



**Minutes of Meeting:**

**March 9, 2004**

**9:30 AM to 4:00 PM**

**Pacific Salmon Foundation Boardroom**

**1682 West 7<sup>th</sup> Ave.**

**Vancouver**

**Present :** Doug McCorquodale, Sandie McLaurin, Lewis Bubl , Rick Routledge, Michael Rough, Colleen Hemphill, Sharon Chow, David Stevenson Mike Rough Gary Taccogna, Bruce Burrows,

**Review and confirmation of Agenda**

The agenda was introduced by the Chair, David Stevenson. It was agreed to change the agenda to include a discussion of the Terms of Reference for Technical Advisory Team and a discussion of membership.

**Agenda items and Discussion**

**1. Summary of last meeting.**

The minutes of the meeting held on January 20/04 in Port Hardy had been circulated. There were some corrections noted which have been incorporated into the minutes and the minutes were accepted as written.

**2. Coordinators Report**

David Stevenson gave a short report on his activities as coordinator. The bookkeeping has been set up in Comox with Eby's Business Services at a rate of \$30/hour. The incorporation papers for the Society are not available from Norman Dale so they will be procured from the Registrar of Societies in Victoria.

**Action: DS to contact Registrar of Societies for a copy of the incorporation papers.**

David gave a review of the 2003 projects. All projects are completed with invoices paid except for the final payment of \$5,000 for RS 2 which is the Recovery Plan. The Pacific Salmon Foundation will print and bind the plan for the RSSEPS. The finished plan will be used to raise more funds for the 2004 projects. A spread sheet has been developed to track the budget revenues and expenditures. The Travel Claim form was re-designed to reflect the change in name to RSSEPS. Revisions to the web page have been developed. Once the Recovery Plan is ready it will be posted on the web page along with the changes to the home page. A draft of the Terms of Reference for the Technical Advisory Team was developed. More discussion is needed on it, especially a dispute resolution mechanism. Gary pointed out that having a provincial representative on the TAC would be appropriate. David has already contacted Ted Down, Bruce Ward, Ken Ashley, and Maurice Lirette of BC Fish & Wildlife and Al Castledine



of Ministry of Agriculture, Fish and Food. They have all expressed an interest in being informed about the proceedings of the Society. They will be invited to the next TAC meeting. All computer files for RSSEPS have been backed up on a CD.

### 3. Recovery Plan

The latest draft of the Recovery Plan has been circulated. Members are encouraged to provide Doug with any comments before Friday March 12/04. Doug has already received some comments from David, Bruce, Gary and Sandie. A work plan for carrying out this year's projects would be a separate document, the Recovery Plan already identifies the projects that need to be done and that is what PSF are looking for.

Project number 2 on page 38 of the present draft, identified as the Traditional, Ecological Knowledge has been completed. Mapping of the data still remains to be done.

**Action: Bruce will check with the Wuikinuxv to see if the final report of the TEK study can be made available to members of the Society.**

Bruce asked a question about how the numbers for the abundance targets in Table 7.1 were arrived at. Doug explained that he used a formula derived from the sockeye smolt size survey, the lake capacity and survival percentages. His numbers are slightly smaller than the table produced by Al Wood. There are other models to use, for example, Bob Bocking uses a different model. Doug's method is explained in the Recovery Plan on page 34. There is no formula for other species; the numbers are derived from historical returns.

Rick Rutledge pointed out that there is a lot of instability in the carrying capacity of the lake. Doug replied that for sockeye juveniles, we will rely on the acoustic counting data and the lake carrying capacity. The information from Jonathan is reflected in Table 7.1. Bruce suggested that another method is to calculate the spawning capacity of the system. Doug's method shows the sockeye abundance target as 967,500. Bruce asked why this number is so low. Doug said that the numbers were adjusted from Al Wood's first draft of the Plan and that there are a number of other variables to take into account including the nutrient levels provided by the carcasses of dead spawners. Gary pointed out that it is important to distinguish between abundance targets and total escapement targets. The abundance target needs to be clearly spelled out. There is need for some clarification in Table 7.1, perhaps the addition of another column would help as the sockeye numbers are abundance targets and the numbers for other species are escapement targets.

Lewis asked if this process was shutting down harvesting opportunities. There needs to be some level above which harvesting is allowed. The targets for abundance need a "trigger" number above which harvesting would be allowed.



Lewis asked that the estimates used for abundance targets should be reasonable regardless of the method used.

**Action: Gary will adjust Table 7.1 and forward to Doug for inclusion in the Recovery Plan.**

Further discussion on escapement targets followed. Sandie pointed out that the escapement targets for Long Lake sockeye is 200,000, and the escapement target for Owikeno Lake sockeye is 200,000. Doug pointed out that the definition of a "limited reference point" (LRP) needs to be clear; the numbers used may not be high enough. We need to improve on those numbers. There was further debate on escapement numbers of r Long Lake sockeye. Sandie reported that a DFO team was working on a Pacific Scientific Advice Review Committee paper regarding the escapement numbers for Long Lake sockeye. The PSARC paper for Long Lake sockeye escapement target review is scheduled for the fall.

There may be an opportunity for RSSEPS to get involved in the PSARC process  
**Action: DS to contact Al Cass to enquire about RSSEPS participation in the PSARC process.**

Doug was thanked for the fine effort he put into the revision of the Recovery Plan.

**4. Review of the Technical Advisory Committee meeting on prioritizing the projects for 2004.**

The Excel chart which summarizes the 2004 projects was projected on the wall and Gary reviewed the process. We need reliable stock status information in order to evaluate recovery strategy and to gain a better understanding of freshwater/marine habitat conditions. We need to identify limits to production of salmon and the impact of human activities. We need to differentiate between local effects and global activities and focus our attention on those factors that we can control. A discussion followed of the goals and priorities based on the chart. There are 4 basic targets: 1) Abundance and stock assessment, 2) habitat protection and rehabilitation, 3) filling in knowledge gaps and 4) monitoring and evaluation. Doug explained Bob Bocking's work on Stages of Recovery. Based on his work the PSF are moving towards an "Ecosystem Capacity" model to evaluate recovery plans. Another consideration is that some projects take more time and may run several years before they produce results. For example the Strategic Enhancement project was planned to last for 5 years.

The projects identified so far by the TAC are

- 1) third year of the hydro acoustic project on the Wannock, \$50,000
- 2) Long Lake Chinook critical habitat study \$5,000
- 3) assemble all data on spawning and rearing from all sources, \$5,000
- 4) a limnology study of the zooplankton communities for both lakes \$5,000
- 5) Continue study of early marine survival - \$50,000.



There was some discussion about the DFO budget process and their commitment to the RSSEPS projects. The DFO budget is not finalized yet and may not be until July. There is restructuring going on within the department and they are moving away from salaried staff to more external contracts. The regional budget is \$230 million and \$70 million in reductions are being planned. 115 to 200 positions are being eliminated in the Region. There is an opportunity for the RSSEPS Recovery Plan to be used for bringing in further funding to supplement what is already available. We need to determine how the DFO budget and the RSSEPS budget will mesh and what the time frame is to coordinate the projects. Doug asked how it is possible to run DFO projects when they do not know the budget. In the past Gary said, projects are done on projections using administration dollars and then when the budget dollars arriving in July they adjust their operating budget. The RSSEPS budget for 2004 is \$150,000 and so far we have identified \$115,000 in project budgets.

**5. Technical Team Composition and Terms of Reference**

A draft Terms of Reference for the Technical Advisory Committee was discussed. The document still needs a clause on a conflict resolution dispute mechanism. A discussion followed on strategies for resolving conflicts namely, negotiate to reach consensus, majority vote decides, mediation, and arbitration. It was agreed that we would continue to work on the consensus model. If there is disagreement then the dispute remains unresolved and no action is taken until consensus is reached. It is important to include all members in the negotiating process. the TAC will provide technical advice on the projects and will also supervise the projects by liaising with the project leads.

**Action DS will revise the draft ToR for the TAC and circulate to the members..**

**6. Selecting 2004 Projects**

Bruce proposed three more projects for the Society's consideration. The first is a feasibility study for a hatchery in or near Oweekeno Village. Hatcheries can be useful in certain specific situations. There is need for 1) a study on biological feasibility, 2) a study of the physical characteristics, and 3) a study of the financial feasibility of the project. Bruce asked for some idea of the cost of a study and names of suitable consultants. Rick suggested that he would need to find a good conservation biologist, such as Brian Riddell, who understood hatcheries. Some information on hatcheries is available from the DFO.

Gary pointed out that the fundamental question is to identify the objectives of the hatchery. What species will be raised? What population targets would it have? How would the hatchery populations affect non-hatchery fish? Bruce said that the hatchery could focus on rehabilitating the Wannock chum stocks, the Wannock chinook stocks, and perhaps sockeye as well. Lewis suggested that a



facility at Nekite may provide some useful information however Sandie pointed out that the operation at Nekite was a spawning channel. Gary said that there was some historic information on the previous hatcheries that had been in Oweekeno.. Sharon pointed out that it was a policy of the PSF to not fund hatcheries. Bruce responded that the Wannock chinook populations are in need of conservation. Doug asked how much do we know about the Wannock chinook population? Sandie replied that a lot is known and that 99 was a very poor year for Wannock chinook. She expects that this year should show some improvement. Abundance estimates are based on the dead pitch count done in November. Further information on chinook populations can be gained from the creel surveys from the lodges in Rivers Inlet. The creel survey also includes non-Rivers Inlet fish.. Mike Rough pointed out that the lodge numbers were accurate but that there were many other non-lodge sports fishers who are poorly monitored. David asked Bruce if the Oweekeno hatchery would be a stand alone or would it operate in conjunction with the Snootli hatchery. Bruce replied that he wanted a stand alone facility not dependant on the Snootli hatchery, one that would be run according to the Wuikinuxv priorities. Russ Hilland of the Snootli hatchery has also said a hatchery at Owikeno would be a benefit.

Bruce asked for some consensus on the costs of hiring a consultant for the feasibility study. Rick suggested that perhaps such a study could be done in house by the DFO staff. Sandie replied that there were not enough resources in the DFO to do such a study. Brian Riddell was suggested again as a good source of information on hatcheries. Bruce was asked to put together Terms of Reference for a consultant to do a feasibility study on a hatchery in Oweekeno. Gary asked again for a clarification of the objectives of the hatchery. Is it for conservation or cost recovery? There is a need for an economic analysis. Perhaps some information can be gained from ocean ranch pilots that already exist.  
**Action: Bruce will develop the Terms of Reference for the consultant.**

Bruce presented his two other project proposals. The second was the removal of large woody debris from Owikeno Lake. It was suggested that the project may generate some revenues from the harvest of the wood. Gary said that a proposal has already been submitted for removing some large woody debris from Owikeno Lake to the Pacific Salmon Treaty fund. The beaches need to be studied to determine the impact on species near the beaches. The proposal was to examine the impacts on a small scale and expand if results were positive.

The third proposal presented by Bruce was to maximize the sockeye egg take in Owikeno Lake. A lengthy discussion followed on the merits of doing this. Doug said that we need to get some agreement on the escapement numbers. Gary said that the sockeye runs are predicted to be low this year so there may need for a captive breeding program. If long Lake sockeye number goes below 2,000 which



is 25% of the LRP then they would consider a captive brood program. Bruce urged the DFO to increase its efforts to maximize the egg take program. Gary said we need to identify the range of costs to increase the egg take. Doug expressed some reservations about the recovery marking since a reasonable size sample of returns is needed and there is not much time to get the otolith markings back. Gary said that you can take up to 30% of the spawning population for brood stock. Sandie said we would need to determine what number of fry the Lake can hold and expressed some concern about effects of hatchery fry on the wild fry.

Rick pointed out that if you increase fry numbers in the lake it tends to reduce the size of the fry and it may have a detrimental affect on ocean survival rates.

Sandie said that 1.5 million fry was the upper limit of fry capacity. Doug did some calculations and suggested that 140 females is the maximum number of fish that could be used for an egg take. Sandie has done some work on this with the Snootli crew and reports that - at loading one female per tray - there is only capacity at Snootli for eggs from 144 females. Using the current division of space etc. that would make the total fry contribution to each basin in the ballpark of: Owikeno Basin = 832,000 Long Lake = 276,000. So the bottom line here is if escapement to the basins is below LRP, even at full capacity we would likely not end up seeding the basins (wild and our fry) past what they would produce LRP levels (and LRP's are 15% of targets...)

Bruce said he wanted to see more eggs taken and more on the ground resources. Gary said it was dangerous to take too many fish for the egg take until you knew escapement population numbers. There was further discussion on the pros and cons of an increased egg take. DFO is committed to completing its 5 year strategic enhancement program. However there is no budget commitment for this year. It is very important that we press Ottawa for the funds to carry out this important work. There is less than 50 % likelihood of getting the \$175,000 needed to do this stock assessment. It was decided to ask the technical team to discuss this and make some recommendations soon.

**Action: DS to convene a meeting of the Technical Advisory Team as soon as possible.**

There was some discussion of the budget required for the egg take. Bruce offered to make funds available for 2 crew member from his AFS budget.

Sandie presented information on the 2003 proposal to mark sockeye by clipping the adipose fin on the Inziana River Stock. The fish are banded already and there would be an extra cost of \$5,000 to do all of the 75,000 fry from Inziana River. Rick suggested that there should be a 50 - 50 split between the adipose clip mark and the otolith tag. To confirm if the survival of the smolts and adults with otolith tags is less than those with adipose fin clipped. Gary suggested that we need to do a cost analysis of both the fin clip and coded wire tag.

**Action : Sandie will provide budget details for the adipose fin clip program.**

There was some discussion on the project to assemble critical spawning and rearing habitat data on the Long Lake Chinook. Doug reported that the Gwa'sala Nakwaxda'xw Nation is looking for more money to do this project. Hopefully the PSF may fund the project. The Wannock acoustic survey project was discussed. It was approved because it was the third year of a three year project. George has made some progress on distinguishing between those fish that mill around and those that go straight upstream. If the results are good this year then it will prove to be a valuable method for enumerating Oweekeno Lake salmon.

**7. Work Plan for 2004:**

Rich Chapple joined the meeting for a brief time. He was asked how the PSF would view the funding of a feasibility study for a hatchery. He said we should be guided by the Recovery Plan. There is some information on the hatchery that was there before. The objective of the hatchery has to be clarified i.e. is it enhancement or cost recovery. When the previous one was built it was a community economic objective and considered a viable project by the DFO. It was lack of funding that closed it down. Rich discussed the other Recovery Plans that are funded by the PSF including the Squamish, the Englishman, the Cold Water and the Nimpkish. The Rivers and Smith Inlets Recovery plan is unique in that projects actually happened before the plan was finalized. Rich described the funding efforts of the PSF. They have set a target of \$2 million for 2004. They focus on individuals with high net worth. They are invited to an expensive dinner and contributed items are auctioned off. The work is done by local people and it is a good friend maker as well as a good fund raiser. Rich is planning to host a workshop which brings together people from the different Recovery Plans to compare notes and share best practices.

PSF is trying to harmonize its funding cycle to coincide with the calendar year. This will facilitate planning and provide some certainty for projects. Rich reiterated the support of the PSF for the RSSEPS Recovery Plan. The other recovery plans have varied in price from \$15,000 to \$50,000. In the US because of their top down approach not one recovery plan has been completed.

There was further discussion on the 2004 projects. There is a need to identify the project leads for the 2004 projects. Kim Hyatt was suggested to do the zooplankton study. The collection of the water samples is a small part of the project, the main part is the chemical analysis. A proposal is needed to spell out the details.

**Action: Sandie will contact Ken Shortreed (?) and will work with Jonathan to develop a proposal.**

Rick talked about the early marine survival study for 2004. He has asked for a letter of support from RSSEPS to assist in his funding application to the



Advanced Science Institute to develop a hydrodynamic model for Rivers Inlet. He plans to have three under graduates to work on the project funded by the NSRC. Rick has the responsibilities of Department Chair this year so he may have to cut back on his research work. He is certain that he will be able to the Early Marine Survey this year with the help of the \$50,000 from RSSEPS. He has already submitted a proposal for the project. He plans to start on the first neap tide in May.

There was some discussion about the Machmell flats log removal Feasibility Study. DFO has put in a proposal to the PST for \$10,000 to do a feasibility study of the project. Work by Mortimer found that the flats were well used by the salmon fry. Bruce expressed concern for the spawning areas both at Machmell and at the foot of the lake.

## 8. Next Steps

Each of the projects proposed was discussed.

Bruce asked what questions he needs to answer in order to get support for a feasibility study. They include:

What are the conservation needs?

What other measures have been taken to meet conservation targets.

What level are the stocks at now?

Determine what the needs are first then determine the methods.

Since some enhancement of the chinook has already been done what were the results?

Doug talked about the Docee Fence and the involvement of GNN staff. He plans to continue on with the project using AFS and DFO money. Gary asked for travel costs from the Coordination Budget.

**Action: DS will provide the costs of the meetings so far.**

Costs for the Docee Fence project and for the Owikeno/Long Lake Juvenile assessment need to be finalized.

**Action: Doug and Jonathan will work on this**

Hydro Acoustic cost need to be identified.

**Action: Sandie will contact George for budget information.**

The marine sounding program will come from the DFO budget.

The Wannock Dead Pitch project will be funded by the DFO pending PST approval. Bruce does not want to contribute AFS money to this year's dead pitch. There was some discussion about this. Bruce said he did not see any return to the Wuikinuxv from the project and that he would prefer to use the AFS budget for more economic benefits.

Aerial survey and stream walking projects will continue at cost of \$18,000.

The coho fry density survey at \$10,000 is dependent on PST funding.

The coho adult AUC estimate is not going to happen.



Chum mark recapture project will be funded by AFS budget.

The Creel Survey is funded by the PST at \$25,000.

The proposed sockeye egg take project is budgeted at \$150,000, \$25,000 for the recovery project and \$5,000 for the adipose fin clip project.

The Wannock chinook coded wire project will cost \$35,000

Long Lake chinook survey project will cost \$5,000..

**Action: Doug will work with Gary to define the project.**

Critical spawning habitat data collection will be fleshed out by the TAC.

Information on the Wannock Estuary Mapping. Project will be provided by Sandie.

**Action: Sandie Wannock Estuary Mapping Project information**

The Machmell Flats log removal feasibility study will be confirmed by the DFO.

The Wannock Estuary dyke project is done.

The Long Lake and Owikeno Limnology study will be requires a proposal.

**Action: Sandie agreed to provide information on it.**

The proposal for the early marine survival project has already been submitted by Rick Routledge. The Machmell Channel is managed by WFP. There is a report on it.

**Action: DS will ask for a copy of the report.**

Sandie provided the following summary of the DFO proposed budget:

Docee Fence - good chance of some funding. Owikeno Adult Fall Survey - good chance of some funding. Long Lake and Owikeno Lake juvenile trawls and acoustic- good chance of some funding DFO charter boat for collection of lodge data and assisting with fisheries in area 8 - some funding

Aerial stream counts - good chance of some funding

Coho juvenile fry surveys - only if PST funding

Coho adult AUC - probably will not get any funding

Rivers Inlet Creel Survey - usually funded every two years but dependent on PST funds.

Initial estimates for Sockeye Enhancement Program (revised to \$150k)- not secured as yet.

Traditional echo sounding program for head of Rivers - no funding but am unsure whether it has even been put forward by STAD for funding?

Projects being privately funded or co-funded:

Wannock chinook enhancement and coded wire tagging (Rivers Inlet Hakai Pass Sportfishing Assoc.)

Long Lake chinook project (PSF funds asked for) - and I think some of RSPG too.

Nekite spawning channel enumeration and assessment - AFS?

The meeting was adjourned at 4:35. A meeting of the TAC will be convened as soon as possible.

Minutes recorded by colleen Hemphill and David Stevenson