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Sent: Tuesday, February 12, 2019 12:02 PM
To: Howard Brown; Garwin Yip; Barbara Byrne; Cathy Marcinkevage
Subject: Marias notes on CVP proposed action

Howard, Garwin, Barb, Cathy,

I spent several hours reading the new proposed action, and thought I would share some initial notes with you. I haven't review the rest of the BA at all, but hope to as time goes by. Feel free to share with others on team if helpful.

- Maria

Marias notes on PA:

General notes:

Shortage policy (new since 2009) and COA need to be pulled into the proposed action - - these are embedded in and drive the operations.

COA change- CVP use of banks up to 195000 per yer - - goes in opposite direction of what we want with preferential pumping. Why?

Yolo basin - still needs programmatic coverage. Should be included since it offsets effects of Oroville and Shasta on floodplain limited access.

Need more detail about balancing Shasta, Folsom and Oroville to meet D-1641 requirements based on conditions and COA.

Shasta notes:

Shasta - do we feel comfortable with 53.5 as compared to 53? What did we learn from operational study last year? Survival not that good.

Why? Maybe should be 53 at CCR and 53.5 is still experimental value?

CCR at 56 degrees is lethal to eggs....why is this in the PA?

How much evidence is there behind the Anderson model of varying temperatures? Perhaps this should be an adaptive management element to try this operation in a year when then 53.5 is not attainable. But not ready to have in PA as a hard-wired action.?

Given that there is no provision in PA to build storage to meet any targets, how is this brought into the modeling and analysis? Much less protective than the current RPA action which triggers Keswick release schedules, reductions in deliveries, preferential releases from Oroville and Folsom, etc.

Page 4-30 - - still shows lack of willingness to build stratification model for Shasta, despite all the science reviews etc.

Tier 3 and 4 - - would predict lots of lethality. Why is there no provision for demand shifting until tier 4?

Given that demand shifting would need to occur in April and May - - how does this plan to timing of shifting discussions work?

Where is the detail on what “demand shifting” means? Is this modeled in BA?

No mention in PA: Would Reclamation short the service contracts to meet the storage needed to reach Tier 1 (or any higher tier)? How does any of this PA relate to final allocation decisions to water service contracts? How is this change from current PA/RPA carried into effects analysis and modeling?

Also no fall storage, no mention of summertime flow schedules, nothing around the current operations to ensure that June through Sept Keswick releases are focused on temperature management when necessary.

A lot of written language does not reference 90% exceeded every, though it is mentioned in decision chart.

It’s surprising that there isn’t more science and adaptive management built into the project description, given all of what we have learned and still do not know. Suggest referring to draft science plan in some way, and incorporating this into seasonal and annual planning and adjustments.

Fall storage and releases:

P. 4-32 - - what is the method to determine a 10% risk or less?

Shasta Dam raise:

Incorporates operations by reference from feasibility study. What are the exact operational criteria?

Conservation measures: (p. 4-35)

Some good things here

Notably missing any floodplain projects to mitigate for storage. Look to salmon resiliency strategy to pull in prior state commitments? Also prior RPA language on floodplain - - which had broad agreement.

Intervention:

Out of basin stocks for winter-run - - -need to flag

TraP and haul - - how does this make any sense to trap and haul of river it too warm for juvenile production? Is there a deeper write up on this proposed action? It is a brand new proposal.

DCC - - different operations than RPA. Are we OK with this? What is a worst case event with this new language?

Still no HORB. No Georgiana barrier.

Delta

I Haven’t reviewed OMR - - need to come back to.

No predation program for hot spots and or CCF No habitat in Delta for salmonids to help compensate

No April-May pulse or VAMP like action, or I:E ratio

Stanislaus - - Is this the same protections as 2E? How does it differ?

what about the additional contribution for downstream pulse that is in the current RPA?

American River - Did not review

Not being consulted on - - this list doesn't really make sense. For example flood ops are part of their operations and embedded in the modeling - -so of course are part of the consultation. We understand that they lack a lot of discretion based on Corps rules, and we are not consulting on the Corps rules themselves. This needs to be re-written with more ESA knowledge and nuance, otherwise they will lack take authorization when doing flood ops - - which is not a good outcome.

Entirely missing:

No real discussion of discretionary allocations, shortages and how these decisions will be made when necessary to meet key ESA or SWRCB metrics Storage management, Keswick releases and connection to allocations, shortages, and temperatures Preferential releases from Folsom and Oroville to meet Delta standards when necessary to preserve storage at Shasta I:E or replacement HORB Predation science based program Delta habitat commitments for salmonids (for example, would be good to look at "heat map" in SST report and propose targeted science-based restoration actions) Prefectural pumping and other other improvements to So Delta facilities NO science and adaptive management, NO discussions or operations of real-time technical teams NO annual, seasonal, or real-time consultation process NO "governance"
NO incorporation of five agency science adaptive management program even though already required and consulted on, and it won't go away in this ROC. On this topic, it seems we would have discretion to pull it in to this proposed action based on CWF PA and terms and conditions.

Sent from my iPad