FINAL NOTES

APRIL 22 AND 23, 2015
UPPER COLUMBIA WHITE STURGEON RECOVERY INITIATIVE (UCWSRI)
TECHNICAL WORKING GROUP MEETING (TWG)
SPOKANE, WA

Attendance:

The following individuals attended all or some of the April 22 and/or April 23, 2015 UCWSRI-TWG meeting: Adrian Clarke (FFSBC), Alison Squier (Facilitator), Amy Duncan (ONA), Andrew Gingerich (DCPUD), Andy Miller (STOI), Bill Baker (WDFW), Bill Green (CCRIFC), Bob Hallock (Expert Citizen), Brent Nichols (STOI), Chad Fritz (FFSBC), Chris Mott (GCPUD), James Crossman (BC Hydro), Jason Flory (USFWS), Jason McLellan (CCT), Lance Keller (CCPUD), Larry Hildebrand (Golder Assoc.), Louise Porto (AMEC), Matt Howell (CCT), Matt Neufeld (BC FLNRO), Mike Parsley (Expert Citizen), Mitch Combs (WDFW), Scott Bettin (BPA), Shawn Young (KTOI), Steve McAdam (BC MOE), and Wendy Horan (CPC).

DAY 1 – APRIL 22, 2015

1. TWG Business Items

1.1 Conflict of interest check-in

- None of the meeting participants identified a conflict of interest with any of the agenda topics on either day of the UCWSRI-TWG April meeting.

1.2 Member requests and observer requests

- The following new member was approved:
    - Chad Fritz (FFSBC)
- The following new observers were approved:
    - Cara Holem-Bell (KTOI)
    - Sue Ireland (KTOI)
    - Amy Duncan (ONA)

1.3 2015-2016 UCWSRI-TWG Chairs

- James Crossman and Jason McLellan agreed to continue in their roles of Canadian and US co-chairs for another year and TWG members approved both as UCWSRI- TWG co-chairs

1.4 Review and confirm updates to UCWSRI-TWG Terms of Reference

- The group reviewed proposed updates to the UCWSRI-TWG Terms of Reference (ToR) (i.e., new data sharing language and the semi-annual update of the member and observer lists).
    - James C. reviewed the history of the data sharing language, explaining that it came about because of a request for large amount of data from someone participating in the

TWG. There was an assumption that all data would be available and thus a need to add some clarification.

- Bill G. also suggested some additional edits to the data sharing language to reflect that entities may discuss and develop an approach to data sharing. There is not necessarily always a need to develop a formal "data sharing agreement." He suggested editing the last sentence of the first and second paragraphs under the data sharing section to address this concern.
- James C. pointed out that the UCWSRI doesn't have an active Community Working Group (CWG) any more, that outreach and education role is currently being filled by an activities coordinated through the TWG education and outreach subcommittee. The ToR should be modified to reflect these changes.

- **ACTIONS:**
  - **Alison will make proposed changes in UCWSRI ToR and distribute if for a final review prior to the next TWG teleconference. The TWG will finalize changes (if possible on that teleconference).**

1.5 Review Operational Plan updates provided by TWG members and finalize and/or identify next steps

- TWG members reviewed and approved all Operational Plan edits submitted prior to the meeting including some minor modifications and additional edits.
- Alison shared that Martin and Tola had requested that the TWG consider adding a column to the Operational Plan showing the linkages to the Recovery Strategy. TWG members noted that this had been discussed during development of the updated UCWSRI Recovery Plan. TWG members agreed that it would be fine to add this information to the Operational Plan and suggested that Tola and/or Martin would be the best people to do it.
- **ACTIONS:**
  - **The TWG members encourage DFO (Martin and/or Tola) to identify linkages to the Recovery Strategy and UCWSRI Operational Plan. The TWG can provide them with a template to do that within.**
  - **Alison will send the UCWSRI-TWG members an updated Operational Plan incorporating changes reviewed and identified at the April meeting. If there are any corrections to the edits those will be identified and reviewed on the June 2015 teleconference.**
  - **The Operational Plan will be reviewed and additional updates made at the November 2015 and/or April 2016 UCWSRI-TWG meeting.**

1.6 UCWSRI-TWG Education and Outreach Subgroup update

- Brent N. reported that the UCWSRI web site is back up and running. It was down for a couple months. Apparently the hosting company went out of business and no one passed that information along to the co-chairs. The Spokane Tribe has migrated the web site to a new hosting company and has taken over ownership of the domain name for the time being.

Basically, it is now back to the way it was 3 or 4 years ago before the web site was migrated to the previous domain. The Spokane Tribe is prepared to host the site for two years.

  - James C. and Brent N. recommended updating twice a year. There still is a need to identify a simple approach.

- James C. spoke about safety issues related to this year's releases. The current release location has never had much dispersal. He said have always released about 1,000 fish in a location that has been low in predators. In the past there have been lots of different release locations and sizes so it hasn't been easy to track predators. They did a public release at Trail, HLK and historical release sites this year. They split the rest to encourage habitat use.
- Mitch C. noted that the three things the TWG held on to as community outreach given current funding levels were the website, the juvenile fish releases, and the education work that FFSBC was doing. Mitch suggested that maybe FFSBC could have an increased role to help support education efforts.
- Dave D. provided the following update by email since he wasn't able to attend the meeting in person.
  - Waneta Dam Upgrades—Sturgeon dollars commitment ($112,000) and the three projects voted on by the UCWSR Team:
    - Pike management program for 2014 was completed ($20,000). A report was distributed throughout southern BC, lots of news items generated. Teck will contribute to this program for three more years under a different Waneta Dam commitment.
    - Hydraulic Modeling: Teck is working with BCH and FLNRO to finalize the TOR then will go to bid ASAP ($60,000).
    - Sturgeon in our Schools: finalized June schedule of visits to be conducted in West Kootenay schools for June ($21,800). Some educational material will be left with schools as legacy items. There were 15 schools included in the schedule and approximately 30-40 presentations.
  - Canadian Education and Outreach activities:
    - Radio spots: Teck Community Update highlighted the UCWSRI and Teck's involvement with a multi-agency recovery program. This will run for the month of April.
    - Sturgeon Release: one release location will be at Gyro Park in Trail BC, Teck will provide person power assistance and funding of rental equipment.
    - Sturgeon in Our Schools: James C. and Dave D. provided input on the ~20 program to be presented in 8 West Kootenay schools.
    - Pike Management Program: program was highlighted on CBC radio Matt N. and Dave D. fielded calls from angler organizations in the East Kootenays and the Okanagan.
- **ACTIONS:**

- **Add regular Education and Communication Subgroup check-in to end of TWG calls for near term.**

1.7 Dates for May through November 2015 teleconferences and November in-person meeting

- Teleconferences
  - June 4 at 1 pm Pacific
    - Discuss "final" agreement on US production number and size i.e., 1,000 at 200 g or other
    - Database report discussion
    - Education and outreach subgroup check-in (before or after call if needed)
  - September 17 at 1 pm Pacific
    - Report back on DFO discussions regarding movement of larvae across US/Canada border (see discussion under Day 2 item 9)
    - Education and outreach subgroup check-in (before or after call if needed)
  - October 8 at 1 pm Pacific
    - November meeting planning
    - Education and outreach subgroup check-in (before or after call if needed)
- In-person meeting
  - November 18-19 in Nelson BC. Location TBD (Prestige Lakeside Resort if available)
  - Depending on agenda topics and discussion needs might consider one-day meeting or two short-days (e.g., pm first day, am second day)

1.8 Mortality check

- No new white sturgeon mortalities were reported.

2. Database Update and Discussion

Jason M. said the contract with summit is executed and is 80% complete now. They are prioritizing setting up web-based access to address problems some entities have with security requirements, etc. Development of the field entry component it the priority focus. The goal is to have access and the field component completed by the end of summer. The database is designed to work on a laptop; they are not configuring it for tablets. They are currently working through data entry flow. Once they have a draft ready Jason M. will distribute it to those who are interested; they can then run through some simulated data entry, collection, etc. Hope to have the completed database by the end of October. It would be good to include a training day at the November TWG meeting.

Discussion: what canned reports would TWG members like to have developed

- Jason M. said part of SOW is development of specialized query. He asked for TWG input on the types of queries that would be helpful.
- TWG members brainstormed the following initial list of reports/content that would be useful:
  - Hatchery release/year
  - Where did sampling occur
  - Where were fish detected on the receivers
  - Standard population metrics
  - Index of spawning success based on juvenile catch.

- Historical capture data (in map form)
- Environmental conditions for the year – tie in with spawning success
- Fish captured by date range…life stage
- General report in PDF form – one-page summary of what we do (to provide to the public) might include info on the hatchery program, stock assessment, major regulatory activities
- Maybe outreach/education group should guide priority of reports
- Abstracts of reports
- Conservation aquaculture report
- Tables with numbers by year
- Size of release (plots)
- Information annually that is reported on anyway
- Ability to export data in report
- Specific capture histories for individual fish
- Mortality report
- Project specific summaries
- Add footnote to reports to guide people to more information

3. Joint Stock Assessment Update

Andy M. gave a presentation on the joint stock assessment (see: Miller_2015_JSA.pptx).

Questions and discussion:

- Steve M. – It is nice that you stratified it. If we believe that fish are clumped than they are going to face none equal probability of capture.
    - Jamie C. – We standardized it by hectare. Also think that it will be accounted for over the course of five-years of sampling.
- Andrew G. – I'm interested that the fish aren't recruiting to gear until 4 or 5 years.
    - Andy M. – Yes it is the size of gear.
    - Andrew G. – What is the mean size before they recruit to gear?
    - James C. – About 40 to 50 ml. In arrow it is 30 to 35 ml.
    - Jason M. – We went to smaller sizes and saw a shift in the size when they recruit. The choice of hook sizes influences what you'll get.
    - James C. – We tried to use small hooks but the problem we had was that the adults came and just munched the hook off.
- Louise P. – The population estimates are separated between the two reaches; how are you handling the fish that are moving back and forth?
    - Andy M. – At the end of the study we'll probably do a single population analysis.
- James C. – We also talked about trying to dissect some of the larger hatchery juveniles.

- Jason M. – We're looking at a proposal with an ecological endocrinologist. We're proposing to develop a maturation study on known age fish. We'll start collecting blood from hatchery fish and then expanding to wild fish as well.

4. Nechako Update

Steve McAdam gave an update work in the Nechako (see: McAdam_2015_Nechako.pptx).

Questions and discussion:

- Bob H. – How far up did you put the pheromones?
    - Steve M. – We haven't done anything yet. We need to think about how the signal dissipates as it moves downstream.
- Larry H. – How are larvae using the habitat?
    - Steve M. – That is the big question!

5. Conservation Aquaculture

Autopolyploidy update from U.S. and Canada

- Chad Fritz gave a verbal update on autopolyploidy monitoring. He said they took 100 blood smears from five maternal families (100 fish per family). Four families came back with 0.0% 12N; one family came back with 12% that were 12N. In total 7.3% came back 12N and will not be released. They also did smears on wild fish. As of April 21, 400 smears were complete and three of those were 12N.

Questions and discussion:

- Adrian C. said this is the first time they've identified that in this population at least that some of the wild fish are 12N. The question is should we be moving those fish or not?
    - James C. – None of the wild adults have come back positive. We're released 12N fish in the past.
    - Adrian C. – My worry is that it occurs in the wild; maybe it's higher immediately after fertilization. By raising them and growing them bigger we're maybe giving them an unfair advantage.
- Shawn Y. – In the Kootenai the 2014-year class we had 12 families. Of those four families were positive for 12N. In three of those the percentage was very low. There was one family that was 87%. They held that family back for research. Now have the 2012 and 2014 families for research. Andrea and Joel at UC Davis and Molly Web at Idaho Fish Technology Center will be doing research using those fish. The Kootenai FFSBC families were all very low or 0. An in-river study in the Kootenai was started last year, but will be on hold for few years. In 2014 they took a total of 120 samples. It was somewhat stratified to get about 10 fish from each of the previous brood year classes to get some sense of what was happening over time. They ended up removing 17 samples that were too hard to read. They had four fish out of 234 that were 12N. Taking what they did in river compared to the 2011-2012 in-hatchery monitoring (because all

fish were released because we'd just discovered the issue) they think the 12N fish aren't surviving as well in the river as in the hatchery.

  - Adrian C. – Are your releasing 12N fish?
  - Shawn – Yes, our agreement is if the family is less that 33% of the fish sampled than those families will still be released; if greater than 33%, than those families will be held back for research or culled. They will do blood smears for every individual.

- Andy M. – In the US we sampled the larvae we released in February. There were 600 samples. We also sampled 30 fish from the setline survey. The plan is to do the same thing in the spring.

TWG AGREEMENT: autopolyploidy actions and/or next steps

- Cull the 12N fish this year.

6. Research and New Projects

6.1 Early Life History research updates and next steps

- Steve McAdam gave an update on the early life history lab studies he is coordinating (see McAdam_2015_Lab.pptx).

Questions and discussion:

- Mike P. – Have they expelled their yolk plug yet?
  - Steve M. – I don't know.
- Larry H. – Given what you see, the diversity of feeding, size, etc. how can you tease out just natural diversity from substrate type?
  - Steve M. – It will require controlled experiments. I think up to day 20 the diversity might not be that extreme.
- Mike P. – You keep referring to days, realize that you're referring to fish that are at a static temperature. That is not comparable to what would be happening in a natural environment. I hear you keep saying you're comparing the wild fish to the day known lab fish.
  - Steve M. – Building on Mike's point, what's interesting to me is getting at that age. Because we've got this developmental model that they drift during this exogenous feeding stage.

6.2 *Larval development research*

- James Crossman gave an update on larval development research (don't have copy of PowerPoint). He explained that this is the second piece of Katy's genetics work. She is pretty close to having the paper complete. We get many larvae in the field and there's uncertainty about how old they are this work is designed to help with that. She is also using eggs and larvae to predict how many spawning events there were in a year. This work builds on Mike's work. Mike looked at the effects of temperature on egg development. He identified the long incubation time and protracted development at colder temperatures. When eggs get closer to hatch at colder temperatures they just hang in there.

7. UCWSRI Monitoring and Evaluation and Study Activities Updates – Larval Prey Availability Study (Upper Columbia River)

Ryan Reihart, a graduate student at Eastern Washington University (Advisor: Dr. Camille McNeely), gave a presentation on his study looking at larval prey availability in the upper Columbia River (see Reihard_2015_Prey_Availability.pptx). Conclusions were that pre availability becomes limited downstream due to flow. Based on Ryan's study, in 2007 prey availability may have been contributing to recruitment failure.

The presentation also included a review of UCWSRI stocking targets including information on the juvenile abundance estimate, related concerns and next steps.

Questions and discussion:

- Steve M. – What was sampling technique of the Muir work?
    - Ryan R. – They were using a dredge.
    - Steve M. – I would expect it would be richer using a dredge.
- Andrew G. – Species composition and density of prey availability is different below Bonneville and at Lake Roosevelt. Is there any way in your data to determine the role of density composition and prey availability?
    - Ryan R. – I would like to get a better understanding first of what they are eating and then the density of what they are eating. I thought the comparison with Bonneville would be a first step. A lab study would be a good idea.
- Mike P. – You really can't compare square meter densities to cubic meter densities. Those things that are in the benthos may or may not contribute to what's in the drift.
- Steve M. – There's a fair amount of food in the Nechako. They eat everything they can get their mouth around.
- James C. – We did a similar thing upstream and took grab samples. We found 27 different taxa. The main focus of the study we did was on the juvenile stages. We were looking at prey selectivity. We also did a bunch of size-based work. We can share what we found with you.

ADJOURN DAY 1

DAY 2 – APRIL 23, 2015

8. UCWSRI Production and Stocking Targets

8.1 TWG subgroup work on updated abundance analysis, updated long-term projections, and key uncertainties

James Crossman gave a presentation summarizing the TWG production and stocking target subgroup's work and recommendations (see Crossman-2015_Stocking.pptx). James indicated that a large portion of UCWSRI broodstock have come from Waneta section of river, but the UCWSRI conservation aquaculture program has included representation from throughout river. The UCWSRI has never missed a year of releases; there have been 136,942 fish released since beginning of program.

The presentation summarized: the program background and original goals, current focus on wild collection of eggs/larvae, conservation aquaculture program results, size of release since program inception, juvenile condition and growth results, and current juvenile status.

Questions and discussion:

- Steve M. – Based on the decline in size at age do you think it's a competition factor?
    - James C. – Possibly. There is likely no decline in the US but there is some in Canada.
    - Mike P. – Is that a bad thing or just what you'd expect.
- Bill G. – So there is greater variability in annual growth rates in younger fish. What are your thoughts on what explains that? The young ones haven't ended up in preferred habitat, or is it food availability?
    - James C. – For the youngest we have the lowest sample sizes because they are harder to catch. We have more confidence in our results, as they get older.
- Steve M. – Are there thoughts about releasing fish in a different location because they're eating out an area?
    - James C. – What we've done suggests there's a lot of food out there. Up to age 12 they all have the same prey types in the diet. In eddies there is less abundance than in slower areas.
    - Jason M. – We see the same thing in the US. It isn't necessarily a function of sample size. They grow at different rates in general; look at the variance of size at release.
    - Mitch C. – Back in the early days both facilities were culling for largest fish. So that's also showing up in your fastest growers.
    - James C. – We don't have enough years yet to know.
- Larry H. – There are habitat differences in the different reaches that could affect energetics.
- James C. – We have a lot of information on what they're eating. In the growth modeling we're going to do we're going to be able to use those fish to test questions about food availability and habitat differences. By the fall we'll have a lot more detail.

8.2 Review subgroup recommendations

James C. reviewed the stocking strategies that TWG members have discussed at previous meetings:

1. Current Approach
    - Broodstock collection and alter numbers released by new survival estimates, or fewer larger fish
2. Pulse Approach
    - Pulse model with releases at 3 year intervals (Scheuller and Hayes 2011)
    - More adults spawned at 3 year intervals
3. Streamside Rearing Only
4. Streamside Rearing + Pulse Strategy (broodstock) if required
5. Streamside Rearing with a proportion of US wild caught larvae reared in Canada

James also reviewed the following recovery targets for white sturgeon in the upper Columbia River:

Section of River	UCWSRI Recovery Plan	National Recovery Strategy
Upper Columbia River: HLK to international border	2,000 Mature Adults*	1,000 Mature adults*
Upper Columbia River: International border to Grand Coulee Dam	5,000 Mature Adults*	No direct goals
Arrow Lakes Reservoir and Mid-Columbia River: HLK to Revelstoke Dam	Evaluating recovery in this area	

*Includes juvenile abundances sufficient to support desired adult population sizes

The subgroup identified the following considerations in their review of stocking targets:

- Uncertainty is high regarding what adult targets should be and how they may differ from recovery plan goals
- Stock assessment is underway and will provide updated abundance and survival estimates (2017)
- Use stock assessment estimates to generate an adult target (account for loss over the past few decades)
- Juvenile abundance is high and the population is not in jeopardy
- A more informed decision could be made over the next few years

Subgroup recommendation for 2016-2018 (three-year plan):

- The original conservation aquaculture goals were 1) prevent extirpation and 2) retain genetic diversity of existing wild adults.
- Goal #1 is complete; Goal #2 should become the focus.
    - It is important to represent wild fish now (uncertainty when hatchery juveniles will start contributing)
    - Allow all fish to spawn in the wild, defer broodstock program for the short-term.
    - Determine proportion of Canadian origin larvae present in US captures (dataset exists)
- Evaluate wild capture program over a 3 year period
- Target an average of 1,000 juveniles for stocking each year
- Criteria for release:

- Maximize survival in hatchery
- Minimum average size at release of 150 g.
- Explore transfer of a portion of US wild captures to Canada to achieve size targets if required

Considerations associated with subgroup recommendation:

- No Broodstock for a few years
- Loss of egg requests
- No stocking ALR for a few years (unless excess wild progeny are available)
  - Additional effort could be expended in ALR to better determine how >40,000 juveniles released to date are doing (growth, habitat use)
  - Evaluate size at release for two release sizes (would allow for informed decisions to be made on what aquaculture program would be required for ALR)
    - 2007-2012: 75 g
    - 2013-2015: >150 g

8.3 UCWSRI production and stocking targets working session discussion and agreements

TWG members discussed the subgroup recommendations. In general there was broad initial support for the recommendation. Major concerns or considerations included: the remaining need to address recruitment failure, Arrow Lake stocking, current focus on Waneta, loss of eggs for research, and harvest.

Discussion: Harvest

- TWG members agree to discuss harvest in the future when adult abundance estimates are complete (in about 3 years).
- Re-establishing a self-sustaining population capable of supporting harvest is a long-term UCWSRI objective.
- However, the conservation aquaculture program is not intended to support harvest as a specific objective.
- Harvest could be a management tool to address carrying capacity/density dependence issues in the future.

Discussion: Possible culling of spawning age hatchery fish

- Rationale for culling would be to address potential flooding of the genetic pool with hatchery fish
- Need to determine what information would be needed to determine if culling was appropriate/needed action (e.g., ecosystem modeling looking at carrying capacity)
- Look at genetic issues versus density dependence issues
- Shifts in species composition
- Value of hatchery fish to test recruitment failure hypotheses
- In Canada will need to discuss culling of hatchery fish with (this is action item for report back at future TWG call/meeting)
- An alternate approach would be to move Lake Roosevelt fish to Arrow Lake rather than culling (experimental)

Discussion: Concerns with dropping broodstock collection

- Eliminates or limits ability to meet research requests for eggs (may be able to address with Nechako or possibly Kootenai eggs)

Discussion Arrow Lake options

- Allocate portion of wild caught larvae eggs to Arrow (could be pursued in 2015 if it was a good year e.g., >500)
- Do nothing
- Broodstock collection in 2016 (TWG members agreed that this still might be possible, will discuss in near future)
- Investigate feasibility of translocating sub-adults to Arrow in 2017 or 2018 from downstream in Canada (TWG members agreed to explore question with DFO. Steve McAdam to lead outreach to DFO and report back on September 2015 TWG teleconference)
- Move Lake Roosevelt larvae to Arrow
    - First step is to determine where the source is i.e., US or Canada and complete genetic investigation. BC Hydro has funds. TWG agreed to move forward.
    - Second step would be to determine if they are a unique stock or not. Steve is concerned they are. Jason M. questioned how unique a stock that is only 20 km apart actually is.
- Implement aggressive effort to catch wild larvae in Arrow.

TWG AGREEMENT

- Production targets
    - US: ~ 1,000 at 200g (pending analysis of range of sizes, etc. will finalize on June TWG call)
    - Canada: as many as possible @ 200g. If there are large numbers available will allocate some for Arrow.
    - Release: in spring if possible (i.e., early June)
    - Sampling period: in US agree for now that sampling the peak is sufficient to capture a broad range
- Lake Roosevelt
    - 2015, 2016 and 2017: wild collection and broodstock for paired larval releases
- Lower Columbia River (CAN)
    - 2015: 2,800 BY14 plus wild
    - 2016, 2017 and 2018: wild collection
- Arrow
    - 2015: ~ 2,800 @ 150-200 g (BY14)
    - 2016: ~ 2,800 at 300-400 g (BY14)
    - 2017: proportion of wild collection @ 300-400 g

ACTIONS:

- **Steve M. to coordinate with DFO to get guidance regarding possible future culling of spawning age hatchery fish (see previous discussion) and report back on September 2015 teleconference.**
- **Confirm production targets, size targets for US on June teleconference (pending analysis of range of sizes).**

9. Conservation Aquaculture

9.1 U.S. hatchery and larval collection update

Mitch Combs gave an update on the U.S. conservation aquaculture program. He reported that they captured 14,120 larvae and released 2,833 fish at 72.7 g each. The previous year they released them closer to 200 g but there were only 657fish. They haven't had any positives in response to WSIV testing this year. He noted that they did observe a series of fish (about 20 or 30) that from the dorsal fin on back there were not any scutes. These were wild origin fish. Mitch wondered if anyone else had seen anything similar (no one had).

9.2 Canadian hatchery update

Chad Fritz gave an update on the Canadian conservation aquaculture program (see Fritz_2015_Hatchery-Update.pptx). There were a total of 8,583 fish, 2,800 from the lower Columbia, (average size 118 g) and 5,738 from the mid-Columbia (average size 158 g). The larvae were from three spawning events at the Waneta Eddy.

9.3 Egg request review and approval

Chad Fritz reported that there was one egg request from Steve McAdam. Per discussion and agreement regarding stocking targets (Item 9) the TWG will not be able to fill Steve's egg request this year. Steve indicated that he would look into alternatives.

9.4 Canadian streamside rearing facility next steps

James Crossman said they are planning to do the same operation they did in 2014. In 2014 they collected 5,500 eggs and got less than half of the eggs to hatch. Plan to keep the facility cleaner next year and get them to the hatchery as soon as they hatch.

10. UCWSRI Monitoring and Evaluation and Study Activities Updates (continued from Day 1)

10.1 Update on Kinnaird monitoring plans for 2015

James Crossman gave an update on Kinnaird monitoring plans (see Crossman_2015_Kinnaird_Spawn_Monitoring.pptx).

10.2 Update on Waneta spawn monitoring 2015 plans and the CPC egg predation study plans for 2015

Larry Hildebrand gave an update on the 2015 Waneta spawn monitoring plans (see Hildebrand_2015_WAN_Spawn_Egg-predation.pptx).

ADJOURN DAY 2