

RIVERS SMITH SALMON ECOSYSTEMS PLANNING SOCIETY

SUMMARY OF MEETING

July 15, 2009

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

Airport Inn

Port Hardy

Present:

David Stevenson, Misty MacDuffee, Karl Wilson, Cindy Hanuse, Ted Walkus, Sandie MacLaurin, Julian Sturhahn, Andrew Johnson, Vern Sampson, Lance McGill, Doug McCorquodale

1. Coordinator's Introduction:

David gave a brief introduction in which he outlined the Wild Salmon Policy and the need to establish benchmarks. There are two benchmarks: the lower one identifies the red zone which requires intervention and the upper one identifies the green zone which indicates harvesting is possible. The benchmarks are important as they will determine management decisions.

2. Misty's work on Stock Recruitment data for areas 9 & 10.

Misty has pulled together catch and escapement data from DFO for areas 9 & 10. She has constructed graphs which show the catch data against the escapement data for each species. . For example, the coho graph shows that exploitation rates have exceeded escapement levels for a number of years. Sandie questioned the Coho and Chinook numbers as there has been no targeted commercial effort on these stocks so the numbers must be sports caught or commercial by-catch. Misty showed a graph which demonstrated that chum have not met their targeted escapement numbers for a number of years. There was some discussion about the confidence of data. Wayne pointed out that assessment methods have changed over the years and therefore the data is unreliable. Sandie pointed out that the Stock Assessment Framework was established 7 to 8 years ago. Different methods produce different results but we are still not meeting target escapements for all species.

Julian pointed out that the target escapement numbers come from historical records. The DFO Stock Assessment people are working on biological based target escapement assessments. The current target escapements are too high so we need biological based target escapement numbers for key indicator streams. Until then the DFO will continue to use the clear stream index X 3 for sockeye. Julian explained the background to the clear stream index X 3 methodology. A survey was done which showed that one third of the escapement as indicated by marked fish returned to the clear streams. Andrew raised some concerns about habitat around the island at the foot of the lake indicating that the gravel was somewhat silted up. Julian pointed out that while we can do some habitat improvement projects the costs may not be the best investment of resources as there is not enough fish to fill the habitat.

Misty challenged the sockeye target escapement of 200,000 for Long Lake and 435,000 for Owikeno Lake. There was general discussion

Andrew raised the issue of sockeye egg transplants that were done in 1902 to other coastal streams. Sandie replied that this experiment did not work and none of the transplants contributed to increased productivity. Sandie gave the example of the KITASOO hatchery where they tried to transplant 2003 brood to Victoria Creek. The returning adults went back to Lagoon Creek where they began so the experiment did not work.

Please see the attached PDF file for a complete copy of Misty's presentation.

Wayne asked what happened to the proposal to use Didson hydro-acoustic technology to enumerate fish on the Wannock River. David gave a brief overview of the Didson hydro-acoustic proposal. It was proposed to install 2 Didsons, on the Wannock one on each side to ensure that the whole river was covered and measure the number of sockeye going up the river. This would be a pilot project to determine the effectiveness of the enumeration. Species composition would be done by the test fishing and/or the food fishery. The cost for the pilot would be \$60,000. If the Didson technology proved successful in counting sockeye, it is proposed to do a 3 year trial to compare the data with the clear stream index methodology. We are waiting for funding for this project.

Action: David will canvas funders for this project.

Discussion of the quality and confidence of the escapement data occurred throughout the morning. Monitoring of coho for example is difficult, very few systems are monitored, and much data has been lost. This makes it difficult to determine a benchmark creating S-R curves from such questionable data. If S-R curves are of limited value, what are other options?

Sockeye: the PR lake model can be used (Cox-Rogers and Shortreed, 2005)

Other species: Doug's work on determining productive capacity was discussed and could be used as a first step in determining capacity and benchmarks through other methods.

Action: Doug is going to summarize the relevant sections of his 2005 Productive Capacity report for chinook, coho, pink and send to Julian.

Action: Julian is going to request a review of Doug's approach and findings.

Such a review will identify strengths and weaknesses of Doug's methods and ideally recommend approaches for refining and improving the methods Developing S-R curves and establishing benchmarks:

Action: Misty is going to discuss and hopefully develop the S-R curves with Steve Cox-Rogers and then apply Carrie Holt's approaches to determining the benchmarks.

The quality of the data will contribute to the fit of the S-R curve. Regardless of our speculation on the ability of the curves to describe the populations, these curves are the basis for our fisheries models. As such we need to know the degree of confidence we have in these models and the appropriate level of caution required in applying them to management decisions.

Sandie answered a question on the sockeye enhancement evaluation. The sockeye enhancement program went for 5 years. Sockeye eggs were taken from Owikeno streams and raised in the Snootli hatchery, then released back in their natal streams. The overall impact was not that great if you consider the adult survival rate. The main gain was from egg to fry survival, however the hatchery fry did not fare better than the wild fry. The project did show that with enhancement techniques you can improve the egg to fry survival. The timing of the release of the fry is important especially in relation to plankton blooms in the Inlet. You may need to raise the sockeye for a year in order to coordinate with the plankton blooms. Ocean survival still poses the main threat to sockeye survival.

There was some discussion on the fry studies done in the Owikeno Lake. Studies indicate the lake productivity is not the limiting factor in sockeye production. The lake is not as productive as other sockeye lakes due to the amount of glacial run-off or lake turbidity which limits the amount of light and therefore the growth of plankton.

Julian discussed the habitat model for Chinook in the Chuckwalla River. He said it would wait on the development of a habitat model being developed in the Barclay Sound area. There is also a new habitat based coho model being developed. Fry index surveys might be useful or key stream index for coho. Ted asked that any model of productivity should include predator pressures into the calculations. For example stickleback populations and seals can have a negative impact on juvenile salmon.

Action: Julian will get a Coho biologist to review the coho part of Doug's productivity report.

Andy mentioned that the Wuikinuxv were doing a community needs study to find out what their needs are with regards to the food fishery.

3. Eric Peterson of the Tula Foundation and the C'islacki program.

Eric Peterson of the Tula Foundation outlined his plans for funding the newly formed C'islacki, an environmental monitoring and research program. He said it was important to do scientific research on the whole ecosystem. In addition the project will create some employment and training opportunities for the Wuikinuxv. He is looking for a project that is systematic, continuous over time and that involves all the players. The Tula Foundation is also supporting the research done by Rick Routledge and his colleagues in early marine survival in Rivers Inlet. Wayne reported that they started in June testing for water quality in the lake by installing data loggers in several different locations. He plans to invite scientists from different universities to sit on an advisory committee.

Cindy explained the Guardian Watchmen program. It is a First Nation training program to provide qualified people to oversee marine activities in their respective territories. This program, if it goes ahead, will have to coordinate with the C'islacki program. Wayne will be reviewing forestry reports and DFO reports and the reports of the Sensitive Habitat and Inventory Mapping.

Action: David to send

to Wayne the files from the RSSEPS on-line Sensitive Habitat Atlas for Rivers and Smith.

Way

ne is also building up a reference bibliography of reports and data on Rives Inlet.

4. Watershed-based Fish sustainability planning for Rivers and Smith Inlets

David gave an introduction to the WFSP process

The overall goal of watershed-based fish sustainability planning is to ensure effective long term conservation of fish and fish habitat-including spawning grounds, and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly. WFSP is based on a standard planning sequence that involves the input of all stakeholders and produces a rational strategy for conserving and rebuilding Rivers and Smith Inlet fish stocks. By using this planning sequence, RSSEPS and its partners with an interest in fish conservation can work together more effectively for the benefit of fish and their habitat.

This WFSP will build on partnerships already developed by RSSEPS since its inception in 2003. It will include all stakeholder including the Provincial and Federal governments and commercial fishing representatives. It will coordinate and incorporate all other fish and wildlife habitat conservation initiatives. It will introduce a consistent approach to planning that will reflect sustainable ecosystem values. It will reflect the Wild Salmon Policy objectives of monitoring salmon status, monitoring habitat status and including ecosystem values.

There are several activities that need to be managed including: data collection, data management, the development of management plans for and the evaluation of management plans. The WFSP would include all of the research that has been done and is currently being done. This would include: the early marine survival research, the marine use planning, LRMP, and other resource development plans.

This WFSP will help RSSEPS and partners develop and implement long-term plans for:

- maintaining and restoring genetically diverse, stable, and self-sustaining wild fish populations
- maintaining and restoring the natural capability of habitats to produce genetically diverse, stable and self-sustaining fish populations
- managing fish populations in a manner that makes full use of this natural habitat

The Rivers/Smith Inlet Watershed-based Fish Sustainability Plan will contain the following chapters:

- Description of the process
- Time Frame for the planning process
- Linkages to other planning processes
- Watershed profile including physiology, hydrology, current land and water –use, resource developments, stakeholder’s profile
- Protected areas

Profile of each species of freshwater fish found in the watershed to include:

- Life History.
- Fish Distribution.
- Population Abundance and Status
- Genetic Distinctiveness
- Habitat
- Spawning
- Rearing
- Productive Capacity
- Benchmarks
- Limiting Factors to Production
- Factors Affecting Fish and Fish Habitat to include:
 - Information Needs
 - Data Gap Objectives & Strategies
 - Implementing & Assessing Data Gap Strategies
 - Monitoring Data Gap Strategies.
- Priority Issues, Objectives & Monitoring
- Fish Stock Objectives & Strategies.
- Implementing Priority Fish Stock Strategies
- Monitoring Priority Fish Stocks
- Priority Fisheries Management Issue
- Fisheries Management Objectives & Strategies
- Implementing Priority Fisheries Management.
- Monitoring & Assessment of Priority Fisheries Management
- Priority Land Use Management Issues.
- Land Use Management Objectives & Strategies.
- Implementing Land Use Management Strategies
- Monitoring Land Use Management.
- Fish Habitat
- Fish Habitat Objectives & Strategies
- Implementing Fish Habitat Strategies
- Monitoring Fish Habitat
- Implementation Framework...
- Implementation Strategy
- References.

There was some discussion about how to proceed with the implementation of the WFSP. It was decided to concentrate on one or two small watersheds first as a pilot. There are some resource development pressures on some of the watersheds now. It was decided to focus on

the Doos which is being considered for an Independent power production proposal and the Dalik which is part of a proposed logging plan.

Action: David will look for funding for the WFSP project.

The meeting was adjourned at 3:30 p.m.