PACIFICORP ENERGY
A DIVISION OF PACIFICORP

Wallowa Falls Project Relicensing
June 13, 2013

Instream Flow Incremental Methodology (IFIM)
Agency Meeting Summary

Start Time: 9:00 a.m.	**End Time**: 5:00 p.m.
Subject: Tour tailrace area and discuss tailrace barrier challenges, tour bypass reach including lower fish barrier habitat reach and tailrace re-route layout (see Agenda at the conclusion of this summary)	**Attendees**: See attendance list at the conclusion of this summary

Assignments
PacifiCorp: Schedule a summer agency visit during low flow period.
USFWS (Gretchen Sausen): Provide Wallowa River Core area Assessment information (part of "in progress" bull trout recovery plan process) that was developed by local recovery team members in September 2011, (USFWS 2011); provided via email on 7/3/13 and attached at the conclusion of this summary
PacifiCorp: Review literature and available data to better understand the potential for channel ice formation as a result of increased winter flows in the bypass reach. (see response at the conclusion of this summary)
PacifiCorp: Schedule an IFIM Conference call week of July 8, 2013 for continued discussion.
PacifiCorp: Record West Fork flow above Project tailrace during the fall spawning period.

Introduction

Following introductions, Russ Howison (PacifiCorp) provided opening remarks that included a statement that the purpose of the meeting was to tour tailrace area and discuss tailrace barrier challenges, then tour the bypass reach including lower fish barrier (falls), habitat reach immediately below, and tailrace re-route layout. See attached agenda. A summary of the meeting discussion is provided below.

Agency Fisheries Goals and Management Objectives

USFWS -

- A USFWS-bull trout recovery plan revision is currently on hold and the most recent Bull Trout Recovery Plan is from 2008.
- USFWS does have some "informal;" recovery goals, which include:
    - Increase and maintain habitat connectivity; sustain and increase all bull trout life histories where possible
    - Minimize take for BT (e.g. sediment flushing and tailrace stranding)

  - No adverse modification to BT critical habitat
  - Want diversity in life history; want a flow that is beneficial to both migratory size and resident size fish utilizing the East Fork
- Regarding the issue of potential bull trout (BT) stranding in the tailrace when the penstock head gate closes; a strategy that relies upon fish salvage or a tailrace barrier that still leaves part of the tailrace vulnerable to dewatering will not be acceptable to USFWS.

ODFW

- Sustain and support native fish population and diversity (native fish conservation policy)
- Support sport fishing opportunities
- No defined goals/management plan for kokanee in the upper Wallowa Lake basin
- Both kokanee and BT are of interest to ODFW.

Nez Perce

- Re-introduce and establish an anadromous sockeye population with 2,500 returning spawning fish to Wallowa Lake
- Want to see the habitat necessary to support kokanee spawning and egg incubation, as well as all sockeye life histories in the future
- Sockeye stock may come from Red Fish Lake (Snake River stock) or possibly 2 other Columbia stocks

Matt Cutlip (FERC) communicated that the following information would be pertinent to the FERC analysis of the license application:

- A discussion of additional flow input and the potential for channel ice forming and\or flooding, in the bypass reach related to the proposed tailrace re-route to East Fork Wallowa River.
  - Suggest asking community about bad ice dam/flooding years, related property damage and the correlation to air temperature and stream flows.
  - It may be possible to model channel ice formation in the bypass reach under different flow regimes.
- At least one flow measurement in the West Fork above the Project tailrace during low flow period. This would help determine the Project contribution to the West Fork currently.

Discussion took place about the benefit of removing the old USGS weir pad in the East Fork Wallowa River. The Nez Perce suggested the weir be removed to open habitat for Kokanee and potentially sockeye. The USFWS has a more cautious approach as the weir currently keeps kokanee below primary BT habitat in the upper bypass, but agreed that the removal of the weir is worth serious consideration.

PacifiCorp provided the following proposal:

PacifiCorp proposes to re-route the Project tailrace to the East Fork Wallowa River. This would result in the return of all generation flow to lower 2/3 of the fish habitat portion of the bypassed East Fork Wallowa River. In addition, PacifiCorp proposes to release 4 cfs as measured just

below the dam ("compliance point"), Gaging at the compliance point may be improved to increase flow measurement accuracy.

The reroute structure would include appropriate energy dissipation and fish protection measures. A conceptual layout is enclosed for reference.

Next Steps

PacifiCorp will schedule a conference call for the week after July 4th to further discuss the PacifiCorp proposal described above (meeting is scheduled for July 10th at 10:00 am).

AGENDA

Wallowa Falls Hydroelectric Project Relicensing
FERC Project No. P-308

Instream Flow Incremental Methodology (IFIM) Agency Meeting
Thursday, June 13, 2013

Morning: at Project Site (Powerhouse)

Afternoon: at Nez Perce Fisheries Tribal Office, 500 Main Street, Joseph, Oregon

Meet at USFS Trailhead\Little Alps State Park	9:00 am
Introduction & Safety Tailboard - Russ Howison, PacifiCorp	9:15 am
Tour tailrace area and discuss tailrace barrier challenges	9:15 am – 10:30 am
Tour bypass reach including lower fish barrier (falls), habitat reach immediately below, and tailrace re-route layout	10:30 am – 11:30 am
Lunch	11:30 am – 1:00 pm
Reconvene at Nez Perce Fisheries Tribal Office	1:00 pm

- Roundtable discussion of observations from morning site visit — 1:00 pm – 1:30 pm
- Identification and discussion of Agency Fisheries Management Goals.
  - Bull Trout goals and objectives
  - Kokanee goals and objectives

- Tailrace Stranding Concerns — 1:30 pm – 2:30 pm
  - Options to reduce\eliminate tailrace stranding
  - Salvage using local support
  - Tailrace Reroute and effects to East Fork
  - Flow record and tailrace contribution to West Fork Wallowa

- Agency Recommended Instream Releases & PacifiCorp Response — 2:30 pm – 3:30 pm
  - Spawning Period (August-September)
  - Incubation and Rearing Period (November-April**)**
  - Rearing and Migration Period (May-July)
  - Agency Technical Comments
    - Indicators of Hydrologic Alteration

- Wrap Up and Next Steps – Russ Howison, PacifiCorp — 3:30 pm – 4:15 pm

Wallowa Falls Hydroelectric Dam Relicensing
Instream Flow Incremental Methodology (IFIM) Meeting
June 13, 2013 – 9:00 am –5:00 pm

Meeting Room – Nez Perce Tribal Office
500 Main Street
Joseph, OR

Participant Name	Agency/Company
Russ Howison	PacifiCorp Energy
Jeremiah Doyle	PacifiCorp Energy
Briana Weatherly	PacifiCorp Energy
Mark Mullins	CH2M Hill
Matt Cutlip	FERC
Daniel Gonzalez	USFS
Gretchen Sausen	USFWS
Elizabeth Moats	ODFW
Tim Hardin	ODFW
Ken Homolka	ODFW
Jim Harbeck	Nez Perce

Taken from
Summary for Wallowa River/Minam River CA
9/9/11

Core Areas and FMO Habitat Lead: Gretchen Sausen, La Grande Field Office, La Grande, OR

The Grande Ronde River Core area was subdivided into three core areas based on the distribution patterns determined from telemetry studies of fish tagged from the Wenaha and Lostine Rivers and Lookingglass Creek, differences in the environmental characteristics among the subdivisions, and the likelihood for genetic exchange and demographic linkage given the size of the Grande Ronde subbasin. For example, bull trout from the upper Grande Ronde would not likely interbreed with fish from the Wenaha River or the Wallowa River. This subdivision is also consistent with the core area designations in the neighboring John Day system. The Little Minam core area was included in the 2002/2004 draft recovery plans due to it being a healthy population isolated above a barrier with essential physical habitat features. The Little Minam River is included in this summary as the 4th core area in the Grande Ronde basin.

The core areas in the Grande Ronde River basin include; 1) Upper Grande Ronde River/Catherine Creek/Indian Creek; 2) Lookingglass Creek/Wenaha River; 3) Wallowa River/Minam River; and 4) Little Minam River. The Grande Ronde River mainstem downstream from Indian Creek to the mouth (outside of the above core areas but within the basin) is identified as foraging, migratory, and overwintering habitat.

Wallowa/Minam Core Area

Area Description: The Wallowa/Minam Core area is located in the Grande Ronde River subbasin in northeast Oregon, in Wallowa and Union counties near the cities of Wallowa, Lostine, Enterprise, and Joseph. This core area includes the Wallowa River, Hurricane Creek, Lostine River, Bear Creek, Deer Creek, and the Minam River drainages. The Eagle Cap Wilderness is located in the Wallowa-Whitman National Forest, and includes most of the Minam River and the upper most reaches of the Wallowa and Lostine River drainages as well as Bear, Deer, and Hurricane Creeks. Federal Wild and Scenic River status is designated for the Lostine (16 miles from the headwaters to USFS boundary) and Minam (39 miles from headwaters to Eagle Cap Wilderness boundary) rivers and Oregon State Scenic Waterway status is designated to the Minam and lower Wallowa rivers.

Local Populations: Currently, this core area contains six local populations. The 2004 draft Recovery Plan describes three populations (Hurricane, Lostine/Bear, Minam/Deer) and which were recently split due to new information on distribution, movement, and abundance (including data from: telemetry; electrofishing, angling, snorkeling, and redd counts); as well as information on barriers (at least seasonally) that suggests limited connectivity and reduced expression of a fluvial life history. The Lostine River/Bear Creek populations and the Minam River/Deer Creek populations were subdivided due to the distance between these spawning populations (geographical separation of the spawning areas); $\geq$21 miles distance between spawning areas of the Lostine River and Bear Creek populations and $\geq$32 miles distance between spawning areas of the Minam and Deer populations. Gene flow may occur between these populations but more infrequent than among individuals within the populations. These six populations are located in the; 1) Minam River and tributaries; 2) Deer Creek; 3) Lostine River; 4) Bear Creek and tributaries; 5) Wallowa Lake and upstream tributaries; and 6) Upper Hurricane Creek (Starcevich et. al 2010, Doyle 2011, Sausen 2011).

Demographic Information: The entire occupied area of the Wallowa/Minam Core Area is essential to the conservation of bull trout in the Mid-Columbia Recovery Unit. The six populations in this core area are spread over a large geographical area with multiple age classes, containing both resident and fluvial fish. Distribution for this core area

includes a total of approximately 168.4 stream miles. (2.2 miles spawning/rearing upstream of Wallowa Lake, 1,496 acres FMO of Wallowa Lake, 41.1 miles FMO in Wallowa River (mouth to Hurricane), 5.0 miles spawning/rearing in Upper Hurricane Creek, 26.1 miles in Lostine River and tributaries (15.7 miles spawning/rearing and 9.4 miles FMO), 28.9 miles in Bear Creek and tributaries (28.9 miles spawning/rearing and 9.9 miles FMO), 16.1 miles in Deer Creek (6.9 miles spawning/rearing and 9.2 miles FMO), and 54.6 miles in Minam River and tributaries (37.4 miles spawning/rearing and 17.2 miles FMO). This core area has an anadromous prey base; connectivity with the Grande Ronde River; general distribution of bull trout throughout the habitat; and in general good habitat conditions.

Recently 600 bull trout were re-introduced to Wallowa Lake which had been salvaged from a decommissioned hydropower project on Big Sheep (Imnaha Basin) in 1997. Limited data are available on their abundance; however, some recent observations suggest they have persisted. A PacifiCorp fisheries biologist caught one fluvial size bull trout in the West Fork Wallowa River in June 2010. Two fluvial bull trout were captured in the Wallowa Falls tailrace on July 12, 2010 while electrofishing. One fluvial bull trout was reported in the tailrace on September 15, 2010 while snorkeling. The bypassed East Fork Wallowa River near the confluence with the West Fork Wallowa River, two bull trout were observed paired up, with the female constructing a redd. A brook trout was observed paired up with the fish. The male bull trout was reported to be the same fish captured during the tailrace fish salvage in July 12, 2010 (Doyle 2011). Due to low population abundance, potential hybridization with brook trout, competition with introduced lake trout, and potential incidental catch of bull trout at Wallowa Lake, there is a high level of uncertainty about the status of the Wallowa Lake and upstream tributaries population of bull trout.

The Lostine River and Bear Creek have several years of trend data. Total redds for 8.5 miles of survey on the Lostine River averaged 38 (range 22-70) redds or 4.6 redds/mile from 1999-2010. Bear Creek averaged 9 redds (range 5-12) redds or 4.7 redds/mile from 1999-2010. The Lostine River and Bear Creek populations appear to be stable for the survey period 1999-2008, with some recent downward trend in 2009 and 2010. The Lostine River was rated as a moderate risk of extinction by Buchanan et al. (1997). Data for the Deer Creek population is limited to observations of 12 resident size bull trout redds in 0.8 miles of stream (15 redds/mile), upstream of a newly installed culvert, that replaced a former passage barrier (Sausen 2011). The Deer Creek population was listed in Buchanan et.al (1997) as “of special concern.” Sampling of bull trout in Hurricane Creek in 2002 by ODFW (using electrofishing) suggests a small population of approximately 200 resident bull trout which is potentially substantially hybridized with introduced brook trout. No abundance data are available for the Minam River.

Major Threats: Interactions of bull trout with introduced non-native species (brook trout, in all areas except Deer Creek, and lake trout in Wallowa Lake) is a significant threat to this core area. Additional, less significant threats include potential barriers to bull trout connectivity (at least seasonally) within this FMO habitat include water quality impacts associated with high stream temperatures and sediment, low flows (in the late summer and early fall) in the Lostine, Minam, Hurricane, Bear, and Deer and bacteria on the Wallowa River (ODEQ 2010, ODEQ 1998). Overharvest and poaching of bull trout during upstream migration to and within spawning areas is a concern on the Lostine River, especially in the headwater reaches. To improve connectivity for bull trout in the Wallowa River, from the confluence with Hurricane Creek to the dam, both passage and screening should be evaluated as a need to improve (dependent on the status of the Wallowa Lake and upstream tributaries population) at the Wallowa River dam and downstream diversions. Hurricane Creek has low flow and passage/screening concerns associated with the consolidated ditch and potentially with upstream natural barriers. This area on Hurricane Creek should also be evaluated as a need to improve, dependent on the status of the Hurricane Creek population. Lostine and Bear Creek have passage/low flow concerns in the late summer and early fall especially in the lower reaches of these streams (and naturally in upper Bear Creek spawning habitat due to drought conditions and flows going subsurface). The Lostine River weir and Big Canyon Hatchery intake on Deer Creek (both near the confluence with the Wallowa River) may also be impacting bull trout in this core area by affecting migration, spawning timing, and distribution.

Summary: The entire occupied area of the Wallowa/Minam Core Area is essential to the conservation of bull trout in the Mid-Columbia Recovery Unit. The six populations in this core area are spread over a large geographical area with

multiple age classes, containing both resident and fluvial fish. The Eagle Cap wilderness areas are within this core area, as well as Federal wild and Scenic Rivers, and private lands. The populations are relatively stable and habitat conditions are generally excellent.

Area Targets:

Threats-Based Targets	Demographics-Based Targets
1. Reduce non-native fish, including brook trout and lake trout to meet demographic targets. Brook trout potential concerns throughout the core area excluding Deer Creek and lake trout potential concern at Wallowa Lake.	1. Maintain over the long-term, at a minimum, four populations including; 1) Lostine River; 2) Bear Creek; 3) Deer Creek; and 4) Minam River. 2. Expand distribution and increase connectivity between populations. 3. Maintain a variety of life history types, potentially increase fluvial populations. 4. Maintain the current known bull trout occupied stream miles of 174.0 (87.2 miles spawning and rearing, 87.1 miles FMO). 5. Maintain current number of adult bull trout to maintain population viability (utilizing best available data, as per stable trends in redd count, e.g. Lostine and Bear Creek long-term redd count trend data).

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Personal Communication

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Streif, B. 2011. U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office, Portland, Oregon

McCune, Kimberly

From: Howison, Russ
Sent: Wednesday, July 03, 2013 4:04 PM
To: Sausen, Gretchen
Cc: OSIERMOATS Elizabeth A; Gonzalez, Daniel -FS; YANKE Jeff; jimh@nezperce.org; DADOLY John; HOMOLKA Ken; HARDIN Tim S; DADOLY John; McCune, Kimberly
Subject: RE: FWS Comments to Wallowa Falls Project Instream Flow Agency Meeting Summary notes from June 13, 2013

Categories: Red Category

Thank you Gretchen, I will look this over and let you know if we have any follow up questions. One point I would like to clarify is that we have looked into the published literature regarding channel ice studies and in streams with a lot of turbulence and continuous sub-freezing temperatures (such as the bypass) it is possible that more flow in the bypass could result in more channel and anchor ice. So we will be investigating that further and giving you all an update in our call next week.

Have a great holiday!
Russ

From: Sausen, Gretchen [mailto:gretchen_sausen@fws.gov]
Sent: Wednesday, July 03, 2013 3:08 PM
To: Howison, Russ
Cc: OSIERMOATS Elizabeth A; Gonzalez, Daniel -FS; YANKE Jeff; jimh@nezperce.org; DADOLY John; HOMOLKA Ken; HARDIN Tim S; DADOLY John
Subject: FWS Comments to Wallowa Falls Project Instream Flow Agency Meeting Summary notes from June 13, 2013

Russ, FWS specific comments to meeting summary notes from June 13, 2013 - Wallowa Falls Project. Also attached Wallowa/Minam Core Area Assessment part of the bull trout revised recovery process that local biologists worked on and I helped summarize in September 2011 (as requested). A fish and water managment stakeholders (ODFW, FWS, ODEQ, and USFS) group comments will be sent in a separate email. Thanks.

Gretchen Sausen
USFWS - La Grande Field Office
3502 Highway 30, La Grande, OR 97850
(541) 962-8695
Fax: (541) 962-8581
gretchen_sausen@fws.gov

Service Comments to Wallowa Falls Project
Relicensing Instream Flow Incremental Methodology
June 13, 2013 Agency Meeting Summary

1. Assignments: USFWS (Gretchen Sausen) – Provide Wallowa River Core area Assessment information (part of "in progress" bull trout recovery plan process) that was developed by local recovery team members in September 2011, (USFWS 2011), attached to this email.

2. Assignments: PacifiCorp- add "less" before words **channel ice**, as it is intuitive that more water should create less ice formation.

3. USFWS – A USFWS bull trout recovery plan revision is currently in progress and the most recent draft bull trout plan available to the public is 2004.

4. The USFWS is responsible for ESA Section 7 consultation for the Wallowa Falls Hydroelectric relicensing project on federally threatened bull trout and critical habitat. The FWS supports a proposed project that minimizes take of bull trout and does not result in jeopardy associated with 1) annual power outages that dewater tailrace and potentially strand bull trout and 2) annual maintenance of forebay - sediment flushing. The project should minimize adverse effects to bull trout critical habitat and will not adversely modify bull trout critical habitat. If possible, the project should strive to benefit bull trout and bull trout critical habitat.

5. In addition, the USFWS is responsible for bull trout recovery plans with recovery actions to recover and/or protect the species. Four "recovery objectives" have been established for bull trout under the USFWS draft Bull Trout Recovery Plan: 1) Maintain current distribution of bull trout and restore distribution in previously occupied areas within bull trout Core Areas, 2) Maintain stable or increasing trend in abundance, 3) Restore and maintain suitable habitat conditions for all bull trout life history stages, 4) Conserve bull trout genetic diversity and provide opportunity for genetic exchange. In the Wallowa River/Minam River Core Area (which this project lies within) demographic based targets that relate to this project also include; 1) expanding distribution and increase connectivity between populations and 2) maintain a variety of life history types, potentially increase fluvial populations.

6. For the proposed project, the USFWS recommends a minimum instream flow in the EF Wallowa River that is beneficial to all life history stages of bull trout (juveniles, sub-adults, and resident and fluvial/adfluvial adults) and allows for species and habitat connectivity at this minimum instream flow, where possible. This minimum instream flow will be beneficial to bull trout and their critical habitat.

7. This bullet is accurate and is part of ESA consultation for bull trout for this project; regarding the issue of potential bull trout stranding in the tailrace when the penstock head-gate closes; a strategy that relies upon fish salvage or a tailrace barrier that leaves part of the tailrace vulnerable to dewatering will not be acceptable to the USFWS.