H	11/13/2013	RCT00000000085383	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$21,172.48
60100008H	12/11/2013	RCT00000000087463	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$24,559.60
60100008H	12/31/2013	RCT00000000088817	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$26,441.27
60100008H	2/5/2014	RCT00000000091066	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H FISH SC	\$27,263.43
60100008H	3/6/2014	RCT00000000092806	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$29,832.39
60100008H	4/8/2014	RCT00000000094921	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$40,478.31
60100008H	5/6/2014	RCT00000000096977	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$38,176.47
60100008H	6/10/2014	RCT00000000099670	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$25,340.55
60100008H	7/7/2014	RCT00000000101592	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-8H	\$18,322.79
Total Project Expenditures						\$597,036.62
Remaining Project Balance						780,836.59

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100009H	Open	601-09	Juv NPM Population Control			267,306.23
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100009H	9/20/2012	RCT00000000058134	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$75,278.70
60100009H	10/4/2012	RCT00000000059082	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$822.45
60100009H	10/22/2012	RCT00000000060118	WASHINGTON ST DEPT OF FISH & WILDLIFE		JUVENILE NORTHERN PIKEMINNOW	\$37,246.15
60100009H	12/20/2012	RCT00000000064040	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$23,151.27
60100009H	12/20/2012	RCT00000000064036	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$27,976.40
60100009H	12/31/2012	RCT00000000065895	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$19,284.97
60100009H	2/6/2013	RCT00000000067116	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$152.75
60100009H	2/14/2013	RCT00000000067820	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$18,197.65
60100009H	3/21/2013	RCT00000000070262	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H JUVENILE NORTHERN PIKEM	\$12,600.59
60100009H	4/15/2013	RCT00000000071727	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$2,191.99
60100009H	7/9/2013	RCT00000000077080	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H JUVENILE NORTHERN PIKEM	\$1,089.78
60100009H	7/9/2013	RCT00000000077059	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$3,515.66
60100009H	7/9/2013	RCT00000000077060	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$12,221.06
60100009H	7/9/2013	RCT00000000077061	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$1,611.79
60100009H	7/9/2013	RCT00000000077062	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H	\$1,318.72
60100009H	7/9/2013	RCT00000000077072	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H JUVENILE NORTHERN PIKEM	\$1,314.24
60100009H	7/9/2013	RCT00000000077074	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H JUVENILE NORTHERN PIKEM	\$1,723.75
60100009H	7/9/2013	RCT00000000077079	WASHINGTON ST DEPT OF FISH & WILDLIFE		601-9H JUVENILE NORTHERN PIKEM	\$1,792.37
60100009H	8/27/2013	ML000000000004844	WASHINGTON ST DEPT OF FISH & WILDLIFE			(\$14,388.18)
Total Project Expenditures						\$227,102.11
Remaining Project Balance						40,204.12

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100011H	Open	601-11	Geochemical Analysis S F Rays		To determine the accuracy of geochemical analysis for identifying the	513,342.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100011H	9/10/2012	RCT00000000057345	BATTELLE-NORTHWEST CORP		601-11	\$16,538.22
60100011H	9/27/2012	RCT00000000058570	BATTELLE-NORTHWEST CORP		601-11H	\$9,194.62
60100011H	10/25/2012	RCT00000000060477	BATTELLE-NORTHWEST CORP		601-11H	\$28,084.84
60100011H	11/7/2012	RCT00000000061321	BATTELLE-NORTHWEST CORP		601-11H	\$53,213.21
60100011H	1/13/2013	RCT00000000066790	BATTELLE-NORTHWEST CORP		601-11H GEOCHEMICAL ANALYSIS	\$69,074.89
60100011H	2/19/2013	RCT00000000068161	BATTELLE-NORTHWEST CORP		601-11H	\$58,767.38
60100011H	3/18/2013	RCT00000000069970	BATTELLE-NORTHWEST CORP		601-11H	\$44,293.89
60100011H	5/2/2013	RCT00000000073003	BATTELLE-NORTHWEST CORP		601-11H ANALYSIS OF SCALES & F	\$31,840.41
60100011H	5/15/2013	RCT00000000073818	BATTELLE-NORTHWEST CORP		601-11H	\$42,901.80
60100011H	8/27/2013	RCT00000000080449	BATTELLE-NORTHWEST CORP		601-11H GEOCHEMICAL ANALYSIS O	\$67,679.06
60100011H	8/27/2013	RCT00000000080450	BATTELLE-NORTHWEST CORP		601-11H GEOCHEMICAL ANALYSIS O	\$27,756.51
60100011H	11/12/2013	RCT00000000085238	BATTELLE-NORTHWEST CORP		601-11H	\$29,941.83
60100011H	2/26/2014	RCT00000000092388	BATTELLE-NORTHWEST CORP		601-11H	\$8,832.27
60100011H	2/26/2014	RCT00000000092345	BATTELLE-NORTHWEST CORP		601-11H GEOCHEMICAL ANALYSIS O	\$16,031.76
60100011H	2/26/2014	RCT00000000092344	BATTELLE-NORTHWEST CORP		601-11H GEOCHEMICAL ANALYSIS O	\$8,201.08
Total Project Expenditures						\$512,351.77
Remaining Project Balance						990.23

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100012H	Open	601-12	Evaluation and Behavior Analysis of Caspian Terns on Goose Island		Study to evaluate the foraging behavior and colony connectivity of Caspian terns	1,342,977.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100012H	5/30/2013	RCT00000000074721	OUS OREGON STATE UNIVERSITY		601-12H	\$16,055.14
60100012H	6/20/2013	RCT00000000076023	OUS OREGON STATE UNIVERSITY		601-12H CASPIAN TERN M & E GOO	\$106,436.69
60100012H	7/24/2013	RCT00000000078363	OSU OREGON STATE UNIVERSITY		601-12H	\$63,827.32
60100012H	8/14/2013	RCT00000000079591	OSU OREGON STATE UNIVERSITY		601-12H	\$65,667.14
60100012H	8/26/2013	RCT00000000080258	OSU OREGON STATE UNIVERSITY		601-12H CASPIAN TERN M & E GOO	\$7,623.88
60100012H	10/1/2013	RCT00000000082584	OSU OREGON STATE UNIVERSITY		601-12H	\$24,641.52
60100012H	11/12/2013	RCT00000000085284	OSU OREGON STATE UNIVERSITY		601-12H CASPIAN TERN M & E GOO	\$38,409.96
60100012H	12/31/2013	RCT00000000088819	OSU OREGON STATE UNIVERSITY		601-12H	\$26,173.84
60100012H	3/17/2014	RCT00000000093591	OSU OREGON STATE UNIVERSITY		601-12H	\$8,510.17
60100012H	3/17/2014	RCT00000000093589	OSU OREGON STATE UNIVERSITY		601-12H	\$32,142.36
60100012H	3/19/2014	RCT00000000093707	OSU OREGON STATE UNIVERSITY		601-12H CASPIAN TERN M & E GOO	\$17,864.13
60100012H	5/28/2014	RCT00000000098928	OSU OREGON STATE UNIVERSITY		601-12H	\$145,721.58
60100012H	6/17/2014	RCT00000000100291	OSU OREGON STATE UNIVERSITY		601-12H	\$71,643.42
60100012H	7/1/2014	RCT00000000101374	OSU OREGON STATE UNIVERSITY		601-12H	\$50,308.63
Total Project Expenditures						\$675,025.78
Remaining Project Balance						667,951.22

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100014H	Open	601-14	Electrofishing Boat			125,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100014H	6/12/2014	RCT00000000099933	MIDWEST LAKE MANAGEMENT, INC		601-14H	\$120,351.00
60100014H	7/1/2014	RCT00000000101313	WA ST DEPT OF LICENSING-GRANT COUNTY		601-14H	\$9,545.48
Total Project Expenditures						\$129,896.48
Remaining Project Balance						(4,896.48)

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100015H	Open	601-15	Chewuch River Instream Flow			474,859.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100015H	10/24/2013	RCT00000000084178	TROUT UNLIMITED - WASH. WATER PR		601-15H	\$17,549.90

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60100015H	11/13/2013	RCT00000000085396	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H CHEWUCH RIVER FLOW PRC	\$34,826.22
60100015H	12/18/2013	RCT00000000087927	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$4,985.76
60100015H	2/13/2014	RCT00000000091597	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H CHEWI	\$3,800.00
60100015H	4/28/2014	RCT00000000096535	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$3,000.00
60100015H	5/28/2014	RCT00000000098925	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$128,910.15
60100015H	6/17/2014	RCT00000000100294	TROUT UNLIMITED - WASH. WATER PROJECT	601-15H	\$215,995.75
Total Project Expenditures					\$409,067.78
Remaining Project Balance					65,791.22

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100016H	Open	601-16	Mid-Columbia Intake Screen & Diversion Assessment			102,838.58
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
Total Project Expenditures						\$0.00
Remaining Project Balance						102,838.58

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100017H	Open	601-17	JSATS Subyearling Survival Study Lower Hanford Reach			79,906.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100017H	3/20/2014	RCT00000000093811	BATTELLE-NORTHWEST CORP		JSATS SURVIVAL STUDY LOWER HA	\$39,953.00
60100017H	6/24/2014	RCT00000000100885	BATTELLE-NORTHWEST CORP	601-17H		\$29,229.79
Total Project Expenditures						\$69,182.79
Remaining Project Balance						10,723.21

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100018H	Open	601-18	WAN Drawdown Migrat Study			225,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60100018H	5/28/2014	RCT00000000098756	BLUE LEAF ENVIRONMENTAL, INC			\$19,096.41
60100018H	5/28/2014	RCT00000000098755	BLUE LEAF ENVIRONMENTAL, INC			\$23,174.40
60100018H	6/3/2014	RCT00000000099120	SKALSKI STATISTICAL SERVICES			\$1,864.20
60100018H	7/1/2014	RCT00000000101334	BLUE LEAF ENVIRONMENTAL, INC			\$18,260.03
60100018H	7/22/2014	RCT00000000102724	BLUE LEAF ENVIRONMENTAL, INC			\$27,288.28
60100018H	7/1/2014	RCT00000000101332	BLUE LEAF ENVIRONMENTAL, INC			\$38,830.01
60100018H	7/29/2014	RCT00000000103168	BLUE LEAF ENVIRONMENTAL, INC			\$94,970.87
Total Project Expenditures						\$223,484.20
Remaining Project Balance						1,515.80

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100019H	Open	601-19	Lw Wenatchee Instream Flow Ph II			456,241.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
Total Project Expenditures						\$0.00
Remaining Project Balance						456,241.00

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60100020H	Open	601-20	Methow Valley Irrigation District Instream Flow Improvement Project			1,400,000.00
Project Expenditure Activity:						
		Voucher /				Expenditure
Project ID	Acctg Date	PA Document No.	Vendor Name	Invoice Ref	Item Description	Amount
						Total Project Expenditures _____ \$0.00
						Remaining Project Balance _____ <u>1,400,000.00</u>

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200003H	Open	602-03	Trinidad Creek Land Purchase	WDFW	63 acres of shrub steppe land purchase	117,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200003H	7/29/2010	RCT00000000011359	WASHINGTON ST DEPT OF FISH & WILDLIFE		TRINIDAD CREEK	\$6,019.88
60200003H	10/5/2010	RCT00000000015264	WASHINGTON ST DEPT OF FISH & WILDLIFE		TRINIDAD CREEK ACQUISITION-CRS	\$124.19
60200003H	10/5/2010	RCT00000000015263	WASHINGTON ST DEPT OF FISH & WILDLIFE		TRINIDAD CREEK ACQUISITION	\$1,733.12
60200003H	11/4/2010	RCT00000000017797	WASHINGTON ST DEPT OF FISH & WILDLIFE		TRINIDAD CREEK/CRESCENT VIEW I	\$837.85
60200003H	11/12/2010	RCT00000000018637	WASHINGTON ST DEPT OF FISH & WILDLIFE		HABITAT 603-14	\$11.26
60200003H	11/12/2010	RCT00000000018632	WASHINGTON ST DEPT OF FISH & WILDLIFE		ENVIRONMENTAL AUDIT	\$1,375.81
60200003H	7/28/2011	RCT00000000033309	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-14H TRINIDAD CREEK	\$1,363.70
60200003H	11/17/2011	RCT00000000039958	WASHINGTON ST DEPT OF FISH & WILDLIFE		CRESCENT VIEW ESTATES	\$1,363.79
60200003H	11/17/2011	RCT00000000039959	WASHINGTON ST DEPT OF FISH & WILDLIFE		CRESCENT VIEW ESTATES	\$4,938.99
60200003H	12/31/2011	RCT00000000042888	WASHINGTON ST DEPT OF FISH & WILDLIFE		NOV-11 TRINIDAD CREEK ACQUISIT	\$611.10
60200003H	12/31/2011	RCT00000000042918	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-14	\$677.18
60200003H	2/15/2012	RCT00000000044747	WASHINGTON ST DEPT OF FISH & WILDLIFE		ACQUISITION T CREEK/ C VIEW ES	\$622.25
60200003H	3/8/2012	RCT00000000045996	WASHINGTON ST DEPT OF FISH & WILDLIFE		456,241.00	\$53,613.50
60200003H	4/5/2012	RCT00000000047730	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-14	\$1,321.98
60200003H	5/2/2012	RCT00000000049429	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-14 TRINIDAD CREEK ACQUISIT	\$140.69
Total Project Expenditures						\$84,851.44
Remaining Project Balance						32,148.56

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200006H	Open	602-06	ORRI Spawning Hab Improvement	ONA	Okanogan River in BC	65,141.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200006H	10/3/2012	RCT00000000058957	OKANAGAN NATION ALLIANCE		HFA 602-6	\$2,576.02
60200006H	3/26/2013	RCT00000000070529	OKANAGAN NATION ALLIANCE		FEB-13 OKANAGAN RIVER VERTICA	\$481.82
60200006H	12/18/2013	RCT00000000087910	OKANAGAN NATION ALLIANCE		602-6 OKANAGAN RIVER VERTICAL	\$2,710.29
60200006H	12/23/2013	RCT00000000088207	OKANAGAN NATION ALLIANCE		602-6H	\$42,518.87
60200006H	3/7/2014	RCT00000000092941	OKANAGAN NATION ALLIANCE		602-6H	\$82.11
60200006H	5/15/2014	RCT00000000097769	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.		602-6H	\$4,976.02
60200006H	7/11/2014	RCT00000000101991	OKANAGAN NATION ALLIANCE		602-6H	\$252.05
Total Project Expenditures						\$56,570.93
Remaining Project Balance						8,570.07

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200007H	Open	602-07	Methow Sugar Dike Acquisition 1	Methow Salmon	Purchase 10.4 acre parcel lower segment M	190,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200007H	8/31/2011	RCT00000000035447	BAINES TITLE & ESCROW		HFA-6027H METHOW DIKE ACQUIST	\$168,366.48
60200007H	5/24/2012	RCT00000000050829	METHOW SALMON RECOVERY FNDN		602-7 ACQUISITION	\$3,016.73
60200007H	10/2/2012	RCT00000000058851	METHOW SALMON RECOVERY FNDN		602-7H	\$2,747.11
60200007H	8/7/2013	RCT00000000079172	METHOW SALMON RECOVERY FNDN		602-7H METHOW SUGAR DIKE ACQU	\$148.50
60200007H	5/20/2014	RCT00000000098095	METHOW SALMON RECOVERY FNDN		602-7	\$319.00
Total Project Expenditures						174,597.82
Remaining Project Balance						15,402.18

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200008H	Open	602-8	Nason Ck LWP B+ Enhance	Chelan PUD NR	Design and permitting of an in-stream vor	160,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
						Total Project Expenditures _____ -
						Remaining Project Balance <u>160,000.00</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200009H	Open	602-09	Wen Nutrient Enhance Treatment			120,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200009H	9/27/2012	RCT0000000058569	CASCADE COLUMBIA FISHERIES ENHC GRP		602-9H NUTRIENT ENHANCEMENT	\$19,953.56
60200009H	11/1/2012	RCT0000000060926	CASCADE COLUMBIA FISHERIES ENHC GRP		602-9H WENATCHEE NUTRIENT ENH	\$14,443.55
60200009H	12/27/2012	RCT0000000064512	CASCADE COLUMBIA FISHERIES ENHC GRP		602-9H	\$10,526.87
60200009H	12/30/2012	RCT0000000064706	CASCADE COLUMBIA FISHERIES ENHC GRP		602-9H	\$9,570.92
60200009H	3/4/2013	RCT0000000068856	CASCADE COLUMBIA FISHERIES ENHC GRP		602-9 WENATCHEE NUTRIENT ENHA	\$8,048.58
60200009H	4/4/2013	RCT0000000071028	CASCADE COLUMBIA FISHERIES ENHC GRP		602-9 WENATCHEE NUTRIENT ENHA	\$7,623.87
60200009H	6/6/2013	RCT0000000075154	CASCADE COLUMBIA FISHERIES ENHC		602-9	\$9,316.85
60200009H	6/27/2013	RCT0000000076523	CASCADE COLUMBIA FISHERIES ENHC		602-9	\$13,231.82
60200009H	7/24/2013	RCT0000000078296	CASCADE COLUMBIA FISHERIES ENHC		602-9H WENATCHEE NUTRIENT ENH	\$5,144.75
60200009H	9/25/2013	RCT0000000082163	CASCADE COLUMBIA FISHERIES ENHC		WENATCHEE NUTRIENT ASSESME	\$8,800.75
60200009H	11/4/2013	RCT0000000084775	CASCADE COLUMBIA FISHERIES ENHC GRP		602.9H WENATCHEE NUTRIENT ENH	\$13,163.51
						Total Project Expenditures _____ \$119,825.03
						Remaining Project Balance <u>174.97</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200010H	Open	602-10	Eniat Stormy Rch Phs III Acq			711,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200010H	3/14/2013	RCT0000000069772	CHELAN-DOUGLAS LAND TRUST		ENTIAT STORMY REACH PHASE 3	\$3,083.27
60200010H	6/19/2013	RCT0000000075844	CHELAN-DOUGLAS LAND TRUST		602-10H ENTIAT STORMY REACH PH	\$3,633.52
60200010H	12/23/2013	RCT0000000088193	CHELAN-DOUGLAS LAND TRUST		602-10H ENTIAT STORMY REACH PH	\$11,402.78
60200010H	4/28/2014	RCT0000000096514	CHELAN-DOUGLAS LAND TRUST		602-10H	\$1,142.63
60200010H	4/28/2014	RCT0000000096506	CHELAN-DOUGLAS LAND TRUST		602-10H	\$3,772.53
60200010H	7/8/2014	RCT00000000101807	CHELAN-DOUGLAS LAND TRUST		602-10H	\$10,000.00
60200010H	7/15/2014	RCT00000000102229	CHELAN-DOUGLAS LAND TRUST		602-10H	\$10,372.59
60200010H	7/8/2014	RCT00000000101808	CHELAN-DOUGLAS LAND TRUST		602-10H	\$535,211.32
						Total Project Expenditures _____ 578,618.64
						Remaining Project Balance <u>132,381.36</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200012H	Open	602-12	ORRI Construction Phase II			599,588.00
Project Expenditure Activity:						

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Project ID	Acctg Date	Voucher /		Invoice Ref	Item Description	Expenditure Amount
		PA Document No.	Vendor Name			
60200012H	9/6/2012	RCT00000000057240	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.		HFA 602-12H	\$975.43
60200012H	9/18/2013	RCT00000000081732	OKANAGAN NATION ALLIANCE		602-12H OKANAGAN RIVER RESTOR	\$5,546.52
60200012H	9/25/2013	RCT00000000082349	OKANAGAN NATION ALLIANCE		602-12H OKANAGAN RIVER RESTOR	\$89,953.92
60200012H	9/25/2013	RCT00000000082352	OKANAGAN NATION ALLIANCE		602-12H OKANAGAN RIVER RESTOR	\$15,700.57
60200012H	10/8/2013	RCT00000000083144	OKANAGAN NATION ALLIANCE		602-12H	\$108,619.11
60200012H	10/15/2013	RCT00000000083574	OKANAGAN NATION ALLIANCE		602-12H	\$104,665.35
60200012H	11/12/2013	RCT00000000085285	OKANAGAN NATION ALLIANCE		602-12H OKANAGAN RIVER RESTOR	\$2,614.78
60200012H	11/20/2013	RCT00000000085968	OKANAGAN NATION ALLIANCE		601-124	\$141,814.27
60200012H	12/31/2013	RCT00000000089775	OKANAGAN NATION ALLIANCE		602-12H OKANAGAN RIVER RESTOR	\$4,650.90
60200012H	12/31/2013	RCT00000000089691	OKANAGAN NATION ALLIANCE		602-12H	\$26,273.03
60200012H	3/7/2014	RCT00000000092942	OKANAGAN NATION ALLIANCE		602-12H	\$13,258.07
60200012H	5/15/2014	RCT00000000097768	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.		602-12H	\$7,980.10
60200012H	6/17/2014	RCT00000000100278	OKANAGAN NATION ALLIANCE		602-12H	\$882.57
60200012H	7/11/2014	RCT00000000101992	OKANAGAN NATION ALLIANCE		602-12H	\$3,227.66
Total Project Expenditures						<u>\$526,162.28</u>
Remaining Project Balance						<u><u>73,425.72</u></u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200014H	Open	602-14	Shuttleworth Ck Diversion/Well			477,230.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher /		Invoice Ref	Item Description	Expenditure Amount
		PA Document No.	Vendor Name			
60200014H	11/7/2012	RCT00000000061325	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.		602-14H	\$4,272.27
60200014H	11/26/2012	RCT00000000062444	OKANAGAN NATION ALLIANCE		602-14H SHUTTLEWORTH CREEK DI'	\$39,412.89
60200014H	12/10/2012	RCT00000000063308	OKANAGAN NATION ALLIANCE		SHUTTLEWORTH CREEK DIVERSION	\$3,846.99
60200014H	12/27/2012	RCT00000000064481	OKANAGAN NATION ALLIANCE		SHUTTLEWORTH CREEK DIVERSION	\$116,699.77
60200014H	12/30/2012	RCT00000000064709	OKANAGAN NATION ALLIANCE		SHUTTLEWORTH CREEK DIVERSION	\$59,159.92
60200014H	1/23/2013	RCT00000000066264	OKANAGAN NATION ALLIANCE		602-14H SHUTTLEWORTH CREEK DI'	\$225.92
60200014H	2/27/2013	RCT00000000068657	OKANAGAN NATION ALLIANCE		602-14H	\$13,824.93
60200014H	3/20/2013	RCT00000000070194	OKANAGAN NATION ALLIANCE		302-14H SHUTTLEWORTH CREEK DI'	\$6,733.07
60200014H	4/4/2013	RCT00000000071050	OKANAGAN NATION ALLIANCE		302-14H SHUTTLEWORTH CREEK DI'	\$18,770.05
60200014H	5/16/2013	RCT00000000073947	OKANAGAN NATION ALLIANCE		678-010 MAR-13 SHUTTLEWORTH CK	\$30,912.15
60200014H	6/18/2013	RCT00000000075738	OKANAGAN NATION ALLIANCE		SHUTTLEWORTH CREEK DIVERSION	\$2,966.69
60200014H	7/12/2013	RCT00000000077484	OKANAGAN NATION ALLIANCE		602-14H SHUTTLEWORTH CREEK DI'	\$4,664.18
60200014H	9/18/2013	RCT00000000081731	OKANAGAN NATION ALLIANCE		678-013 JUL-13 SHUTTLEWORTH CR	\$5,862.34
60200014H	10/2/2013	RCT00000000082697	OKANAGAN NATION ALLIANCE		602-14H	\$1,761.06
60200014H	12/18/2013	RCT00000000087909	OKANAGAN NATION ALLIANCE		678-015 OCT-13 SHUTTLEWORK CRD	\$8,158.03
60200014H	12/23/2013	RCT00000000088076	OKANAGAN NATION ALLIANCE		602-14H SHUTTLEWORTH CREEK DI'	\$0.90
60200014H	12/31/2013	RCT00000000089689	OKANAGAN NATION ALLIANCE		602-14H	\$3,369.18
60200014H	6/24/2014	RCT00000000100734	OKANAGAN NATION AQUATIC ENTERPRISES, LTD.		602-14H	\$69,490.27
60200014H	6/17/2014	RCT00000000100277	OKANAGAN NATION ALLIANCE		602-14H	\$41,787.06
Total Project Expenditures						<u>\$431,917.67</u>
Remaining Project Balance						<u><u>45,312.33</u></u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200015H	Open	602-15	Tyee Ranch Conservation Easement			34,056.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher /		Invoice Ref	Item Description	Expenditure Amount
		PA Document No.	Vendor Name			
60200015H	7/29/2014	RCT00000000103118	CASCADIA CONSERVATION DISTRICT		602-15H	\$34,055.56
Total Project Expenditures						<u>34,055.56</u>
Remaining Project Balance						<u><u>0.44</u></u>

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200016H	Open	602-16	Roaring Ck Restor/Div Removal			160,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200016H	9/18/2013	RCT00000000081693	TROUT UNLIMITED - WASH. WATER PR		602-16H	\$846.00
60200016H	12/18/2013	RCT00000000087908	TROUT UNLIMITED - WASH. WATER PROJECT		602-16 ROARING CREEK FLOW REST	\$3,287.26
60200016H	2/19/2014	RCT00000000091911	TROUT UNLIMITED - WASH. WATER PR		602-16H	\$708.73
60200016H	4/28/2014	RCT00000000096525	TROUT UNLIMITED - WASH. WATER PR		602-16H	\$2,400.00
60200016H	5/20/2014	RCT00000000098123	TROUT UNLIMITED - WASH. WATER PR		602-16H	\$1,181.30
Total Project Expenditures						8,423.29
Remaining Project Balance						151,576.71

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200017H	Open	602-17	Robinson Acquisition		For the purchase of 18 acres including abo	270,065.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200017H	6/25/2013	RCT00000000076270	INLAND PROFESSIONAL TITLE, LLC		ROBINSON LAND ACQUISITION	\$257,466.96
60200017H	8/7/2013	RCT00000000079220	METHOW SALMON RECOVERY FNDN		602-17H ROBINSON LAND ACQUISIT	\$4,036.50
60200017H	1/22/2014	RCT00000000090167	METHOW SALMON RECOVERY FNDN		602-17H	\$241.50
Total Project Expenditures						\$261,744.96
Remaining Project Balance						8,320.04

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200020H	Open	602-20	Entiat Riv Cottonwood Phs 2			10,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200020H	2/26/2014	RCT00000000092308	CHELAN-DOUGLAS LAND TRUST		602-20H	\$5,000.00
Total Project Expenditures						5,000.00
Remaining Project Balance						5,000.00

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200021H	Open	602-21	Barkley Irr Co. Diverson			299,380.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
Total Project Expenditures						-
Remaining Project Balance						299,380.00

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200022H	Open	602-22	Natapoc Appraisal			20,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200022H	6/16/2014	RCT00000000010013	STRICKLAND, HEISCHMAN & HOSS, INC		APPRAISAL SEI	\$20,000.00
Total Project Expenditures						20,000.00
Remaining Project Balance						-

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200023H	Open	602-23	Fish Jump Passage McIntyre			33,032.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
Total Project Expenditures						-
Remaining Project Balance						33,032.00

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200024H	Open	602-24	ORRI-Spawning Platforms in Penticton Channel			391,200.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60200024H	7/15/2014	RCT00000000010225	OKANAGAN NATION ALLIANCE		602-24H	\$33,572.50
Total Project Expenditures						33,572.50
Remaining Project Balance						357,627.50

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60200025H	Open	602-25	Primary Appraiser Land Acq & Conservation Ease			50,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
Total Project Expenditures						-
Remaining Project Balance						50,000.00

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300016H	Open	603-16	Libby Ck Riparian Acquisition	WDFW	18.5 acres on Libby Creek, Methow basin	206,600.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300016H	10/7/2010	RCT00000000015539	WASHINGTON ST DEPT OF FISH & WILDLIFE		PR HABITAT CONSERVATION-LIBBY	\$714.92
60300016H	11/4/2010	RCT00000000017798	WASHINGTON ST DEPT OF FISH & WILDLIFE		PR HABITAT CONSV.LIBBY CREEK	\$489.56
60300016H	11/4/2010	RCT00000000017800	WASHINGTON ST DEPT OF FISH & WILDLIFE		PR HABITAT CONSERVATION-LIBBY	\$643.96
60300016H	11/12/2010	RCT00000000018635	WASHINGTON ST DEPT OF FISH & WILDLIFE		LIBBY CREEK HABITAT	\$5,731.52
60300016H	12/31/2010	RCT00000000021924	WASHINGTON ST DEPT OF FISH & WILDLIFE		LIBBY CREEK HABITAT	\$258.23
60300016H	12/31/2010	RCT00000000021454	WASHINGTON ST DEPT OF FISH & WILDLIFE		LIBBY CREEK HABITAT	\$2,053.16
60300016H	2/23/2011	RCT00000000024036	WASHINGTON ST DEPT OF FISH & WILDLIFE		LIBBY CREEK	\$130,387.58
60300016H	7/22/2011	RCT00000000033027	WASHINGTON ST DEPT OF FISH & WILDLIFE		LOWER LIBBY CREEK	\$189.08
60300016H	8/31/2011	RCT00000000035330	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-16 LIBBY CREEK JUN-11	\$521.61
60300016H	12/19/2012	RCT00000000063918	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-164	\$334.18
60300016H	2/5/2014	RCT00000000091068	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-16H	\$408.51
60300016H	7/7/2014	RCT000000000101594	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-16H	\$23.81
456,241.00 al Project Expenditures						\$142,195.15
Remaining Project Balance						64,404.85

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300019H	Closed	603-19	Nason Ck Low White Pine Ponds	Chelan/Douglas	Protection 18 acres on Nason Creek	5,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300019H	3/22/2013	RCT00000000070318	CHELAN-DOUGLAS LAND TRUST		603-19H NASON CREEK LOWER WH	\$3,222.78
60300019H	6/19/2013	RCT00000000075809	CHELAN-DOUGLAS LAND TRUST		603-19	\$1,777.22
Total Project Expenditures						\$5,000.00
Remaining Project Balance						-

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300022H	Open	603-22	White River Gage Station			22,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300022H	10/25/2012	RCT00000000060464	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$103.09
60300022H	11/19/2012	RCT00000000062010	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$115.98
60300022H	1/24/2013	RCT00000000066317	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$343.86
60300022H	3/5/2013	RCT00000000068904	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$181.18
60300022H	5/1/2013	RCT00000000072960	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$811.71
60300022H	6/26/2013	RCT00000000076515	WASHINGTON ST DEPT OF ECOLOGY		603-22H WHITE RIVER GAGE STAT	\$354.48
60300022H	7/29/2013	RCT00000000078501	WASHINGTON ST DEPT OF ECOLOGY		603-22 WHITE RIVER GAGE STATIO	\$360.76
60300022H	8/14/2013	RCT00000000079600	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$249.34
60300022H	11/4/2013	RCT00000000084776	WASHINGTON ST DEPT OF ECOLOGY		603-22 WHITE RIVER GAGE STATIO	\$571.21
60300022H	12/31/2013	RCT00000000088821	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$671.76
60300022H	1/22/2014	RCT00000000090183	WASHINGTON ST DEPT OF ECOLOGY		603-22H WHITE	\$13.82
60300022H	2/26/2014	RCT00000000092387	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$3,233.43
60300022H	3/17/2014	RCT00000000093607	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$1,081.97
60300022H	4/28/2014	RCT00000000096536	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$1,655.10
60300022H	5/20/2014	RCT00000000098092	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$1,336.73
60300022H	6/23/2014	RCT00000000100593	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$748.43
60300022H	7/28/2014	RCT00000000103097	WASHINGTON ST DEPT OF ECOLOGY		603-22H	\$647.59
Total Project Expenditures						\$12,480.44

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PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300024H	Open	603-24	Barkley Irrigation Diversion			220,866.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300024H	10/24/2012	RCT00000000060356	TROUT UNLIMITED - WASH. WATER PROJECT		BARKLEY IRRIGATION DITCH DIVE	\$168,288.39
60300024H	12/6/2012	RCT00000000063151	TROUT UNLIMITED - WASH. WATER PROJECT		BARKLEY IRRIGATION DITCH DIVE	\$2,018.22
60300024H	12/21/2012	RCT00000000064115	TROUT UNLIMITED - WASH. WATER PROJECT		603-24 BARKLEY IRRIG DITCH DIV	\$1,294.58
60300024H	10/24/2013	RCT00000000084177	TROUT UNLIMITED - WASH. WATER PROJECT		603-24H	\$28,036.95
60300024H	12/18/2013	RCT00000000087930	TROUT UNLIMITED - WASH. WATER PROJECT		603-24H	\$3,999.91
Total Project Expenditures						<u>\$203,638.05</u>
Remaining Project Balance						<u>17,227.95</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300025H	Open	603-25	Methow River 1890's Side Channel Acquisition			90,000.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
Total Project Expenditures						<u>\$0.00</u>
Remaining Project Balance						<u>90,000.00</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300026H	Open	603-26	Okan River Discharge Monitor			90,952.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300026H	5/9/2014	RCT00000000097360	COLVILLE CONFEDERATED TRIBES		603-26H	\$13,430.00
60300026H	6/17/2014	RCT00000000100280	COLVILLE CONFEDERATED TRIBES		603-26H	\$13,430.00
Total Project Expenditures						<u>\$26,860.00</u>
Remaining Project Balance						<u>64,092.00</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300027H	Open	603-27	Icicle IRR Pump Exch Analysis		To determine the feasibility, of constructing additional pumping	174,847.00
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300027H	12/18/2013	RCT00000000087932	TROUT UNLIMITED - WASH. WATER PROJECT		603-27H	\$9,960.00
60300027H	12/31/2013	RCT00000000089688	TROUT UNLIMITED - WASH. WATER PROJECT		603-27H	\$38,682.11
60300027H	2/19/2014	RCT00000000091872	TROUT UNLIMITED - WASH. WATER PROJECT		603-27H ICICLE-PESHASTIN IRRIG	\$4,285.00

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60300027H	3/17/2014	RCT00000000093598	TROUT UNLIMITED - WASH. WATER PROJECT	ICICLE-PESHASTIN ANALYSIS FOR	\$12,720.00
60300027H	4/28/2014	RCT00000000096537	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$30,006.90
60300027H	5/20/2014	RCT00000000098121	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$21,630.00
60300027H	6/17/2014	RCT00000000100298	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$17,733.75
60300027H	7/29/2014	RCT00000000103144	TROUT UNLIMITED - WASH. WATER PROJECT	603-27H	\$13,443.75
Total Project Expenditures					<u>\$148,461.51</u>
Remaining Project Balance					<u>26,385.49</u>

PID	Status	HCFA	Name/Description	Contractor	Description	Project Budget Amount
60300028H	Open	603-28	Icicle Creek Boulder Pit Tag Array			167,097.87
Project Expenditure Activity:						
Project ID	Acctg Date	Voucher / PA Document No.	Vendor Name	Invoice Ref	Item Description	Expenditure Amount
60300028H	7/15/2014	RCT00000000102230	WASHINGTON ST DEPT OF FISH & WILDLIFE		603-28H	\$213.01
Total Project Expenditures						<u>\$213.01</u>
Remaining Project Balance						<u>166,884.86</u>



WASHINGTON WATER PROJECT

CHEWUCH RIVER PERMANENT INSTREAM FLOW PROJECT



Final Narrative Report

July 21, 2014

EXECUTIVE SUMMARY

Trout Unlimited-Washington Water Project's (TU-WWP) Chewuch River Permanent Instream Flow Project (Chewuch Project) is a successfully implemented salmonid habitat and irrigator assistance project in the lower Chewuch River near the town of Winthrop, Washington. TU-WWP implemented comprehensive irrigation efficiency upgrades to attain the project goals of enhancing instream flows in the Chewuch River for the benefit of Endangered Species Act (ESA) listed fish, upgrading the Chewuch Canal Company's (CCC) aging irrigation delivery infrastructure, and increasing the efficiency of CCC water use. The project converted nearly 9,000 feet of open earthen ditch to enclosed pipe, restructured several miles of the existing ditch, and implemented several new water intake, distribution, and control structures. This project will provide CCC users a reliable water supply while creating instream flow benefits to the Chewuch River, significantly improving historical low flows in the Chewuch River. Enhanced flows will directly benefit steelhead, Chinook salmon, bull trout, cutthroat trout and a variety of other fish and wildlife species. TU-WWP completed the project in June 2014 with strong support from a variety of partners including:

- United States Bureau of Reclamation (Reclamation)
- National Fish and Wildlife Foundation (NFWF)
- Confederated Tribes and Bands of the Yakama (Yakama)
- Bonneville Power Administration – Fish and Wildlife Program (BPA)
- Public Utility District No. 1 of Chelan County – Rock Island Habitat Conservation Plan Tributary Committee (Tributary)
- Grant County Public Utility District – Priest Rapids Coordinating Committee
- Chewuch Canal Company (CCC)
- Washington State Parks and Recreation Commission (Washington Parks)
- Methow Conservancy
- Washington State Recreation and Conservation Office-Salmon Recovery Funding Board
- Washington Department of Fish and Wildlife
- Department of Ecology
- NOAA Fisheries

OVERVIEW

Beginning in 2008, TU-WWP staff, CCC, Reclamation, and Van Hees Environmental (VHE) carried the project from conception to completion in six years. The Chewuch Project included partnerships between multiple public agencies, tribal entities and private contractors and exemplifies the benefits of collaboration. The principle objectives of improving Chewuch River instream flow and increasing the efficiency of the CCC irrigation delivery system were achieved.



1. Chewuch Canal at Bear Creek, before project

Project Goals

Instream Flow

- 10 cfs conserved in late season before October 1 (when Chewuch River flows fall below 100 cfs) in perpetuity for instream flow in the Chewuch River with residual downstream effects to the Methow River
- 15 cfs conserved in late season after October 1 (up to 1000 acre feet in Pearrygin for filling the reservoir which will now happen in spring when flows are higher) in perpetuity for instream flow in the Chewuch River

Irrigation Delivery

Ensure sufficient delivery of water to 180 users and over 700 acres of farmland including five commercial farming and ranching operations, numerous micro-farms, and dozens of livestock pastures and other non-commercial irrigation uses

Project Location

The Chewuch Project is situated in Columbia Cascade Water Resource Inventory Area (WRIA) 48, Hydrologic Unit Code (HUC) 1702000804 near the lower Chewuch River and HUC 1702000806 in proximity to the Methow River between Winthrop and Twisp in north-central Washington State.



2. Methow Valley farmland irrigated by Chewuch Canal Company

Background

The Chewuch Canal was originally an open ditch, constructed about one hundred years ago. The total canal length is about 16 miles (six miles above Pearrygin Lake and ten miles below). The Chewuch Canal Company has a water right to divert up to 34 cfs of water from the Chewuch River from May 1st to September 30th to supply shareholders water. CCC also has a reservoir right allowing diversion outside of the irrigation season to store up to 1,000 acre-feet (a-f) of water for late season use. The pipeline used to fill the lake was failing, limiting flow rates such that it took 60 days to fill the reservoir. A dam at one end of the lake included a weir and withdrawal pipes allowing the top five feet of the lake to be used as CCC reservoir. The dam had failed in the past, but was repaired, and the pipes were limited in withdrawal capacity.

During the last decade various agreements to reduce diversion water resulted in discontinuous sections of the canal being piped. The piped sections were all below Pearrygin Lake. This left several operational spills still working and 8,800 feet of un-piped canal. An additional section of un-

pipelined canal, Lake Creek, emanated from Pearrygin Lake and delivered CCC water to a pipe via a screen structure 2,000 feet downstream of the reservoir.



3. Chewuch Canal at Bear Creek after construction

Project Elements

Piping the canal was the first and most straightforward element of the plan. Piping 8,800 feet of the lower canal would eliminate seepage and operational spills. Similarly, installing a pipe parallel to Lake Creek would eliminate seepage along an additional 2,000 foot reach and remove another operational spill.

Implementing a schedule change for the reservoir spill was more complex. First, an agreement to change the reservoir permit was explored. TU-WWP, CCC, and the Washington Department of Ecology (DOE) negotiated an agreement to implement a system that would be monitored for up to three years to determine if more reservoir water was needed. In response to this agreement a system of two new screen structures in the Chewuch Canal above Pearrygin Lake was designed. A large pipe connecting the second screen to the new Lake Creek pipe allowed for both reservoir fill and draw from the new intake structure installed at Pearrygin Lake. A monitoring system was included to measure fill and draw volumes over the course of several irrigation seasons. TU-WWP's team identified new easements required for pipe alignments and helped CCC obtain those rights-of-way. A new easement was required for the Silverline pipe and was arranged between the Silverline

Resort and CCC. Another new easement was required for the Lake Creek pipe on Washington Department of Parks and Recreation land. The team assisted CCC in obtaining this easement as well.

Opportunity for Salmon Recovery

The existing system had several opportunities to increase water delivery and storage efficiencies. The Chewuch Project began with the idea of maximizing these efficiencies. Open sections of canal below Pearrygin Lake could be made more efficient by eliminating seepage and operational spills. Modifications to the reservoir fill schedule at Pearrygin Lake could switch reservoir fill diversions from fall low flows to spring high flows. Both opportunities were evaluated and determined to provide significant instream flow improvement for salmonid recovery.

The Chewuch River is designated critical habitat for endangered Upper Columbia River (UCR) spring Chinook (*Oncorhynchus tshawytscha*), threatened UCR steelhead (*Oncorhynchus mykiss*), and threatened Columbia River (CR) bull trout (*Salvelinus confluentus*). In addition, both the Chewuch and Methow Rivers offer important rearing, migration, and spawning habitat for a variety of anadromous and resident salmonids including Chinook, steelhead, and bull trout, as well as unlisted rainbow trout (*Oncorhynchus mykiss*), westslope cutthroat trout (*Onchorhynchus clarki lewisi*), coho salmon (*Oncorhynchus kisutch*) and mountain whitefish (*Prosopium williamsoni*). Tributaries within these watersheds also provide critical spawning grounds as well as cold-water refugia when main stem temperatures rise and high-water refugia during main stem flood events.

Salmon Recovery Plans/Limiting Factors

The Chewuch River reaches critical flows during the fall of some years. Increasing flows will result in habitat improvements designed to recover listed salmonid species. Specifically, the Chewuch Project enables the CCC to divert 10 cfs less during times when the Chewuch River drops below 100 cfs. At these low flows, fish passage through habitat units such as riffles and some runs is compromised. Enhanced flow made possible by the Chewuch Project will provide increased wetted perimeter habitat, particularly in side channels that may afford increased refugia and cover for juveniles as well as increased spawning habitat for adults. Increased stream flows will provide measurable benefit to instream habitat (pool/riffle depth) and help maintain water temperatures during summer/fall low flows. In addition, this project changed the periods during which the Pearrygin Lake reservoir can be filled, so that if the Chewuch River is below 100 cfs, the CCC will wait until the spring when flows are less limiting. This means that there will be more water in the

Chewuch River at critical low flow periods, providing key habitat, especially for adult passage and juvenile rearing.

The Chewuch Project addressed the limiting factor of water quantity described in the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan 2007.

PROJECT ELEMENTS

Funding

TU-WWP raised over \$2.5 million dollars of funding to implement the project

- United States Bureau of Reclamation (Reclamation)
- National Fish and Wildlife Foundation (NFWF)
- Confederated Tribes and Bands of the Yakama (Yakama)
- Bonneville Power Administration – Fish and Wildlife Program (BPA)
- Public Utility District No. 1 of Chelan County – Rock Island Habitat Conservation Plan Tributary Committee (Tributary)
- Grant County Public Utility District – Priest Rapids Coordinating Committee
- Salmon Recovery Funding Board

Permitting

TU-WWP and/or their Contractors secured all necessary local, state and federal permits for the Chewuch Project, including:

Okanogan County

- Shoreline Exemption (project falls under irrigation exemption 5.22 (D))
- State Environmental Policy Act Final Determination of Non-Significance (DNS)

State of Washington

- Department of Fish and Wildlife Hydraulic Project Approval (HPA) (work adjacent to and/or with surface waters of the state)
- Parks and Recreation Commission – Temporary construction easement (for construction access to install pipe, intake, monitoring station), and Permanent easement (for the buried pipe, intake at Pearrygin Lake, and monitoring station)

Federal

- United States Fish and Wildlife Service Consultation (Endangered Species Act – bull trout)
- National Marine Fisheries Service Consultation (Endangered Species Act – spring Chinook and steelhead)

Design and Engineering

The Federal Bureau of Reclamation (Reclamation) sub-basin liaison and Boise engineering office (the engineer of record for the project), in consultation with TU-WWP, TU-WWP's consultants, and CCC personnel, developed system concepts and engineering design. VHE, along with the subcontractor Optimal Niche LLC, provided on-site expertise in construction and engineering concepts and direct liaison with CCC personnel. CCC personnel helped guide conceptual and final design based on their experience operating the canal. Reclamation provided engineering analyses, design drawings, and specifications.

Conceptual Design

Two distinct project areas comprised the entire project. The first part of the project involved piping 8,800 feet of the lower Chewuch Canal from the south boundary of the Town of Winthrop to Bear Creek. This part of the project is referred to as Bear Creek. The other major area of the project is located near Pearrygin Lake and included new water control structures as well as 2,000 feet of pipe along Lake Creek. This part of the project is referred to as Lake Creek.

Bear Creek involved straightforward canal piping. However, this section of the canal is along steep rocky slopes with many turns, so an extremely accurate survey and design was necessary.

Lake Creek has three important sub elements: Dempsey Drop, Silverline, and Lake Creek. In order to simplify piping and operations the idea was developed to make part of the Lake Creek pipe a conduit for water to or from Pearrygin Lake. The new pipe would be large enough to cut Pearrygin Lake fill time in half.

There were several different alignments possible to convey water from the upper canal to the existing pipe below Pearrygin Lake and to Pearrygin Lake. The existing collapsed pipe runs from the Wright Lateral (part of the Chewuch Canal) under Silverline Resort to Pearrygin Lake. It was estimated to be too expensive to disrupt the resort in order to excavate a deep trench to install another pipe. Instead, arrangements were made to place a screen (Silverline screen) at the end of

the Wright Lateral and from there install the pipe across undeveloped Silverline Resort property. This pipe would pass under Lake Creek and connect to the Lake Creek pipe.

At the Dempsey Drop a new screen was conceived that would use it as an occasional spill to regulate flow from the upper open canal, and as a waste way for detritus coming down the six-mile canal.

Project Construction

Pre-Construction

Construction of this project consisted of activities in two major locations separated by about six miles. Prior to construction the TU-WWP team, primarily through local subcontractor Water Resource Solutions (WRS), negotiated four access points and five construction staging areas. This was necessary because all aspects of the project required access across private property.

The schedule required construction to begin following the irrigation season with substantial completion by 15 April 2014. The completion deadline provided a two-week buffer for system commissioning to ensure the system was operational for the 2014 CCC irrigation season.

Selland Construction submitted the low bid among five bidders. Bids were evaluated on a best-value basis. Following research and interviews into Selland's previous project performance the contract was awarded to them 12 September 2013.

Construction observation was arranged with VHE and Reclamation, who subcontracted to Anchor QEA. Two observers were provided – one for the Bear Creek area (VHE) and one for the Lake Creek area (Anchor QEA). Observers were instructed to provide daily field reports to the project manager no later than one day after the construction observed.

Construction easements were negotiated with Silverline Resort and Washington Parks. The new easements on these properties were necessary to make possible the Silverline and Lake Creek pipe alignments, respectively. The construction easement was temporary for the purposes of digging deep trenches and equipment mobility. Temporary easements were 70 feet wide while final easements were 25 feet wide.

A preconstruction meeting was held with Selland, TU-WWP, VHE, Optimal Niche, and Reclamation. Selland presented a schedule for review. The submittal process was reviewed in detail for

materials, environmental/safety plans, and pay estimates along with other contracting forms and processes such as requests for information and change orders.

Submittals for materials and environmental/safety plan approvals were initiated immediately upon contract award. The 21- and 24-inch pipe material submittals were completed first so that pipe could be verified, ordered, and delivered in a timely manner.

Adding to the complex nature of a large-scale construction effort, the federal government shut down for three weeks at the beginning of the project. Fortunately, TU-WWP and VHE project managers stepped up to find resolution to the forced vacation for Reclamation engineers. In order to promptly and efficiently deal with submittals TU-WWP contracted Anchor QEA to help process the submittals and Requests for Information as they came in from the contractor. In the end the project team was able to keep the flow of paper work moving and remain just ahead of the contractor on the ground.

Construction

Bear Creek

Construction began on 21 October 2013 with Selland delivering a Cat 312C excavator and a Cat D4G dozer. Selland chose to start at the Bear Creek Road end and work upstream to the Winthrop end of the project. They began clearing and grubbing prior to canal preparation for pipe installation.

The canal first passes through open fields and then enters a region with many large cottonwood trees growing adjacent to the ditch bank. A separate arrangement with local arborist Dennis Jones provided for tree removal. The contractor filled the canal using soil within the easement, which also created a bench to facilitate tree cutting and bucking. The contractor removed the bucked logs.



4. Pipe staging along Winthrop to Bear Creek

Once several thousand feet of canal were prepared in this way the alignment was surveyed and trenching began. Seland incorporated additional equipment including a Cat 315D excavator and a Cat 938G front loader. The contractor distributed the pipe along the side of the ditch. The larger excavator was used to dig the trench. It first placed soil castings to the side of the trench, and then retrieved a length of pipe for placement. The loader brought pipe bedding material up to the second excavator, which placed it prior to the pipe being set. The surveyor used GPS to maintain accurate alignment and slope. The first excavator pushed the stick, seating it correctly in the downstream bell, and then the second excavator buried the pipe.

Specifications called for one foot of cover, but the contractor requested placing two feet of cover to allow the contractor to drive over the pipe with heavy equipment without causing damage. The request was approved, at no cost. Using this method the contractor achieved up to 500 feet per day of pipe installation. This dropped when a turnout had to be installed and in steep terrain where pipe alignment included many bends.

It became apparent when operating in the steep areas that the existing soil making up the canal bench did not contain enough suitable material for bedding and covering the pipe. The downhill included too many rocks and boulders and the uphill side included bare bedrock. The contractor imported several thousand yards of soil and graded for the top portion of the canal (approximately

3,000 feet). This made it possible for work to proceed inside the canal boundaries and avoided any work on the embankment.

The contractor left elbows of 30 degrees or greater exposed. Later these elbows were provided with a cast-in-place concrete thrust block to take the forces for pressure and flow, keeping the joints tight. The thrust blocks were covered after curing.

Although weather was a factor during construction, the contractor was able to respond to favorable conditions. A cold spell in late October did not halt progress because dry soils did not freeze and remained workable. Construction continued until 20 December 2013 before shutting down for the holidays. January 2014 brought some snow and cold, but the weather broke and the contractor resumed work. A large amount of snow fell in February so no work was accomplished during the majority of the month. Otherwise, snow was mostly light and manageable and only intermittent weather-related work stoppages were required.

The pipe alignment was seeded with dry seed mix as specified. Seeding was done as the contractor progressed. Thus, some seeding was done in the fall with the remainder completed in the spring.

Lake Creek

Construction began on 21 October 2013 at both ends of the Lake Creek pipe alignment. The contractor initially did clearing and grubbing of the entire Lake Creek pipe construction easement and staging area using a Cat D4G bulldozer with ripper. They then installed silt fence along the entire length of Lake Creek from the Pearrygin Lake to the Bubbler. Other equipment mobilized included a Cat 930 front loader, Cat 325 CL excavator, Komatsu PC 400 LC excavator, READ Screen All Portable Vibratory soil screener, International water truck, and an International Transtar 4300 fuel truck. The fuel truck was staged 200 feet from Lake Creek per HPA requirements.

Work progressed at both ends of Lake Creek with two crews. One crew began the pipe alignment trench near the Bubbler. The second crew began construction of a coffer dam in the lake ahead of the dam in preparation for forming and pouring concrete for the new intake structure.



5. Lake Creek connection to existing Chewuch Canal pipe

The trenching proceeded, typically using one trench box but adding a second when the trench became deeper. The soil screen was used to extract pipe bedding material from the raw excavation. The bedding material was placed, the pipe was set and pushed into the bell, and additional pipe bedding was installed in lifts. Each lift was compacted with a Jumping Jack Wacker. Once the bedding sufficiently covered the pipe, backfilling proceeded. The contractor removed large boulders from the initial backfill in order to protect the pipe. Backfill was compacted with a 'sheeps foot' attached to the excavator bucket. The contractor surveyor tracked the alignment and elevations to ensure the pipe was located correctly.

At the point where the Silverline pipe connects to the Lake Creek pipe the contractor installed a tee and buried for later excavation. Thus, the contractor avoided crossing the creek and dealing with a large flow down the creek. Instead, in late November when Lake Creek was at annual low flow the contractor re-excavated the Lake Creek pipe tee. A temporary culvert was installed for Lake Creek

to pass through and the Silverline pipe was installed under the culvert. Then it all was backfilled and a temporary crossing built up for access to the Silverline pipe alignment.



6. Piping Lake Creek

At the Pearrygin Lake intake site the contractor constructed a coffer dam by placing ecology blocks, plastic sheeting, and sandbags across the 50-foot wide lake outlet. The area between the coffer dam and the existing dam was excavated to about 12 feet below lake level. Sump pumps removed and deposited water above the lake such that the water dispersed and sediments settled out on the land before the water reentered the lake. Care was taken to minimize the size of the disturbed area. The existing lake outlet pipes passing through the existing dam were left intact.

A gravel pad was set in preparation for the bottom slab of the screen structure. The two levels of the pad added some complexity to the rebar and form work. Once set and checked by the observer, the contractor poured concrete. Slump tests were taken. Four concrete test cylinders were poured and taken to the North Central Testing and Inspection for quality control. Four additional test cylinders were left next to the slab to field cure. This was the procedure used for all concrete testing on the site. Strength tests were performed at 7 and 14 days after a pour.



7. Lake Creek Cofferdam

Several days later the coffer dam failed, inundating the slab and test cylinders. It was later determined that the soil, while very compact and difficult to excavate in its undisturbed state, was subject to water piping and fines migration under low differential pressure. Soil eroded under the coffer dam, creating a void that was hidden from above into which the ecology blocks collapsed. The contractor proceeded to install a series of three cofferdams at differential levels. Sump pumps removed water behind each cofferdam. This configuration remained for the duration of construction of the intake structure.

Later testing of the lab- and field-cured concrete test cylinders confirmed that the concrete exceeded specifications for strength. The contractor proceeded with installation of more rebar and formwork for the walls of the structure. Successive testing demonstrated continuing conformance with concrete strength specifications. Wall thimbles were cast in place for later attachment to a control valve and the Lake Creek pipe.



8. Lake Creek structure after pour

Construction continued in the spring of 2014 with connection of the Lake Creek pipe to the intake structure. A 24-inch gate valve was also installed per the design. Metal work proceeded in late spring 2014. The trash rack, screens (3/32 inch diameter holes), ladders, and catwalks were all installed. A fence around the facility, including through part of the lake, impedes access to the structure from land or water. Access is gained only through a lockable gate.

Silverline

Silverline pipe construction commenced with the installation of the tee in the Lake Creek pipe. Following the crossing of Lake Creek, the contractor proceeded upslope toward the future location of the new Silverline screen. The contractor discovered a major ground water flow appearing to come from gravel pathways about 9 feet below the surface. They were able to pump out the water and properly bed the pipe, proceeding to within 20 feet of the screen site. A manhole on the Silverline pipe was installed near Lake Creek and backfilled. Within a few days the manhole filled up. There was enough subsurface pressure that the water was welling up through the manhole

cover approximately 18 inches above the surface. It became apparent that the trench and pipe bedding were acting as a conduit for ground water.



9. Construction of the Silverline pipeline

There was also a surface seep about 25 feet away that contributed water to the manhole. A field change was made and we created a gravel drain around and under the structure, which decreased the pressure and the amount of flow into the structure. The manhole was also sealed from the inside with a hydrophobic epoxy product. Several applications accomplished this goal.

The contractor proceeded to excavate for the Silverline screen. This proceeded uneventfully. A county drain pipe crossed the area where the Chewuch Canal exited a 54-inch by 36-inch squash pipe under the county road. The drain pipe elevation was below the elevation of the canal berms. The pipe was extended over the open canal, supported with a cast-in-place concrete block inside the berm before exiting to some riprap acting to alleviate erosion.



10. Construction of Silverline

The screen structure proceeded with three separate concrete pours. Concrete test cylinders taken for each pour eventually resulted in confirmation of the concrete strength. Pipe thimbles were cast in place for connection to the new Silverline pipe and to the existing pipe feeding shareholders, including the Silverline Resort, downstream of the structure.

Once the concrete cured the contractor proceeded to install the last 20 feet of the Silverline pipe and connect it to the structure. Valves were also installed. Near the end of the project the remaining metal work was installed including screens, ladders, and catwalks. A fence and lockable gate were erected around the structure.

Dempsey Screen and Wright Lateral

The Dempsey screen is the most complex structure in the project. It is designed to remove most of the detritus coming down the six miles of open ditch upstream, act as an operational spill, and deliver flow to the Silverline screen via the 2,000 foot Wright lateral. A steep bank limited access to a road crossing over the canal itself. The steep bank was excavated to a less erodible slope per the drawings. Then the site of the screen was excavated in preparation for rebar and form work.

An existing pipe was used to take water from the canal and take it down 40 feet in elevation to another Chewuch Canal feeding the Bubbler, which is where the main canal used to deliver water to

shareholders when Pearrygin Lake reservoir wasn't being drawn from. Upon excavation this concrete pipe was found to be unusable due to cracks, holes, and loose or decoupled joints. A new ductile iron pipe was designed and added to the installation.

Construction of the structure proceeded uneventfully. Rebar and formwork was set and checked. Concrete test cylinders were taken for each pour. Pipe thimbles and mounting brackets were installed for the four valves and three pipes to be attached to the structure. As in the other structures, metal work installation occurred near the end of the project, with screens, ladders, and catwalks being installed. A fence with two locked gates was erected around the structure.



11. Construction of Dempsey Drop Structure

The Wright Lateral was not originally constructed to handle the full 24 cfs that this project would be delivering, so the canal had to be widened. The first 700 feet of the Wright lateral was constructed on a very steep hillside. Deepening would not help so this first portion of the canal was replaced with two parallel 36-inch Hancore corrugated pipes.

At the end of the pipes, the Wright lateral was widened as far as possible within the existing Chewuch Canal easements. This was done so that sufficient soil could be generated to build up the banks. The built-up banks made it possible for the Dempsey screen to be an operational spill should the Silverline screen become plugged or shut off. Additionally, the Wright lateral passes through the middle of a horse pasture. Horses consistently crossed at a single location and just as consistently broke down the canal banks. An overflow of the added flow and volume in the Wright Lateral could cause more damage than in previous years. Thus, a bridge located at the existing horse crossing alleviated this potential problem.



12. Reconstruction of the Chewuch Canal, below wright lateral pipe

Elevations along the Wright lateral were checked for potential over flow sites. The bank is about one foot above the maximum possible water level at the Dempsey screen.

System Commissioning

System commissioning began the day after substantial completion. This task involved checking valves for proper operation and general overview of the system prior to turning on the water. The valve in the manhole near the Bubbler could not be operated and the contractor replaced a bent valve stem. All other valves checked out as operations and the system appeared to be ready for use.

Water was conveyed through the canal to clean debris and test the system. It became apparent that the valve in the lake intake structure was reversed. One side is specified to seal against 70 feet of pressure while the other side must seal against about 7 feet of lake depth. The contractor reversed the valve and it operated as designed.

The system was first pressurized from the lake structure. This added approximately 30 feet of head to the system. There were no apparent problems so the lake intake was closed and the Silverline valve opened. This contributed an additional 30 feet of head to the system. Leaks began to appear in the pipe turnouts and air/vacuum relief valves installed prior to this project, which CCC was able to repair. Several of the air/vacuum relief valves blew off the pipe due to increased pressure. These plastic extensions were replaced with steel pipe. The entire system was ready and put into operation on May 1st, 2014.

Final Design Elements

Bear Creek

Twenty-four inch diameter plastic irrigation pipe (PIP) were installed to match the canal centerline. Turnouts were either replaced or constructed at new locations as directed by each shareholder. An isolation valve was placed at the connection to the previously installed pipe from Bear Creek south. The pipe alignment was refined to incorporate more elbows, eliminating angling of pipe at the joints. Elbows of 30 degrees or greater have a cast-in-place concrete thrust block for protection against surges.

Dempsey Screen

A concrete structure was designed with screens and a spillway. The screens, with 3/32 inch diameter holes, slope up to a platform. The platform elevation matches that of an adjacent weir. Valves at the end of the structure regulate flow down the Wright Lateral. The weir capacity is sufficient to bypass 100% of the canal flow if necessary due to plugged conditions downstream.

However, normal operation is to allow some water to go over the weir as needed to remove debris. Otherwise, flow continues through the screen and down the Wright Lateral.

Wright Lateral

The Wright Lateral is piped for the first 700 feet to get through a very steep and restricted area. Twin 36 inch pipes carry the flow until gradient slackens. The next 1,500 feet of canal were widened and built up. This provides some buffer volume and also allows for water to back up from the Silverline screen to the Dempsey screen where excess water can be safely spilled.

Silverline Screen

The Silverline screen, also containing 3/32 inch diameter holes, provides the final water screening before water enters the pipe. It also diverts water to shareholders downstream of the screen, including the Silverline Resort. The main flow enters the Silverline pipe, which crosses under Lake Creek before entering a tee in the Lake Creek pipe. The pipe is up to nine feet below grade in places in order to maintain grade to enable passage under Lake Creek and minimize elbows. A manhole provides a sensor location for monitoring flow in this pipe. A valve at the screen structure allows CCC to control supply from the canal, regulating it or shutting it off in favor of supply from Pearrygin Lake.

Lake Creek Intake Structure

The Lake Creek intake structure allows both water delivery to and withdrawal from Pearrygin Lake as needed by CCC and within the limits of their reservoir right. Water enters or exits the lake through the Lake Creek pipe with a manual gate valve for flow regulation.

The Lake Creek pipe parallels Lake Creek and connects to the existing pipe installed several years earlier at a screen structure called ‘the Bubbler’. The Bubbler was incorporated into the design as an alternative emergency supply that could take water directly from the Dempsey screen through the existing canal. The Lake Creek pipe is buried up to 16 feet in order to maintain grade from the lake to the Bubbler. A new valve was installed in the Bubbler to handle the increased back pressure. Two manholes were installed on the Lake Creek pipe. One manhole is located near the intake structure where a sensor measures flow volume through the pipe into and out of Pearrygin Lake. The other manhole is situated near the Bubbler and houses a control valve to close the Lake Creek pipe if it becomes necessary to use the Bubbler to supply irrigators below Pearrygin Lake.

Appendices

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Biological Assesment

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Winthrop to Bear Creek As-builts

Appendix L

Lake Creek As-builts

Appendix M

Depsey Drop and Wright Lateral As-builts

Appendix N

Silverline Easement

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Memorandum

To: Denny Rohr
From: Tracy Hillman
Date: 12 August 2014
Re: FCWG Meeting Progress Report

The Fall Chinook Working Group (FCWG) met at Grant PUD in Ephrata, WA, on Tuesday, 5 August from 10:00 am to 12:30 pm.

Wanapum Dam Issues

- Grant PUD gave a brief update on the status of Wanapum Dam. The update described the successful passage of over 600,000 fish, problems with one of the four pumps in the left ladder, evaluation of adult Pacific lamprey passage including adult lamprey trap and haul, and the status of installation of tendons in the monolith piers.

Study Plan Updates

- The predation report prepared by Blue Leaf is final and has been submitted to the FCWG.
- Grant PUD is preparing a draft study plan to evaluate the density dependence that was identified in the productivity assessment. The proposed approach includes evaluation of growth and condition based on sampling otoliths. The draft study plan will be available for review in September.
- Consistent with the 401 reporting requirements, Grant PUD is preparing a final report for Ecology that includes the investigation of reasonable and feasible measures to avoid, reduce, or mitigate for adverse effects (Implementation Feasibility Study; IFS) and a plan to implement approved measures (Implementation Feasibility Plan; IFP). The FCWG reviewed and approved the draft outline for the final report. A draft of the final report will be available for review in November. The FCWG will have 90 days to review the report. The final report will be submitted to Ecology and FERC in April 2015.

Hanford Reach Working Group Updates

- Grant PUD will propose to the Board of Consultants an interim Wanapum Pool elevation of 560-562 feet. The proposed interim elevation will occur later this year. The PUD is examining the effect of the interim pool elevation on the operation of Reverse Load Factoring.
- Grant PUD continues to examine historic stranding and entrapment data to identify data and sampling gaps. They are also evaluating ways to reduce the large variance associated with entrapment estimates. This work will be completed in October.

2014 Return-Year Studies and Funding Opportunities

- The FCWG discussed different studies that could be conducted to address density dependence, which is likely to occur this year with the projected high escapement of adult fall Chinook to the Hanford Reach. Proposed studies include evaluation of redd superimposition, physical characteristics of juvenile fall Chinook, and development of models to examine the historic effects of escapement on fish size. The FCWG supports these studies. Those proposing the studies will seek funding from the Army Corps of Engineers, Alaska Department of Fish and Game, or other sources.

Next Steps

The FCWG will next meet on Tuesday, 2 September 2014 at Grant PUD in Ephrata, WA.



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Memorandum

To: Denny Rohr
From: Tracy Hillman
Date: 12 August 2014
Re: PRFF Meeting Progress Report

The Priest Rapids Fish Forum (PRFF) met at Grant PUD Natural Resources Office in Wenatchee, WA, on Wednesday, 6 August 2014, from 9:00 am to 12:00 pm.

Wanapum Dam Issues

- Grant PUD provided an update on issues at Wanapum Dam. The update described the successful passage of over 600,000 fish, intermittent problems with one of the four pumps in the left ladder, evaluation of adult Pacific lamprey passage including adult lamprey trap and haul, modifications to the flume to improve adult lamprey passage, and the status of installation of tendons in the monolith piers.

White Sturgeon Updates

- On 21 July, Ecology sent a letter to Grant PUD instructing them to release the remaining 2,168 juvenile sturgeon on station at Marion Drain. On 5 August, Chairman Boyd (Colville Tribes) submitted a letter to Director Bellon (Ecology) requesting a government-to-government consultation and asked Ecology to instruct Grant PUD to stay release of the juvenile sturgeon at Marion Drain.
- As directed by the PRFF Policy Committee, Grant PUD submitted a Statement of Agreement (SOA) to the PRFF describing the release of juvenile sturgeon into the Priest Rapids Project Area. As recommended by the PRFF Policy Committee, the SOA follows the approach approved by the RRFF White Sturgeon Subcommittee. All voting members present, with the exception of the Yakama Nation, approved the SOA for the release of juvenile sturgeon in 2015. The Yakama Nation indicated that they could not support the SOA at this time. Because consensus could not be reached, WDFW and Grant PUD will make minor modifications to the SOA and resubmit it to the PRFF in September.
- Juvenile sturgeon rearing at Marion Drain are doing well.
- The Colville Tribes will conduct sturgeon index surveys for two weeks in Priest Rapids Pool and another two weeks in Wanapum Pool.
- The PRFF discussed the need to examine sturgeon broodstock that die before, during, or after spawning. They will review necropsy protocols established for the Upper Columbia Sturgeon Program.

Pacific Lamprey Updates

- The PRFF and RRFF lamprey subcommittees met the last week of July to discuss what is currently known about adult lamprey entrance and passage efficiency. There were no major disagreements among members and adult lamprey tagged with HD PIT tags will help address questions about lamprey entrance and passage efficiency. Members also discussed the importance of monitoring lamprey escapement into tributaries (e.g., Entiat River).

- WDFW described the operation of the OLAFT at Priest Rapids Dam. The OLAFT is used to address many objectives including broodstock collection, stock assessment, and collecting data for run reconstructions. It is unlikely that human scent from processing fish in the OLAFT is causing delays in the movement of adult lamprey in the upper portion of the left-bank ladder. However, members did question the operation of some of the slide gates (especially slide gate 3), which may affect lamprey. In addition, the presence of adult sturgeon in or just outside the OLAFT may have some effect on lamprey passage. The sturgeon appear to follow the movement of shad and sockeye into the ladder. The PRFF will visit the OLAFT and its operations on Monday, 15 September.
- A total of 1,634 adult lamprey have passed Priest Rapids Dam. Most of these (60%) migrated through the left-bank ladder. A total of 289 adult lamprey have been captured; 274 were tagged and transported upstream from Rock Island Dam. Adult lamprey collection will occur from 1 July to 1 September.
- To assess adult lamprey passage efficiency at Wanapum Dam, 15 adult lamprey captured at John Day Dam and 13 captured at Priest Rapids Dam were HD PIT tagged and released into the Wanapum left-bank ladder. All but one passed the HD PIT Tag detection system at the exit of the ladder.
- Grant PUD reported that they will provide the PRFF with a draft report later this summer on their assessment of benthic organisms stranded in Wanapum Reservoir due to water level reductions.

Next Steps

The next meeting of the PRFF will be on Wednesday, 3 September 2014 at Grant PUD in Wenatchee, WA.