

February IC-TRT meeting

February 22 -23, 2005

IDFG Nature Center

Boise, ID

TRT attendees: R. Carmichael, T. Cooney, F. Utter, P. Hassemer, D. McCullough, C. Petrosky, H. Schaller, P. Spruell, M. McClure, P. Howell

Other attendees: D. Matheson, K. Engie

Tuesday, February 22:

- I. Develop work plan through June for current status & limiting factors analysis. What needs to be done:
 - a. Deliver package to recovery planners
 - b. By the end of June, WA recovery plan due
 - c. Interior Columbia region plan due by the end of December
 - d. For Snake River ESU
 - i. Washington: state is working on recovery plans
 - ii. Idaho: incorporate OR and WA plans
 - iii. SRD has put together a draft
 1. work together on status reviews
 - iv. NOAA: coordinate across H's and states
 - v. "ooze" factors out of tributaries
- II. Updates
 - a. Pressing army corps for finances
 - b. Comments on the A-ha model
 - i. Uses EDT productivity and abundance
 1. should be able to use other model outputs
 - ii. should be able to get results based on uncertainty
 - iii. attempts to use a genetic function that explains effects of hatchery influence (very simple genetic tool)
 - iv. first develop criteria, then evaluate the efficacy of various models in the process (limiting factors analysis)
 - c. RSRP conservation conference on March 29th
 - i. Questioning how hatchery fish should be viewed in an ESU
 - ii. Also focuses on the resident vs. anadromous question
 - iii. Decision: Move the March TRT meeting to Seattle (28-30) and leave the 29th open for RSRP meeting
- III. Extirpated populations in MPGs
 - a. LWTRT – includes extinct populations in their MPGs
 - i. Possible to have extinct MPGs which must be restored to meet viability
 - b. ICTRT – all MPGs required for adequate spatial structure and diversity
 - c. Upper Snake River Chinook Historical MPGs: they do not make up their own ESU, since a PCA analysis of ecoregions shows overlaps among extant and historical MPGs. Since the historical MPGs in the Upper Snake are extirpated, this leads to the larger question:
 - i. How do we decide which extirpated populations should be re-populated to best increase viability?

1. Develop criteria for re-populating these areas (i.e., Fred's paper)
- ii. Consideration – should MPG boundaries be re-visited if Asotin/Tuc were holding up viability?
- iii. If all strata should be re-populated, what questions need to be considered?
- iv. Treat extirpated MPGs differently than extant ones (actual diversity vs. potential diversity)?
- v. When do we recommend focusing on restoration of extant pops vs. re-populating extirpated pops?
 1. Is the range of conditions covered within the extant pops?
 2. How much do we have to gain in terms of range of conditions by restoring the extirpated areas?
 3. how much did extirpated pops add to the abundance and diversity of the MPG?
 4. It is clear that extant pops must have primary focus.
 5. Alternative: modify the current criteria, requiring either all MPGs, or a certain number, to be viable in an ESU, depending on which is greater?
- vi. How do we treat extirpated UC pops and above Hells Canyon extirpated pops?
 1. shouldn't focus on populations that won't be accessible
 2. analyze risk based on what's there
 3. recognize there may be exceptions to the all MPGs viable rule
 - a. evaluate MPGs one by one
- vii. Creating MPGs
 1. How is it done? What size should they be?
 2. Should extirpated MPGs be larger than average since we have little information about them?
 3. Upper SR Chinook MPG designations
 - a. Most supported by distances
 - b. Ecoregion similarities should not override distance
 - c. Should Clearwater be lumped into one MPG?
 - i. Separate "dry" Clearwater from "wet"
 - ii. Lolo with upper Clearwater
 - iii. Check distances between dry and wet Clearwater and decided if it needs to be split
 4. SR Steelhead
 - a. Split or lump Payette and Boise? Owyhee and Malheur?
 - i. Lump Payette and Boise (within distance range)
 - ii. For Owyhee and Malheur, get histogram of between population distances then make decision
 5. UC Chinook
 - a. Extant would be one MPG (Methow, Wenatchee, Entiat)
 - b. Spokane would be one (bring border to mouth of the Sanpoil R.)
 - c. Everything else would be one
 - d. Okanogan should go all the way to the mouth (include in extant MPG)

- e. Pend Oreille – agreement that nothing went beyond Lake Pend Oreille
 - 6. UC Steelhead
 - a. Should Crab Creek be its own ESU?
 - i. Connectivity as a reason to lump it with the UC ESU
 - ii. Life history and ecoregion differences as a reason to make it its own MPG
 - 7. Revise MPG maps and make copies available
 - 8. Give TRT members – basin area stats, and stats based on mod-hi reaches for Upper Columbia Chinook.
- IV. Viability Criteria
 - a. What should be provided to planners?
 - i. Include tables with numbers so that the tables can be easily re-created
 - ii. Remove 75% and 50% curves
 - iii. Show all curves in intro to illustrate the concept
 - iv. Cut off 1% and 5% curves at threshold
 - v. Consider shading for low vs. high risk areas
 - vi. Change lambda graphs from log for consistency
 - vii. If this reduces visibility of important areas, consider an inset
 - b. In viability guidelines, include language to explain why 500, 1000 and 2000 were chosen
 - c. Move and expand variation/autocorrelation/age structure into figure legend to clarify
- V. Current Status Review
 - a. Plotted point estimates with a 1 std err box and 2 std error whiskers
 - b. Adjusting productivity to SAR narrows the std dev range – or - if using the whole SAR series, shifts point estimates to the right
 - c. Need to decide what percentage of the box needs to be above the viability line
 - d. Use reproductive success of hatchery fish?
 - i. Need data for justification (0.5 standard)
 - e. Should we do current status plots for lambda?
 - i. How would standard error be calculated?
 - f. Should we use additional measurements of abundance and prod?
 - i. Measure abundance using 5, 10, 15 year geomean
 - ii. Which productivity measure should be used?
 - iii. Is the standard error methodology appropriate?
 - iv. Is there additional measurement error that should be considered?

Wednesday, February 23:

- I. Fall Chinook viability curve
 - a. Treat the same way as spring/summer Chinook datasets
 - b. What about the outmigrant question?
- II. Sockeye viability
 - a. Find variance and productivity data
 - i. 7 years of out migration data from lake Wenatchee
 - ii. Scale pattern data from 1985, Bonneville Dam (age structure)

- iii. Provide a curve (target) and narrative
 - 1. What is the potential for sockeye productivity?
 - iv. Snake R. out migration estimates (1990's)
 - 1. Catherine Willard (Bjorn's AFS paper)
 - v. Currently working on popID (Waples 1997)
- III. Spatial Structure and Diversity
 - a. If you get moderate ratings across all factors, should you get a higher rating overall?
 - i. No upgrade, since moderate is equivalent to moderate in each metric
 - b. Revisit supplementation issue
 - c. Give examples (treatment of qualitative information)
 - d. Genetics risk-level determination
 - i. Can't define a specific FST threshold
 - 1. Number of generation?
 - ii. Pair genetics table with straying and A&P
 - iii. Add text for explanation of genetic measurement criteria
 - iv. Include Yankee fork, Wenatchee and Lookingglass.
 - e. Consider including an explanation of the table up front
 - i. Work backwards to give planners an endpoint to visualize
 - f. TRT members work through example populations (identified in previous meeting) to find problems with metrics
 - i. Consider how to simplify language of metrics
 - ii. Within a week, do a short "skim"
 - 1. qualitative assessment
 - 2. identify red-flags
 - 3. suggest fixes
 - iii. in parallel, work to pull together data needed for metrics (Casey, UC)
 - iv. Rich, Casey, Michelle – design format for summaries
 - g. Minor spawning areas
 - i. No reference to these areas and how they should be counted
 - 1. May be important in some places
 - 2. How much weight should they be given?
 - h. Should scores be adjusted based on quality of data?
 - i. More straightforward to include this within the criteria
 - ii. Or use a scale that applies to all data/metrics
 - iii. No built-in check for distributional data
 - iv. If there are too many "no data" entries, should a score decrease overall?
 - i. Tasks
 - i. Post MSA maps on the web (viability section of website)
 - ii. Michelle and Phil – work on selectivity language
 - iii. Genetics group – work on "presumed historic" language and language about the use of qualitative data
 - iv. Write a paragraph for each data type: come up with basic approach for each type
 - 1. distribution (spawner)
 - 2. spawner composition
 - 3. observed variation (phenotype and genotype)
 - a. quantity for data quality?

- i. Rating system? (i.e. H, M, L, 1-4 etc)
 - v. There should be a distinction between being in a high-risk situation b/c you have good quality data (indicating high-risk) and being high-risk b/c you have bad data (ambiguous indication)
 - vi. Consider expressing confidence in data by using an asterisk
- IV. Spatial Structure and Diversity Table
 - a. Should we create a new moderate risk definition for A&P?
 - i. Policy decision could change A&P column values or shift “V”s down in the matrix
 - b. If you have “low” or “very low” risk SS&D coupled with “moderate” risk A&P, should that combination achieve viability?
 - i. General consensus is yes, but with strict conditions
- V. Group Tasks
 - a. A&P
 - i. Questions regarding measure of A&P
 - ii. Lower bounds straw horse
 - iii. Text
 - iv. Sockeye and fall Chinook
 - v. Analysis – minimum habitat for an MSA (and write up)
 - vi. Write up distribution
 - vii. Should steelhead thresholds be different?
 - b. SS&D
 - i. Compile data for test
 - 1. format, example
 - ii. red flag review (1.5 weeks) – 8th or 9th
 - iii. text
 - iv. occupancy question
 - c. Example status review
 - i. Limiting factors
 - d. Get viability curves to planners with captions
 - i. Meeting in Vancouver from 12 to 4 on the 1st (Tuesday)
 - e. Post on web: MSA maps, SS&D integration table also.
 - f. Meeting with council staff and recovery planners this week
 - i. Pass on questions to technical group (late next week—4th or 5th)