

**OKANAGAN BASIN TECHNICAL WORKING GROUP**

C/O Ministry of Environment, Fish and Wildlife Section  
102 Industrial Place, Penticton, British Columbia, V2A7C8

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**Bilateral Okanagan Basin Technical Working Group Meeting  
February 24, 2010 ~ Penticton Lakeside**

**DRAFT MINUTES**

**Attendances:**

<b>Organization</b>	<b>Representatives</b>
Okanagan Nation Alliance (ONA)	<ul style="list-style-type: none"><li>• Howie Wright</li><li>• Richard Bussanich</li><li>• Kari Alex</li><li>• Camille Rivard-Sirois (meeting note taker)</li></ul>
Fisheries and Oceans Canada (DFO)	<ul style="list-style-type: none"><li>• Kim Hyatt</li><li>• Paul Rankin</li><li>• Dean Allan</li><li>• Barry Rosenberger</li></ul>
BC Ministry of Environment (MOE)	<ul style="list-style-type: none"><li>• Steve Matthews (meeting chair)</li><li>• Paul Askey</li><li>• Oleg Ivanov</li><li>• Shaun Reimer</li></ul>
Colville Confederated Tribes (CCT)	<ul style="list-style-type: none"><li>• Dennis Papa</li><li>• Brian Miller</li><li>• Jennifer Panther</li><li>• Mike Rayton</li><li>• Mary Davisson</li></ul>
Washington Department Fish & Wildlife (WDFW)	<ul style="list-style-type: none"><li>• Dennis Beich</li></ul>
Bonneville Power Administration (BPA)	<ul style="list-style-type: none"><li>• Dave Roberts</li></ul>
Columbia River Inter-Tribal Fish Commission (CRITFC)	<ul style="list-style-type: none"><li>• Jeff Fryer</li></ul>
NOAA Fisheries/PSC	<ul style="list-style-type: none"><li>• Larry Rutter</li></ul>
Chelan PUD	<ul style="list-style-type: none"><li>• Joseph Miller</li><li>• Alene Underwood</li></ul>
Grant PUD	<ul style="list-style-type: none"><li>• David Duvall</li></ul>
Glenfir	<ul style="list-style-type: none"><li>• Chris Bull</li></ul>

**Action Items**

- The information on Wild-Hatchery Interaction Workshop to be posted on OBTWG Website.
- Mike Rayton to provide a summary of CCT catch numbers and a description of the harvest monitoring.

**Welcome and Introductions and review of action items from last meeting (Steve Matthews)**

- Steve chaired the meeting. Camille took meeting notes.
- All meeting Power Point presentations to be posted on OBTWG Website.
- The information Wild-Hatchery Interaction Workshop has not yet been transmitted to BOBTWG members but will to be posted on OBTWG Website.
- All other action items completed.

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### 1. Okanagan Basin 2010 Water Outlook (*Oleg Ivanov*)

- Oleg presented the snowpack accumulation and forecasted inflows for the Okanagan region (from Forecast Center). 2010 inflow forecasts are below normal.
- Oleg presented the FWMT expected scenarios for Okanagan River, Okanagan L. and Osoyoos L. All objectives should be met according to last surveys. Water management in conservation mode.
- Refer to: [1\\_OBWO\\_OIvanog.pdf](#)

### 2. Adult / Juvenile Okanagan Sockeye Enumeration (*Paul Rankin*)

- Paul presented (in replacement of Margot Stockwell) the 2009 sockeye salmon escapement in the Okanagan River and a summary of the catch numbers from the different fishing groups (total≈28,000).
- There is an important loss of fish between fish that passed Wells Dam (≈135,000) and the escapement on spawning grounds (peak live + dead≈41,000).
- Mike Rayton mentioned that CCT will be working on improving their monitoring of individual fishing.
- Paul presented the 2009 In-lake monitoring results for Osoyoos L. and Skaha L, including juvenile enumeration and zooplankton biomass. The surveys estimate 7,724,000 presmolts in Osoyoos L. and 231,000 presmolts in Skaha L. There is no evidence of juvenile growth density dependence in Osoyoos L.
- Refer to [2\\_SK\\_Escapement\\_MStockwell.pdf](#) and [2\\_SK\\_Juvenile\\_Enu\\_PRankin.pdf](#)

### 3. Re-Introduction of Sockeye into Skaha Lake Initiative (*Howie Wright*)

- Howie presented a summary of the project progress including Broodstock collections, fry release strategies, monitoring, reporting. Howie distributed a summary results table per broodyear.
- Howie provided an update on the construction of the Penticton hatchery (under final discussions).
- Refer to [3\\_Skaha\\_ReIntro\\_HWright.pdf](#) and [3\\_Broodyear\\_Table\\_HWright.pdf](#)

### 4. Fish Water Management Tools (*Kim Hyatt*)

- Kim presented an overview of FWMT operations for 2008-09. Copies of 2008-2009 report were available.
- 2009 was the 3<sup>rd</sup> year of drought. Okanagan River was under water conservation management for 2008-09.
- There is a variation between the snowpack accumulation and the river inflow.
- Sockeye egg incubation was not at risk, because additional water was released to prevent egg freezing. Sockeye alevin emergence was in the yellow zone. Agricultural intakes were at risk for several irrigators.
- FWMT predicted a high risk of O<sub>2</sub>/temperature squeeze in Osoyoos L. In-lake monitoring was increased. In progress of organizing a policy table to discuss water management conflicting decisions in case of drought.
- Refer to: [4\\_FWMT\\_KHyatt.pdf](#)

### 5. Providing Fish Passage McIntyre Dam Project (*Kari Alex*)

- Kari presented background information, project progress, monitoring, outreach activities and next steps.
- In 2009, 5 undershot gates were replaced by 5 overshot gates and a backwater riffle was constructed to provide fish passage at McIntyre Dam (upstream migration barrier). In progress of optimizing fish passage and ensuring passage is not selective. Guidelines for gate settings will be integrated in FWMT.
- The project allows salmon to access another 8 km of Okanagan River and to access Shuttleworth Creek.
- The next fish barrier is Skaha L. Dam. There is fish passage facility at that dam, but not in operation.
- Refer to: [5\\_McIntyre\\_Dam\\_KAlex.pdf](#)

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### 6. Kokanee Enumeration (*Paul Askey*)

- Paul presented historical kokanee spawners escapement (shore and stream spawners) in Skaha, Okanagan, Wood and Kalamaka lakes. Skaha L. is under stock re-construction data.
- Paul presented the kokanee fishery data (angler catch and effort) in the various lakes. There is important fishery in Wood L. There has been recent fishery trials in Okanagan L.
- There is no indication that fisheries are harming kokanee population.
- Refer to: [6\\_Kokanee\\_Enu\\_PAskey.pdf](#)

### 7. Okanagan River Restoration Initiative (*Steve Matthews*)

- Steve presented the values and impacts of Okanagan River, the restoration vision and benefits, the 3-phase ecosystem based approach, the funding agencies implicated, the approvals obtained, the outreach activities, the monitoring (aquatic, terrestrial, environmental during construction), the designs for Phase I, the project progress, the adaptive management, and the next steps.
- ORRI returns channelized portion of the Okanagan River at a semi-natural state (one of COBTWG priorities).
- **Phase I:** construction of dual channel with riffle/pool sequences is completed, next focus is re-vegetation.
- **Phase II and III:** in process of funding research.
- Refer to: [7\\_ORRI\\_SMatthews.pdf](#)

### 8. Okanagan Habitat Priorities (*Kari Alex*)

- Kari presented background info on COBTWG priorities and progress of other habitat projects.
- ORRI- Phase I and Fish Passage at McIntyre Dam are completed. Next Okanagan habitat priorities include: several river restoration possibilities for ORRI Phase II and III; enhancement of unscreened water withdrawals diversions in Vaseux and Inkaneep creeks; Okanagan Falls spawning and access; providing fish passage at Shuttleworth Creek's sediment catching basin; modification of vertical drop structures.
- Refer to: [8\\_OK\\_Habitat\\_KAlex.pdf](#)

### 9. Status of Okanagan River Chinook Enumeration (*Howie Wright*)

- Howie presented chinook listing and life history, as well as, the results of the 2007-09 research on juvenile and adult enumerations, bio-sampling, life history life determination, and genetic analysis.
- Recommendations include continuing timing & escapement monitoring and bio-sampling; assessing the difference between Zosel Dam counts and spawning grounds counts; preparation of a summary report; developing stock monitoring to support recovery planning.
- Refer to: [9\\_chinook\\_Enu\\_HWright.p](#)

### 10. BPA Funding Program for 2010-12 and MOA Projects-Outcomes of Year 1 (*Dave Roberts*):

- Dave presented (in replacement of Joe Peone) background information on BPA funding and MOA.
- MOA core program being implemented including anadromous fish projects (Chief Joseph Hatchery, OBMEP, OSHIP, Steelhead Production, Selective Harvest, Salmon Passage Investigations), resident fish projects and wildlife projects.
- New initiatives include Okanogan Habitat Fund. Funding is available for habitat enhancements in the Canadian Okanagan watershed. Mike Rayton mentioned that the new round of solicitation for proposals will open April 2010 and are due by June 4<sup>th</sup>, 2010. Council decision is due out in December 2010.
- Refer to: [10\\_BPA\\_MOA\\_Funding\\_DRoberts.pdf](#)

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### 11. CRITFC MOA Sockeye Projects (*Jeff Fryer*)

- Jeff presented the results of PIT tagging and acoustic tagging including the percentage of tagged sockeye at various dams, travel time between dams, migration delays at dams, stock & age composition estimates, etc.
- The percentage of tagged sockeye salmon detected at upstream dams in 2009 is similar to previous years.
- Tumwater Dam had the greatest migration delays among the dams that have PIT tag detector.
- Two migration pulses occurred at Zosel Dam in 2009. This migration delay is related to temperature.
- Acoustic tag receivers were installed in Osoyoos L. in 2009.
- Pit tag detector was installed in the spawning grounds (at VDS 3) in 2009.
- The plan for 2010 is to install an acoustic tag at McIntyre Dam.
- Refer to: [11\\_CRITFC\\_SK\\_JFryer.pdf](#)

### 12. Climate Change and Fish Migration Issues (*Kim Hyatt*)

- Kim presented physical constraints for sockeye salmon. Sockeye encounter stress inducing temperature during migration through Columbia River and especially through Okanagan River.
- A temperature above 17°C induces stress (optimal temperature is below 15°C).
- Adult migration stops at 21°C when temperature increases. Migration resumes at 22 - 23 °C when seasonal temperatures decrease. Those rules have been confirmed with observations at McIntyre Dam.
- Brake in migration distribution and migration delays at Zosel Dam are associated with temperature. Temperature at Zosel often exceeds 21°C. This situation could cause mortality.
- The migration rule suggests an average migration delay 29/annum. According to predictions on climate change the delay will increase to 40 days, which is alarming. The migration delay during a warm PDO phase is double than the delay during a cold PDO phase.
- Okanagan sockeye encounter significant migration delays due to dams and climate changes, which is alarming.
- Acoustic & radio-tagging at Zosel Dam could provide a better understanding of the migration at Zosel. Caracas surveys might not be relevant because dead pitch surveys indicate a fast decomposition rate.
- A survey on energetic reserves could also be done.
- Refer to: [12\\_Migration\\_Climate\\_Change\\_KHyatt.pdf](#)

### 13. COBTWG Accomplishments - 10 Years Retrospective (*Chris Bull*)

- Chris presented COBTWG program and vision to improve the situation of Okanagan River.
- Chris acknowledged the contribution of Albert Saddleman and Rick Klinge. Chris recommended than COBTWG acknowledge officially Rick Klinge's contribution.
- COBTWG program guidelines established on an ecosystem base approach and decisions made by consensus according to best management practices.
- COBTWG priorities include extending the range of salmon; improving stream flows; restoring the most critical reach of Okanagan River; improving the existing habitat; determining stock status; etc.
- Challenges include trans-boundary issues; overlapping agencies responsibilities; funding coming from various agencies; abundance of approvals required; etc.
- COBTWG program have been very successful, however one aspect has not been included. Chris explained the necessity to protect the natural section of Okanagan River (located on OIB, Crown and private lands).
- The group acknowledged the contribution of Chris in all the COBTWG projects.
- Refer to: [13\\_COBTWG\\_CBull.pdf](#)

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### 14. Chief Joseph Dam Hatchery (*Mike Rayton*)

- Mike presented (in replacement of Joe Peone) an update on the hatchery project.
- The main goal is to release marked (adipose clip) chinook in several ponds for fishing purposes.
- Selective harvest methods required to harvest all hatchery fish.
- The construction of the hatchery is planned for this summer (or early fall) and the fish production is planned to start in 2011.
- Refer to: [14\\_CJD\\_Hatchery\\_MRayton.pdf](#)

### 15. CCT Selective Harvest (*Mike Rayton*)

- Mike presented the principles/goals of selective harvest, 2009 CCT harvest results and allocation estimates. A handout presenting the goals and results of CCT selective harvest is distributed.
- Selective harvest aims to secure Tribal harvest allocation; to harvest all hatchery fish; to release natural-origin fish; to interrogate fish for tags; to collect hatchery broodstock; and to educate/train CCT members.
- 2009 selective harvest trials include beach seine, tangle net (replacing gillnet) and purse seine. Purse seine caught 90% of all caught. A total of 14,423 sockeye were caught and 2,461 chinook. Half of the chinook caught were natural-origin fish and were immediately released.
- Other opportunities include pound net, scaffold at Chief Joseph Dam and a salmon weir.
- 2010 goals are to continue the training; to improve fish distribution/processing/preservation; to investigate other harvest gears; to interrogate fish for tags; to improve data quality standards; etc.
- A workshop on the harvest weir is coming (week of March 15, 2010). Barry Rosenberger mentioned the concern of adding another delay/stress to the natural population by installing the salmon weir.
- Refer to: [15\\_CCT\\_Selective\\_Harvest\\_MRayton.pdf](#)

### 16. 2009 RST Results and Passage at Zosel Dam (*Dennis Papa, Brian Miller and Mary Davisson*)

- Brian presented OBMEP and WDFW 2009 Okanogan steelhead escapement estimate ( $\approx 2,300$ ) and stock trend. Steelhead escapement is calculated using sex ratio (at Wells Dam) and redds surveys. 8% of the escapement is estimated to be wild stock.
- Marry presented the 2009 results of the video counts at Zosel Dam for steelhead (437), chinook (256) and sockeye (61,400). Sockeye mortality at Zosel Dam increases when temperature rises. Sockeye migration peak was 2 weeks delayed in comparison of last year.
- Dennis presented smolts 2009 RST results for hatchery steelhead ( $\approx 2,300$ ), unmarked steelhead ( $\approx 300$ ), sockeye ( $\approx 4,000$ ), chinook sub-yearlings (16,500), and hatchery chinook ( $\approx 11,700$ ).
- CCT is conducting bio-sampling of a sub-sample of the smolt trapped. CCT would like to calibrate the RST catching efficiency at various discharges for more precise population estimate.
- Refer to: [16\\_OBMEP\\_ZoselVideo\\_RST\\_CCT.pdf](#)

### 17. Upper Columbia Chinook Escapement (*Dennis Beich*)

- Dennis presented chinook counts at Wells Dam (adult=36,246; jack =7,778), as well as other salmon counts.
- Dennis presented the 2009 Washington harvest estimates in the Wells pool (chinook= 867; sockeye=1,314) and in the Okanogan/Similkameen (chinook= 195; sockeye=111) as well as the sport fishery harvest in the mainstem Columbia River from Priest Rapids Dam up-river to Chief Joseph Dam (chinook=2,447; sockeye=1,345).
- Refer to: [17\\_Chinook\\_Enu\\_DBeich.pdf](#)

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**2010 Columbia Salmon Forecasts (Sockeye and Chinook) (Jeff Fryer)**

- Jeff presented the 2009 predicted and observed escapement as well as the 2010 escapement forecast.
- Escapement of 124,600 sockeye (Okanagan and Wenatchee) and 57,300 spring chinook are forecasted.
- Kim Hyatt mentioned good marine conditions for sockeye BY 2008, which also predicts a high 2010 return.

**Bilateral discussions (Larry Rutter / Barry Rosenberger)**

- Larry and Barry presented background information on the Pacific Salmon Boundary Treaty.
- There is a clause in the Treaty for a practical arrangement/agreement for the Columbia River. This upcoming agreement is based on a voluntary commitment of the different parties and addresses conflicting fish management decisions (escapement objectives, harvest allocation, etc.).
- Barry mentioned that the issues related to harvest allocation are becoming imminent, especially since the escapements are higher.
- Dennis Beich mentioned the actual agreements within the various USA groups.
- Kim Hyatt mentioned that COBTWG is in progress of organizing a Policy Table to address the conflicting fish/water management issues within Canada.
- BOBTWG group is actually discussing those trans-boundary issues in an informal or semi-formal way.
- BOBTWG group will be participants/consultants in the preparation of a more formal agreement (Memorandum of Understanding).

**Wrap Up, Upcoming events, Next steps, Next meeting date (Steve Matthews)**

- Howie Wright will be chairing next meeting.
- Next meeting will be at a similar date next year.