ROC LTO Directors Meeting

May 10, 2019

NMFS: Maria (M), Barry (B), Howard (H), Garwin, Cathy, Barb

USFWS: Paul (P), Dan, Jana, Matt

Reclamation: Ernest, Dave M, Kristin White, Jeff R, Russ

DOI: Lori Carmanian

Intro

Paul: Recognized hard work. Noted that goal is no J/no AD MOD. That is objective, and the schedule does not allow time for a J.

Barry: Notes that 2009 BiOp was jeopardy, was upheld in court. Species hasn't improved, and has actually gotten worse. The PA shows effects, so it is hard to get out of that place. Acknowledges the challenges there.

Delta

Recap of OMR conversation from Howard. Barb noted dive into salvage-density discussion and how to connect modeling vs. real-world effects. Russ notes that agreed to look at other metrics beyond CWF App 5 (exports from 1996-2005) and that they have people working on that. Howard notes that have ideas on how timing fits into process. Howard notes Kristin's question on restoration action proposals and discussion on how those would be incorporated into analysis. Russ reframes this to ID how non-flow actions can offset take.

Paul is stressing the "importance of the method" and how that needs to be solid. Is maybe calling out salvage-density/salvage-loss analysis. Suggests that maybe there is another approach. Notes that didn't seem like we quantitatively captured the effects of protective measures – is there a way to use something to "bring those numbers down". Suggests looking at data from 2009 on instead of data before that. Can there be a commitment to RTO that salvage not exceed salvage from 2009 to now. Basically saying would stay below the top limit of what salvage was seen in last 10 years.

Pressed in room for answer on that. Russ willing to consider. Maria notes maybe, but salvage is very variable, maybe need to use a distribution.

Paul: Thinks it "would really help" with model results.

Maria: Noted the approach would give a performance metric, and could look at it to try to come up with something. But noting schedule concerns and existing workload, proposes finding a way to give more space: Rec ran out of time to get action cone, we are running out of time to analyze. Suggests authorizing biop on programmatic level, which won't give take, but could agree to work together and come back in November with developed performance metrics and process.

Paul: Countered that “Need to complete biops by June 17”, seeming not open to a programmatic biop by that date. Could put in placeholders to say in X time agencies will do Y. But seemed to push off programmatic idea, noted the “need to be very careful in presenting this” because of need to have biop done by deadline.

Maria: Notes approach Ron Milligan proposed for south Delta at one point as perhaps an interim approach. Assign a multi-agency team the task to come back with alternatives that are protective and still allow water. OMR is protective of Sac River fish Dec-Apr, and also STH in Apr-May (this was stated to correct Paul that the spring exports and effects on STH is the only issue).

Dave: Going to an I:E instead of a OMR seems different only in name. So how is it different? Seems to stay on path of assigning effect rather than looking at drivers, and he does not think that exports is the driver.

P: Never heard of this approach, not sure it is modeled. So concerned about timing.

M: The PA OMR has a water supply gain compared to current ops. We’re willing to give you that, but in exchange we need some hard commitments to efforts that improve conditions to species.

H: Discussion of barriers, and some promise with that work in being good for species. M adds that DWR has a good program with Georgiana Slough, seems like it is in a place to get ready to go.

Dave: Stated (his opinion) that these studies are very costly with inconclusive results. Is against carving out initiatives related to them to say this is the way to go, would rather look at suite of alternatives and say “this is the biggest fish bang for the bucks”. This is an expected response from Dave focusing on $$$ and setting up for a conversation on SDM. He quotes Georgiana Slough $100M cost with nothing to support that. [NOTE: FROM RECENT DWR PRESENTATON TO CSAMP, ANNUAL COSTS OF INSTALLING, OPERATING, AND MONITORING IS $8-15M. THERE’S A$17M ONE-TIME COSTS FOR PLANNING AND CONSTRUCTION.]

M: There’s not silver bullet, need to look at different options that work differently in different hydrologies. Recommends this stay on the table. And she had not recalled a number that high, which Dave sood behind with only ab it of waffle.

B: Suggests a catalog all potential solutions, then review for potential of benefit.

H: DCC. Could have approach that is more focused on performance metrics, recommendations from fish monitoring teams that could go to Reclamation. Don’t think it would be all that different than operated now.

B: Curious, from Rec perspective, is there a plan to do something with DCC in terms of studies?

D: Yes. Looking at different operations, more dynamic. But can’t now because is too old and may get stuck in one position or another.

M: Focus is to get away from there potentially being 10 days when DCC is open during peak WR migration. Put something in as assurance in risk analysis/assessment that gives confidence, like that gates wouldn’t be opened if fish are present. H notes that that’s an interim approach, and would want commitment to team to develop diurnal ops and evaluation of new gates.

P: Going back to salvage piece, he incorrectly related DCC ops to the salvage concern, which Barry corrected.

M: Recap of DCC challenges and ops during drought. Had WQ challenges but needed to close to protect. Worked out approach and table that is in drought plan. Suggests that there are ways to work through this that are not resorting to claim that can't do much because of WQ requirements.

Russ: Thinks DCC can be solved, and is not as concerned about that. Is concerned that on May 23 document will be released to peer review that shows what he thinks is a very worst case of approach to loss that he does not have confidence in. He wants "to have confidence in numbers that hit the streets." This seems to be an undermining our methods and suggesting that those numbers be revised or removed before section is sent to peer review.

P: "I've never even heard of Georgiana Slough." Also "This effects analysis is going to get out there and look like effects of PA are significantly greater than current ops. And we need to get that taken care of."

Caucus.

B: Stick with salvage levels seen since 2009 is generally ok, but need to work out details of weekly/monthly/WYT numbers. And question of how much can be worked out now vs in future. But this won't cover everything. Need to address SJR steelhead, because Apr/May SJR STH is swamped by Sac River fish. So need way to protect them in some way, be sure that SJR STH not increasing salvage at that time. HORB is a way to help with that. And it sounds like DCC ops has traction and can get there (Russ agrees with DCC item). Notes also what happens when hit a level – if hit limit early, Rec will have to determine operations given the constraint that may result. Make sure they are aware of that potential downside to "flexibility".

Dave: Would like to approach with recognition of hope that fish pops increase over time and Rec doesn't get set up with increased penalties in future. Wants to modify operation to bring down salvage numbers. He suggests that salvage numbers or limits should be a proportion of pop rather than an absolute number, which is what is in the PA.

M and H: That right now is impossible because we don't have JPEs for anything besides WR. Do have other metrics like adult trends. Maybe sync review with truing up numbers with production. Would give a science angle, looking at 5-year status review, others, to give a scientific basis to having a proportional take. Open to this, but really need to make sure that the scientific basis is there.

P: Rec thinks this would be more realistic interpretation/characterization of what PA is/does.

Dave: Introduced discussion on monitoring, using something other than calendar based curve, proposed cumulative take. We want to preserve life-history diversity. Dave has some conversation about "arbitrary" curve related to WIIN act, and that that actually makes it so Rec is affecting life-history diversity more.

B: Look at historical data to see what cumulative curve is. H says we will take first step towards that. H and Dave tasked with getting into this.

P: HORB is out of PA and is expensive.

B: Fill me in on that.

Dave: Cost, water supply all affect this. Claims that it is put it in at great cost, but only get a single year benefit, then it is gone. Says that Michelle and Karla are ok with there not being HORB. And are more supportive of a non-flow action approach. Says they went through PA with DWR and they bless all of this …at least for what's in PA for this consultation. [This makes me wonder if, looking longer term, DWR would prefer there be a HORB or other components.]

M: Wants to be sure NMFS is not missing mitigation in SJR that would be benefits. Are we?

Dave: PA includes density triggers for STH, predator hotspots, SJRRP flows, and six-year study, wetland habitat action (but admits there's not specifics, and it's the same as the 2008-2009 BiOps and continuing them). M reiterated asking specifically more about SJR fish benefits, to which Dave responded "The last I checked they swim past Chipps Island."

Exchange between Dave and M on benefits to south Delta of different actions. M notes building on SST work and heat map concept (which Rec was part of), using SST recommendations and findings. Dave responds (borderline insulting) that they are "way past heat maps" and that they are "using" information and "having" studies that are more "advanced" than that.

P: It would be wonderful if we can do something that would "temper the worst-case scenario for documents going to peer review on May 23" (even though it's going May 20).

Shasta

M and B: Understand the desire to go away from letter writing. But there's uncertainty in operations. Would like to develop some sort of approach that shows a way that to expect mortality objectives to run given the variability of the system. Rec does what it does, but at end of day, they need to meet performance metrics. There can be a review to see if met or not, and if not, then reinitiate. M notes that this is a big shift for us to provide this type of discretion in operating the project. But in exchange would really need to rely on a performance-based approach with annual check in and clear reinitiation trigger.

2017 Proposed RPA adjustment has initial set of metrics, but M admits we need to evaluate those with models and tools that we have. She notes that it's Rec's CWP that keeps WR alive right now, but it's also Rec's discretionary actions that allow that to happen. Advocated for Battle Creek, McCloud, dynamic distribution of fish for reintroduction, and modeling of conditions in upper Sac. Think with all this together, can get to a much better place, and would alleviate Rec from being wholly responsible for survival of species. Is highly managed species, that's a fact; let's accept htat and manage with all tools we can.

R: Did not hesitate in saying that regarding passage on Shasta, that can't be solved today. M responded, "Sure, but we can elevate it." Russ goes right to the metrics, nearly discounting any discussion of reintroduction.

P: Question on analytical approach to Shasta, which Garwin and Cathy provided some answers to.

Seems to be concern that any consideration is given to historical frequencies of storage levels, temperatures, etc., and that we rely on that more than on the modeling.

Dave: Made it clear that Tiers are not "picked" but are dictated (which we reiterated we knew and understood and there's not really an issue with that). They are a strategy to manage cold water. They don't "pick" to go to 2 or 3 from Tier 1. We did note that the way the PA is written, it seems like they could *decide* to move to a lower Tier during the season, so there seems to be discretion in that (vs. the Tier-setting on May 1 based on May 1 storage).

B: Why would you move out of a Tier if you are already in it?

Dave: No perfect foresight, so when have storage, get to a point, and it's possible that inflow could be warmer than expected so can't do what had anticipated. Tiers are the approach to deal with the variability before and after May 1.

M: But there are discretionary actions that can be done, like pulling from Trinity, blending, fixing the TCD, acknowledge that some flexibility exists between May and July, when CWP really is set.

Dave: Believes there is disconnect between what tools really are available at their discretion. See meeting senior water rights as a must, refuges as a must. Contracts don't give much discretion. Setting baseflows are the way to build storage to get to a higher level.

P: "I'm just fascinated by the fact that you all think this is a better option for cold water pool management." Asks to explain more about that.

Dave: Are using total storage is a proxy for CWP.

Jeff and Kristen: Discuss COA component in modeling. Biggest revisions in COA is reduced obligation to in basin use in D and C years. So in critical years decreased obligation from 75% to something lower. Modeling on this exists – compares COA revisions to pre-COA.

B: Previous discussion on our uncertainty of being in Tier 1 in as many years as modeling states, based on historical record, and we considered that. But if there is something that shows some confidence that the 68% of years is greater than something lower or historical, then provide that.

M: Notes that we are obligated to look at the full extent of effects of the SRSC. Even though Rec has no discretion, which we recognize. But the PA is written to include take coverage for them, so we analyze the full effects of them.

B: Look at Shasta RPA for performance metrics, start a conversation there.

Jeff: Regarding building storage: will take any capability to build in spring. If M sees other discretions, what are they? M notes that it comes down to KWK releases, and can reduce those and let system reoperate from there. Jeff says you can't, M says understood, but that's where we are given that SRSC are in this PA, so we have to analyze that these are in there, and she thinks that they do have more discretion than they are really claiming. Move on to performance-based approach – which allows Rec to do what they feel they will and can to operate however they would like, but risk is that if don't meet performance measures, reinitiate.

Paul: Are they ok with a performance measure based on mortality?

Dave: Seemed reluctant on this. States that if Rec thought they had discretion, they would have used it. Don't feel they have the knobs to turn to meet those metrics, so why would they agree to them? Disconnect on what their discretion is.

M: Idea too to incentivize lots of things that could overall improve survival, not just temperature-based.

P: "It's hard to see how this isn't better, on the cold water pool issue."

Discussion on intent to stay within initial year, unless "factors beyond our control" force a change. We made point that BA is not written that way. They are open to revising that.

Caucus

Dave: Can propose that when have a Tier determined, will stay in it barring emergencies, mother nature, discretionary requirements. And periodic review to see if annual Shasta temperature plan is effective. And meet and confer on dry years.

B: Perf metrics would help us a lot to get to plan. Wants to be sure we are clear on incentive structure. Rec concerned that they are on hook for mortality that they cannot control.

Dave: He states that incentive for better survival coming out of Sacramento River is not temperature because "they don't think that they are doing anything" (that is, he doesn't think that Reclamation is affecting temperatures in upper sac and therefore affecting egg to fry mortality). Their incentive is the Delta piece.

B and R: Commit to development of drought plan within set timeframe.

B and H: Collaborative planning. Develop action plan with implementation strategy for restoration and non-flow actions.

B: Given that there is still uncertainty associated with Shasta and tiers, that this is a new approach, and we aren't sure how it would work. We've discussed review of the approach, revising if measures aren't met, and to him that is adaptive management. Collaborative implementation plan is for non-flow actions. Separate is adaptive management on operations (or at least an adaptive component for Shasta review). M notes the SRSP science plan, suggests pulling from there.

H: Other divisions would benefit from AM.

P: They "don't want us to end up in a dark place on the other side". Encourages NMFS to follow FWS approach for baseline. They have some language that they want us to have. NMFS will be sure to get latest USFWS baseline and incorporate any needed language into ours.

Tuesday COB: Interior/Rec provide high-level review of Shasta and Delta division effects analysis.

FWS give EB text to us, HB check to see if we need to revise. We provide baseline to others.

Next week:

Paul does not feel like at an impasse. Where do we need guidance. Asks if we can "transition from the modeling to a type of proportion to moot out the numbers in the Delta."

Ernest and R and P: Will need to have effects analysis to be "cleaned up".

B: What do you mean by “cleaned up”? May be that what’s in there is in there and we talk about mitigation efforts but still have analysis that is there.

P: “No one would ask anyone in this room to do something that lacks in integrity.”

Kristin: American available? That is a main foundation behind the VSAs and if there’s an issue they would like to know now.