



KLICKITAT  
MANAGEMENT, DATA &  
HABITAT PROJECT



ANNUAL REPORT  
OCTOBER 1, 2011 – DECEMBER 31, 2012  
PROJECT #1988-120-35

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**Introduction:**

The Klickitat Management, Data and Habitat (MDH) project facilitates the project management, data management, habitat restoration and management activities for the Yakima/Klickitat Fisheries Project (YKFP), a joint project of the Yakama Nation (YN) and the Washington Department of Fish and Wildlife (WDFW). The YKFP has been working to reintroduce and/or increase the populations of all anadromous species that historically existed in the Yakima and Klickitat subbasins. As the Lead Agency for the YKFP, the YN is responsible for YKFP project planning and design in the Klickitat Subbasin; the construction, operation and maintenance of YKFP facilities; the monitoring and evaluation of YKFP research activities; and habitat and passage improvement activities. The Lead Agency is also responsible for insuring that there is adequate funding for all YKFP Project activities. The magnitude and scope of the YKFP requires the level of management involvement described below. In order to properly implement all YKFP Project activities, essential personnel must be assigned to supervise and manage the Project's field and support personnel.

The Klickitat-Only MDH contract covers the Yakama Nation's management and oversight of the following YKFP activities:

1. Policy Development, Planning and Administrative Support;
2. Finance and Administrative Support;
3. Data and Information Management/Processing;
4. Annual Reviews;
5. Klickitat Field Office Operations;
6. Klickitat Subbasin habitat coordination and implementation;
7. Klickitat Hatchery Complex reforms efforts 9. Education and outreach;
8. Subcontracts for: Legal/Policy Analyst and Engineering Services;
9. Status Reports;
10. Annual Report.

The primary objectives of the three components of the Klickitat - MDH project are described below.

**Project Management**

Project management, under the leadership of the Project Advisor/Policy Coordinator (PAPC) Melvin Sampson, is responsible for the overall management of the various components of the YKFP which include three supplementation hatchery complexes, Monitoring and Evaluation (M&E) for those programs, Operations and Maintenance (O&M) for all project facilities, construction, data management, and all habitat related actions of those properties. Several of these project components have stand-alone projects (i.e. KWEP, K-M&E); the K-MD&H serves as the administrative support project that provides policy oversight and coordination to facilitate a unified approach to project management for the YKFP.

The Klickitat production program currently consists of the Klickitat Supplementation and Harvest Augmentation Hatchery Complex, managed by Jason Rau, which supplements spring Chinook and steelhead natural populations and releases fall Chinook and coho for harvest augmentation purposes.

The Management project is also responsible for the Monitoring and Evaluation of all the research conducted under the YKFP. This component of the overall program is under the direction of the Senior Research Scientist, Dr. David Fast. This component of the YKFP is responsible for directing all research conducted under the project, evaluating results of research projects, and using adaptive management to redirect those research programs as needed to address critical uncertainties regarding supplementation and 3other research objectives of the project. These decisions are made jointly with WDFW under the auspices of the Scientific and Technical Advisory Committee (STAC) which reports directly to the Policy Representatives. William Sharp is also on the Management Project as the lead for the Klickitat River component of the YKFP.

Project Operations and Maintenance (O&M) is also under the direction of the PAPC through the Management project. The O&M project is responsible for maintaining all facilities under the YKFP in operational condition so as to achieve the overall objectives of the project. Operations are under the direction of the various project managers, and the maintenance component is under the lead of Travis Hull.

### **Data Management**

Data Management, under the direction of Bill Bosch and Michael Babcock, are responsible for collection, organization, storage, and analysis of all data collected under the YKFP umbrella. This project element is also incorporates record keeping of management decisions, and preparing and submitting reports to BPA and manuscripts for peer-reviewed publications.

### **Habitat**

The Habitat project element of the YKFP, led by William Conley in the Klickitat, is also under the direction of the Project Manager. The Habitat project is responsible for securing acquisition of biologically important land along the Yakima and Klickitat Rivers. The purpose of acquisition of these properties is to protect from development land in these watersheds with the objective of maintaining or improving habitat benefits for fish production and ultimately returning these watersheds to a more normative state. This is also achieved by habitat improvement projects conducted on these properties whenever warranted to increase their value to watershed restoration.

The following activities comprise the scope of work under the Klickitat MDH project:

### **Watershed Coordination**

Coordinate YKFP management and policy development with other government agencies and decision-making bodies. Implement cooperative planning and policy development with lead agencies including WDFW, BPA, NPCC, NOAA Fisheries, CBFWA, and other federal, state and local government agencies. Coordinate lead agencies with appropriate Tribal officials and personnel when necessary.

Review Klickitat YKFP Program through project & provincial reviews. These are a vital part of the annual review and planning cycle that contributes to the research considerations for Klickitat activities within the YKFP.

### **Identify and Select Projects**

Coordinate with federal, state and local government and non-governmental organizations with respect to anadromous fish, stream flows and related matters to promote fish and riparian habitat and streamflow (passage) protection and restoration; monitor recovery.

Future discussions between BPA and YN will ensue during this contract period to better define which activities are eligible for BPA funding in the YN/Klickitat County permitting and planning process.

NOTE: Some technical habitat, water and passage matters arising within the Klickitat subbasin will be handled by the Klickitat Subbasin's YKFP Habitat Specialist, who is funded under the YKFP's Klickitat Watershed Enhancement Project (Project # 1997-056-00) contract for the Klickitat Subbasin. Specific Tasks are identified in that separate contract.

### **Produce Data Management Plan**

Maintain an up-to-date Information System Management Plan (ISMP) by identifying the YKFP's near- and long-term data and information management needs within the Klickitat basin. Develop methods to standardize, consolidate and centralize all data and information that is generated within the basin. Design an information management and transmission system (hardware and software) capable of handling existing and future generated data, providing for quality control, standardization, and proper storage procedures. Identify mechanisms where by various end users may be identified and provided adequate access to appropriate data and or information. Periodic modifications in the ISMP will reflect changes in project scope and developments in data design. Management strategies may evolve based on recommendations and feedback received from peer review and/or hardware and software demands.

Additional Notes: The ISMP cannot, by nature, be a static document. It provides a snap shot of the state of the body of YKFP Data collected on the Klickitat basin at a certain point in time along with short and long term strategies for managing that body of data. Interaction with all the data will be ongoing. The plan will evolve as progress is made. Different aspects of the data will take the focus at different points in time.

Implement the ISMP by monitoring the data collection systems of the YKFP, supervising the input of all data into a standardized system and coordinating any necessary reformatting of existing data. Verify that proper data validation procedures are followed. Assure that appropriate hardware and software are used to provide timely data and/or information accessibility to appropriate researchers.

Acquire appropriate Klickitat basin data from collection activities performed by YKFP and other relevant entities. Ensure quality control, standardization and proper storage procedures for all data and information acquired.

Identify the appropriate data and/or information to be shared with various entities. For a given entity make data available at a useable resolution through appropriate media. This could include electronic file transfers for specific data requests or web pages to disseminate more general information and/or data.

Additional Notes: Information is disseminated from the Klickitat field office on a case by case basis when authorized by the manager of this project. Where appropriate standardized databases or data sets exist, ensure proper formatting and transfer of data from collection activities performed by YKFP within the Klickitat basin to the regional data structures. The YKFP transfers PIT-tag data to PTAGIS, coded wire tag information to the Regional Mark Processing Center and Hatchery, and release data to the Fish Passage Center.

Abundance estimates for Klickitat River target species are achieved through a cooperative relationship between YN and WDFW. These abundance estimates are shared through StreamNet. YKFP staff continually monitors and often participate in discussions and exercises aimed at developing regionally standardized data structures.

### **Outreach & Education**

Expansion of the YKFP in the Klickitat Subbasin affords the opportunity to assist in ongoing educational outreach into the local community. Project staff will partner with the USFWS-Columbia Gorge Information and Education Office (<http://gorgefish.fws.gov/springcreek/springeducation.htm>) and local teachers to provide outreach activities that are informative, relevant to the local community, promote involvement, and improve stewardship of our natural resources.

Klickitat & White Salmon Rivers Fisheries and Watershed Science Conference. Presentations made by YKFP, NMFS, State, County, US Corps of Engineers, WDFW, USFWS and other interested parties to share Fisheries information pertaining to the Washington Gorge. This review, along with the Yakama YKFP PAR Conference, affords an opportunity for project personnel to interact with scientists who have a interest and expertise in supplementation and fisheries resource management.

Conference abstracts in electronic format will be produced that provides a record of the annual conference. Records will assist the YKFP in planning and management activities, and will be made available to regional scientists. The documentation from the PAR Scientific and Management Review and Klickitat Science Conference will be sufficient to support the adaptive management requirements of the YKFP EIS policy and program strategic planning for YKFP project direction.

Coordinate and oversee implementation of all YKFP activities in the Klickitat Subbasin, including development of statements of work, development of YKFP sponsored project and contract budgets, compliance with all applicable laws and environmental review requirements, subcontractor procurement and management, fiscal management, financial reporting, annual operating plan development, performance of YKFP research, monitoring/evaluation and operation/maintenance contracts, master plan development, and attendance at training, conferences and meetings.

### **Manage & Administer Project**

Additional Notes: Expansion of YKFP supplementation activities in the Klickitat Subbasin requires the support of the YN Hatchery Manager (HM) to facilitate integration of proven

hatchery reform technologies from the YKFP's Cle Elum Supplementation & Research Facility (CESRF) to the Klickitat Hatchery. Integration of the 60-year-old Klickitat Hatchery facility with hatchery reform efforts will require a substantial engineering design effort, which is now covered under the Passage & Hatchery (expense) project. The HM, with 8 years of work experience at the CESRF, provides the institutional knowledge of YKFP facility requirements useful to integrate YKFP fish culture practices and assist with engineering planning and design development.

Coordination of NPCC Step process: YKFP staff will coordinate with BPA and NPCC to sequence Final Klickitat Master Plan submittal and future designs for the EIS process.

## **Management Data & Habitat – October 2011**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.

### **Klickitat Data Management accomplishments.**

- Continued development of RAHAP data entry Forms
- Began incorporating modifications to the RAHAP database that were identified through field work.
- Worked with PSMFC submitting a Purchase Order for two sets of Satellite internet equipment to establish a redundant satellite communications system at Castile.
- Continued posting 2011 Klickitat hatchery Spring Chinook returns to the web. The link Follows: [http://ykfp.org/klickitat/hatch\\_AdultReturns2011.htm](http://ykfp.org/klickitat/hatch_AdultReturns2011.htm)
- Submitted Klickitat hatchery spawning mortality PIT tagging records to PTAGIS
- Researched Castile Satellite Internet options
- Researched potential Castile video equipment in consultation with Jeff Trammell
- Continued research on the purchase of Toshiba a Digital video recorder and appropriate camera/lens combination for Castile fish video operations.
- Entered all relevant 2011 Klickitat Hatchery Spawning data into the Scale age database to await the reading of the scales and cwts.
- Submitted LAT PIT tagging records to PTAGIS
- Performed & secured backups of KFO critical data.

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital): Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 19 months into Lyle Falls Project (~96%+ complete).
  - Substantial Completion date pushed back until late October 2011
  - Project completion approximately end of November 2011
  - Commissioning of various systems has begun.
- Ongoing meetings with Harbor Engineers & Contractor at Lyle Falls to further develop aspects of Revegetation Plan for Lyle Falls construction site including installation of soil pockets during re-grading, hydro-seeding, etc.

- Weekly “Kick Finish” Meetings being held.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 16.5 months into project.
- WCW 2011 work began end of May 2011
  - Substantial Completion pushed back to end of October 2011
  - Project Completion slated for mid-November 2011
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>
- PCSRF sill modification to Castile Falls 4/5 Fishway completed. Project effectively directs high flow thalweg to right bank. Future high flows events will scour bedload that accumulates at the fishway exit.

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA. Well attended. Comments taken at meeting and coming in on BPA’s website (link below). Comment period ended 1 October 10<sup>th</sup> 2011. Numerous comments to BPA website. Majority are from Native Society in opposition to hatchery production in the Klickitat Subbasin and elsewhere in the Columbia Basin. BPA, WDFW, NOAA and YKFP staff will meet in November to address these comments.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

### **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Delivery of 3,000 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station.
- Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.
- Digital Camera research and purchase for Castile Falls Facility underway. Equipment will be purchased under capital contract per BPA guidance.
- Project continuing under pre-award from BPA on April 1 2011.

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Radio telemetry monitoring sites are operating and radio tracking is continuing.
- Fall Chinook and coho spawning ground surveys underway.
- Smolt trapping
  - Lyle Falls and Castile Falls smolt traps operating; flows still fairly high in upper Klickitat R.
- White Cr. steelhead PIT tag monitoring
  - Instream PIT tag antenna in lower White Cr. Operating
  - Stream fish tagging being conducted

- ~1300 steelhead/rainbow trout tagged as of early September.

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 6 sites
- Ongoing monitoring of turbidity from Big Muddy at three stations
- KWEP administration
  - Environmental compliance for new (FY 11/12) contract (Upper Klickitat Phase 3
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
- Continued to operate sensors to read water depth, water and air temperature, and wind speed/direction at 4 locations around the Klickitat Delta.
  - Conducted 1 site visit to replace datalogger and water level sensor at the Daybeacon site which had been inundated during high-water.
  - Updated program at 4 sampling sites to subsample once every hour to determine the influence of wave action
  - Updated RTMC data display for real time data monitoring at KFO
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Revision of habitat field protocol manual
  - Development of relational database (data entry forms)
- White Creek PIT Tag Study (cooperatively with Nico)
  - Revisited 13 sampling sites to measure total site length and determine average wetted widths
- River Restoration NW – conference planning
  - Review of 57 abstracts
  - Planning for scholarships
- Tepee/White Creek Food Web Study (cooperatively with Nico)
  - QC of macroinvertebrate identification and measurements performed by subcontractor
  - Preparation of subcontract for Fall 2011 Sampling Season - macroinvertebrate identification and measurement
- Tepee Creek Phase 2 Project
  - Submitted Committee Actions: Roads, Irrigation and Land Committee and Timber, Grazing, Overall Economic Development Committee
- Upper Klickitat Phase 3
  - Project Design and Planning
  - Conducted 1 site visit to collect additional topographic data (survey)

### **Management Data & Habitat – November 2011**

#### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.



#### Klickitat Watershed Planning Activities:

- Collected acorns for potential planting of white oaks on site at Lyle Falls this fall
- GPS'd areas to be revegetated
- Met with construction contractor at Lyle Falls to hash out strategy and placement of planting pockets, removal of fill, scarification of the soil and other prep work for revegetation
- Coordinated delivery of sonotubes to project site (to be used for planting pockets) and preparation of soil to be delivered from Klickitat Hatchery
- Met with EPA region 10 tribal administrator at Lyle Falls to give overview of Klickitat Basin activities (with Joe Z.)
- Gave presentation to Gorge chapter of Native Plant Society of Oregon about YN revegetation efforts at Lyle Falls and in the former reservoir after Condit Dam breach
- Meetings/discussions about YN's appeal of Klickitat County's BZ/Husum Subarea Plan update

#### Klickitat Data Management accomplishments.

- Continued the evolving development of RAHAP data entry Forms
- Began incorporating modifications to the RAHAP database that were identified through field work.
- Researched potential Castile video equipment. Continued research on the purchase of Toshiba a Digital video recorder and appropriate camera/lens combination for Castile fish video operations, acquired bids, selected a vendor & prepared a PO.
- Submitted LAT PIT tagging records to PTAGIS
- Submitted white Creek PIT tagging interrogation records to PTAGIS
- Performed & secured backups of KFO critical data.
- Oversaw the installation of Castile Satellite Internet equipment, establishing a redundant satellite communications system
- Worked with PSMFC configuring network security at Castile
- Researched and submitted for approval video lighting options for the fish viewing window a Castile.
- Traveled to Castile on numerous occasions to consult with subcontractors needing access to the Satellite internet connection.
- Consulted with the physical surveillance video subcontractor providing IP addresses for his equipment and arranging for rack storage of the security DVR in the fish video rack.
- Collaborated with the Yakama ykfp data manager on a proposal requested by the coordinated assessment work group for a Yakama Nation Fisheries Centralized data system.
- Sat in on a Coordinated Assessment conference outlining budgetary needs of establishing agency wide centralized data systems. It seemed to be the opinion of at least some of the Coordinated Assessment core that the Yakama Nation Fisheries should need no additional funding to develop and implement a centralized data system through which all our data could be shared.
- Provided technical support to Klickitat Hatchery and KFO.

## **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital): Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 20 months into Lyle Falls Project (~96%+ complete).
  - Due to construction delays Substantial Completion date pushed back new date TBD.
  - Due to construction delays Project Completion date pushed back new date TBD.
  - Commissioning of Lyle Intake Screen has begun, remaining elements commissioning dates TBD.
- Weekly “Kick Finish” Meetings being held.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

## **Castile Falls Monitoring Facility**

- WCW 17.5 months into project.
- WCW 2011 work began end of May 2011
  - Due to construction delays Substantial Completion date pushed back new date TBD.
  - Due to construction delays Project Completion date pushed back new date TBD.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

## **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

## **Klickitat Hatchery Design**

- Design plans and cost estimates on hold at 30%.

## **Klickitat Production EIS**

- Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA.
- Comment review meeting held 11/14-15. In attendance were BPA, HDR< YN and NOAA staff. Over 180 comments were review, compiled, and issued to appropriate staff for response development. Response to comment will be completed by Dec 2, 2011.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

## **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Position Description for YKFP-Klickitat Maintenance Supervisor (1.0 FTE) being refined. Announcement anticipated in mid-Dec.
- Delivery of 3,000 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station.
- Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.

## **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Spring Chinook final run size estimate:
  - Wild: 780 (95% CI: 650-940)
  - Hatchery: 3860 (95% CI: 3240-4640)
  - Jack percentages: 21% at Lyle adult trap, 34% at in hatchery returns
  - Above average, larger than expected run size

- Spring Chinook final redd count (surveys completed early Oct.)
  - 154 total redds (none observed above Castile Falls)
  - Higher-than-average redd counts as compared to last 5 years; likely reflects some hatchery fish on natural spawning grounds
- Fall Chinook spawner surveys began in late Oct.
  - Early indications of fairly high redd count and run size
- Lyle Falls trap operation
  - Adult trapping resuming in early Nov. after late October shutdown for construction.
  - Coho, last few fall Chinook, a few steelhead migrating past Lyle.
- Radio telemetry monitoring sites are operating and radio tracking is continuing
- White Cr. steelhead PIT tag monitoring
  - Instream PIT tag antenna in lower White Cr. Operating
  - Stream fish PIT tagging completed for the season:
    - ~2500 steelhead/rainbow trout tagged at 24 sites.
- Tepee Cr. Food web study:
  - Fall sampling occurring at 8 sites for aquatic insect & invertebrate abundance & diversity, fish abundance, and fish stomach contents prior to habitat restoration work in 2012. Multiple pre-restoration sample occasions have been conducted, sampling will also occur post-restoration to monitor changes in these parameters.
- Gravel sampling completed on 12 sites in Klickitat River, White Cr., Diamond Fork Cr. – continues long term monitoring dataset (starting 1999 for some sites) in monitor sediment changes/trends in spawning gravels
- Klickitat M&E staff also working on:
  - Reviewing public comments on Klickitat Hatchery Program EIS – multiple science-related comments on spring and fall Chinook, coho, and steelhead programs that need addressing

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 6 sites
- Ongoing monitoring of turbidity from Big Muddy at three stations
- KWEP administration
  - Environmental compliance for new (FY 11/12) contract (Upper Klickitat Phase 3
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
- Continued to operate sensors to read water depth, water and air temperature, and wind speed/direction at 4 locations around the Klickitat Delta.
  - Submitted reauthorization request to USCG for Daybeacon 55 site
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Perennial Water Mapping – Dillacort, Wheeler, Logging Camp and Snyder Creeks
  - Development of relational database (data entry forms)
- River Restoration NW – conference planning
  - Review of 57 abstracts
  - Planning re-writing scholarship procedures and application
- Tepee/White Creek Food Web Study (cooperatively with Nico)

- Fall 2011 Sampling Season - macroinvertebrate sampling (Drift, Benthic, Pan and Gastric Lavage) and Fish Population Surveys
- Upper Klickitat Phase 3
  - Project Design and Planning
  - Time Extension Request to SRFB
- SRFB Admin:
  - Upper Klickitat Phase 3 – Status Report
- Attending Restoration Design Course through Portland State University
- LiDAR and Hi-Res Aerial Photography –
  - RFP for LiDAR and Aerial Photography Acquisition
    - 52.5 miles of Klickitat River (hatchery to headwaters)
    - 14.7 miles of Swale Canyon (mouth to Ueker Road)
    - 16.7 miles of stream in the Brush Cr watershed
    - 16.9 miles of stream in the Tepee Cr watershed
    - 20.6 miles of White Cr (mouth to headwaters)
    - 4.6 miles of Dead Canyon (mouth to above big falls)
    - 4.5 miles of Snyder Creek (mouth to above Simmons Cr confl.)
    - 1.5 miles of Summit Cr (mouth to above first big falls)
  - Selected vendor, refined deliverables and contracted LiDAR and aerial mapping services
  - Ground crew mobilizing 11/7 with data collection to start 11/10

## **Management Data & Habitat – December 2011**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Prepared and for review 2 yr contract for YKFP Klickitat Management, Data and Habitat contract. BPA is currently reviewing.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Participated in Columbia River Initiative/Fisheries –rebranding strategy meeting.
- Began coordination for 5<sup>th</sup> annual Klickitat –White Salmon conference to be held on 3/13/11.

### **Klickitat Watershed Planning Activities:**

- Coordinated propagation of white oaks and other plants for Lyle Falls revegetation project
- Met with EPA region 10 tribal administrator at Lyle Falls to give overview of Klickitat Basin activities (with Joe Z.)
- Met with construction contractor at Lyle Falls to hash out strategy and placement of planting pockets, removal of fill, scarification of the soil and other prep work for revegetation

### Klickitat Data Management accomplishments.

- Continued the evolving development of RAHAP data entry Forms
- Began incorporating modifications to the RAHAP database that were identified through field work.
- Tracked down a number of orphan tags being read in PTAGIS detectors, identified as issued to YKFP Klickitat Programs but never submitted in tagging files. This work is ongoing.
- Submitted LAT PIT tagging records to PTAGIS
- Submitted white Creek PIT tagging interrogation records to PTAGIS
- Performed & secured backups of KFO critical data.
- Worked on Configuration of Castile Satellite Internet equipment, establishing a redundant satellite communications system
- Worked with PSMFC configuring network security at Castile
- Performed network engineering work at Castile Falls Facility with mixed results. Multiple vendors and contractors have provided partial or no information on required configurations.
- Researched and submitted for approval video lighting options for the fish viewing window at Castile.
- Met with a Charter communications representative for the performance of a “site survey” in preparation for a move of the fiber optic internet cable from the construction trailer to the permanent building at Lyle Falls. Submitted a request for this work and followed up that request multiple times. It is hoped that this work will be completed soon.
- Traveled to Castile on numerous occasions to consult with subcontractors needing access to the Satellite internet connection.
- Consulted with the physical surveillance video subcontractor providing IP addresses for his equipment and arranging for rack storage of the security DVR in the fish video rack.
- Established remote satellite internet connectivity with the security DVR at Castile.
- Performed initial evaluation of the security surveillance system and our ability to manipulate it remotely. The bandwidth demands of the high definition video and robotic camera manipulation equipment are inappropriate for use over a Satellite internet connection. Remotely configuring this system for the most rudimentary remote video access has proven extremely time intensive.
- Erected a Server rack in the observation building at Castile Falls. Providing a storage structure for the fish video equipment.
- Provided space in the fish video server rack for the surveillance DVR as the engineers and /or contractors failed to provide adequate rack space for this large server machine.
- Provided technical support to KFO.

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital): Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 21 months into Lyle Falls Project (~96%+ complete). .
  - Substantial Completion date set for February 10, 2012
  - Final Completion date set for March 12, 2012.

- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 18.5 months into project. Project (~96%+ complete).
  - Substantial Completion date set for March 30, 2012
  - Final Completion date set for April 30, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

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### **Klickitat Production EIS**

- Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA.
- Comment review meeting held 11/14-15. In attendance were BPA, HDR< YN and NOAA staff. Over 180 comments were review, compiled, and issued to appropriate staff for response development. Response comments completed by Dec 2, 2011.
- BPA anticipates ROD May 2012.
- Website with DEIS and supporting information presented below:

[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

### **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Castile Falls 10/11 project area clean out on 12/1/11
- Position Description for YKFP-Klickitat Maintenance Supervisor (1.0 FTE) being refined. Announcement anticipated in mid-Dec.
- Delivery of additional 400 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station on 12/1/11 to top of tank in case of long winter/limited access.
- Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Fall Chinook spawner surveys began in late Oct., continuing into Dec.
  - High redd count - Indication of strong run size
    - Good surveys conditions, ~1200 redds in early Dec.
- Coho spawning surveys began in Nov., in conjunction with Fall Chinook surveys
  - Little spawning observed as of early Dec.
  - Moderately high live adult counts mostly below Klickitat Hatchery
- Lyle Falls adult trap operation
  - Coho and a few steelhead migrating past Lyle
  - Adult trapping conducted in Nov., currently in 2-week shutdown for construction (early Dec.). Continued coordinating trap operation with contractor activities.
- Radio telemetry study
  - Continued radio tagging adult steelhead at Lyle adult trap
  - Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites, & data analysis

- Switched radio telemetry receiver from propane to hard power at upper Castile, winterized Castile equipment
- Recovered stuck radio tags from various sites in Klickitat River
- Tuning, repair, maintenance of radio telemetry equipment in the field
- White Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - Continued Pit Tag data analysis with specific attention to Tepee Creek
  - Conducted habitat survey at Pit tag site
- Tepee Cr. Food web study
  - Completed Food Web Pre-treatment data formatting, QC, and biomass regression formula application
  - Entered Fall 2011 Food Web Data and QC
- *Klickitat M&E staff also working on:*
  - Draft comment responses provided to BPA on Klickitat Hatchery Program EIS – multiple science-related comments on spring and fall Chinook, coho, and steelhead programs
  - Design and specs of equipment for fish handling trailer at newly improved Lyle Falls fishway monitoring facility
  - Analysis of spring Chinook run size and age data for forecast
  - Calculating smolt survival rates and Bonneville detection efficiency for Skamania Hatchery steelhead and Klickitat Hatchery spring Chinook smolts
  - Began preparing 2012 River Restoration Northwest Symposium oral presentation
  - Attended 2011 CHaMP (Columbia Habitat Monitoring Program) post-field season workshop in Portland, OR

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 6 sites
  - Routine visit to all sites to upload data
  - Maintenance performed at 2 sites
- Ongoing monitoring of turbidity from Big Muddy at three stations
  - Routine visit to all sites to upload data
- KWEP administration
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
  - Budget Modification IGC#52388
  - Cost-share reporting FY11
- Continued to operate sensors to read water depth, water and air temperature, and wind speed/direction at 4 locations around the Klickitat Delta.
  - Site visit conducted to survey 4 gages to a common datum
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Data entry and QC - Spring 2011 dataset
- Tepee/White Creek Food Web Study (cooperatively with Nico)
  - Entry and QC of Fall 2011 dataset (Fish, Vegetation, and Discharge)
- River Restoration NW – conference planning
  - Preparation of scholarship application and policy documents

- Outreach
- Review and summarization of 28 applications
- Coordination of scholarship committee
- Notification of scholarship awardees
- Evaluation and selection of member gifts
- Upper Klickitat Phase 3
  - Project Design and Planning
  - Time Extension Request to SRFB
- SRFB Admin:
  - Upper Klickitat Phase 3 – Status Report
- Attended Regional Planning/Coordination Meetings
  - CHaMP 2011 Post-Season Workshop
  - WDFW - HPA Rule Revision
  - SW Washington WSDOT & YN Coordination Meeting
  - Monitoring Methods.org
- LiDAR and Aerial Photography Acquisition
  - Geographic Scope Completed
    - 14.7 miles of Swale Canyon (mouth to Ueker Road)

## **Management Data & Habitat – January 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Prepared and for review 2 yr contract for YKFP Klickitat Management, Data and Habitat contract. BPA is currently reviewing.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Participated in Columbia River Initiative/Fisheries –rebranding strategy meeting.
- Began coordination for 5<sup>th</sup> annual Klickitat –White Salmon conference to be held on 3/20/11.

### **Klickitat Watershed Planning Activities:**

- Coordinated propagation of white oaks and other plants for Lyle Falls revegetation project
- Met with EPA region 10 tribal administrator at Lyle Falls to give overview of Klickitat Basin activities (with Joe Z.)
- Met with construction contractor at Lyle Falls to hash out strategy and placement of planting pockets, removal of fill, scarification of the soil and other prep work for revegetation

### **Klickitat Data Management accomplishments.**

- Continued the evolving development of RAHAP data entry Forms



- Began incorporating modifications to the RAHAP database that were identified through field work.
- Tracked down a number of orphan tags being read in PTAGIS detectors, identified as issued to YKFP Klickitat Programs but never submitted in tagging files. This work is ongoing.
- Submitted LAT PIT tagging records to PTAGIS
- Submitted white Creek PIT tagging interrogation records to PTAGIS
- Performed & secured backups of KFO critical data.
- Worked on Configuration of Castile Satellite Internet equipment, establishing a redundant satellite communications system
- Worked with PSMFC configuring network security at Castile
- Performed network engineering work at Castile Falls Facility with mixed results. Multiple vendors and contractors have provided partial or no information on required configurations.
- Researched and submitted for approval video lighting options for the fish viewing window at Castile.
- Met with a Charter communications representative for the performance of a “site survey” in preparation for a move of the fiber optic internet cable from the construction trailer to the permanent building at Lyle Falls. Submitted a request for this work and followed up that request multiple times. It is hoped that this work will be completed soon.
- Traveled to Castile on numerous occasions to consult with subcontractors needing access to the Satellite internet connection.
- Consulted with the physical surveillance video subcontractor providing IP addresses for his equipment and arranging for rack storage of the security DVR in the fish video rack.
- Established remote satellite internet connectivity with the security DVR at Castile.
- Performed initial evaluation of the security surveillance system and our ability to manipulate it remotely. The bandwidth demands of the high definition video and robotic camera manipulation equipment are inappropriate for use over a Satellite internet connection. Remotely configuring this system for the most rudimentary remote video access has proven extremely time intensive.
- Erected a Server rack in the observation building at Castile Falls. Providing a storage structure for the fish video equipment.
- Provided space in the fish video server rack for the surveillance DVR as the engineers and /or contractors failed to provide adequate rack space for this large server machine.
- Provided technical support to KFO.

**YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):  
Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 22 months into Lyle Falls Project (~96%+ complete). .
  - Substantial Completion date set for February 10, 2012
  - Final Completion date set for March 12, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 19.5 months into project. Project (~96%+ complete).
  - Substantial Completion date set for March 30, 2012
  - Final Completion date set for April 30, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA.
- Comment review meeting held 11/14-15. In attendance were BPA, HDR, YN and NOAA staff. Over 180 comments were review, complied, and issued to appropriate staff for response development. Response comments completed by Dec 2, 2011.
- BPA anticipates ROD May 2012.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

### **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Castile Falls 10/11 project area clean out on 12/1/11
- Job announcement issue to YN Human Resource early Jan. for YKFP-Klickitat Maintenance Supervisor (1.0 FTE).
- Delivery of additional 400 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station on 12/1/11 to top of tank in case of long winter/limited access.
- Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Fall Chinook spawner surveys began in late Oct., ended mid-late Dec.
  - Second-highest redd count (1650) since 1995 - Indication of strong run size
  - Highest redd density downstream of Klickitat Hatchery
- Coho spawning surveys began in Nov., in conjunction with Fall Chinook surveys
  - Fairly low redd counts as of late Dec./early Jan.
  - Moderately high live adult counts mostly below Klickitat Hatchery
- Lyle Falls adult trap operation
  - Coho and a few steelhead migrating past Lyle
  - Adult trapping suspended until early Jan. due to construction. Continued coordinating trap operation with contractor activities.
- Radio telemetry study

- Continued radio tagging adult steelhead at Lyle adult trap (early Dec.)
- Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites
- Tuned, repaired radio telemetry equipment in the field (Dead Creek, White Creek, Klickitat Hatchery)
- Conducted data analysis of final tagged fish fates with USGS biologists
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array (including replacement of two antennas)
  - Tepee Cr. PIT Tag data analysis:
    - Calculation of PIT array efficiencies, smolt survival, and estimates of total out-migrants for 2010-11
    - Calculation of instantaneous growth rates and site-to-site comparisons
    - Statistical analysis of fish abundance in relation to habitat variables
- Tepee Cr. Food web study
  - Sorted Fall 2011 insect and fish stomach samples to be sent off for analysis
  - Completed preliminary results of Food Web pre-treatment data
- Habitat surveys
  - Conducted habitat surveys at 2 Tepee Creek Pit tag sites
  - Habitat survey data entry and analysis for Tepee Cr. and Logging Camp Cr. sites
- *Klickitat M&E staff also working on:*
  - Design and specs of equipment for fish handling trailer at newly improved Lyle Falls fishway monitoring facility
  - Analysis of spring Chinook run size and age data for forecast
  - Genetic sample inventory and QC
  - Assisted with cleanout & maintenance at Castile Falls fishways
  - Worked on River Restoration Northwest Symposium oral presentation on Tepee Cr. PIT tag data, fish population data, and habitat relationships

#### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 6 sites
  - Site visit to 4 sites to upload data
  - Imported data for 2 sites into Aquarius (WY06 – WY11)
- Ongoing monitoring of turbidity from Big Muddy at three stations
- KWEP administration
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
  - Budget Modification IGC#52388
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta.
  - Site visit conducted to 1 gage to remove back-up sensor
  - Compilation of data for each location and import into Aquarius
  - Data correction and quality control started
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Data entry and QC - Spring 2011 dataset
  - Analysis of Fish and Physical Habitat data

- River Restoration NW – conference planning and preparation
  - Data summarization and analysis of RAHAP data and preparation of poster preparation
  - Data summarization and analysis of RAHAP and White Creek PIT Tag Study data to prepare oral presentation (cooperatively with Nico)
  - Completion of oversight of scholarship process
  - Completion of oversight of member gift acquisition
  - Ongoing outreach as Tribal Liaison
  - Development of presentation for LWD/recreation safety
- Tepee/White Creek Food Web Study (cooperatively with Nico)
- Upper Klickitat Phase 3
  - Site visit to site to download and collect measurements at shallow groundwater wells (12 total)
- Upper Klickitat Phase 3
  - Project Design and Planning
  - Time Extension Request approved by SRFB
  - Upper Klickitat Phase 3 – Status Report
- Contract administration of LiDAR and Aerial Photography Acquisition
  - Review of geographic scope of actual 2011 data acquisition
  - Data processing

## **Management Data & Habitat – February 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Coordinated internal BPA CAP Inflation table for YN Entity
- Assembled Accord outyear budget information for internal Entity 120%/FY calculation.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Meet with FEMA reps to discuss Indian Ford B damage and potential coverage under disaster relief.

### **Klickitat Watershed Planning Activities:**

- Delivered eggs to several area schools for Salmon in the Classroom program; first salmon lesson at Klickitat School
- Scheduled cultural presentations to accompany Salmon in the Classroom with participating schools
- Continued planning/preparation for Lyle Falls revegetation project
- Prep for Klickitat/White Salmon Science Conference (web site, save-the-date notice, contacting potential presenters)

### **Klickitat Data Management Accomplishments:**

- Continued the evolving development of RAHAP data entry Forms
- Met with CRITFC on a plan to automate some RAHAP data Input.

- Continued to repeatedly contact Charter communications to relocate the fiber line at Lyle from the construction trailer to the permanent building.
- Worked with Matt Dorsey from TAG on remote access to the automated monitoring system at Castile. TAG has been, so far, unable or unwilling to establish a VPN connection to Castile from a site of their own. This has left it incumbent upon YKFP data management to provide file uploads and feedback on performance. This is basically the performance feedback loop of the development cycle. It has proven a very time intensive process
- Submitted LAT PIT tagging records to PTAGIS
- Submitted white Creek PIT tagging interrogation records to PTAGIS
- Performed & secured backups of KFO critical data.
- Worked on improving Castile Satellite Internet connection speed, researching and arranging tests of alternate Virtual Private Network technologies.
- Resolve to go with Lite Gear LED for video lighting at the fish viewing window at Castile. Prepared a request for a quote, Purchase order and arranged paperwork for the account.
- Researched work station and server technology for Lyle
- Researched a work station for Castile
- Maintained remote satellite internet connectivity with the security DVR at Castile.
- Established remote satellite internet connectivity with the Red Lion data concentrator at Castile
- Continued evaluation of the security surveillance system and our ability to manipulate it remotely. The bandwidth demands of the high definition video and robotic camera manipulation equipment are inappropriate for use over a Satellite internet connection. Remotely configuring this system for the most rudimentary remote video access has proven extremely time intensive. Investigation into performance enhancements is ongoing
- Provided technical support to Klickitat Hatchery and KFO.
- Consulted on a reorganization of the folder structure of Science Conference material presented on the web site.
- Sorted out PIT tag codes in LAT db. The field original designed to record PIT tag detections at LAT has been used for both detections and tagging actions. The data Manager had to sort through each tag, one at a time to determine its tag history and assign those tags inserted at the adult trap to a separate field that indicates these are fish we tagged as opposed to fish we detected. In the future, Pit tag detection at Lyle could be left to the PSMFC antenna array and we could make the PIT tag field in the LAT database only indicate fish we tagged there. This issue remains unresolved at this writing.
- Performed queries against the LAT and screw trap databases, compiling information for RM&E reports.

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):**

#### **Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 23 months into Lyle Falls Project (~96%+ complete).
  - Substantial Completion date set for February 10, 2012

- Final Completion date set for March 12, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 19.5 months into project. Project (~96%+ complete).
  - Substantial Completion date set for March 30, 2012
  - Final Completion date set for April 30, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Start up meeting to discuss Phase II Capital construction activities at Klickitat hatchery to be held in late February 2012. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- BPA working with NOAA on BO/BA. NOAA conducting detailed review due to potential 3rd party law suits.
- BPA still anticipates ROD May 2012.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

### **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Job application received for YKFP-Klickitat Maintenance Supervisor (1.0 FTE). Interviews to be scheduled for Mid-February.

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Coho spawning surveys began in Nov., continuing through Feb.
  - Snow/ice followed by high flows prevented surveys in much of Jan.
  - Moderately high redd and live adult counts, mostly below Klickitat Hatchery
- Lyle Falls adult trap operation
  - Coho and a few steelhead migrating past Lyle
  - Adult trapping resumed in Jan., continued coordinating trap operation with contractor activities, some adjustments to new trapping structures made
- Radio telemetry study

- Continued radio tagging a few adult steelhead at Lyle adult trap in Jan.
- Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites
- Maintenance of fixed telemetry sites, including inspections following snow/ice storm with little to no damage to telemetry gear
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - Continued Tepee Cr. PIT Tag data analysis
- Tepee Cr. Food web study
  - Sorted Fall 2011 insect and fish stomach samples to be sent off for analysis
- Habitat surveys
  - Design work on database for Rapid Assessment Habitat Survey protocol data
- *Klickitat M&E staff also working on:*
  - Design and specs of equipment for fish handling trailer at newly improved Lyle Falls fishway monitoring facility
  - Genetic sample inventory and QC, shipped to CRITFC for analysis
  - Received some preliminary analysis of previous samples from CRITFC
  - Presented at River Restoration Northwest Symposium on Tepee Cr. PIT tag data, fish population data, and habitat relationships

#### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 6 sites
  - Imported data for 1 sites into Aquarius (WY06 – WY11)
- Ongoing monitoring of turbidity from Big Muddy at three stations
- KWEP administration
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
  - Budget Modification IGC#52388
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta.
  - Site visit conducted to 1 gage to replace power supply
  - Data correction and quality control started in Aquarius
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Data entry and QC - Spring 2011 dataset
  - Analysis of Fish and Physical Habitat data
- Preparation and attendance of River Restoration Northwest Stream Restoration Symposium
  - Data summarization and analysis of RAHAP data and preparation of poster presentation
  - Delineation of RAHAP defined habitat units and associated fish abundance in Arc GIS
  - Generation of 3-dimensional Arc GIS maps depicting the spatial relationship between habitat type and fish abundance

- Data summarization and analysis of RAHAP and White Creek PIT Tag Study data to prepare oral presentation (cooperatively with Nico)
- Ongoing outreach as Tribal Liaison
- General assistance with symposium organization as required of Board members
- Development of oral presentation for LWD/recreation safety
- Development of materials to instruct a one-day short-course
- Co-instruction of one-day short course, [Introduction to Geomorphic Channel Surveying](#) which was attended by 17 restoration professionals
- Oral Presentation entitled *Boater Safety Considerations for Placing In-stream Woody Debris* (January 31, 2012)
- Poster presentation entitled *Rapid Aquatic Habitat Assessment Protocol RAHAP* (February 1, 2012)
- Tepee/White Creek Food Web Study (cooperatively with Nico)
  - Sorting of fall macroinvertebrates from drift, pan trap, and fish diet sampling (Cooperatively with Klickitat M&E)
- Contract administration of LiDAR and Aerial Photography Acquisition
  - Review of geographic scope of actual 2011 data acquisition
  - Data processing
- Haul Road Phase 3
  - Completion of funding agreement between CLT and SRFB
  - Planning and design
  - Preparation for spring planting
  - Upper Klickitat phases 3 and 4 design

## **Management Data & Habitat – March 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Hosted and presented at the Klickitat/White Salmon Science Conference (see website for detail) on March 20, 2012. Over 125 people in attendance.
- Assembled Accord outyear budget information for internal Entity 120%/FY calculation.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Delivered CAP Inflation table to YN lead for YN Entity submittal to BPA.
- Meet with FEMA reps to discuss Indian Ford B damage and potential coverage under disaster relief.

### **Klickitat Watershed Planning Activities:**

- Continued planning/preparation for Lyle Falls revegetation project
- Scheduled cultural presentations to accompany Salmon in the Classroom with participating schools
- Delivered eggs to several area schools for Salmon in the Classroom program; first salmon lesson at Klickitat School

### **Klickitat Data Management Accomplishments:**



- Castile Monitoring –Castile several hours
- Server Setup for a visitors & VPN accounts for inspection –Castile 2 Hour
- Research and establish Global VPN Client set up –Castile 3 Hours
- Lyle construction Meeting for VPN 3 hours 2/6/2012
- RAHAP database/data sheet walk through w/Bios David & Nicolas 1 Day
- Development of RAHAP automated data entry data sheets 1 Week +
- Two days at CRITFC Portland training on Capturx technology for RAHAP data capture.
- White Creek PIT Tag query for first detections. 1 Hour
- White Creek PIT Tag array detection queries to aid in calculating efficiency & population estimates- 6 hours
- Research and order new networked Printer 1 Day
- Set up adobe e-mail Web Registration e-mail form and system to manage form Data. 2 Days
- Received Science conference Registration forms and processed the information contained therein as reservations. Forwarded submitted registration forms to bookkeeper for payment processing -8 Hours.
- Confer w/Michael Mongrain on VPN & Red Lion functioning. 2 Hours.
- KDSM Performed diagnostics and warranty replacement of a hard drive failure on KWEP Mobile Work Station. 4- Hours
- Transfer LAT scale card data to the Scale age database for dates: 7-8-11 thru 11-30-11 2 hours
- Submitted LAT tagging files to PTAGIS
- Submitted White Creek pit-tag interrogation files to PTAGIS.
- Diagnostics on intermittent network interruptions in the KFO office trailer ultimately indicated a failed network switch. The switch was replaced. 6 hours
- Contacted Charter cable, repeatedly, attempting to expedite the move of the fiber optic cable at Lyle from the construction trailer to the permanent building. 8 + hours
- Evaluated the possibility of executing the Lyle cable move using in house labor but determined that the risk of damaging the equipment outweighed any time advantage we may gain. 2 hours
- Initiated and tracked the purchase of LED lighting hardware for the Castile fish video application. 2 hours
- Arranged for warranty replacement of two failed hard drives on the KFO Map server and performed the replacement and recovery of both drives. 4 hours
- Provided technical support the KFO and Klickitat Hatchery
- Performed data backup on the KFO servers.

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):**

#### **Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 24 months into Lyle Falls Project (~96%+ complete).
  - Substantial Completion date set for April 17, 2012
  - Final Completion date set for April 30, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 19.5 months into project. Project (~96%+ complete).
  - Substantial Completion date set for March 30, 2012
  - Final Completion date set for April 30, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Start up meeting to discuss Phase II Capital construction activities at Klickitat hatchery to be held in late February 2012. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- BPA working with NOAA on BO/BA. NOAA conducting detailed review due to potential 3rd party law suits.
- BPA anticipates FEIS June 2012.
- BPA anticipates ROD Fall 2012.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

### **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Hired YKFP-Klickitat Maintenance Supervisor (1.0 FTE).

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Steelhead spawning surveys began in mid Feb.
  - Some spawning activity observed, many areas still inaccessible
  - One steelhead redd in upper Little Klickitat R. above Goldendale
    - Uncommon, last one observed was in 2007 and before that 1996-7,
    - Falls at RM 6 limits, but doesn't exclude, passage
- Lyle Falls adult trap operation
  - A few steelhead migrating past Lyle
  - Continuing to coordinate trap operation with construction activities, with some adjustments to new trapping structures made
  - Minor flood at end of March shuts down trap for short timeframe
- Radio telemetry study
  - Continued radio tagging a few adult steelhead at Lyle adult trap in March

- Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites on weekly basis
  - Data analysis on hatchery & wild steelhead spawn timing
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - March 30 flood caused some damage, still assessing repair needs
- Lower Klickitat tributaries PIT tag monitoring (upcoming study)
  - Preparing for construction/installation of small stream PIT tag detection arrays
  - Obtaining landowner permissions & permits
- Habitat surveys
  - Review, refinement, and database development for Rapid Assessment Habitat Survey protocols
- *Klickitat M&E staff also working on:*
  - Presented at Klickitat-White Salmon science conference in March on:
    - Tepee Cr. PIT tag data, fish population data, and habitat relationships
    - Klickitat Hatchery program proposed changes and fishery science questions
  - Design and specs of equipment for fish handling trailer at newly improved Lyle Falls fishway monitoring facility

#### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- KWEP administration
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
  - Budget Modification IGC#52388
- Ongoing operation of stream gages at 6 sites
  - Imported data for 1 sites into Aquarius (WY06 – WY11)
- Ongoing monitoring of turbidity from Big Muddy at three stations
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta.
  - Site visit conducted to 1 gage to replace power supply
  - Data correction and quality control started in Aquarius
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Data entry and QC - Spring 2011 dataset
  - Analysis of Fish and Physical Habitat data
- Haul Road Phase 3
  - Completion of funding agreement between CLT and SRFB
  - Planning and design
  - Preparation for spring planting
  - Upper Klickitat phases 3 and 4 design
- Tepee/White Creek Food Web Study (cooperatively with Nico)
  - Sorting of fall macroinvertebrates from drift, pan trap, and fish diet sampling (Cooperatively with Klickitat M&E)
- Contract administration of LiDAR and Aerial Photography Acquisition

- Review of geographic scope of actual 2011 data acquisition
- Data processing

## **Management Data & Habitat – April 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Coordinated John Day mitigation possibilities for WHAF with CRITFC parties.
- Accord out year FY12/13 budgeting.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Continued coordination with FEMA reps to discuss Indian Ford B damage and potential coverage under disaster relief.

### **Klickitat Watershed Planning Activities:**

- Conducted cultural presentations to accompany Salmon in the Classroom with participating schools
- Continued planning/preparation for Lyle Falls revegetation project
- Delivered eggs to several area schools for Salmon in the Classroom program; first salmon lesson at Klickitat School

### **Klickitat Data Management Accomplishments:**

- Procured networked Printer
- Castile Monitoring –Castile several hours
- Research and establish Global VPN Client set up
- Lyle construction Meeting for VPN 3 hours 2/6/2012
- RAHAP database/data sheet walk through w/Bios David & Nicolas 1 Day
- Development of RAHAP automated data entry data sheets 1 Week +
- White Creek PIT Tag query for first detections.
- White Creek PIT Tag array detection queries to aid in calculating efficiency & population estimates
- Submitted White Creek pit-tag interrogation files to PTAGIS.
- Confer w/Michael Mongrain on VPN & Red Lion functioning. 2 Hours.
- KDSM Performed diagnostics and warranty replacement of a hard drive failure on KWEP Mobile Work Station. 4- Hours
- Transfer LAT scale card data to the Scale age database for dates: 7-8-11 thru 11-30-11 2 hours
- Submitted LAT tagging files to PTAGIS

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):**

#### **Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 25 months into Lyle Falls Project (~99%+ complete).
  - Developing punch list and preparation for NMFS Engineering review.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 20.5 months into project. Project (~96%+ complete).
  - Access to site opened in mid-April.
  - Developing punch list and preparation for NMFS Engineering review.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Start up meeting to discuss Phase II Capital construction activities at Klickitat hatchery to be held in late February 2012. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- YKFP and BPA staff to coordinate priority actions for Phase II capital Construction.
- BPA anticipates FEIS June 2012.
- BPA anticipates ROD Fall 2012.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

### **YKFP Klickitat Operations and Maintenance**

- YKFP Maintenance Supervisor on site review of Lyle Falls final construction elements. Learning operation of facility.
- Detail of activities provided next reporting cycle.

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Steelhead spawning surveys began in mid Feb.
  - Some spawning activity observed, many areas still inaccessible
  - One steelhead redd in upper Little Klickitat R. above Goldendale
    - Uncommon, last one observed was in 2007 and before that 1996-7,
    - Falls at RM 6 limits, but doesn't exclude, passage
- Lyle Falls adult trap operation
  - A few steelhead migrating past Lyle
  - Continuing to coordinate trap operation with construction activities, with some adjustments to new trapping structures made
  - Minor flood at end of March shuts down trap for short timeframe
- Radio telemetry study
  - Continued radio tagging a few adult steelhead at Lyle adult trap in March
  - Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites on weekly basis
  - Data analysis on hatchery & wild steelhead spawn timing

- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - March 30 flood caused some damage, still assessing repair needs
- Lower Klickitat tributaries PIT tag monitoring (upcoming study)
  - Preparing for construction/installation of small stream PIT tag detection arrays
  - Obtaining landowner permissions & permits
- Habitat surveys
  - Review, refinement, and database development for Rapid Assessment Habitat Survey protocols
- *Klickitat M&E staff also working on:*
  - Presented at Klickitat-White Salmon science conference in March on:
    - Tepee Cr. PIT tag data, fish population data, and habitat relationships
    - Klickitat Hatchery program proposed changes and fishery science questions
  - Design and specs of equipment for fish handling trailer at newly improved Lyle Falls fishway monitoring facility

#### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 8 sites
  - Conducted site visits to 6 sites to upload data and check site and sensor conditions
  - Imported data for 5 sites into Aquarius (WY06 – WY11)
- Ongoing monitoring of turbidity from Big Muddy at three stations
  - Conducted one site visit to upload data and check sensor array status
- KWEP administration
  - Finalized and submitted 2009 Annual Report summarizing KWEP activities
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta
  - Site visit conducted to 1 gage (East Delta) to replace power supply
  - Data correction and quality control started in Aquarius
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Revised RAHAP protocol document
  - Creation and testing of Capturex technology enabled datasheets
- Tepee/White Creek Food Web Study (cooperatively with Nico)
  - Sorting of fall macroinvertebrates from drift, pan trap, and fish diet sampling (Cooperatively with Klickitat M&E)
- Tepee Creek Restoration – Phase 2
  - Design
  - Calculation of in-kind
- Evaluation of *O. mykiss* Life History Strategies in Klickitat River Tributaries (cooperatively with Nico)
  - Development of Study Design, Scope and Landowner contacts
  - Procurement of materials and supplies to construct 2 All-flex PIT tag arrays

- Definition of work elements and delegation of tasks to specific personnel
- Contract administration of LiDAR and Aerial Photography Acquisition
  - Review of preliminary dataset
  - Creation and error-checking of derived datasets (terrains, etc)
- Haul Road Phase 3 & 4
  - Planning and design
  - Spring planting and measures to control herbivory
  - Coordination and Planning for 2012 SRFB Grant Round
- Upper Klickitat phases 3 and 4
  - Design
  - Calculation of in-kind
- Klickitat Trail Assessment
  - Methodology documentation
  - Calculation of in-kind and preparation of invoice to RCO
- Rattlesnake Headcut (MCFEG sponsored project)
  - Calculation of in-kind
- Swale Cr RM 2
  - Monitoring of LWD jams during peak flows 3/30/12

## **Management Data & Habitat – May 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Coordinated John Day mitigation possibilities for WHAF with CRITFC parties.
- Continued coordination with FEMA reps to discuss Indian Ford B damage and potential coverage under disaster relief.
- Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Accord out year FY12/13 budgeting.
- Presented Mid-C Steelhead Recovery DPS update (Klickitat & Rock Creek populations) to the NW Power & Conservation Council.

### **Klickitat Data Management Accomplishments:**

- Remote monitoring of Castile facility.
- Created screen shots of all Castile RED Lion screens for Wood Harbinger and Harbor Engineering.
- Sat in on Conference Call w/above, evaluating Red Lion application
- Development of RAHAP automated data entry data sheets
- Set up the Capturx software on 3 machines to be used with the RAHAP data.

- Rebuilt a surplus RM&E Laptop computer for use by the new Klickitat Maintenance Manager.
- Got the Maintenance Computer set up on the KFO network.
- Installed hardware Drivers and software needed by the Maintenance Manager.
- Researched, ordered and installed a large format monitor for viewing technical drawings.
- Installed new networked Printer.
- Installed new Printer software on local computers
- Submitted LAT tagging files to PTAGIS
- Submitted White Creek pit-tag interrogation files to PTAGIS.
- Submitted 2011 Skamania tagging files to PTAGIS upon release of these fish into the Klickitat River.
- Installed a network switch at Lyle Falls Fish way allowing PSMFC an autonomous network connection
- Performed initial tests of LED lighting hardware for the Castile fish video application
- Provided technical support to staff at the KFO and Klickitat Hatchery.
- Performed data backup on the KFO servers.
- Executed custom queries against the LAT database, providing data for various RM&E requests.
- Performed a complete rebuild of the maintenance management work station.

## **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):**

### **Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 26 months into Lyle Falls Project (~99%+ complete).
  - Developing punch list from NMFS Engineering walkthrough/inspection on May 25<sup>th</sup>.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 20.5 months into project. Project (~96%+ complete).
  - Access to site opened in mid-April.
  - Contractor and engineering developing punch list for remaining items.
  - System commissioning underway.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**



- Start up meeting to discuss Phase II Capital construction activities at Klickitat hatchery to be held in late February 2012. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- YKFP and BPA staff to coordinate priority actions for Phase II capital Construction. Received BPA position letter from Lori Bodi.
- BPA anticipates FEIS June/July 2012.
- BPA anticipates ROD Fall 2012.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

### **YKFP Klickitat Operations and Maintenance**

Harbor Consulting Engineers, Inc.

- Meetings in Seattle for three days to discuss current and future products.
- Meeting at Klickitat Hatchery to discuss budgets and design of Hatchery upgrades.
- Meeting at KFO to discuss Lyle Falls Fish Passage Project.
- Meeting at Lyle Falls with William Charles West, and subsequent walk through of facility.
- Numerous telephone and email exchanges to discuss how best to get Lyle Falls Fish Passage, and Castile Falls Fishway Projects completed.

Mary Todd Haight, BPA

- Met her at Lyle Falls to discuss electrically actuated valves

Lyle Falls Fishway Improvements

- Moved Adult Capture Trailer to higher ground due to flooding event.
- Re-Fabricated the stairs to Adult-Capture Trailer.
- Procured and installed leveling jacks on Adult Capture Trailer
- Obtained supplies for providing power, water, and air to Adult Capture Trailer.
- Documented effects of the flood event on facilities

Castile Falls Fishway and Fish Enumeration Facility

- Photographed and documented unfinished work at the site
- Provided supplies and assisted in radio telemetry setup activities
- Developed an action plan for dewatering and cleaning Tunnel around Falls 4/ 5

KFO

- Cleaned overhead box storage area in shop
- Measured and ordered new door for field office
- Procured surplus riding mower from Klickitat Hatchery

### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Steelhead spawning surveys began in mid Feb., ongoing
  - Fairly low redd counts to date
  - High flows through much of April preventing surveys

- Lyle Falls adult trap operation
  - Some steelhead migrating past Lyle; no spring Chinook as of late April
  - High flows and construction activities limiting trap operation
  - Ability to adequately monitor spring Chinook run may be limited this year with final construction activities occurring
- Radio telemetry study
  - Continued radio tagging a few adult steelhead at Lyle adult trap in March
  - Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites on weekly basis
    - Tracking via aircraft detected steelhead in lower Little Klickitat, White Cr., & Klickitat R. above hatchery
  - Repaired/reinstalled radio telemetry equipment at Wahkiacus, Lyle falls, Dead Canyon Creek following high water event in Klickitat River drainage
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - March 30 flood caused some damage, still assessing repair needs
  - Ability to monitor this spring outmigrants limited due to damage and ongoing high flows (inability to assess and repair)
- Lower Klickitat tributaries PIT tag monitoring
  - Construction & testing of small stream PIT tag detection arrays
  - Fish sampling and tagging in Wheeler Cr.
- Habitat surveys
  - Habitat mapping & surveys in Wheeler and Beeks Canyon Creeks
- *Klickitat M&E staff also working on:*
  - Design, specs, planning for equipment in fish handling trailer and other portions of newly improved Lyle Falls fishway monitoring facility
  - Klickitat Master Plan review and edits for next submission to NPCC
  - Klickitat Hatchery upgrades planning
  - Klickitat Lead Entity Strategy updates for Salmon Recovery Funding Board and habitat improvement project funding
  - Processed adult fish scale samples taken at Lyle falls
  - Stream temperature database management and field data downloads
  - Spawner survey (redd GPS) data management and quality control

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 8 sites
  - Conducted site visits to 3 sites to upload data, check site and sensor conditions and demarcate HWM during 3/30/12 event
  - 2 site visits to survey-in HWM to gage datums
  - 5 high-flow instantaneous discharge measurements taken at 4 sites with new hardware
  - Learning quality control and quality assurance procedures for new hardware
- Ongoing monitoring of turbidity from Big Muddy Creek at three stations
  - Conducted 4 visits to Klickitat River at Wahkiacus site

- surveyed high water surface elevation marked on 3/30/12
  - 4 discharge measurements for rating curve development
- KWEP administration
  - Submitted quarterly status report in PISCES
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta
  - Site visit conducted to 1 gage (Basalt Cliff) to raise sensor elevation in order to capture a wider range of Bonneville Pool elevations
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Creation and testing of Capturex technology enabled datasheets
  - RAHAP survey of Beeks Canyon Creek
- Tepee Creek Restoration – Phase 2
  - Design
- Evaluation of *O. mykiss* Life History Strategies in Klickitat River Tributaries (cooperatively with Nico)
  - Development of Study Design, Scope and Landowner contacts
  - Procurement of materials and supplies to construct 2 All-flex PIT tag arrays
  - Submitted JARPA permit
  - Constructed 3 All-flex PIT tag antennae
  - Continuously sampled Wheeler Creek for *O. mykiss* utilizing one pass Electrofishing Survey. Abundance estimates will be compared to 2011 estimates generated via a subsampling methodology. PIT tagged approximately 200 *O. mykiss* to evaluate PIT tag antennae efficiency and seasonal fish movements
  - Definition of work elements and delegation of tasks to specific personnel
- Contract administration of LiDAR and Aerial Photography Acquisition
  - Review of preliminary dataset
  - Creation and error-checking of derived datasets (terrains, etc)
- Haul Road Phase 3 & 4
  - Planning and design
  - Spring planting
  - Measures to control herbivory at two historic planting sites
    - Set-up electric fence for livestock exclusion
    - Implemented beaver protection for cottonwoods and pines
  - Coordination and Planning for 2012 SRFB Grant Round
- Klickitat Trail Assessment
  - Planning
  - Set-up new GPS system
- Attended RCO sponsored Salmon Habitat Restoration Guidelines Workshop
- River Restoration NW
  - Attended Board of Directors Retreat
  - Scholarship planning
    - Re-design of application process including new web-based application
    - Developing new strategy for fundraising given loss of Oregon Watershed Enhancement Board funding

## **Management Data & Habitat – June 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Continued coordination with FEMA for Indian Ford B disaster relief. WDFW will assume management.
- Will present with Bill Tweit (WDFW Intergovernmental Affairs) status of Klickitat hatchery transition to WDFW Commission at August 3/4 meeting.
- Continued Accord out year FY12/13 budgeting.
- Led site tours of Lyle Falls with USFS interpretive staff (field rangers that will be out on the Klickitat) and for BPA Environmental Compliance staff.
- Site visit (post pull-out of contractor) with Kat Strathmann (YN Wildlife botanist) of area to assess conditions and revegetation options

### **Klickitat Data Management Accomplishments:**

- Performed troubleshooting and recovery of an outage on the fiber internet connection at Lyle.
- Performed Recovery of the Education & Outreach laptop computer from a viral infection.
- Researched and ordered components for a waterproof workstation for the workup trailer at Lyle
- Researched and ordered a network storage server solution for the network at Lyle.
- Performed preliminary evaluation of the present network configuration at Lyle anticipating development of a functional configuration plan.
- At the request of John Hutchins, attempted to evaluate security camera functioning at Lyle. Absent of training on or documentation of the network and camera configuration at that facility was unable to confirm that any of the security cameras at Lyle are functioning.
- Arrange for SLE Virtual Private Network testing at Castile, This technology may increase data transfer speed across the Satellite uplink.
- Registered Wheeler as a PIT tagging site in PTAGIS
- Submitted Lyle Falls and Wheeler Creek Pit tagging files to PTAGIS.
- Troubleshooting on radio tagging tough-book computer returned that machine to service but likely to need a replacement. We have one back-up machine available.
- Worked with the CRITFC database administrator on the automated RAHAP data processing.
- Performed preliminary work on modifications to the LAT database to automate PIT tag data entry directly from the tag readers, and facilitate direct data entry at the work-up trailer in Lyle.
- Initiated research on conversion of the data files produced by the AllFlex interrogation array installed in Wheeler Creek to a form that is compatible with the PTAGIS database.
- Started installation of Castile fish passage video system
- Attended training on the remote power management system at Castile
- Provided technical support to staff at the KFO and Klickitat Hatchery
- Performed data backup on the KFO servers.

- Executed custom queries against the LAT database, providing data for various RM&E requests.

## **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):**

### **Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 27 months into Lyle Falls Project (~99%+ complete).
  - NMFS Engineering walkthrough inspection conducted on May 25<sup>th</sup>.
  - Punch list accomplishments underway
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 21.5 months into project. Project (~96%+ complete).
  - Access to site opened in mid-April.
  - Punch list accomplishments underway
  - System commissioning underway.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Start up meeting to discuss Phase II Capital construction activities at Klickitat hatchery to be held in late February 2012. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- Master Plan update ~July 2012. This document will be used in FEIS development and will be consistent with EIS documentation and final HGMPs
- BPA anticipates FEIS July/August 2012.
- BPA anticipates ROD Fall 2012.
- YKFP and BPA staff to coordinate priority actions for Phase II capital Construction. Received BPA position letter from Lori Bodi.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

## **YKFP Klickitat Operations and Maintenance**

### **Lyle Falls Fishway Improvements**

- Installed PIT tag tube antennas (6) with assistance from Jeff Moser (NOAA)
- Fabricated and installed supports for PIT tag tube antennas
- Researched Flow Meter installation with Bainbridge Associates, Inc.
- De-Watered Transportation Channel and field measured for Flow Meter

- Participated in NMFS walk-through with Ed Meyers, HCE, and YN personnel
- Worked with PSMFS to ensure YN work would not conflict with theirs
- Observed and assisted with WCW startup activities on all mechanical systems
- Assisted YKFP biologists, and technicians as needed for Adult Capture
- Coordinated with vendors to procure Extended Reach Forklift quotes
- Obtained a bid for Flow Meter wire installation from Primary Electric
- Evaluated and helped establish commissioning activities
- Procured and installed fish passage sleeves inside other mobile laboratory
- Fencing vendor on site July 10<sup>th</sup>, coordinating this activities with WDFW's Area Lands Manager

#### Castile Falls Fishway and Fish Enumeration Facility

- Developed a detailed punch list for Castile Facility
- Observed and assisted with oil change procedures on both generators
- Assisted with the installation of fish viewing window lights
- Provided 12 volt power supply for fish viewing camera

#### Klickitat Field Office

- Serviced HVAC system

#### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Steelhead spawning surveys wrapping up in early June
  - Fairly low redd counts to date
  - High flows through much of April and May limited surveys
    - Upper Klickitat not fully surveyed due to high flows
- Lyle Falls adult trap operation
  - Steelhead and spring Chinook migrating past Lyle
    - First spring Chinook was May 9
    - Early indications of average-sized spring Chinook run (~2000 fish total)
  - Some limited trap operation due to final construction activities
- Radio telemetry study
  - Radio tagging spring Chinook at Lyle adult trap in May
  - Continued mobile tracking in mainstem Klickitat River, downloading data from fixed telemetry sites on weekly basis
  - Troubleshooting radio telemetry equipment at White Creek and Castile Falls
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - Re-installation of antenna equipment following March 30 flood damage
  - Ongoing salvage of flood-damaged antenna equipment
  - Some data gaps in smolt outmigrant monitoring this spring due to damage
- Lower Klickitat tributaries PIT tag monitoring
  - Purchasing materials, construction and testing of small stream PIT tag detection arrays
  - Installation of antennas and data downloads on Wheeler Creek
- Habitat surveys
  - Conducted surveys on Beeks Canyon Creek
- *Klickitat M&E staff also working on:*

- Design, specs, planning for equipment in fish handling trailer and other portions of newly improved Lyle Falls fishway monitoring facility
- Klickitat Master Plan review and edits for next submission to NPCC
- Klickitat Hatchery upgrades planning
- Data entry and analysis:
  - Scale age samples
  - Habitat survey data
  - Fish sampling and tagging data

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 8 sites
  - Learning quality control and quality assurance procedures for new hardware
  - Import data from 4 sites into Aquarius (WY12)
- Ongoing monitoring of turbidity from Big Muddy Creek at three stations
- KWEP administration
  - Conducted site visit with Mary Todd Haight (COTR) and Hannah Dondy-Kaplan (Environmental Lead) to discuss strategic planning for ongoing and future KWEP projects
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta
  - Three site visits conducted to gage (Basalt Cliff) to record staff gage observations for calibration of sensor measurements
  - Three site visits conducted to gage (East Delta) to exchange battery, measure water surface elevation for calibration of sensor, and repair/replace damaged radio antennae
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Continued development of relational database
- Tepee Creek Restoration – IXL Meadows
  - Maintenance and repair of exclusion fencing
  - Invasive plant species control (hand-pull)
- Tepee Creek Restoration – Phase 2
  - Design
  - Invasive plant species control (hand-pull)
- Evaluation of *O. mykiss* Life History Strategies in Klickitat River Tributaries
  - Development of Study Design, Scope and Landowner contacts
  - Submitted JARPA permit
  - Procurement of materials and supplies to construct 6 additional All-flex PIT tag arrays
  - Definition of work elements and delegation of tasks to specific personnel
  - Initiation of Literature Review – assembling existing documents
- Contract administration of LiDAR and Aerial Photography Acquisition
  - Review of preliminary dataset
  - Creation and error-checking of derived datasets (terrains, etc)
  - Crafted Scope of Work for contract extension to complete data acquisition Fall 2012
- Haul Road Phase 2

- Spring planting
- Measures to control herbivory at two historic planting sites
  - Set-up electric fence for livestock exclusion
  - Implemented beaver protection for cottonwoods and pines
- Weed control
- Haul Road Phase 3
  - Design and bid package development
  - 2 site visits and coordination with CLT staff
- Haul Road Phase 4
  - Planning and design
  - Funding proposal development with Columbia Land Trust
  - Powerpoint developed and presented at TC and CRC meetings
- Klickitat Trail Assessment
  - Planning
  - Set-up new GPS system
  - Design/Create data entry forms for handheld GPS for field based data collection
- River Restoration NW - Scholarship planning

## **Management Data & Habitat – July & August 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Continued Accord out year FY12/13 budgeting.
- Revising/updating Lyle Falls Revegetation Plan
- Led site tours of Lyle Falls with USFS interpretive staff (field rangers that will be out on the Klickitat) and for BPA Environmental Compliance staff

### **Klickitat Data Management Accomplishments:**

- Received and began assembly of components for a waterproof workstation for the workup trailer at Lyle
- Performed preliminary evaluation of the present network configuration at Lyle anticipating development of a functional configuration plan.
- At the request of John Hutchins, evaluated security camera functioning at Lyle. Met with Entrance Controls Project manager and technicians at Lyle on two occasions. Performed Network cable troubleshooting and repair. The security cameras at Lyle are functioning.
- The SLE Virtual Private Network testing at Castile indicated that administration of this technology is time intensive and provided no net increase in data transfer speed across the Satellite uplink.
- Submitted Lyle Falls Pit tagging files to PTAGIS.
- Worked with the CRITFC database administrator on the automated RAHAP data processing.
- Performed preliminary work on modifications to the LAT database to automate PIT tag data entry directly from the tag readers, and facilitate direct data entry at the work-up trailer in Lyle.



- Continued with refinements to the Castile fish passage video system. Submitted a PO request for additional lighting.
- Successfully established remote video file backups via the satellite network connection, copying files from Castile to a local hard drive at the KFO.
- Consulted with Bill Bosh on modifications to the present video fish counting software to accommodate the Castile video fish counts. According to Bill, “it is a trivial matter to add Castile video counts to the existing video dam count database in Toppenish.”
- Tentatively scheduled a meeting with Jeff Trammel for Wed. August 8<sup>th</sup> to evaluate necessary arrangements for transferring fish video files to him for species ID and counts.
- Provided technical support to staff at the KFO and Klickitat Hatchery
- Performed data backup on the KFO servers.
- Executed custom queries against the LAT and screw trap databases, providing data for various RM&E requests.
- Updated LAT and Hatchery Adult return Tables on YKFP.org.
- Worked at sorting out stream and air temperature data that has been downloaded in a haphazard manner for the past few years. The lack of disciplined control of this data collection effort is threatening the integrity and completeness of this data set.

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):**

#### **Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 30 months into Lyle Falls Project (~99%+ complete).
  - Punch list accomplishments underway
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

#### **Castile Falls Monitoring Facility**

- WCW 22.5 months into project. Project (~96%+ complete).
  - Punch list accomplishments underway
  - System commissioning underway.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

#### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

#### **Klickitat Hatchery Design**

- Start up meeting to discuss Phase II Capital construction activities at Klickitat hatchery to be held in late February 2012. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

#### **Klickitat Production EIS**

- Master Plan update issues to NPCC in late July 2012. This document will be used in FEIS development and will be consistent with EIS documentation and final HGMPs
- BPA anticipates FEIS Aug/Sep 2012.
- BPA anticipates ROD Fall 2012.
- YKFP and BPA staff to coordinate priority actions for Phase II capital Construction. Received BPA position letter from Lori Bodi.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

## **YKFP Klickitat Operations and Maintenance**

### Lyle Falls Fishway Improvements

- Met with local fencing contractor to discuss option for Lyle Falls Fencing Project
- Tested the electro-narcosis systems in the wet lab
- Developed, and built a system to open and close the crowder door
- Aimed security camera to provide better surveillance of the adult trap
- Witnessed the repairs of the hydraulic power pack
- Conducted a site visit with gate contractor
- Documented gaskets in need of replacement
- Documented all visible leaks
- Met with local fire department official to discuss pumper truck connection
- Ordered extended reach forklift for use on capital projects
- Documented various deficiencies in the miter gate

### Castile Falls Fishway and Fish Enumeration Facility

- Received training for Castile Falls Woodward Panel generator controls
- Received the first videos of adult fish, with Mike Babcock
- Installed a vertical crowder at the viewing window to bring adults to the center of the window
- Cleaned fishway
- Cleaned window
- Conducted focus and motion calibration activities for the video camera

### Castile Falls 4 / 5 Tunnel

- Conducted a full survey of the tunnel, and documented log jam and bed load conditions
- Developed an action plan to move main channel bed load

### KFO

- Maintained facility

## **YKFP Klickitat Monitoring & Evaluation (M&E) :**

- Radio telemetry study
  - Radio tagging spring Chinook at Lyle adult trap in May
  - Continued mobile tracking in mainstem Klickitat River, downloading data from fixed telemetry sites on weekly basis
  - Troubleshooting radio telemetry equipment at White Creek and Castile Falls
- Lyle Falls adult trap operation

- Steelhead and spring Chinook migrating past Lyle
  - First spring Chinook was May 9
  - Early indications of average-sized spring Chinook run (~2000 fish total)
- Some limited trap operation due to final construction activities
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - Re-installation of antenna equipment following March 30 flood damage
  - Ongoing salvage of flood-damaged antenna equipment
  - Some data gaps in smolt outmigrant monitoring this spring due to damage
- Lower Klickitat tributaries PIT tag monitoring
  - Purchasing materials, construction and testing of small stream PIT tag detection arrays
  - Installation of antennas and data downloads on Wheeler Creek
- *Klickitat M&E staff also working on:*
  - Design, specs, planning for equipment in fish handling trailer and other portions of newly improved Lyle Falls fishway monitoring facility
  - Klickitat Master Plan review and edits for next submission to NPCC
  - Klickitat Hatchery upgrades planning
  - Data entry and analysis:
    - Scale age samples
    - Habitat survey data
    - Fish sampling and tagging data

#### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing monitoring of turbidity from Big Muddy Creek at three stations
- KWEP administration
  - Conducted site visit with Mary Todd Haight (COTR) and Hannah Dondy-Kaplan (Environmental Lead) to discuss strategic planning for ongoing and future KWEP projects
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta
  - Three site visits conducted to gage (Basalt Cliff) to record staff gage observations for calibration of sensor measurements
  - Three site visits conducted to gage (East Delta) to exchange battery, measure water surface elevation for calibration of sensor, and repair/replace damaged radio antennae
- Haul Road Phase 2
  - Spring planting
  - Measures to control herbivory at two historic planting sites
    - Set-up electric fence for livestock exclusion
    - Implemented beaver protection for cottonwoods and pines
- Evaluation of *O. mykiss* Life History Strategies in Klickitat River Tributaries (cooperatively with Nico)
  - Development of Study Design, Scope and Landowner contacts
  - Submitted JARPA permit

- Procurement of materials and supplies to construct 6 additional All-flex PIT tag arrays
- Klickitat Trail Assessment
  - Planning
  - Set-up new GPS system
  - Design/Create data entry forms for handheld GPS for field based data collection
- Ongoing operation of stream gages at 8 sites
  - Learning quality control and quality assurance procedures for new hardware
  - Import data from 4 sites into Aquarius (WY12)
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Continued development of relational database
- Tepee Creek Restoration – IXL Meadows
  - Maintenance and repair of exclusion fencing
  - Invasive plant species control (hand-pull)
- Haul Road Phase 3
  - Design and bid package development
  - 2 site visits and coordination with CLT staff
- Haul Road Phase 4
  - Planning and design
  - Funding proposal development with Columbia Land Trust
  - Powerpoint developed and presented at TC and CRC meetings
- Contract administration of LiDAR and Aerial Photography Acquisition
  - Review of preliminary dataset
  - Creation and error-checking of derived datasets (terrains, etc)
  - Crafted Scope of Work for contract extension to complete data acquisition Fall 2012
  - Weed control

## **Management Data & Habitat – September 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Continued Accord out year FY12/13 budgeting.
- Presented updated Lyle Falls Revegetation Plan to BPA
- Led site tours of Lyle Falls & Castile Falls
- Presented Master Plan & ESI update to WDFW Commission on 5<sup>th</sup>. First in series (2 presentations/1 request for action) that will be used to transfer Klickitat Hatchery Facility to the YN. Received email below from Bill Tweit (WDFW Intergovernmental Affairs) that will need discussion at the next YKFP Policy Group meeting.

**From:** Tweit, William M (DFW) [<mailto:William.Tweit@dfw.wa.gov>]

**Sent:** Wednesday, October 10, 2012 5:02 PM

**To:** Easterbrooks, John A (DFW)

*Cc: Bartlett, Heather R (DFW); Bill Sharp  
Subject: RE: Commission presentation*

*Glad to hear that it went well. A scheduling difficulty has arisen though. I think everyone is aware that the Klickitat transfer is part of the US v Oregon discussion/dispute over Priest Rapids Hatchery marking. I'm told that the dispute resolution date for that was just moved to December, so it is probably best to delay the next step by a couple of months to see how that will resolve. I am available for the March 1-2 meeting, unfortunately not available for the February 8-9 Commission dates. Should we tentatively plan on a March briefing? Bill T.*

**Klickitat Data Management Accomplishments:**

- Performed preliminary work on modifications to the LAT database to automate PIT tag data entry directly from the tag readers, and facilitate direct data entry at the work-up trailer in Lyle.
- Successfully established remote video file backups via the satellite network connection, copying files from Castile to a local hard drive at the KFO.
- The SLE Virtual Private Network testing at Castile indicated that administration of this technology is time intensive and provided no net increase in data transfer Continued preliminary evaluation of the present network configuration at Lyle anticipating development of a functional configuration plan.
- speed across the Satellite uplink.
- Submitted Lyle Falls Pit tagging files to PTAGIS.
- Worked with the CRITFC database administrator on the automated RAHAP data processing.
- Continued with refinements to the Castile fish passage video system. Submitted a Received and began assembly of components for a waterproof workstation for the workup trailer at Lyle
- Consulted with Bill Bosch on modifications to the present video fish counting software to accommodate the Castile video fish counts. According to Bill, "it is a trivial matter to add Castile video counts to the existing video dam count database in Toppenish."
- Provided technical support to staff at the KFO and Klickitat Hatchery
- Performed data backup on the KFO servers.
- Executed custom queries against the LAT and screw trap databases, providing data for various RM&E requests.
- Updated LAT and Hatchery Adult return Tables on YKFP.org.

**YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):  
Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 32 months into Lyle Falls Project (~99%+ complete).
  - Punch list accomplishments underway
  - Pumps to be reinstalled 10/19
  - Commissioning and Training to follow
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Castile Falls Monitoring Facility**

- WCW 24 months into project. Project (~96%+ complete).
  - Began imaging late June 2012
  - Shakedown of system and data transfer ongoing.
  - Final Punch list accomplishments underway
  - Second phase of commissioning underway.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

### **Klickitat Hatchery Design**

- Start up meeting to discuss Phase II Capital construction activities at Klickitat Hatchery TBD. Focus will be priority actions to secure water delivery, adult holding and spring Chinook rearing upgrades.
- Design plans and cost estimates on hold at 30%.

### **Klickitat Production EIS**

- Master Plan update issues to NPCC in late July 2012. This document will be used in FEIS development and will be consistent with EIS documentation and final HGMPs
- BPA anticipates FEIS Fall 2012.
- BPA anticipates ROD Fall/Winter 2012.
- YKFP and BPA staff to coordinate priority actions for Phase II capital Construction.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/).

### **YKFP Klickitat Operations and Maintenance**

#### **Lyle Falls Fishway Improvements**

- Designed and crafted specifications and drawings for Lyle Falls Fencing Project
- Designed and crafted specifications and drawing for Lyle Falls Road Gates Project
- Conducted pre-bid walk through for Lyle Falls Fencing Project
- Conducted pre-bid walk through for Lyle Falls Road Gates Project
- Obtained bids for Lyle Falls Fencing Project
- Obtained bids for Lyle Falls Road Gates Project

#### **Castile Falls Fishway and Fish Enumeration Facility**

- Cleaned upper fish way of debris (x2)
- Cleaned fish viewing window and back panel (x2)
- Developed a materials list for PSMFS purchase of grating and structural FRP materials
- Developed and obtained hardware and supplies for grating installation
- Evaluated Red Lion System from the available views only

- Evaluated and added to HCE generated punch list
- Discovered HVAC system anomalies

#### KFO

- Developed and crafted a job description for a YKFP Maintenance Technician Position
- Obtained snow machines from Toppenish, and facilitated repair and maintenance
- Procured and replaced defective refrigerator
- Obtained bids, wrote memo, and filled out capital purchase form for joint(KWEP and O &M) purchase of Kubota BX25 tractor

#### Klickitat Hatchery

- Designed and crafted specifications and drawings for Hatchery Bridge Road Gate Project
- Obtained bids for Hatchery Bridge Road Gate Project

#### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Spring Chinook spawner surveys conducted Aug-Sept, wrapping up in early Oct.
  - Indications are for a moderately high redd count (~150)
  - 5 redds above Castile Falls
- Lyle Falls adult trap operation
  - Spring Chinook run size estimate at Lyle Falls:
    - 4550 fish total (95% confidence interval of 3830 to 5470), 87% hatchery, 13 % wild, 21% jacks
  - Fall Chinook migrating past Lyle – larger numbers of fall Chinook in trap than previous years due to ladder attraction improvements
- Radio telemetry study
  - Radio tagging of steelhead conducted through summer & early fall
  - Continued mobile tracking in mainstem Klickitat River, downloading data from fixed telemetry sites on weekly basis
  - One wild steelhead (out of 243 wild steelhead tagged since fall 2009) migrated above Castile Falls in 2012, still above Castile in early Oct.
  - Ongoing data reviews & fish fate determination conducted with USGS biologists
- White and Tepee Cr. steelhead PIT tag monitoring
  - Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
  - Juvenile steelhead/rainbow tagging – 1760 fish in White Cr. watershed
- Lower Klickitat tributaries PIT tag monitoring
  - Construction and testing of small stream PIT tag detection arrays
  - Installation of antennas, data downloads, and tagging of juvenile steelhead conducted on Wheeler Creek and Logging Camp Creek
    - 167 fish tagged in Wheeler Cr.; 364 fish tagged in Logging Camp Cr.
- *Klickitat M&E staff also working on:*
  - Conducted pre-project fish salvage for habitat improvement projects:
    - Tepee Creek Meadows Restoration Phase II
  - Coordinated Skamania Hatchery juvenile steelhead PIT tagging (with tagging assistance from Yakima R. coho M&E crew)
  - Assisted with Klickitat Hatchery spring Chinook spawning and data collection

- Klickitat Master Plan review/edits and responses to ISRP comments
- Received training at Castile Falls fish monitoring facility
- Procuring of equipment and furniture for newly improved Lyle Falls fishway monitoring facility

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 8 sites
  - Conducted 2 visits to 2 sites to perform routine maintenance and upload data
- Ongoing monitoring of turbidity from Big Muddy Creek at three stations
  - Import data from 1 site into Aquarius (WY12)
- KWEP administration
  - Crafted Draft CCR to reallocate funds within current contract and made changes to Statement of Work
- Continued to operate sensors to read water depth, water and air temperature at 4 locations and wind speed/direction at one location around the Klickitat Delta
  - One site visit conducted to gage (East Delta) to reinstall and realign sensor housing
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Continued development of relational database and Capturex pen interface
- Tepee Creek Restoration – Phase 2
  - Cooperatively with Klickitat M&E staff, conducted preconstruction fish salvage which relocated 1917 fish from approximately 3500 feet of stream
  - Cooperatively with Klickitat M&E staff, conducted fall 2012 population estimates on 4 treatment and control sections
  - Finalized design
  - Conducted pre-bid site walk-through
  - Solicited bids, reviewed submitted bids, and awarded subcontract for construction
- Evaluation of *O. mykiss* Life History Strategies in Klickitat River Tributaries (cooperatively with Nico)
  - Constructed three antennas and repaired three additional antennas for installation in fall 2012
- Haul Road Phase 2
  - Weed control – Klickitat County Weed Control sprayed invasive plant species along approximately 3 miles, wash-out to Dead Canyon Ck (road segments 8.40 – 11.58)
- Haul Road Phase 3
  - Construction oversight ongoing
  - Temporary shut-down (1 week) due to DNR increasing the Industrial Fire Precaution Level (IFPL) to 4
- Haul Road Phase 4
  - Planning and design
  - Continued development of funding proposal with Columbia Land Trust
- Klickitat Trail Assessment
  - Design/Create data entry forms for handheld GPS for field based data collection
  - Completed field data collection on 31 miles of former railroad embankment



- Quality Control/Review of field data
- Requested time extension to accommodate LiDAR flight to capture gaps from 2011 flight
- Upper Klickitat Phase 3
  - Planning and Final Design
  - Crafted and compiled bid documents
  - Conducted pre-bid site walk-through
- River Restoration NW
  - Review and ranking of abstract submissions
  - Design and implementation of scholarship webpage and application

## **Management Data & Habitat – October 2012**

### **YKFP Klickitat Management, Data and Habitat.**

General:

1. General project administrative duties.
2. Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.

### **Klickitat Data Management accomplishments.**

1. Continued development of RAHAP data entry Forms
2. Began incorporating modifications to the RAHAP database that were identified through field work.
3. Worked with PSMFC submitting a Purchase Order for two sets of Satellite internet equipment to establish a redundant satellite communications system at Castile.
4. Continued posting 2011 Klickitat hatchery Spring Chinook returns to the web. The link Follows: [http://ykfp.org/klickitat/hatch\\_AdultReturns2011.htm](http://ykfp.org/klickitat/hatch_AdultReturns2011.htm)
5. Submitted Klickitat hatchery spawning mortality PIT tagging records to PTAGIS
6. Researched Castile Satellite Internet options
7. Researched potential Castile video equipment in consultation with Jeff Trammell
8. Continued research on the purchase of Toshiba a Digital video recorder and appropriate camera/lens combination for Castile fish video operations.
9. Entered all relevant 2011 Klickitat Hatchery Spawning data into the Scale age database to await the reading of the scales and cwts.
10. Submitted LAT PIT tagging records to PTAGIS
11. Performed & secured backups of KFO critical data.

### **YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital): Lyle Falls Fishway Improvement & Monitoring Facility**

1. William Charles West (WCW) is 19 months into Lyle Falls Project (~96%+ complete).
  - a. Substantial Completion date pushed back until late October 2011
  - b. Project completion approximately end of November 2011

- c. Commissioning of various systems has begun.
2. Ongoing meetings with Harbor Engineers & Contractor at Lyle Falls to further develop aspects of Revegetation Plan for Lyle Falls construction site including installation of soil pockets during re-grading, hydro-seeding, etc.
3. Weekly “Kick Finish” Meetings being held.
4. Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

#### **Castile Falls Monitoring Facility**

1. WCW 16.5 months into project.
2. WCW 2011 work began end of May 2011
  - a. Substantial Completion pushed back to end of October 2011
  - b. Project Completion slated for mid-November 2011
3. Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>
4. PCSRF sill modification to Castile Falls 4/5 Fishway completed. Project effectively directs high flow thalweg to right bank. Future high flows events will scour bedload that accumulates at the fishway exit.

#### ***Wahkiacus Hatchery Design***

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

#### **Klickitat Hatchery Design**

- Design plans and cost estimates on hold at 30%.

#### **Klickitat Production EIS**

1. Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA. Well attended. Comments taken at meeting and coming in on BPA’s website (link below). Comment period ended 1 October 10<sup>th</sup> 2011. Numerous comments to BPA website. Majority are from Native Society in opposition to hatchery production in the Klickitat Subbasin and elsewhere in the Columbia Basin. BPA, WDFW, NOAA and YKFP staff will meet in November to address these comments.
2. Website with DEIS and supporting information presented below:
3. [http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

#### **YKFP Klickitat Operations and Maintenance**

1. General Project administration at this time.
2. Delivery of 3,000 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station.
3. Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.
4. Digital Camera research and purchase for Castile Falls Facility underway. Equipment will be purchased under capital contract per BPA guidance.
5. Project continuing under pre-award from BPA on April 1 2011.

#### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

1. Radio telemetry monitoring sites are operating and radio tracking is continuing.
2. Fall Chinook and coho spawning ground surveys underway.
3. Smolt trapping
  - a. Lyle Falls and Castile Falls smolt traps operating; flows still fairly high in upper Klickitat R.

4. White Cr. steelhead PIT tag monitoring
  - a. Instream PIT tag antenna in lower White Cr. Operating
  - b. Stream fish tagging being conducted
    - i. ~1300 steelhead/rainbow trout tagged as of early September.

**YKFP Klickitat Watershed Enhancement Project (KWEP)**

1. Ongoing operation of stream gages at 6 sites
2. Ongoing monitoring of turbidity from Big Muddy at three stations
3. KWEP administration
  - a. Environmental compliance for new (FY 11/12) contract (Upper Klickitat Phase 3
  - b. Rescheduling of balance of funds from IGC #43183 to IGC #52388
4. Continued to operate sensors to read water depth, water and air temperature, and wind speed/direction at 4 locations around the Klickitat Delta.
  - a. Conducted 1 site visit to replace datalogger and water level sensor at the Daybeacon site which had been inundated during high-water.
  - b. Updated program at 4 sampling sites to subsample once every hour to determine the influence of wave action
  - c. Updated RTMC data display for real time data monitoring at KFO
5. Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - a. Revision of habitat field protocol manual
  - b. Development of relational database (data entry forms)
6. White Creek PIT Tag Study (cooperatively with Nico)
  - a. Revisited 13 sampling sites to measure total site length and determine average wetted widths
7. River Restoration NW – conference planning
  - a. Review of 57 abstracts
  - b. Planning for scholarships
8. Tepee/White Creek Food Web Study (cooperatively with Nico)
  - a. QC of macroinvertebrate identification and measurements performed by subcontractor
  - b. Preparation of subcontract for Fall 2011 Sampling Season - macroinvertebrate identification and measurement
9. Tepee Creek Phase 2 Project
10. Submitted Committee Actions: Roads, Irrigation and Land Committee and Timber, Grazing, Overall Economic Development Committee
11. Upper Klickitat Phase 3
  - a. Project Design and Planning
  - b. Conducted 1 site visit to collect additional topographic data (survey)
12. SRFB Admin:
  - a. Upper Klickitat Phase 3 – Status Report
13. Upper Rattlesnake project (MCFEG):
  - a. Construction oversight

**Management Data & Habitat – November 2012**

### **YKFP Klickitat Management, Data and Habitat.**

1. General project administrative duties.
2. Continuing to take part in YN DNR's Ceded Lands Working Group & coordinating with other DNR departments on resource issues.

### Klickitat Watershed Planning Activities:

1. Collected acorns for potential planting of white oaks on site at Lyle Falls this fall
2. GPS'd areas to be revegetated
3. Met with construction contractor at Lyle Falls to hash out strategy and placement of planting pockets, removal of fill, scarification of the soil and other prep work for revegetation
4. Coordinated delivery of sonotubes to project site (to be used for planting pockets) and preparation of soil to be delivered from Klickitat Hatchery
5. Met with EPA region 10 tribal administrator at Lyle Falls to give overview of Klickitat Basin activities (with Joe Z.)
6. Gave presentation to Gorge chapter of Native Plant Society of Oregon about YN revegetation efforts at Lyle Falls and in the former reservoir after Condit Dam breach
7. Meetings/discussions about YN's appeal of Klickitat County's BZ/Husum Subarea Plan update

### Klickitat Data Management accomplishments.

1. Continued the evolving development of RAHAP data entry Forms
2. Began incorporating modifications to the RAHAP database that were identified through field work.
3. Researched potential Castile video equipment. Continued research on the purchase of Toshiba a Digital video recorder and appropriate camera/lens combination for Castile fish video operations, acquired bids, selected a vendor & prepared a PO.
4. Submitted LAT PIT tagging records to PTAGIS
5. Submitted white Creek PIT tagging interrogation records to PTAGIS
6. Performed & secured backups of KFO critical data.
7. Oversaw the installation of Castile Satellite Internet equipment, establishing a redundant satellite communications system
8. Worked with PSMFC configuring network security at Castile
9. Researched and submitted for approval video lighting options for the fish viewing window a Castile.
10. Traveled to Castile on numerous occasions to consult with subcontractors needing access to the Satellite internet connection.
11. Consulted with the physical surveillance video subcontractor providing IP addresses for his equipment and arranging for rack storage of the security DVR in the fish video rack.
12. Collaborated with the Yakama ykfp data manager on a proposal requested by the coordinated assessment work group for a Yakama Nation Fisheries Centralized data system.
13. Sat in on a Coordinated Assessment conference outlining budgetary needs of establishing agency wide centralized data systems.
14. Provided technical support to Klickitat Hatchery and KFO.

**YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):  
Lyle Falls Fishway Improvement & Monitoring Facility**

1. William Charles West (WCW) is 20 months into Lyle Falls Project (~96%+ complete).
  - a. Due to construction delays Substantial Completion date pushed back new date TBD.
  - b. Due to construction delays Project Completion date pushed back new date TBD.
  - c. Commissioning of Lyle Intake Screen has begun, remaining elements commissioning dates TBD.
2. Weekly “Kick Finish” Meetings being held.
3. Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

**Castile Falls Monitoring Facility**

1. WCW 17.5 months into project.
2. WCW 2011 work began end of May 2011
  - a. Due to construction delays Substantial Completion date pushed back new date TBD.
  - b. Due to construction delays Project Completion date pushed back new date TBD.
3. Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

**Wahkiacus Hatchery Design**

1. Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

**Klickitat Hatchery Design**

1. Design plans and cost estimates on hold at 30%.

**Klickitat Production EIS**

1. Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA.
2. Comment review meeting held 11/14-15. In attendance were BPA, HDR< YN and NOAA staff. Over 180 comments were review, complied, and issued to appropriate staff for response development. Response to comment will be completed by Dec 2, 2011.
3. Website with DEIS and supporting information presented below:
4. [http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

**YKFP Klickitat Operations and Maintenance**

1. General Project administration at this time.
2. Position Description for YKFP-Klickitat Maintenance Supervisor (1.0 FTE) being refined. Announcement anticipated in mid-Dec.
3. Delivery of 3,000 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station.
4. Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.

**YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

1. Spring Chinook final run size estimate:
  - a. Wild: 780 (95% CI: 650-940)
  - b. Hatchery: 3860 (95% CI: 3240-4640)
  - c. Jack percentages: 21% at Lyle adult trap, 34% at in hatchery returns

- d. Above average, larger than expected run size
- 2. Spring Chinook final redd count (surveys completed early Oct.)
  - a. 154 total redds (none observed above Castile Falls)
  - b. Higher-than-average redd counts as compared to last 5 years; likely reflects some hatchery fish on natural spawning grounds
- 3. Fall Chinook spawner surveys began in late Oct.
  - a. Early indications of fairly high redd count and run size
- 4. Lyle Falls trap operation
  - a. Adult trapping resuming in early Nov. after late October shutdown for construction.
  - b. Coho, last few fall Chinook, a few steelhead migrating past Lyle.
- 5. Radio telemetry monitoring sites are operating and radio tracking is continuing
- 6. White Cr. steelhead PIT tag monitoring
  - a. Instream PIT tag antenna in lower White Cr. Operating
  - b. Stream fish PIT tagging completed for the season:
    - i. ~2500 steelhead/rainbow trout tagged at 24 sites.
- 7. Tepee Cr. Food web study:
  - a. Fall sampling occurring at 8 sites for aquatic insect & invertebrate abundance & diversity, fish abundance, and fish stomach contents prior to habitat restoration work in 2012. Multiple pre-restoration sample occasions have been conducted, sampling will also occur post-restoration to monitor changes in these parameters.
- 8. Gravel sampling completed on 12 sites in Klickitat River, White Cr., Diamond Fork Cr. – continues long term monitoring dataset (starting 1999 for some sites) in monitor sediment changes/trends in spawning gravels

### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- 1. Ongoing operation of stream gages at 6 sites
- 2. Ongoing monitoring of turbidity from Big Muddy at three stations
- 3. KWEP administration
  - a. Environmental compliance for new (FY 11/12) contract (Upper Klickitat Phase 3
  - b. Rescheduling of balance of funds from IGC #43183 to IGC #52388
- 4. Continued to operate sensors to read water depth, water and air temperature, and wind speed/direction at 4 locations around the Klickitat Delta.
  - a. Submitted reauthorization request to USCG for Daybeacon 55 site
- 5. Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - a. Perennial Water Mapping – Dillacort, Wheeler, Logging Camp and Snyder Creeks
  - b. Development of relational database (data entry forms)
- 6. River Restoration NW – conference planning
  - a. Review of 57 abstracts
  - b. Planning re-writing scholarship procedures and application
- 7. Tepee/White Creek Food Web Study (cooperatively with Nico)
- 8. Fall 2011 Sampling Season - macroinvertebrate sampling (Drift, Benthic, Pan and Gastric Lavage) and Fish Population Surveys
- 9. Upper Klickitat Phase 3
  - a. Project Design and Planning

- b. Time Extension Request to SRFB
- 10. SRFB Admin:
  - a. Upper Klickitat Phase 3 – Status Report
- 11. Attending Restoration Design Course through Portland State University
- 12. LiDAR and Hi-Res Aerial Photography –
  - a. RFP for LiDAR and Aerial Photography Acquisition
    - i. 52.5 miles of Klickitat River (hatchery to headwaters)
    - ii. 14.7 miles of Swale Canyon (mouth to Ueker Road)
    - iii. 16.7 miles of stream in the Brush Cr watershed
    - iv. 16.9 miles of stream in the Tepee Cr watershed
    - v. 20.6 miles of White Cr (mouth to headwaters)
    - vi. 4.6 miles of Dead Canyon (mouth to above big falls)
    - vii. 4.5 miles of Snyder Creek (mouth to above Simmons Cr confl.)
    - viii. 1.5 miles of Summit Cr (mouth to above first big falls)
  - b. Selected vendor, refined deliverables and contracted LiDAR and aerial mapping services
  - c. Ground crew mobilizing 11/7 with data collection to start 11/10

## **Management Data & Habitat – December 2012**

### **YKFP Klickitat Management, Data and Habitat.**

- General project administrative duties.
- Prepared and for review 2 yr contract for YKFP Klickitat Management, Data and Habitat contract. BPA is currently reviewing.
- Continuing to take part in YN DNR’s Ceded Lands Working Group & coordinating with other DNR departments on resource issues.
- Participated in Columbia River Initiative/Fisheries –rebranding strategy meeting.
- Began coordination for 5<sup>th</sup> annual Klickitat –White Salmon conference to be held on 3/13/11.

### **Klickitat Watershed Planning Activities:**

- Coordinated propagation of white oaks and other plants for Lyle Falls revegetation project
- Met with EPA region 10 tribal administrator at Lyle Falls to give overview of Klickitat Basin activities (with Joe Z.)
- Met with construction contractor at Lyle Falls to hash out strategy and placement of planting pockets, removal of fill, scarification of the soil and other prep work for revegetation

### **Klickitat Data Management accomplishments.**

- Continued the evolving development of RAHAP data entry Forms
- Began incorporating modifications to the RAHAP database that were identified through field work.

- Tracked down a number of orphan tags being read in PTAGIS detectors, identified as issued to YKFP Klickitat Programs but never submitted in tagging files. This work is ongoing.
- Submitted LAT PIT tagging records to PTAGIS
- Submitted white Creek PIT tagging interrogation records to PTAGIS
- Performed & secured backups of KFO critical data.
- Worked on Configuration of Castile Satellite Internet equipment, establishing a redundant satellite communications system
- Worked with PSMFC configuring network security at Castile
- Performed network engineering work at Castile Falls Facility with mixed results. Multiple vendors and contractors have provided partial or no information on required configurations.
- Researched and submitted for approval video lighting options for the fish viewing window a Castile.
- Met with a Charter communications representative for the performance of a “site survey” in preparation for a move of the fiber optic internet cable from the construction trailer to the permanent building at Lyle Falls. Submitted a request for this work and followed up that request multiple times. It is hoped that this work will be completed soon.
- Traveled to Castile on numerous occasions to consult with subcontractors needing access to the Satellite internet connection.
- Consulted with the physical surveillance video subcontractor providing IP addresses for his equipment and arranging for rack storage of the security DVR in the fish video rack.
- Established remote satellite internet connectivity with the security DVR at Castile.
- Performed initial evaluation of the security surveillance system and our ability to manipulate it remotely. The bandwidth demands of the high definition video and robotic camera manipulation equipment are inappropriate for use over a Satellite internet connection. Remotely configuring this system for the most rudimentary remote video access has proven extremely time intensive.
- Erected a Server rack in the observation building at Castile Falls. Providing a storage structure for the fish video equipment.
- Provided space in the fish video server rack for the surveillance DVR as the engineers and /or contractors failed to provide adequate rack space for this large server machine.
- Provided technical support to Klickitat Hatchery and KFO.

**YKFP Klickitat Design & Construction (Expense) & Klickitat Construction (Capital):  
Lyle Falls Fishway Improvement & Monitoring Facility**

- William Charles West (WCW) is 21 months into Lyle Falls Project (~96%+ complete).
  - Substantial Completion date set for February 10, 2012
  - Final Completion date set for March 12, 2012.
- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

**Castile Falls Monitoring Facility**

- WCW 18.5 months into project. Project (~96%+ complete).
  - Substantial Completion date set for March 30, 2012
  - Final Completion date set for April 30, 2012.



- Project website updates at <http://www.ykfp.org/klickitat/Accords.htm>

#### **Wahkiacus Hatchery Design**

- Design plans and cost estimates on hold at 30% while DEIS is developed and reviewed. Engineering Basis of Design Report completed which will be key component of EIS.

#### **Klickitat Hatchery Design**

- Design plans and cost estimates on hold at 30%.

#### **Klickitat Production EIS**

- Draft EIS for this project element issued by BPA on July 22, 2011, with Public Meeting held for August 10<sup>th</sup> at Lyle, WA.
- Comment review meeting held 11/14-15. In attendance were BPA, HDR< YN and NOAA staff. Over 180 comments were review, complied, and issued to appropriate staff for response development. Response comments completed by Dec 2, 2011.
- BPA anticipates ROD May 2012.
- Website with DEIS and supporting information presented below:  
[http://efw.bpa.gov/environmental\\_services/Document\\_Library/Klickitat\\_Hatchery\\_Program/](http://efw.bpa.gov/environmental_services/Document_Library/Klickitat_Hatchery_Program/)

#### **YKFP Klickitat Operations and Maintenance**

- General Project administration at this time.
- Castile Falls 10/11 project area clean out on 12/1/11
- Position Description for YKFP-Klickitat Maintenance Supervisor (1.0 FTE) being refined. Announcement anticipated in mid-Dec.
- Delivery of additional 400 gallons of winter grade diesel fuel to the Castile Fall Monitoring Station on 12/1/11 to top of tank in case of long winter/limited access.
- Coordinated new 0.5 FTE training with current YKFP Maintenance staff for Castile & Lyle Fishway infrastructure funded by BPA.

#### **YKFP Klickitat Monitoring & Evaluation (M&E) Summary:**

- Fall Chinook spawner surveys began in late Oct., continuing into Dec.
  - High redd count - Indication of strong run size
    - Good surveys conditions, ~1200 redds in early Dec.
- Coho spawning surveys began in Nov., in conjunction with Fall Chinook surveys
  - Little spawning observed as of early Dec.
  - Moderately high live adult counts mostly below Klickitat Hatchery
- Lyle Falls adult trap operation
  - Coho and a few steelhead migrating past Lyle
  - Adult trapping conducted in Nov., currently in 2-week shutdown for construction (early Dec.). Continued coordinating trap operation with contractor activities.
- Radio telemetry study
  - Continued radio tagging adult steelhead at Lyle adult trap
  - Continued mobile tracking radio-tagged steelhead in mainstem Klickitat River, downloading data from fixed telemetry sites, & data analysis
  - Switched radio telemetry receiver from propane to hard power at upper Castile, winterized Castile equipment
  - Recovered stuck radio tags from various sites in Klickitat River
  - Tuning, repair, maintenance of radio telemetry equipment in the field
- White Cr. steelhead PIT tag monitoring

- Ongoing monitoring, downloading, and maintenance of White Creek Pit Tag Array
- Continued Pit Tag data analysis with specific attention to Tepee Creek
- Conducted habitat survey at Pit tag site
- Tepee Cr. Food web study
  - Completed Food Web Pre-treatment data formatting, QC, and biomass regression formula application
  - Entered Fall 2011 Food Web Data and QC
- *Klickitat M&E staff also working on:*
  - Draft comment responses provided to BPA on Klickitat Hatchery Program EIS – multiple science-related comments on spring and fall Chinook, coho, and steelhead programs
  - Design and specs of equipment for fish handling trailer at newly improved Lyle Falls fishway monitoring facility
  - Analysis of spring Chinook run size and age data for forecast
  - Calculating smolt survival rates and Bonneville detection efficiency for Skamania Hatchery steelhead and Klickitat Hatchery spring Chinook smolts
  - Began preparing 2012 River Restoration Northwest Symposium oral presentation
  - Attended 2011 CHaMP (Columbia Habitat Monitoring Program) post-field season workshop in Portland, OR

#### **YKFP Klickitat Watershed Enhancement Project (KWEP)**

- Ongoing operation of stream gages at 6 sites
  - Routine visit to all sites to upload data
  - Maintenance performed at 2 sites
- Ongoing monitoring of turbidity from Big Muddy at three stations
  - Routine visit to all sites to upload data
- KWEP administration
  - Rescheduling of balance of funds from IGC #43183 to IGC #52388
  - Budget Modification IGC#52388
  - Cost-share reporting FY11
- Continued to operate sensors to read water depth, water and air temperature, and wind speed/direction at 4 locations around the Klickitat Delta.
  - Site visit conducted to survey 4 gages to a common datum
- Habitat mapping and inventory (RAHAP...cooperatively with Nico & Mike)
  - Development of relational database (data entry forms)
  - Data entry and QC - Spring 2011 dataset
- Tepee/White Creek Food Web Study (cooperatively with Nico)
  - Entry and QC of Fall 2011 dataset (Fish, Vegetation, and Discharge)
- River Restoration NW – conference planning
  - Preparation of scholarship application and policy documents
  - Outreach
  - Review and summarization of 28 applications
  - Coordination of scholarship committee
  - Notification of scholarship awardees
  - Evaluation and selection of member gifts

- Upper Klickitat Phase 3
  - Project Design and Planning
  - Time Extension Request to SRFB
- SRFB Admin:
  - Upper Klickitat Phase 3 – Status Report
- Attended Regional Planning/Coordination Meetings
  - CHaMP 2011 Post-Season Workshop
  - WDFW - HPA Rule Revision
  - SW Washington WSDOT & YN Coordination Meeting
  - Monitoring Methods.org
- LiDAR and Aerial Photography Acquisition
  - Geographic Scope Completed
    - 14.7 miles of Swale Canyon (mouth to Ueker Road)