

# Summary of Okanogon Mainstem Weir Meeting

July 17, 2012

## Purpose:

The Okanogon Mainstem Weir (OMW) is an integral part of the Chief Joseph Hatchery Program (CJHP). The main functions of the weir will be adult management and broodstocking activities and are coupled with an integrated research, monitoring and evaluation (RM&E) program.

This report documents a number of pre-deployment checks and logistical considerations.

The main activities for 2012 focus on conducting a series of 24-hour test periods to gather data across a range of environmental and biological conditions. Data will be summarized in the fall of 2012 and reported to regional managers and collaborators. A full analysis of all OMW activities and data will be part the CJHP's Annual Program Review each winter.

Specifically, the CJHP will assess the feasibility of safe and effective fish capture, handling, release, and by-pass through a series of regionally developed and agreed parameters. The weir will be operated as a live capture, live release facility and fish survival is of paramount importance. In addition, the pilot weir will be used to assess installation efficiency, structure stability, operational flexibility, and guidance effectiveness.

## Objectives for 2012:

- Implement design enhancements developed in 2011 and 2012;
- Deploy the temporary pilot weir and trap at RM 15.7 of the mainstem Okanogon River;
- Conduct a series of 24-hour test periods to assess components of the Okanogon River Adult Salmon Weir Operational Plan;
- Assess the engineered design for optimal target species live capture and bypass of non-target species;
- Assess biological and environmental effects;
- Provide data to be used for design and operations adaptation, environmental compliance and future permitting processes;
- Inform development of annual operation, and
- Communication results broadly to regional natural resource managers and the public.

## Schedule

- Deployment dependent on river flow conditions, permitting states "river velocity shall not exceed 3.5 ft/s. Deployment will occur when flows are manageable or ~ 2,000 -3,000 cfs.
- Three to four days for assembly, mobilization and deployment will be required.
- Due to river conditions in 2012, deployment is expected to occur in early to mid-August.
- Conduct data collection and operations trials to end by September 30 in 2012.

- Allow 1-2 weeks breaks in between trapping periods to sample operations and conduct RM&E. Intention is to cover as much of the run-at-large as possible and allow for periods of non-trap operation comparisons.
- Generally, a 24/7, or a 24/5 day trapping period in August and September is prepared.
- Three elements make up the staffing framework:
  - Trap operations by hatchery and harvest/adult management crew
  - Weir, river and up/downstream research, monitoring and evaluation crew.
  - Engineering crew participating in all aspects
- This translates to a schedule generally consisting of the following:
  - 3- 8-hour shifts (0000-0800 2 staff., 0800-1600 8-10 staff, 1600-0000 2 staff)
  - 2- 12-hour shifts (0600-1800 8-10 staff. and 1800-0600 2 staff.)
- No in water work will occur during non-daylight hours; however trap passage and effect will be monitored continually.
- Safety Plan will be followed and all staff will be briefed daily.
- Daily visits to check for debris and security video and on-site observers during non-trap days.
- Available staff
  - CJHP M&E (4 available)
  - Hatcheries (3 available)
  - LGL (3 available)
  - CCT F&W Department staff (2 available)
  - Interns (2 available)

## Data Collection

- Datasheets will be filled out for daily checklist of weir, boat traffic, fish impinged on weir, fish behavior approaching weir, trap observations, water quality (includes turbidity above and below weir and water velocity).
- Important to note picket spacing configuration (test spacing's) during trapping period
- There will be four (4) in water video cameras with LED lights and 1 terrestrial camera to capture individual or groups of fish approaching the weir or trap. Cameras will have motion detection for viewing footage. Tele communications could be incorporated into cameras for quick uploading. Protocols for video monitoring being developed by LGL.
- Hatchery and harvest crew will monitor the trap and work with staff to develop adult management and broodstock protocols specific to the OMW configuration and project needs and objectives.
- M&E will do in river surveys and weir observations starting at the weir and ending at Chilliwist Creek.
- We are considering modifying our snorkel survey to include "upstream" observations up to Loup Loup Creek to monitor weir effects and fish mortality.
- There will be at least one CJHP M&E staff member to act as data steward during each day shift. Data steward will make sure information is collected correctly on a daily basis and will make sure communication between day and night crew occurs
- We will keep a daily log in either a notebook or whiteboard for communication between day/night crews
- The Utility trailer and travel trailer are on site for operations, data management and equipment storage
- Weir activities and general observation reporting will occur on a biweekly and or monthly basis to interested parties

- Two temperature data loggers will be placed at the trap to track temperature over the entire period we are in the water

### **Weir Logistics & Design- will follow Operational Plan**

- Trap will be put together in river by crew
- When the trap is in, a contractor will construct an access bridge from the stairs to the trap walkway
- There will not be an observation tower installed for this season, still waiting on signatures for contracting
- Stairs to the weir trap are finished. Rails and non-slip tread to be installed before deployment.
- If trap gate size is too small for weir trap, we can pull upstream pickets on the trap for passage. This will also allow more flow through the trap. Trap gate will be open on downstream side of and closed on upstream to capture fish.
- Safety Plan is in development for operations at the weir. Daily briefing and incident reporting will be part of the procedures.
- If we encounter steelhead, pull pickets or drop tripods to allow passage.
- Pickets within trap panels will be zip tied together to prevent gaps between panels.
- ¾" bolt attaching tripod tops with legs will be replaced with a 5/16" bolt or hitch pin to allow for panel breakaway.
- Instead of pulling pickets from the tripod panels, we will replace the whole tripod with the correct picket spacing. Picket spacing: 1½", 2", 3" spacing's.
- Sandbags will be placed on the bottoms of the tripods for support.
- Panel coupling-use nylon cords and or break-away zip ties.
- Weir signs will be installed next week (July 23-24) and transects will be flagged for snorkel surveys.
- Nylon rope will attach the tripod panels at the carabineers and we will zip tie pickets together at the end of each panel to hold them together.
- 3" picket gap panels used in migration corridor. 1" picket gap panels used on bank sides of migration corridor.

### **Additional questions addressed at the onsite meeting:**

- Temperature restriction on the weir @ a daily mean of 72.5°F requires us to close the trap and remove the weir sections to allow unabated fish passage.
- We are discussing how far up to survey Chilliwist and Loup Loup creek. A "utilization" baseline may help provide insight into weir effects and for overall status and trends (CJHP program effect) information relative to the goal of expanding summer/fall and spring Chinook spawning and or rearing distribution.

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*The Hatchery Operations Plan and an example schedule (subject to change) are provided on the CJHP Website under the "Projects" and or "Breaking News" tabs. This report is also found under the "Resources" tab.*

<http://www.colvilletribes.com/cjhp.php>