



Webb, Heather <heather_webb@fws.gov>

Re: BDCP and EIS Assessment

Nobriga, Matt <matt_nobriga@fws.gov>

Tue, Jan 14, 2014 at 2:19 PM

To: "Rinek, Lori" <lori_rinek@fws.gov>

Cc: Barbara Beggs <barbara_beggs@fws.gov>, Heather Webb <Heather_Webb@fws.gov>

Lori,

Rather than keep you waiting, I added bubble comments to the latest tracker.

Matt

On Tue, Jan 14, 2014 at 8:55 AM, Rinek, Lori <lori_rinek@fws.gov> wrote:

FYI.

----- Forwarded message -----

From: **Hoover, Michael** <michael_hoover@fws.gov>

Date: Mon, Jan 13, 2014 at 5:20 PM

Subject: Re: BDCP and EIS Assessment

To: "Hilts, Derek" <derek_hilts@fws.gov>, Lori Rinek <lori_rinek@fws.gov>

Derek,

Thanks for the info -- great again. A question -- since all alternatives are to be evaluated at an equal level of analysis, did you look over the modeling with a multiple-alternative hat to see if that's the case? As an example, I don't believe operations of Alternative 9's twin 7,500 cfs screens were actually modeled at 0.4 fps. If they were, were the assumptions similar to alternatives that would have diversions on the Sacramento River below Freeport -- i.e., 1-dimensional cross channel averages some distance downstream of the diversions? I think I know the answer, just checking with someone who actually looked over the modeling.

Mike Hoover

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On Mon, Jan 13, 2014 at 4:44 PM, Hilts, Derek <derek_hilts@fws.gov> wrote:

Hi Lori,

While the consultants DID add a lot of great information for those who would want modeling details, my search of the Public Draft version of Chapter 5 and its appendices and attachments makes me believe the following:

1. The full circle analysis was not presented, assuming it was ever done.
2. The rationale for assuming a cross-sectional average 0.4 fps represents screen face velocities of 0.4 fps

was not presented.

3. Sensitivity of north delta diversion amounts to the 12,000 cfs Wilkins Slough flow threshold was not presented.

4. The un-intuitive result that NOD CVP ag service contractors would receive less in ALT6 than they would under the NAA was not discussed. This could be discussed offline, as many "whys" were not included in the document. If they were, Chapter 5 would balloon up to a much larger document.

5. The rationale for presenting monthly model results in terms of average flow to the nearest cfs was not discussed.

6. A discussion of modeling the south delta exports on a daily timestep WAS added. That's not to say it's good, but it was added.

7. A discussion of why 2020 level demands in the Sac Valley are okay to use when simulating 2060 conditions was not presented.

Hope that helps.

Derek

Derek Hilts M.S., P.E.

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On Fri, Jan 10, 2014 at 11:05 AM, Rinek, Lori <lori_rinek@fws.gov> wrote:

I have been tasked by Mike C. to take the lead on determining where the public draft BDCP and EIS are in addressing our comments in the April Assessment memo and the current Federal Tracker list. I have attached both documents. Mike, was hoping I could have this by COB next Tuesday, I told him I wasn't sure but would try. 😊 NMFS has been working on this task since the documents came out and Mike has asked that we do the same. It is my opinion that most of our issues have still not been resolved and I am hoping that by just doing a cursory review we will be able to determine that.

Matt, I can talk to Leanna and Derek about their comments and that will leave you more time to spend on yours ! And is we need more time, I am more that happy to tell Mike that ! Also trying to see if NMFS can share what they have done so far with us. Thanks !

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BDCP Federal Open Issues Tracker 1.6.13 (mIn011414).docx

43K

Federal List of Issues related to the Public Draft

The Federal agencies have compiled this initial list of open issues which will require additional work in order to support issuance of a scientifically sound and legally defensible final permit and record of decision. In compiling this initial list, the Federal agencies anticipate comments received through a robust public review process may alter or expand significantly upon this list, reflecting the basic function of NEPA public review processes.

Comment [MN1]: I think all of our HCP Issue Area 3 comments have been adequately resolved – but other issue areas have ongoing unresolved issues.

“OPEN” ISSUES THAT WILL REQUIRE FURTHER REFINEMENTS BETWEEN DRAFT AND FINAL

Comment [MN2]: Is this missing our Governance comments from HCP Issue Area 6?

I. ISSUES WITH CM 1 OPERATIONS

1. **Real Time Operations**

- a. **STATUS:** Further work is needed on four issues: 1) membership of real-time operations team: should PWAs be added to real-time operations teams; 2) whether the High Outflow Scenario (HOS) draws from Oroville only or whether other COA “adjustments” will occur; 3) whether water transfer programs are part of meeting the HOS requirements, and if so, how to address their NEPA/CEQA-related effects; and 4) whether the Head of Old River Barrier will be operated as agreed in Scenario 6 or some other way.

2. **High Outflow Scenario (HOS) and Decision Tree**

- a. **STATUS:** At present the only the HOS appears to be permissible based upon the best available science. The Services will only authorize operations that meet permit issuance criteria. The State’s proposed project may therefore need to be changed at the time of permit issuance.
- b. The Plan needs to more clearly and specifically state the scientific work related to HOS/Decision Tree that will be carried out prior to operations with respect to salmonids.

Comment [MN3]: This is missing our comment about the need for a 4-pronged Effects Analysis in the HCP Progress Memo (at best 75% complete if we agreed the analysis was credible), equal level of analysis among Alternatives and sub-alternatives in our EIR/S Progress Memo (2.4) and our request for clear flow and total fish entrainment summary plots (2.5; ~ 0% complete?).

3. **North Delta Diversion Bypass flows**

- a. **STATUS:** Requirements for the north Delta bypass diversion flows remain unresolved, with NMFS recommending Level 1 pumping only, subject to adaptive management. NMFS and DWR have agreed with State on a technical path forward (see second list).
- b. Depending on outcome of further discussions on this issue between draft and final, may need to revisit E/I ratio issue from NMFS progress assessment memos

4. **CVP Upstream Operations.**

- a. **STATUS:** Recent refinements to real time operations state that meeting BDCP exports will require an (unspecified) accounting between the CVP and the State project. This accounting needs to be clarified and agreed upon.
- b. This change raises several fundamental issues of project operations and project impacts and it may trigger additional NEPA/CEQA analyses. This change may also affect the scope and timing of the ESA section 7 consultations associated with the BDCP.

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- c. NMFS and Reclamation may need to carry the modeling associated with these changes into the underlying Section 7 consultation and possibly develop conforming upstream operating criteria.

II. ADAPTIVE MANAGEMENT, ASSURANCES AND FUNDING

5. Adaptive Limits and Assurances

- a. **STATUS:** The Adaptive Limits and Assurances package contains a number of unresolved issues that will require significant further specificity and analysis. They include the level of exports below which will trigger access to the supplemental adaptive management fund; the size and funding sources which will capitalize the fund; the availability of additional water transfers which may be required to cushion the difference between the minimum export targets and actual operations; the conformity of the package with the No Surprises regulations, and the issue of parity with other CVP contractors.
- b. The Services will seek additional flexibility in the adaptive management operations that do not need to “off-set” by the supplemental fund. The water fund, as crafted is only available for smelt species, not salmonids or sturgeon.

6. Program Budget, Implementation Costs and Funding Sources

- a. **STATUS:** A reliable financing plan is required for the BDCP program, including an agreed-to budget and agreed-to reliable funding commitments from appropriate Federal, state and PWA sources.

7. Implementing Agreement

- a. **STATUS:** The Implementing Agreement will require revisions as issues are resolved.

III. SECTION 7/10 ISSUES

8. Section 7 Requirements for Permit Issuance.

- a. **STATUS:** The schedules and scope of analyses for the consultations on the issuance of the BDCP permits will require clarification once decisions on program scope and effects occur. Further, additional refinement will be needed on the timing and tiering of additional ESA reviews associated with other Federal implementation activities of BOR, the Corps of Engineers and EPA.

IV. SIGNIFICANT ANALYTIC ISSUES

9. Terrestrial Species Issues in HCP

- a. **STATUS:** issues raised in FWS progress memo have not been adequately addressed. Remaining issues include: level of development of monitoring and research plans for specific species to support adaptive management; needed refinements to avoidance and minimization measures and impact analysis based on refinements to the tunnel alignment and associated structures; fixes for contaminants analysis; cumulative effects text for the salt marsh harvest mouse regarding late long-term condition with sea level rise; DWR’s removal of the

Comment [MN4]: This is missing our EIR/S Issue Area 1 comment that ICF pick reasonable flow and biological thresholds in advance and use them (~ 0% complete). I don’t know if NMFS made a similar request, but they should have.

Key thresholds for us include:

Frequency of Chipps Island X2 months
Frequency of Roe Island X2 months
Longfin smelt population growth flows (35K-45K cfs in the Feb-May timeframe)
Minimum floodplain inundation days for successful splittail reproduction

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“stay ahead” provision from the plan (issue may apply to more than just terrestrial species).

- b. Issues will require additional work on HCP between draft and final for resolution.

10. Flow and habitat analyses in HCP

- a. **STATUS:** issues that were raised in the NMFS and FWS progress memos have not been adequately addressed. Issues include: CM4 habitat restoration analyses and conclusions in the HCP and EIS assume 100% restoration success and fish species occupancy/use: sensitivity of overall effects analysis to these assumptions needs to be developed and reported; though improved, new Net Effects analyses in the HCP continue to combine outflow and restored habitat into one concept that is inconsistent with best available science, resulting in unrealistically optimistic overall conclusions regarding the embedded operations alternatives.
- b. Issue will require additional work on the HCP between draft and final to resolve.

11. Predation analyses in HCP

- a. **STATUS:** issues that were raised in the NMFS progress memos have not been adequately addressed. No inclusion of analysis of less than 100% successful predation removal program.

12. Contaminant/Turbidity analysis in HCP

- a. **STATUS:** issues raised in FWS progress memo and EIS review have not been adequately addressed. Issues include: arbitrary significance thresholds for biological or ecological effects (e.g. 8-9% additional reduction in Delta sediment loads determined to be insignificant without rationale); mercury and selenium modeling not credible in current state (DSM2 QUAL likely cannot be validated for these constituents); selenium analysis inadequate and incomplete; mercury and selenium effects analysis for covered species based on potentially inappropriate model species, reducing credibility of analysis; information about chemical additives used in tunnel drilling have not been provided nor has any data on contaminants present in in-river sediments that would be dredged and relocated.
- b. Issue will require additional work between draft and final to resolve.

13. Crane analysis in the HCP and EIS

- a. **STATUS:** issues raised by realignment of the tunnels have not been adequately addressed. Issues include: need additional discussion of minimization and mitigation measures for impacts to the SLNWR because the Refuge is the focal area receiving the greatest level of impact from the conveyance project; discussion of additional monitoring/adaptive management /minimization/mitigation for the Staten Island population of cranes is needed; discussion of additional minimization/mitigation measures for transmission line placement and further discussions on other indirect effects (noise, light etc) are needed.
- b. Issue will require additional work between draft and final for resolution.

14. Conservation Measures in the HCP

- a. **STATUS:** Issues have not been adequately resolved. Issues include: the "other stressors" conservation measures are inadequately developed and need

Comment [MN5]: Ch 5 and Appendix 5E have not addressed our HCP (Issue Area 1 and elsewhere) comments adequately; ~ 10% complete due to the writing and background, but ICF needs to provide a credible analysis:

1. Re-do the HabSuit Index curves to keep them within the bounds of the available data
2. Re-do the HabSuit Index analyses with a range of success criteria that are > 0%, but less than the current 100% assumptions so that we can see the sensitivity of results to input assumptions (including use of Lopez model, which has quantifiable variance than can be used for this analysis if a credible case for its use at all can be made).
3. Explain how predicted habitat improvements for a habitat specialist like delta smelt can exceed predictions for generalists like salmon and splittail.
4. Before it is concluded that big habitat and prod-acre gains predicted for delta smelt from the south Delta can be realized, need to show that this “enriched” water won’t all be pumped out of the Delta (along with the fish in it that attempt to use that predicted productivity).
5. The best south Delta floodplains will deposit water right at the south Delta pumps – analysis needs to show what the fate of inverts and fish using these areas is expected to be before benefits can be claimed; inundation threshold applied to splittail is too short and inconsistent with the ca. 4-wk threshold used elsewhere.
6. Link flow into habitat analyses (analyze these components of habitat together and do so credibly). For instance, the Appendix 5E Exec Summary does not ever consider flow or flow regime as an explicit element of CM4 restoration outcomes.

Etc....

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significant improvements to clarify role of BDCP amid other regulatory obligations, reduce uncertainty of success, and contribute to listed species recovery; further discussion among the federal and state fish and wildlife agencies needed to discuss the potential benefits and impacts due to restoration in the south Delta.

- b. Issue will require additional work between draft and final for resolution.

15. EIS Summary Tables

- a. **STATUS:** Issues raised by the Summary Tables that will not be resolved for the public draft will need to be resolved for the final. They include: Executive Summary Tables - need refinement for the NEPA effects determination; a separate summary of NEPA effects determinations table needs to be included in each resource chapter; Alternative Comparison Summary Table – needs to be included in the final.
- b. Issue will require additional work between draft and final for resolution.

16. Water Surface Analysis in EIS

- a. **STATUS:** issues have not been adequately resolved. Issues include: need results of the UnTRIM-RMA-DSM2-ANN-CALSIM II “full circle analysis” alluded to in Appendix 5A atop page A-44 (checking salinity-flow relationships); need the rationale/sensitivity analysis that led to using a one-dimensional average cross-sectional velocity of 0.4 feet per second 1,000 feet downstream of each intake location; need analysis of how sensitive the CALSIM II results are to the assumption of a 12,000 cfs Wilkins Slough flow threshold for defining a Sacramento River pulse;
- b. Issue will require additional work between draft and final for resolution.

17. Site-Specific Analysis in HCP

- a. **STATUS:** issues raised in FWS progress memo have not been adequately resolved. Issue: the final BDCP must have the site specific information needed to complete our intra-service Sec 7.
- b. Issue will require additional work between draft and final for resolution.

18. FAST team

- a. **STATUS:** Currently the FAST team is only envisioned as being part of the interim period. We need be sure the FAST team, or something similar, is maintained throughout the implementation process.

19. Effects Analysis

- a. Analyze CS5 operations for the south Delta.
- b. Show/Discuss linkages between net effects and achievement of BGOs

Comment [MN6]: Our HCP comments transcend these...

20. Normalization Methods in Entrainment Appendix

- a. The assumption made was that “a relatively high number of fish would be expected to be entrained in a year of relatively high abundance.” While this makes some sense for a comparison of juvenile salvage to juvenile abundance (as was done for winter-run using the JPE), it makes little to no sense for a comparison of juvenile salvage to adult abundance, which is what was done for most salmonids.

COMMITMENTS AGREED TO BE COMPLETED BETWEEN DRAFT AND FINAL:

21. “Roll-up”/aggregate analysis
22. Particle Tracking Method (PTM)
 - a. Fry passage/survival issue
 - b. Additional north Delta model runs
23. Delta Passage Model (DPM)
 - a. Incorporate revisions to model based on NMFS and other agencies’ comments
 - b. Work on the relationship between exports and survival for SJ River fish
 - c. Determine appropriate level of significance for flow/survival relationships (Newman/Perry) within the model.
24. Independent Scientific Review
 - a. ND Bypass Flows
 - b. Effects of Oroville operations on Feather River
 - c. DPM
 - d. Effects of habitat restoration & sea-level rise on tidal energy and river stage
 - e. Appropriate interpretation of upstream flow and temperature models
25. Critical Habitat Analysis
 - a. In EIR/EIS
26. Essential Fish Habitat Analyses
 - a. BDCP and EIR/EIS
27. ND Diversion Bypass Flows analyses
 - a. Update on when to expect analysis of controlling criteria.
 - b. A “water costs analysis” showing the difference in average exports under each of the bypass criteria levels (Levels 1, 2 & 3)
 - c. Analyses showing what the survival rates for ONLY level 1 pumping
28. EIS Action Alternatives
 - a. Climate change and seismic risk for action alternatives
29. Continue work on habitat restoration analyses
 - a. Floodplain
 - b. Channel Margin Habitat
 - c. Tidal Marsh
 - d. Partial implementation (feasibility and uncertainty issue)
 - e. Lessons learned from unintentional restoration examples
 - f. Foodweb
30. Predation Measure (CM 15)
 - a. Metric to measure success of program

Comment [MN7]: Progress last fall, but still not a credible analysis for any covered fish, but especially the smelts – even as a qualitative exercise (e.g., acknowledging professional disagreement among participants in a footnote does not meet our needs for addressing uncertainty). Perhaps 75% complete

Comment [MN8]: See comment above – maybe 10% complete; Public Draft write-ups are better, some elements of 2.1 starting to be addressed, continue to ignore Steve’s issues with use of Lopez phyto model, overall analyses are not credible so conclusions are suspect.

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b. Description of expected outcomes if less than fully successful

31. Non-Physical barriers

a. Incorporate 2012 Geo SI report

32. Stressor reduction targets for smelt entrainment

Comment [MN9]: And outflow/habitat and population growth; ~ 50% complete for smelts

33. Fish Population Dynamics analyses (smelt, splittail)

Comment [MN10]: I know ICF is working on this; don't know how far along they are. The comment was very specific so they should know when they'll be finished.

34. Avoidance and Minimization Measures (CM22)

a. Remove as a CM. Incorporate A&M's into other appropriate CM's.

35. EIS Terrestrial

a. Refinements to the qualitative and net effects assessments.

36. Review/Address Existing Agency Comments and Terrestrial Technical Team Task List

a. With agency representatives, compile and review existing lead agency comments associated with BDCP and EIR/EIS processes.

b. With agency representatives, address these comments to improve and/or correct the documents while providing clarity and closure on items such as:

- Document clarity and consistency
- Adequacy of assumptions for alternatives, analyses and roles and responsibilities
- Efficacy of project and program level analyses
- Provision of a rigorous and supportable comparison between alternatives, and
- Assurance of an equal-level of analysis for each alternative

c. Address remaining tasks on the Terrestrial Technical Team list.