Interior Columbia River TRT Meeting
Portland, OR August 23 – 24, 2006

Members attending: Michelle McClure, Tom Cooney, Charlie Petrosky, Howard Schaller, Paul Spruell, Fred Utter, Phil Howell, Casey Baldwin, Rich Carmichael, Pete Hassemer
Non-members attending: Rich Zabel, Damon Holzer, Kim Engie

Tuesday, August 22 – Steelhead Workgroup Meeting 1:30 – 5 pm
Attendees: Michelle, Tom, Howard, Charlie, Rich Z., Damon, Kim, Rich C.

Update on Life Cycle Modeling Data work, from Rich Zabel. Snake River Steelhead spreadsheet of data for S3s (now calling them $S_{Early\ Oceans}$) and climate function

I. Climate function – Snake -- WTT, Apr and May PDO, and Sept upwelling were significant. PDO is similar to Chinook in sign and magnitude, but no spring upwelling
II. Developing spawner-smolt relationship
    a. Step 1: Age Compilation of returning adults. Step 2: combine A and B runs by ocean year. Get proportion of adults that were O1, O2, O3. This creates age-structured table.
    b. Discussion on data availability for the 1980-94 inriver survival data for proportion transported, which was interpolated. Possibly in Fish Transportation Oversight Team (FTOT) reports – Charlie.
    c. Discussion on data availability for looking at the Umatilla vs. Snake R SAR. Other potential data to compare Umatilla SAR to? Options: composite SAR, or Mid Columbia hatchery time series comparison. Rapid River and Umatilla data yield very similar
    d. In future – compare SARs to climate factors
III. Discussion on overwinter survival estimates
IV. Discussion on resident/anadromous reproductive rates, cross-breeding, etc. Relates to reproductive rates in steelhead populations
V. Model Options
    a. Keep track of steelhead female spawners only. Decision – Yes.
    b. Decision to develop the model starting at the smolt stage initially. This keeps complexity down and makes the model simpler. Keep option of adding numbers for egg – smolt survival later. Include a couple paragraphs in write-up that discusses the average survival at different sub-stages.
VI. Run-through of tasks to do – Michelle compiled list:

Task/Topic	Who	When
Steelhead proportion transported– look at F-TOT reports for ratio of chinook to steelhead—Charlie has it from -1992 at LGR and LGO – take transport #s in Granite equivalents, or proportion transported at each dam.	Charlie will look into LGR-LGO survival for those years (take system survival to the nth power) to derive these. Start from 1992 and go back as far as possible.	August 31, 2006
Figure out time-varying upstream survival rates	Howard and Charlie	August 31, 2006
Need multi-factor regression results (significance, AIC of other combos of variables)	Rich Z.	
Test Mid-C SAR data set for congruence with Umatilla SARs (a. Skamania has longest time series, but nobody's compiled; b. Deschutes, but some issues with disease; c. Yakima smolt counts not representative of run timing; d. Wind River goes 10 years – 5 yrs of SARs; e. composite may be most appropriate) -- attempt to expand Umatilla SARs.	Tom will give spreadsheet to Rich Z. (including Umatilla hatchery SARs). Rich will check the fit.	August 25, 2006 to get data to Rich Z.
If no appropriate time series is available reconstruct smolt output based on average smolt/spawner and then generate SARs from those	Rich C. will double-check that smolt data are up-to-date, and he or Tom will send estimated number of spawners.	August 31, 2006 to get data

data	Separate out females from males in this data set. Rich Z. will use this to develop SARs (fitting a Beverton-Holt). Also compare with the original SAR data	to Rich Z.
Need to incorporate harvest rates into Umatilla – use Snake River A-run rates for Mid-C	Rich Z.	
Update Umatilla smolts/spawner data by one year	Rich C. will look for data and forward to Rich Z.	August 25, 2006
Get B-run, age-specific fecundity rates from Dworshak	Howard S. will talk with Howard B. at FRO.	August 31, 2006
Keep track of female spawners only	Rich C. will work on identifying sex and age ratios in R/S data sets	August 31, 2006
Check TAC reports for harvest rates	Howard will check with Henry and forward to Rich Z.	August 31, 2006

Wednesday, August 23

I. Business –
   a. Contracts, future timeline of TRT.
   b. Outline of agenda – Thursday includes discussion of fall Chinook
   c. Upper Columbia Plan: The Public Review Comment period is now beginning, so they've asked for comments from the TRT at the same time. Copies should be arriving this week. Discussion on how best to review:
      i. Take note of the TRT's previous comments. Follow the guideline questions for reviewing the TRT already came up with. Hopefully get comments back to the Upper Columbia recovery planners before the end of the public comment period. There may be some issue/guidance wanted with the deciding factors for salmon being threatened vs. endangered.

II. The policy level would like to have some ESU-level metrics that would have the following possible objectives. Useful for eventual ESU delisting:
   1) relative certainty of achieving goals
      i. if watershed actions are implemented and viability plan is followed.
   2) is the ESU trending toward the objective?
      ii. i.e., has the extinction trend changed?
   3) Where is the ESU right now?
      iii. one possible indicator - are actions being implemented on schedule?
      iv. a single number, or a clear and simple picture? Graphics like those from OR coastal coho are one option.
   b. Overview of Pete Lawson presentation about OR coastal coho by Tom C.
      i. Methods used very similar to ICTRT, but with fuzzy logic incorporating uncertainty directly into the metrics.
   c. Possibilities for ICTRT ESU-level metrics – graph or maps showing proportion of populations in an MPG that are viable, over time, series of maps showing SS/D status by pop, MPG, ESU.
      i. A workgroup will brainstorm ways to blend these ideas.

III. Overview of updates in Viability Criteria Draft (Tom C.): Blended stuff from the December draft. Changes to SS/D section. Fall Chinook moved to end of section. Added text to ESU-level viability criteria.
   a. Update from June meeting not incorporated – small grammatical errors and typos still in this draft. Get this document from Don – a series of descriptive edits from last two TRT meetings. To Do: Tom blend in updates from June before TRT looks closely at this draft.
   b. Possibly rearrange doc to discuss the ESU level first, then progressively smaller scales. This might also allow the attachments as outlined in the draft to be incorporated into the main doc.

c. Need to add more language about the word "maintained". Possibly to MPG section.
d. Additional text explaining why increasing hatchery numbers increase risk (and over time). In specific metrics section

IV. Viability Curve Updates: more datasets available now than when curves were first generated.
a. Potential criteria made for filter for which data to include/exclude -
i. No more than 2 brood years with <10 spawners. Modified to removing those years with too few spawners, but using the datasets.
ii. Median hatchery fraction < 30%
iii. Within population – eliminate S/R function if AICc score lowest by 2 units or more. Modified to eliminating the worst-fit function across the populations.
b. Add Rapid River A-run data to SR steelhead total population variability graphs
c. Sensitivity Analyses (discussion focuses on Snake River SS Chinook). Four elements of sensitivity analyses:
1 - Age structure (done)
2 - Variance/Autocorrelation (done)
3 - Measurement error level (to do)
4 - Difference if using hockey stick vs. beverton-holt vs. ricker (in progress)
i. Must also diagnose why/if screening out data changes the curves in sensitivity analyses.
ii. Discussion on potential policy interpretations of updated graphs.
iii. What impact would a data filter (on new data) have on the work already done (which did not employ the same filter)? How would one preserve consistency?
1. Decision: include the effects of the filter in a sensitivity analysis. Tom will work up and distribute a write-up to the group.
iv. Include graph showing viability curves with varying autocorrelation, and also graphs with varying variance.

V. Workgroups:
a. Steelhead intrinsic potential – Damon, Tom, Rich, Casey
i. Working on something to deal with mainstem areas – now it may overestimate production.
b. White R hatcheries memo – Michelle, Fred, Paul (Thursday)
c. Chunks of draft viability memo – everyone else

Thursday, August 24

I. Update from the steelhead workgroup of Wednesday's events.
a. Decision to leave the intrinsic potential as is. No clear relationship found with max redd depth or distance from shore in the new data inspected. Going with the adjustments to intrinsic potential made in June meeting – Klickitat, Wenatchee and Yakima areas.
i. Damon will recalculate MSAs and update maps.
ii. Population priorities for current status assessments – Salmon R MPG, then Clearwater

II. Update from other workgroups –
a. Charlie and Howard got spreadsheet of 1st yr ocean steelhead filled in – for R. Zabel modeling exercise. Filled in data for proportion transported from additional data. This moderates a spike in steelhead survival in the '80's previously graphed.
b. Discussion on writing gaps in SS/D. Does a similar approach to gaps in A/P apply?

III. Fall Chinook NOAA policy meeting – Tom, Pete, Rich and Michelle attend (also Kim briefly)

IV. Workgroup sessions continue concurrently.