



Chief Joseph Hatchery 2013 Annual Program Review

Habitat Status and Trend



Project Summary

As it relates to the CJHP

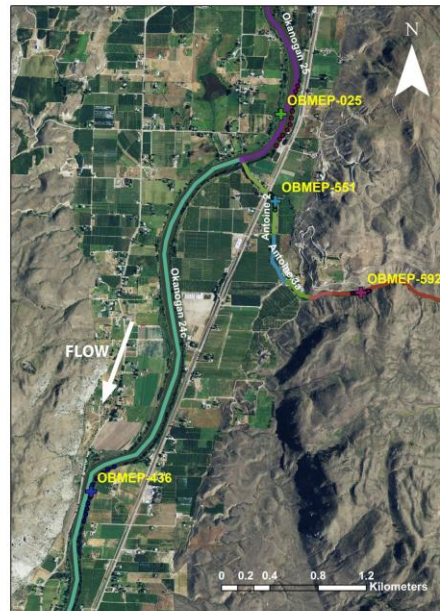
- *The Okanogan Basin Monitoring and Evaluation Program (OBMEP) was designed to monitor the status and trends of salmonid habitat within the Okanogan River basin.*
- *The OBMEP study design is focused on summer steelhead habitat. An efficiency of this approach is that Summer Chinook habitat is nested within the steelhead design.*
- *Our analysis generates a capacity and productivity estimate used by the ISIT model.*

Summary of Progress on EDT

As it relates to the CJHP

- Repopulated the subbasin planning Ecosystem Diagnosis and Treatment level 2 data and life history trajectories with empirical data collected through 2009 under OBMEP and other monitoring efforts.
- In 2013, we will redo the life history trajectories used by EDT to analyze OBMEP habitat data through 2009 and model summer Chinook to develop new habitat capacity and productivity estimates (more on this in a minute).
- Our next model run is planned in 2014/2015 for data collected through 2013. Additional model runs will occur every 4 years afterwards.

Development
of Upper
Columbia
Endorsed
Spatial
Framework for
the Okanogan
River Basin



Activities /Methods

1. *Activities – Collect habitat data and conduct EDT analysis related to Chinook*
2. *Methods – Our methods can be obtained or reviewed at CCTOBMEP.com or monitoringmethods.org*

Proposed Okanogan Chinook EDT Population Components

- Draft technical memorandum distributed to expert panel on February 28, 2013
- Three (3) Proposed EDT summer/Fall-run Chinook population components defined:
 - Summer-run, direct migrant
 - Summer-run, delayed migrant (thermal barrier response)
 - Fall-run
- Next steps:
 - Refine population based on expert panel comments
 - Construct and test Chinook EDT population
 - Generate Okanogan Chinook EDT model results using OBMEP 2009 habitat scenario
 - Produce results report (spring/summer 2013)

EDT Population Component #1: Okanogan Summer-Run, Direct Migrant

- **Columbia River Entry**
 - May 20 to July 1 (arrive at Okanogan in 16 to 45 days)
- **Rapid migration to in-river holding habitats (no Wells Pool holding)**
 - Okanogan: Mainstem below Zosel, Similkameen
 - Okanogan (Canada): TBD (stratified lake habitats)
 - Hold for 75 to 100 days
- **Spawning**
 - September 15 to October 30
 - Okanogan DUs: Okanogan 03 to Okanogan 07, Similkameen Lower, Similkameen Middle (emphasizing areas upstream of Aeneas Creek)

EDT Population Component #2: Okanogan Summer-Run, Delayed Migrant

- **Columbia River Entry**
 - July 1 to August 15 (arrive at Okanogan in 16 to 45 days)
- **Wells Pool Holding (delayed migration)**
 - 30 to 50 days (thermal barrier response)
- **Migration to in-river holding habitats**
 - Okanogan: Mainstem below Zosel, Similkameen
 - Okanogan (Canada): TBD (stratified lake habitats)
 - 3 to 45 days
- **Spawning**
 - September 15 to October 30
 - Okanogan DUs: Okanogan 03 to Okanogan 07, Similkameen Lower, Similkameen Middle (emphasizing areas upstream of Aeneas Creek)

Okanogan Chinook – EDT Fall-Run

- **Columbia River Entry**
 - August 1 to September 5
- **Direct migration to in-river holding habitats**
 - Okanogan: Mainstem below Zosel, Similkameen
 - Okanogan (Canada): TBD
 - Hold for 75 to 100 days
- **Spawning**
 - October 15 to November 20
 - Okanogan DUs: Okanogan 01 to Okanogan 03 emphasizing Okanogan 03
 - Okanogan (Canada): All non-lake mainstem spawning reaches

Common Population Parameters

- **Smolting**
 - Summer-run: 95% subyearling migrant, 5% yearling migrant (in-river rearing)
 - Fall-run: 100% subyearling migrant
- **Reservoir Rearing Behavior**
 - 5% of all subyearling migrants hold and rear in Wells Pool (reservoir rearing) and smolt the following spring
- **Adult Age (% of adult population)**
 - 2-Salt: 2% 3-Salt: 10%
 - 4-Salt: 50% 5-Salt: 35%
 - 6-Salt: 3%
- **Okanogan to Okanogan SAR**
 - ~1.5 (proposed)
- **Harvest regime:**
 - TBD per U.S. v. Oregon and AHA assumptions

Acknowledgements

- February 8, 2013
- Life history trajectory workshop
- Eric Doyle and I would like to thank the following local experts and their employers for their voluntary and valuable contributions:
 - Mike Tonseth-WDFW
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 - Casey Baldwin-Colville Tribes
 - Tracy Hillman-Bio Analyst
 - Greg Blair-ICFI
 - Deny Snyder-Bio Analyst

I have copies of the draft life history model developed during this workshop for anyone interested.

now for something completely different.

