Puget Sound Recovery Implementation Technical Team (RITT)
Agenda and *Notes from Meeting (in italics)*
Minutes by Norma Jean Sands, committee chair, and accepted as written at Feb. 17th meeting.

Tenth Meeting – December 16, 2008, Montlake Auditorium
10am – 3pm

Attendance:
RITT members present: Ken Currens, Kirk Lakey, Kit Rawson, Phil Roni, Mary Ruckelshaus, Norma Sands
Absent: Eric Beamer, Bill Graeber

Domain Team: Elizabeth Babcock, Susan Bishop, Tim Tynan,
PSP: Joe Ryan, Rebecca Ponzio, Jason Mulvihill-Kuntz, Morgan Scheidler
Others: Alan Chapman (Lummi), Ashley Steel (NWFSC), Paul McElhany (NWFSC)

10:00 am Minutes of last meeting and today's agenda
Minutes of December meeting accepted as submitted.

10:15 am Updates

a. Watershed Liaison activities
No specific activities to report. The RITT is interested in developing a mission statement that will help define our role in implementation of salmon recovery and our guidance/support to watersheds. Norma will write a first draft, consulting with NWFSC, NWRO, and PSP, for discussion at upcoming meeting.

b. PSP – Joe Ryan (salmon) and Mary (ecosystem)
Rebecca provided a review of the watershed retreat in Blaine in November. The watersheds are definitely interested in more involvement from the RITT, especially in dealing with adaptive management and monitoring. PSP is still interested in "modeling alternative futures." The question from RITT is what alternative futures and what policy discussions do they want tested? There is also interest in better defining RITT's role in reviewing SRFB projects. PSP is working on drafting something to address this. This is part of the revised "3-yr review" process PSP is working on. Watersheds are concerned about funding and losing coordinating positions from lack of funding.

The PSP Action Agenda strongly affirms salmon recovery. The SRFB round for this year is over. There are $8.4M funds allocated to PS Chinook and $470K to Summer Chum.

An update on Jim Kramer: He is helping with the San Juan initiative and is on a task force supported by WDFW/PSP on how to implement the Action Agenda for Puget Sound.

c. RIST (Ken and Mary)
RIST is currently reviewing hatchery programs and their effect on salmon recovery. They are also reviewing monitoring plans; this review should come out early in the new year.

d. Domain Team – Elizabeth Babcock

Elizabeth reports that the Skokomish Recovery Plan review meeting scheduled for tomorrow is being cancelled due to the snowy weather conditions in the Puget Sound area. It will be rescheduled.

11:00 am Puget Sound implementation issues

1. EDT sensitivity presentation from McElhany and Steel
   Ashley Steel and Paul McElhany from the NWFSC gave a presentation on work they have done on the sensitivity of input parameters to EDT (salmon habitat model) results. Ashley started with "A point estimate without some estimate of uncertainty is practically useless." While is may be good for what happens "on average," it doesn't give the range of estimates one is likely to experience.

   EDT is a salmon habitat model that relies on habitat characteristics to estimate fish production. The model is based on a multitude of rules that relate habitat quality and quantity to salmon production at various stages of the life history. Relationships are based on Beverton-Holt relationships.

   The sensitivity study was a collaborative work by many agencies and the final report has been submitted to "Fisheries" for publication. There were three types of analyses: 1) US Bureau of Reclamation did a sensitivity of all land structure parameters, changing one input at time; 2) WDFW customized confidence intervals for every population in Puget sound and varied all parameters at once (they have a report that is available, check their web site), and 3) NOAA addressed "making sense of 10,000 parameter," the number in a typical EDT run.

   Input parameters are of two major types: user input, parameter values the user can change, and internal parameters that only Mobrand can change (programming changes). Local Sensitivity Analysis changes one at a time (OAT, does not address co-variance) and Global Sensitivity Analysis uses the Sobol Method to change groups of parameters. It was found that variability in many parameters had little effect on population outputs. The largest sensitivity parameters were adult survival (i.e., marine survival), benchmarks, and salmon productivity rules. Since habitat parameters have little effect on population output, is EDT useful for determining habitat recovery actions?

12:30 Lunch break

1:00 pm Puget Sound implementation issues continued

2. Model discussion
   The model discussion began with what did we learn from the EDT presentation? For any model, the choice depends entirely on what we want to get out of the modeling exercise. So what can EDT be recommended for? The initial goal of EDT was to prioritize restoration projects for improving fish numbers, not for determining recovery goals in terms of fish numbers. But EDT is being used now as input to AHA, the hatchery evaluation model.

   Phil will take the TRT blue paper and come up with a draft prioritization matrix paper.

3. Population ID letter and type I and II errors

a. *Mid Hood Canal – This population is doing poorly despite hatchery supplementation. However, EDT gave a large historical capacity to this area. DT wants more time to think about this problem.*
b. *Sammamish escapement and goal estimates – Escapement estimation is under change (earlier relied on an index count). Changes in escapement estimation would not change the TRT's viability ranges. However, the PS TRT did not give a viability range for Sammamish, so it is uncertain where the numbers in the NMFS supplement to the Recovery Plan came from. DT will look further into this.*

4. 3-yr plan review (Rebecca Ponzio)
Rebecca provided an overview of the suggested changes to the "three-year plan format;" what is being asked for from the watersheds. It is hoped that the new spreadsheet format will not only document proposals, but document progress/status of projects, identify prioritizations, and document changes in implementation plan. It is hoped this will complement the habitat works schedule process; this can be found on the website: http://hws.ekosystem.us. It is also planned that the 3-yr plan spreadsheet will feed into development of and documentation of an adaptive management plan at the watershed level. A review of the 3-yr plan spreadsheet by the RITT should provide verification (or not) that the work asked for in the 3-yr plan is needed and is useful for salmon recovery.

Alan Chapman pointed out that requirements for the 3-yr plans have changed each year and they are now being asked to include projects for all H's, not just habitat. Does this have to be done every year? What the watersheds need is what monitoring is needed to evaluate their projects. This feeds into adaptive management planning.

There is currently a gap between RITT and SRFB review of projects. In reviewing the 3-yr plans, who needs to identify gaps and how do these gaps get filled on the project list? The liaison role (RITT) needs to help the watersheds prioritize projects and these prioritizations need to be forwarded to SRFB.

12:30 pm Ozette issues

1. Interpreting viability in terms of recovery criteria – Mary
Rosemary Furfey has asked the RITT for guidance on how to use the viability range when determining delisting criteria. Mary provided some initial ideas to the RITT. A first reminder is that delisting requires recovery levels to be reached for all four VSP criteria (abundance, productivity, spatial structure, and diversity). Monitoring programs need to be in place for all four criteria. Power analysis is one way to determine the number of years of data needed to detect change in the abundance or growth parameters. Estimates from other TRTs have ranged from 12 to 20 years. Since this issue applies to all ESUs, the RITT wonders if RIST (region wide recovery implementation team) should tackle this problem.

2:55 pm Other business

e. TRT Reports – *Ozette sockeye pop id report has been submitted to the NWFSC Technical Memo series*.
f. Other? *None*

3 pm Adjourn

Next Meetings – January 27 (pm) in conjunction with San Juan Workshop Jan 26&27, Friday Harbor
February 19 and third Thursday each month thereafter

Outstanding Ideas/Task/Issues/Agenda Items

RITT	TRT
Ken's cross watershed comparison of TRT reviews Hatcheries and integration – do we want a discussion of this; what is RIST doing? Symposium/Book for TRT products Adaptive management and Monitoring at the watershed level - set up a procedure following Jan discussion on topic Delisting Criteria – RITTs role in defining. DT presentation of PPA to RITT- soon? Steelhead TRT presentation of pop id and viability to RITT - Mar?	Ozette Pop Id document *(submitted to NWFSC technical memo publication Nov 2008)* Ozette Viability document (to be *submitted to NWFSC technical memo publication*) Summer Chum document Chinook Viability document

Watershed Liaisons

Straits	Phil Roni	Lake Wash.	Kirk Lakey
Hood Canal	Ken Currens & Bill Graeber	Green	Kirk Lakey
Nooksack	Ken Currens	West Sound/Kitsap	Norma Sands
San Juan	Mary Ruckelshaus	Puyallup/White	Kirk Lakey
Skagit	Eric Beamer	Nisqually	Ken Currens
Island	Eric Beamer	South Puget Sound	Norma Sands
Stillaguamish	Kit Rawson	Nearshore	Bill Graeber
Snohomish	Kit Rawson	Ozette	Norma Sands