

**RSSEPS  
Technical Advisory Committee  
Meeting**

February 28, 2005

Airport Inn  
Port Hardy

Attendance:

David Stevenson - Coordinator

Karl Wilson, Lyle Enderud, Gordon MacEachen, Bruce Burrows, Doug McCorquodale

Myra Stromstedt – Minutes

9:40 – Review of Agenda

The agenda was accepted as presented.

**Docee Fence Project**

Doug gave an overview of the Docee Fence Project. Gary had asked for a schedule for the capacity building exercise at the last meeting. Gordon stated that the DFO continued its support for building a partnership with the GNN. They have not yet established any milestones or final goal. Doug suggested that the GNN needs to sit down with the DFO to come up with a plan. It would help the RSSEPS funding proposals if there was a clear plan for developing capacity and a schedule for completion. The GNN funded the Coho proportion last year. Karl asked why RSSEPS was funding this project.

Doug replied that the money was for an extra person from the GNN who was learning how to operate the fence and that the project was to build capacity not to duplicate work already done. Gordon said that we need 3 people there to provide a pool of experience and to rationalize the work schedule

A general discussion followed on the problems of identifying species as they cross the fence. Gordon replied that the crew uses a dip net to do a random sampling of the run. The DFO has asked for a trap box but it is very expensive (\$9,000) and the last few budgets the emphasis has been on safety features and upgrades to camps

Doug suggested that that to ensure more accurate species identification, they need to explore other options and technology such as video cameras.

It was agreed that RSSEPS would continue its financial support of this project.

**Sockeye Enhancement Evaluation**

Sandy was not present to lead the discussion but an email that she had sent was circulated. In it Sandie asked for continued funding support for the Sockeye Enhancement Evaluation of RSSEPS for 2005 in the amount of \$13K. This funding is necessary to ensure that the cost of reading extra otoliths is covered.

Bruce reported that John Willis of the Snootli Hatchery has requested that the hatchery fish from the Amback Creek (or Qwapx) be fin clipped this year as well as the fry from the Inziana. It would require \$5,000 to clip both the Amback and Inziana fry. A general discussion followed on the merits of doing this.

Doug said that you would have to clip a significant amount of the population. Fin clipping means the costs are incurred upfront with marking rather than at the end with

reading otoliths. Doug suggested that marking one system will only provide an index,. The real question is are hatchery inputs helping to recover the stocks?

Karl suggested that we should check the number of fish that would have to be tagged to see if it's feasible to tag fish as an index

Bruce said that since we are already committed to mark Inziana fish, it would not be much more effort to mark the rest. There was some discussion on how many fish would need to be clipped to provide a statistically significant sample and on the value of the information 4 or 5 years from now. There was some discussion about whether 1% of the fry at Snootli was a sufficient number for clipping. Rick Routledge has suggested in an email that 5% would give a statistically sound index. It is not clear if Rick is referring to the juvenile or to the adult returns. This needs more clarification.

Karl suggested that we would have two years of otolith data and so he supports the additional fin clipping if it makes statistical sense. Doug said that if we count clipped fish in more than one system we can compare different enhancement strategies.

Bruce stated that this project is a top priority project, and we should continue to support it. It was agreed to continue supporting the Sockeye Enhancement Evaluation project.

**Action: Gordon agreed that he would check out what is a good number statistically to make results viable and get back to the TAC with the information.**

#### Project Planning

##### **Mark Recapture program for Owikeno Sockeye**

Karl asked what we are going to use to measure recovery of sockeye stocks. Bob Bocking had suggested a 3 pronged approach – an adult escapement mark-recapture program, a juvenile abundance in lake survey and a test fishery.

Gordon said he posed questions to Dave Peacock, about previous test fishery program. He said it was theoretically possible but expensive and labour intensive and that perhaps we should look at juveniles surveys to measure the output of lake, Doug said that Owikeno is so huge, that the numbers needed for tagging would be difficult to capture.

We still need an accurate “in season” way to monitor the stock. As for the Juvenile Fall survey, Gordon suggested that we formally request data that has been collected from Kim Hyatt,.

**Action: David will write a formal request to Kim for past data on Owikeno and Long Lake Juvenile surveys.**

Gordon said that DFO budgets will be reduced again this year. It is unclear where allocations will go this year, so that juvenile work may be reduced again this year

Karl suggested that we need a partnership with the First Nations and DFO and RSSEPS.

Doug said that the data set from Kim Hyatt's work is very valuable, and in addition we would need to ground-truth the data. David asked if we can get a juvenile survey this year in Owikeno Lake. Karl said the lake is glacial, and so any survey would have to be done in January to March when the lake clears. Kim indicated in his email that he would not have time for an Owikeno Juvenile survey this year. David asked if we can look at other agencies to do this work perhaps through an RFP.

Doug said that now is the time to look at other options. There is a priority for getting this data. The question is how we are going to come up with numbers for Owikeno sockeye

and good stats. He suggested looking for someone else to do the data such as LGL or Triton.

Gordon suggested that we contact Kim's new boss, Bryan Riddell for suggestions. Doug said that there should be savings from not having to pay the costs of back-filling and overtime for DFO staff. Kim does data for Nimpkish lake, on a contract basis and he provides good quality data. Time will be a factor for him as his schedule is full.

**Action: David agreed to follow up on this, with an email to Brian and to look for another party to contract to do this work.**

Gordon said that last years budget for a juvenile survey was \$14,000 for both Owikeno and Long Lakes. Karl said that the juvenile hydro acoustic project rated as number one. Gordon identified some of the issues for DFO funding namely: the ratings of the stocks, the stocks in Rivers and Smith are rebuilding, there is no commercial fishery planned, the stocks are not of interest to the Pacific Salmon Treaty. Projects such as the juvenile survey may fall off the table due to other obligations and priorities. This project is on the border-line for DFO budgeting.

David agreed to follow up on this by contacting Brian Riddell and Kim Hyatt. Gordon recommended that we pursue partnership funding to make this project happen.

### **Test Fishery and Sounding Program**

Bruce said he was recommending a test fishery as part of an in-season management tool. He read from the RSSEPS recovery plan that our objective is to maximize sustainability. He quoted the Recovery Plan Section 7.4 that an "in season counts is necessary". He recommended that we start doing it this year to correlate results with end of season escapement data.

Gordon replied that from 1981-84 there was a gill net test fishery. In his opinion, a test fishery by 1-2 boats is not going to work in Rivers Inlet. He suggested other options such as echo-sounding and small bite fisheries, using a catch-per-unit model. The test fishery at Round Island is used to determine stock composition not stock strength. One single gill-net does not work that well, a small fishery, say 10 boats, is more valuable in terms of providing reliable numbers

Lyle summarized the possibilities for a commercial fishery. In 2007 a commercial fishery may be possible in Smith Inlet. The following are techniques currently used to determine a commercial fishery:

- 1) Start Forecasts – early marine survival, climate conditions, stocks, brood years and age-compositions
- 2) Docee Fence count – basic for confirming stocks in Smiths and an indicator for Rivers
- 3) Test Fishery – could be used as a tool, but given the area and how the fish move, hard to correlate.
- 4) Small-bites Fishery – with perhaps 20 boats, and FN food fishery numbers, match with existing data, model used before in Rivers (research and follow-up)
- 5) Sounding Grid – was used before in Rivers. Carl Walters may have some information on it. The existing data needs to be reviewed. Lyle provided the members with a copy of a paper by Goruk & Walters on the River Inlet Echo Sounding program from 1967 -1988 which explained the mechanics and how it

was conducted. The sounding program has a lot of potential but it is a very expensive program.

- 6) Escapement –stream walks, tagging and recovery of spawners, , fry-surveys,
- 7) Juvenile fry surveys

The important thing, he said is that we need to work on determining specific conservation limits, to indicate when a commercial fishery would be possible. It is a production issue rather than a management issue. Gordon added that the indicators used include the Docee Fence count, as well as consultation with the Wuikinuxv and what kind of catch numbers they could use. He said that we should look at the productive capacity of the system as well. David pointed out that last year Sandy had developed decision rules for conservation and enhancement of Owikeno and Long Lake stocks. Lyle said that there were decision rules for a commercial fishery in the integrated fishery management plan. Lyle said that he has asked Ron Goruk to look at using a sounding grid before a fishery, using the latest acoustic technology. Gordon said we need to look at all the options, and explore any new technology to move forward. Sockeye hold in the head of the inlet till 3-4 week of July (old premise), and there is good value in looking into exploratory work to determine the costs and timing of a sounding program.

Doug said that we have a good estimator in Smith Inlet with the Docee Fence, but we need to need to look at major goals and development plans for the Owikeno system. Bruce asked Gordon about the viability of a test-fishery using a seine boat to catch and tag fish then use a gillnet fishery for mark recapture. Gordon replied that yes, fish have been tagged and sampled in Johnson Strait to determine the harvest rate over a timed interval.

Lyle said that you can do it with large-run sizes, but with smaller runs it's harder to do, as the fish tend to travel in groups and it doesn't give a good estimate.

Doug said that this method usually ends up over-estimating the run size. The sounding program is an in-season indicator and not a measure of stock recovery.

Karl suggested that we develop a checklist to show a summary of enumeration methods, with potential benefits and drawbacks, to enable us to explore all options for adult indices. Gordon said that if you are looking for a program to show strong abundance, you need to use a combination of methods, use echo-sounding, catch information, and other indicators; there are always other tools to use for the decision making process

### **Break for Lunch – 12:07 Meeting was Reconvened at 1:00 pm**

#### **Long Lake Chinook Habitat Projects**

Doug said that given a limited budget, it is worth improving Chinook habitat by removing log debris, but it can be done with funds from the AFS budget. Gordon pointed out that a large slide had jammed the second narrows and that he would like to see a clean-up, to salvage the wood.

#### **Owikeno Lake Habitat projects**

Bruce reported that the wood at the foot of lake is not a problem, but he was concerned about the wood debris at the Machmell Flats. Karl will do more to assess the Machmell flats with the PST budget. He wants to assess if Sockeye or Chinook use the habitat for rearing in the spring,. He suggested a small trial of removing wood for a test area. There

is the problem of the wood coming back in again, He needs to find out if it is a rearing area for Chinook and trout as well as Sockeye and what effect the removal of the debris would have on each species. Karl suggested that removing wood from Long Lake would be better than moving wood from Owikeno. The prevailing winds and natural slides just keep moving the wood around. A key factor for fry rearing habitat is the up well of the water to provide nutrients. The forest company (WFP) suggested removing the wood in the winter with a machine when the water levels were low.

Karl will look at the data first before recommending the removal of the wood from the Machmell Flats. David said that we need to involve Interfor and WFP in our plans for habitat improvement. We don't want recovery plans to conflict with forestry development plans. With no habitat restoration projects being planned it was difficult to get them interested. Karl suggested that we need to approach them this year to develop a relationship with them and begin discussing possible areas where they can contribute to the recovery plan. Doug agreed that it was important to engage the forest companies in the projects for habitat rehabilitation.

**Action: David will arrange for meetings with both Interfor and WFP to discuss the involvement in the Recovery Plan.**

### **Critical Habitat Survey**

Bruce said that they are developing a marine use plan which will focus on the salt water resources not the fresh water. More funding would have to be found to study the fresh water critical habitat. It was pointed out the Canfor is providing funding for the Nimpkish fall fry survey. Karl said this was another reason to engage the forest companies in our recovery plan projects. David asked what was needed for this critical habitat survey. Karl said that it would be mostly a literature review of data on salmon habitat on Owikeno Lake, and may include interviews and the production of maps to show spawning and rearing areas. David said that we could put it out as an RFP to identify a consultant who could do the research. Karl replied that we were not ready to do that just yet, we need to pull things together first and follow up with Gary Taccogna to determine what he had in mind.

**Action: Bruce said that he would ask Stephanie how many days it would take to do a mapping project like this.**

### **Early Marine Survival**

The Early Marine Survival Project was discussed. David reported that Rick Rutledge's total budget is 81K and he is asking for 50 K from the Society. Discussion followed on how to trim this down. This project is time sensitive as it has to be done in May so that the planning has to be done by the end of March so funding can be done by April. Karl asked if this project was producing valuable information. Bruce said that yes, the data on smolt migration patterns, food habits, plankton levels was valuable. Doug agreed that it was a valuable project but it was expensive. Perhaps we should partially fund it. We don't know where this is going over the long term.

Bob Bocking had asked at the previous meeting about the objectives of the project. Rick replied that it was possible to develop the data into a predictor for marine survival. It was agreed that it was a worthwhile project but expensive given that our budget for this year is only \$73K Bruce said that it was valuable to be able to compare years of smolt

data to say whether one year is better for fish health than the other. He asked if DNA profiles had been developed on all smolts for areas. Karl said that it may happen one day, but we are not there yet. Doug said that we should try to look at other funding opportunities for this project, 50 K for one project is too much when there is only 73K to go around. Bruce asked about the Living Rivers Fund (provincial) as a possible source of funding. David said that the focus of the Living River Fund will probably be on big freshwater issues, with specific projects. Gordon suggested that if you cut back the funding for the Early Marine Survival project too much, it may kill the project, but Rick has already put in a fair amount of time on the project and he should be accountable for the outcomes.

The following projects were recommended for the 2005 budget:

- 1) Early Marine - \$40,000
- 2) Docee Fence - \$8,000
- 1) Enhancement Evaluation - \$13,000
- 2) Fall Fry Survey - \$8,000 ( in addition to the existing program run by Kim Hyatt)
- 3) Critical Habitat – \$4,000 (find out other funding opportunities and what the major goal is for the project)
- 4) Test Fishing/Sounding for Rivers Inlet – (come up with a plan first)

#### **Project in order of Order of Priority**

- 1) Fall Fry – Owikeno Lake and Long Lake
- 2) Enhancement Evaluation
- 3) Early Marine
- 4) Docee Fence
- 5) Critical Habitat
- 6) Long Lake Habitat
- 7) Sounding program in Rivers Inlet
- 8) Mark Recapture, Test Fishery

Lyle and Gordon confirmed their participation in the Technical Advisory Committee as needed at future meetings. David suggested that another TAC meeting would be needed by the end of March. It was suggested that a letter be written to: Bryan Riddell, Chuck Parkins, and Gord MacEachen to inform them about the 2005 project priorities.

Karl suggested that we should use a more formal approach to assessing the technical projects. Right now the decisions are made by the TAC based on their perceived value of the project. David said that it would be a good idea to move to a template, but it is difficult to structure. It is important that the rationale for all projects relate back to recovery plan. He also said that he would like to see some uniformity in final project reports. Some of this years reports are detailed but the outcomes are vague.

**Action: David will prepare a draft template of a final report to follow a basic format**

The next TAC meeting will be in late March or early April. It will be probably be a conference call. The TAC members will be notified by email.

Meeting Adjourned – 2:30 pm