

RIVERS SMITH SALMON ECOSYSTEMS PLANNING SOCIETY

SUMMARY OF AGM MEETING

March 04, 2008

9:30 a.m. to 4:00 p.m.

Pacific Salmon Boardroom

1682 West 7th Ave.

Vancouver

Present:

Doug McCorquodale, David Stevenson, Misty MacDuffee, Karl Wilson, Julian Sturhahn, Mike Rough, Désirée Tommasi, Vern Sampson, Colleen Hemphill, Mark Saunders (in the afternoon)

1. Coordinator's Report:

David gave a brief update on the status of RSSEPS. Our financial records have been reviewed by an auditor and found to be in good order. Colleen Hemphill and Misty MacDuffee have both agreed to sit on our Management Committee for another year. We are waiting for the Wuikinuxv to hire their new Fisheries Manager. This person will also sit on the Management Committee to represent the Wuikinuxv Nation. The Tula Foundation has generously agreed to fund the Coordinator – Administration position for 2008. A recent letter from the Living Rivers Trust Fund indicated that they are not prepared to invest any funds into the Central Coast salmon stocks at this time. Their main focus is on the Fraser Basin, the Georgia Basin, and the West Coast of Vancouver Island. David will continue to search for funding.

This year we received funding from the Northern Boundary Fund for the Rivers Echo Sounding project, and the Long Lake Chinook Mark Recapture project. The Tula Foundation provided funding for Rick Routledge's Early Marine Survival research and for the Sockeye Enhancement Evaluation project. Tony Allard of the Good Hope Cannery Lodge provided funding for the Wannock River Hatchery Feasibility Study. We submitted two projects to the Northern Boundary Fund: the Nekite Chum Mark Recapture project and a proposal to produce an engineer's hatchery design for the Wannock Chinook and Coho. Only the Neekite Chum Mark Recapture proposal was approved. As well, the DFO proposal to enhance the Coho of Rivers Inlet was approved.

2. Rivers Coho Enhancement Project

Karl reported on the Coho project in Rivers. There was some funding provided by the Rivers Inlet North Coast Salmon Enhancement Association to begin the project by taking some eggs from Johnston Creek. 35 Coho were captured marked and released; 16,000 eggs were transported to the Snootli Hatchery in Bella Coola. The smolts will be released into Johnston Creek in the spring of 2009. The objectives are to determine migration patterns and to increase production from this stock.

3. Early Marine Survival

Désirée Tommasi gave a report on the 2007 Early Marine Survival Research. Because of the high spring runoff in 2007, the spring plankton bloom was late by 20 days. Plankton populations were low throughout the season so there was less food for the out migrating smolts. The following is a part of the Rick Routledges final report for 2007:

- We obtained a mix of daily and weekly observations on inlet conditions in the lead-up to the juvenile sockeye salmon migration.
- We have analyzed the chlorophyll measurements, and are beginning to assess the results of laboratory analyses of plankton and nutrient sample that we are currently receiving.
- We continued to obtain data on local weather conditions at two sites in the inlet.
- We are nearing completion of the first version of the hydrodynamic model.
- To obtain direct observations of surface currents, we deployed drifters in the inlet as opportunities became available.
- We ran a designed experiment on horizontal plankton tows, and are currently awaiting the results of the laboratory analyses.
- We reinstated the purse seining for juvenile sockeye salmon during their late spring migration down the inlet.
- We completed the analysis of a pilot version of an experiment on salinity preferences for juvenile sockeye salmon.

In addition, one paper associated with Phase I of this project has been printed in the journal, *Limnology and Oceanography*, a second has been submitted, and a third is nearing completion. Furthermore, Ms. Seana Buchanan successfully defended her M. Sc. thesis in the past year, and has now graduated.

Hydrodynamic Model: The first working version of the hydrodynamic model is nearing completion. This will provide a two-dimensional moving picture of the circulation and mixing of inlet waters. We shall soon be able to compare model predictions to observations on surface water flows from the drifter deployments.

Juvenile Sockeye Salmon Sampling: Preliminary analyses suggest that the sockeye salmon did not grow significantly during their migration down the inlet. We await the laboratory analyses of plankton samples and stomach contents to see if this was accompanied by a lack of food.

Juvenile Sockeye Salmon Salinity Preferences: Our pilot study on salinity preferences demonstrated that the small sockeye salmon consistently preferred relatively low salinity levels. In addition, we experienced considerably more difficulty in keeping the sockeye salmon alive if they were caught near the inlet mouth. This suggests that early marine survival for these fish will have been low this year, and provides further evidence that the inlet plays a critical role in determining marine survival.

Thus we have found direct evidence supporting the importance of inlet conditions in early spring to the marine survival of juvenile sockeye salmon migrating down the inlet in late spring. A late phytoplankton bloom appears to disrupt food production for the late-spring juvenile sockeye salmon migration.

In his report, Rick concluded that 2007 was a disaster for juvenile sockeye; there will be serious marine survival problems for the this juvenile age group due to the lack of adequate plankton populations in the Inlet .

4. Wetland Proposal

Désirée mentioned that a wetland proposal was being undertaken by Jonathan Hughes of UBC. David will ask Rick Routledge for a copy of his proposal. It is planned that the Early Marine Survival Research Project will continue until 2009 with funding from the Tula Foundation.

5. Long Lake Chinook Mark Recapture Project 2007

Doug McCorquodale gave a report on the Long Lake Chinook mark recapture project. The project was a partnership between RSSEPS, the GNN and DFO. The primary objectives of the study include:

- The enumeration of adult chinook salmon using mark-recapture methodologies
- The comparison of mark-recapture enumeration results against the Docee Enumeration Fence results, in an attempt to determine if fence counts can be relied on as an enumeration tool for chinook.
- The tagging of adult chinook with radio transmitters in an attempt to determine watershed distribution and habitat utilization

In 2007 there were 95 chinook counted through the Docee Fence. 46 of 50 radio tags were successfully applied. Data was collected on length, sex, age, and DNA. High water conditions made collecting carcasses by a dead pitch very difficult. Only one single tagged fish was recovered out of a total of 28 carcasses. Radio receivers were set up to track fish movements. Number one receiver recorded zero fish, number two receiver recorded 3 fish and at number three receiver 23 fish were recorded. There were problems with batteries running out and perhaps some data was lost due to low battery charge. Doug concluded that since only one fish was recaptured this indicates that the Chinook population is higher than previously estimated. He estimated an escapement of 700 Chinook. Misty asked about previous escapement numbers. These are problematic as smaller fish are harder to distinguish as they pass through the fence. Julian mentioned that the camera recently installed at the fence will help with species identification. He asked for some post-testing of the radio tags to see if they work or not. This population of Chinook is too small to warrant any enhancement interventions.

6. Wuikinuxv Hatchery Feasibility Study

Dave Vincent of DGV Engineering and Don Sinclair a fisheries biologist produced a report on the feasibility of building a hatchery on or near the Wannock. They investigated four possible sites and concluded that the previous hatchery site east of the village offered the best option. It would cost \$1.5 million to build. No detailed operating costs were available but it is estimated to be about \$275,000 per year based on similar expenses to run the Snootli hatchery. It is estimated that it will take three full time people to run the hatchery and additional crew at time of egg take and net pen rearing. Misty asked what problem the proposed hatchery is solving. The hatchery will respond to low populations of Chinook and Coho. The hatchery at Bella Coola has been effective for Chinook. The hatchery will create employment for the Wuikinuxv. There are some outstanding issues such as the cost of power, cost of fuel, the site needs remediation from previous hatchery set up and water pressure problems.

It is now up to the Wuikinuxv to address the issue of funding the capital and operating costs. Possible sources of funding include CIII funding, AAROM funding or Treaty Related Measures.

7. Nekite Chum Mark Recapture Project

The GNN have previously conducted a mark recapture project with success but the number of tagged fish was limited. This proposal will increase the capacity of the GNN crew to tag more fish and provide more reliable escapement data. The low numbers of Chum in the Nekite are both 4 and 5 year old. The low escapement numbers from 4 years ago may mean increasing the catch. The project will operate from the beginning of August through to Thanksgiving. The second proposal to clean the spawning channel was not approved by the NBF but it is supported by the report done by Al Lill so it may get funded in another year.

8. Review of Rivers Smith Recovery Plan

David provided a review of the 25 projects that were identified in the Recovery Plan as important to do. The excel chart attached summarizes this discussion.

9. Wild Salmon Policy

Mark gave an update on the Wild Salmon Policy. The development of the Wild Salmon Policy is slower than expected as the scientific issues are more complex than anticipated. A PSARC paper describing the Conservation Units is completed and will soon be available. Three to Four Million dollars is being spent to study the CU and WSP policy as they apply to the Fraser River stocks. There are two and half years to go on this project. Criteria are being developed to assess the CUs and the benchmarks by Brian Riddell. Work is being done on the habitat assessment indicators by Heather Stalwart and Gary Taccogna of the DFO. The task of monitoring the habitat benchmarks is not the sole responsibility of the DFO. There is still a lot of work to be done. The Work on integrated Strategic Planning is focusing on governance structures.

The WSP goals are:

1. Determine Stock Status

- Identify CU
- Criteria to assess CU: CU benchmarks paper scheduled fall 2008
- Monitor CU
- Integrated Planning Process

2. Assess Habitat Status

- Document habitat characteristics
- Indicators and benchmarks for habitat status

3. Inclusion of ecosystem values and monitoring

- indicators of FW ecosystems
- integrate climate and marine conditions

4. Integrated Strategic Planning

- Management/ strategy for priority CUs

- Design/implement planning process for salmon conservation

Misty presented a possible first step of WSP implementation using DFO's proposed WSP objectives. The first stage of DFO's WSP is to assess the salmon status. Misty presented an idea for starting this evaluation in Rivers/Smith Inlets. Please see the attached spreadsheet.

1. All salmon runs in Rivers & Smith were divided into 3 categories:
 1. DFO Indicator streams: consistent enumeration over time (for the most part)
 2. Non-indicator systems: enumeration data exists, but inconsistent, especially since mid 1980's
 3. Know presence of species in the river/stream, but no enumeration data exists
2. All species and runs were grouped according to DFO's Conservation Units (as drafted May 2007)
3. Spawner abundance was used to assess the status of the run. This was done by assessing the ability to meet the Management Target Escapement goal (MTE). The escapement goal was determined by DFO. The source for the target goal was an internal DFO report from the 1990s and/or DFO Stream Summary Catalogues (Blue Books).
4. The last year the MTE was achieved was noted
5. The ability to meet the MTE was assessed and colour-coded according to the status
 1. **Green:** healthy; 80% or more of the target escapement was achieved over the last decade
 2. **Yellow:** depressed; between 40% and 80% of the target escapement was achieved over the last decade
 3. **Red:** Very depressed; less than 40% of the target escapement was achieved over the last decade
 4. **Grey:** Unknown, escapement data is too inconsistent to assess the status

Note: I was not rigid on the 10 year period, and if recent information was missing, I moved further back into the 1990's to consider the assessment. If I was rigid on the 10 year period, a greater number of streams would need to be classed as 'Unknown'. Sometimes a 'U' is shown inside the colour code to indicate missing data. Sometimes I was also lenient with giving a "green" if the status indicated a recent recovery. This is particularly true for pink salmon.

It was proposed that Misty present this paper to Brian Riddell for his input. Julian will call Brian to set up this meeting.

10. Workshop on the implications of Lake Core Analysis

Misty has received some funding to conduct a workshop which will bring together scientists to discuss the paleontological data found in cores from various lakes. There is a lack of consensus on the the interpretation of this data. She will keep us informed of the time and place of the workshop.

The meeting was adjourned at 3: 00 p.m.