

DRAFT NOTES:
Water Management Development Team Meeting – 10/12/99
1:00-5:00

EXPECTATIONS/AGENDA:

- **Expectations for meeting**
- **Agreement on Stage 1 Assets**
- **Scenarios and dealing with b(2)**
- **Agency perspective for fish needs - ESA Bar**
- **Coordination Team Charge**
- **Workplan Update**
- **Recommendations from last meeting.**
- **Clarifications and discussion of positions (subgroup meeting at end)**

Summary of Agreements/Actions/Assignments

Governance and Finance:

9. BDAC governance working group meeting this Friday to discuss EWA/WMS.
10. Asset Funding Matrix should be available in mid November.
11. Water Bond passage should make funding available next spring.
12. Will add who benefits and who pays to the matrix.
13. Will provide a full range of funding options.
14. Purpose of each asset should be defined so funding can be considered.

Assets:

15. Need to evaluate each asset as well as how they perform in scenarios.
16. Need to contact Delta interests for Source Shifting - generally need more outreach if we are to get cooperation. Agreed to move Source Shifting to Market and to consider entire Valley not just Sac Valley.
17. Need to work with CVPIA on their experience with obtaining water in the Sac Valley.
18. Should consider redirected impacts of source shifting.
19. Details on assets are needed to refine scenarios - assignments have been made.
20. New asset list will be developed and e-mailed.

Higher Environmental Bar for Stage 1 Assurances:

21. Goal is trajectory for recovery in Stage 1.
22. Agreed to provide out-of-Delta list of elements.

Scenarios:

23. Evaluate sensitivity of scenarios to Trinity actions.
24. Agreed to evaluate 12 scenarios: early and late St 1 X three b(2) baselines X two Trinities (with/without).
25. Priority would be three early scenarios + at least one late Stage 1 scenario.
26. Evaluate performance of scenarios against common target (environmental and water supply bars - also water quality).
27. Agreed to move forward and develop and analyze scenarios.
28. Agreed to model and game scenarios over next two weeks.

Next Week:

29. Development Team: Finish agenda and frame baseline issues.
30. Coordinating Team: begin modeling/gaming scenarios.

Introductions - Steve Macaulay

I. Workplan Update

- Putting together assets into scenarios and evaluating and testing assets.
- Taking Water Quality issues into account.

Governance: BDAC working group on governance will meet Friday from 9-12. EWA will be a topic. Will provide comments to WMDT next week.

Finance: Near and long term considerations. Developed a Draft Funding Matrix with linkages among different available funds. Assets from various programs are going to be paired with other program elements by mid November.

Q: When will Water Bond fund pass and funds be available? R: March - funds should be immediately available.

S: We should get an update on Prop 204 bond sales and funding.

S: David Yardis needs to be contacted.

S: Suggest adding 'who benefits' and 'who pays' columns to matrix. R: May be too early in program to define these. FY 2000 monies do not involve cost sharing.

S: We need a State and Federal position on cost sharing. R: We don't have list of assets and beneficiaries. Principles are there but not the details. There are no dark bold lines linking beneficiaries with assets.

Q: How can we have implementation in FY 2000 without finance decisions? R: We can't. Details will be developed and operations will define beneficiaries. This is an obvious issue - we are not avoiding it.

S: Suggest we create a forum on the issue that discusses equity issues. There are many implications with the policy of 'beneficiaries pay'. We need financing plans and decisions on who pays what.

C: Many finance work groups have been commissioned by CALFED over the past five years with little to show for the effort. Users will be satisfied if the public pays; but unhappy if users have to pay.

C: There should be a full range of funding options. R: Table is partial list - will make next draft clear on what is included.

C: Not clear as to what are Y2000 assets - what are they and how will they be used. Purpose needs to be defined in the description of each asset.

II. Assets

Asset lists have been developed for FY2000, early Stage 1 (2001-2002), later Stage 1, and after Stage 1. Purpose of lists is to evaluate appropriateness of individual assets. We will look at how they perform as a group in scenarios later.

Source shifting:

Q: Any progress with Delta interests? R: No. Farmers will provide the land; projects will provide money and technical expertise.

C: We should also consider additional burdens on farmers such as habitat conversions.

C: May need to consider barriers package in South Delta including Grant Line barrier to make this work.

Q: Did we capture everything in the Bond Issue on the list? Where is reclamation? R: On late Stage 1 list. Efficiency asset includes reclamation.

Q: Is shifting to groundwater for the Sacramento Valley only? R: Some options with Kern.

C: Don't know what Sac Valley water you are considering. R: If we can't find any we will drop from list.

S: Suggest you hook up with CVPIA/FWS who are trying to get such water for their purposes. They are looking toward water districts. Their activities have just about shut down the water market. There is also some history with the Yuba County Water Agency. Getting source shifting from the Sac Valley will be uphill battle. Tone and wording is a problem that contributes to the problem.

C: Option agreements are real options for early Stage 1.

S: You need to work more closely with the locals involved. At present there is a perception of alienation with CALFED. CALFED agencies continue to burn bridges with the locals. Outreach is needed along with fence mending if you want this option to go anywhere. Get to specifics quickly and get to sources quickly. Fear factor can be alleviated with a process of involvement. They would welcome solicitation for input. Should also consider a more diverse group of purchasers. Also need to consider the redirected impacts of such activities.

C: Puzzled by list - some items are specific while others are abstract. Need to be more specific. Early Stage 1 options will have to be well defined. R: We want to leave items open - details will be developed later by CT. Individual assignments have been made to develop details for each asset. Details are needed to refine scenarios.

Agreement: take out Source Shifting and put in section on Markets. Take out reference to Sac Valley.

C: The problem is too much process. Question the value of the process. Need working groups on topics. Need to get to the real issue - funding.

S: CT should only include real things and only early Stage 1 options.

C: Real dilemma; irresponsible to not include things like water transfer.

Late Stage 1 Assets:

S: Under efficiency, some urban and ag conservation is possible in early Stage 1 with Bond funding.

Q: Increased Banks Capacity: wonder how you will deal with redirected impacts to other species? R: We deal with that in scenario evaluation.

C: Outsiders will want to know price, alternatives, who, and can water be conveyed. We need to do this gaming exercise to determine how much water we are talking about.

S: Suggest moving flexible standards to early Stage 1 list. Need a willingness to change these uses if shown to be OK. It simply is not appropriate to not include this willingness to change standards.

S: We should also examine where we are putting research money (e.g., IEP). We need studies to evaluate the standards. Maybe we can do better for fish. R: There are a lot of regulatory issues relating to standards and BO's. There is a lot of effort to get these done. We will have a report to CT in two weeks on flexibility toward standards.

Q: Could we develop a study program for standards? R: CMARP is moving in that direction.

Q: What about developing priorities for assets? R: No, can't prioritize - developing sharing formulas for scenarios.

S: What about the American Basin Conjunctive Use project? And others? Are we considering only CALFED projects? R: Yes.

Q: Why aren't DWR projects included? R: These are separate transactions for our own contractors - just like other transfers.

C: Seems to be arbitrary as to whether its in or out of process. Need to look at the other projects going on (e.g., EBMUD, VAMP). Need a clear rationale on a case by case basis - no real rules.

Action: CT will refine assets and focus more on scenarios and analysis. New list will be e-mailed.

III. Agency - Fishery Needs for Stage 1

- Looking at seven year assurance - higher bar.
- We have tried to define bar for Stage 1.
- Goal is to provide a trajectory toward recovery in Stage 1 with full recovery by the end of the program in 30-40 years.
- Want security against setbacks in harsh years - at least stay even in such years.
- Assume other programs in and out of Delta (e.g., VAMP, AFRP) will occur.
- Presented chart of timing of fish presence in Delta

S: Request for a list of out-of-Delta program elements. R: Will provide when its worked out.

Q: What about the recent Canadian study that links salmon survival to ocean conditions?

Q: Why are sturgeon not on chart? R: All fish are not presented.

Q: What is a program that gives assurances? R: One that provides for restoration and sufficient protection that allows assurances.

Role of EWA: fill deficiencies with flexible assets, assign upstream flows, and apply adaptive management experimentation.

Assumptions: includes b(2) actions and WQCP except where modified. ERP habitat actions for upstream and in-Delta are assumed. No changes in standards.

Q: How will you layer b(2) actions that are vague on top of your actions? R: We will assume we have 800 TAF of b(2) actions. B(2) actions will help to implement our EWA measures.

Areas lacking protection:

- Oct-Jan: protection for spring-run chinook young reaching the Delta.
- Dec-Mar: in high flow years salmon rearing in Delta need protection by allowing them some time to acclimate to habitat in Delta. Need a positive QWEST after Sac River salmon begin to be salvaged. This

could be accomplished with 10-day export reduction and a San Joaquin flow pulse. EWA would also focus on adult smelt with a positive QWEST in wet years.

- Apr-Jun: Building on the 30-day VAMP provide additional protection with longer period of export reductions and supplementation of San Joaquin flow.

Q: What evidence is there that the young salmon are hanging around in Delta? Maybe they are moving to the Bay. San Pablo Bay is a small volume that is easily flushed with freshwater flow to provide freshwater rearing habitat.

Q: What is the basis for a 10-day export reduction? What is the biological process involved? Is there something else we could do that would provide the same protection/benefit? R: Maybe. This is an entrainment issue. Barrier at head of Old River is one thing.

Q: How do you choose the 10-days over this 2-4 month period? R: Monitoring fry - they come in wet years in association with flow pulses - then they begin to set up in Delta rearing habitat.

Q: Can we screen fry at the pumps? R: Yes.

C: This is a bizarre discussion. This would appear to be a massive undertaking to accommodate fry acclimation to habitat in the Delta. Lots of cans opened here.

C: Disagree that standards are inadequate for delta smelt. Did not see how smelt were at risk this year - most of population was downstream. What was the population effect of the number lost at the pumps? R: We will see when the fall midwater trawl index comes out soon.

EWA Measures: May not be needed in all years. In some year more will be needed. EWA will provide the flexibility needed to protect fish as necessary. Upstream actions by CVPIA and ERP will round out the recovery package.

C: Helpful to see what the fish agencies believe to be the "bar". Establishes where we think the needs are. But have a concern for implications to water supply and water quality. Concern about the opportunities for water supply with this baseline (with EWA meeting the "bar") and our ability to model this baseline. R: We can estimate the impact of this to water supply and water quality. But we have to make some assumptions in the gaming.

C: Also concerned whether we are using the "best" science in establishing the "bar". Where are the gray areas. We need to get our arms around the science process.

C: These protections would further constrain our ability to pump high quality water for urban use. Fish so far have benefitted from not exporting when they are otherwise allowed to export. Those benefits will decline under this new baseline. What will modeling tell us about the impact of meeting more water demands on fish? R: This is just a starting point to show how assets work. Water supply impacts are being evaluated. Flexibility provides more protection for any given level of water supply.

C: This seems bizarre - to start gaming with this target/bar. Your uncertainties will be translated into a need for more water supply reliability and reaching a higher supply potential.

Q: What actions are needed simply to avoid extinction? How much less water would be needed? What is the extinction bar? R: CALFED is charged with recovery, not avoiding extinction. This concept of the "bar" has been around for a year. It's our best guess as a road to recovery.

Q: What is meant by export reduction? R: Reduce capacity, not turn off.

Q: What about new facilities and habitat? R: We assume new habitat and facilities such as screening, Head-of-Old River Barrier, etc.

C: There appears to be a lot of assumptions/hypotheses behind this proposal (the "bar"). We need more analyses and testing of these hypotheses. Need to assess WQ impacts to water users. Need to assess effects on fish populations and water supply deliveries.

C: When the Accord was negotiated we assumed some of the protections for the environment were provided by the existing low level of demand and that the standards would be reevaluated with higher new demands when facilities such as the East Side Reservoir came on line. R: East Side will have temporary effects on demand levels, then it will simply shift timing of demands.

C: Did not expect EWA on top of the "bar" would be the baseline/benchmark. Expected EWA to replace standards with flexibility over rigid standards that waste water.

IV. Scenario

In creating a scenario we need to:

- follow the water
- define assets
- define operational rules and constraints
- define baseline
- define sharing formulas
- define b(2); some in Accord, rest not committed in prescriptive way
- define VAMP - cost will be covered by EWA or b(2)

Other constraints: Trinity would not appear in basic scenario. We could evaluate sensitivity of various Trinity options. Sharing formulas would be adjusted depending on other features.

Change any one of these features and you have a new scenario.

8 Scenarios: 4 early stage 1 - 4 late; two b(2) baselines - Interior and Water Users. 4 with Trinity and 4 without. (2X2X2=8)

Scenario 1: DOI b(2) baseline, shared fixed assets, flexible assets to water supply, early stage 1.

Scenario 2: Water Users b(2), shared fixed assets, flexible assets to EWA, early stage 1.

Scenario 3: late Stage 1, scenario 1 + share of additional assets

Scenario 4: late Stage 1, scenario 2 + share of additional assets

Q: What are the differences in two baselines? R: Water users b(2) is Accord + Upstream AFRP.

Q: Why don't fixed assets change with the scenario? Why are they fixed? R: share of fixed assets could change.

Q: If b(2) is the legal base, then why allocate the rest of the new assets to water supply? R: only flexible assets, not fixed assets.

Q: In scenario 1 - why no water purchases to EWA? R: not 100% to water supply just majority of flexible assets.

Q: Under scenario 1 - will that be enough water for the environment? What would be the water supply goal in this scenario? What is the basis for shifting flexible assets to water supply? R: We will be closer to the bar with the prescriptive assets under DOI b(2). We believe we are asset limited - so we must decide how to distribute assets. In each we are trying to hit same target of the bar while maintaining water supply.

Q: How do you define the balance point between water supply and reaching the bar? We ask the water users what they are lacking from each scenario in terms of water supply yield and we purchase the deficit.

C: An observation: your fixed assets are inexpensive, while your variable assets are expensive. How did you decide what was fixed and what was variable? R: b(2) allocations affect federal water supply rather than projects as a whole.

Q: Does the threshold target have to be the same for each scenario? R: yes. We need assets in each scenario to reach target.

Q: What is regulatory flexibility? R: ability to adjust Bacon Island pumping rates outside present allowed limits; ability to operate outside of Delta standards.

S: Suggest adopting bar as a scenario to test it as a baseline.

Q: Could we make JPOD a variable asset? R: Yes.

Q: Should we have both fixed and variable assets? R: Yes.

Q: Do we assume water is available for the water purchases in the scenarios? R: We assume funding is available to purchase water. May need more water than is available to satisfy needs.

Q: The WMCT agreed to have one scenario? R: One was not sufficient - not balanced. We had to use multiple scenarios to adequately evaluate the assets.

C: Some significant decisions need to be made. Much to do. R: We want to have a few workable scenarios otherwise the number is infinite. Four or eight may not be enough. We are improving our scenario evaluation process so that we could do more.

Q: Is it possible to integrate reasonable financial constraints? R: This group (the WMDT) should make that determination.

Q: There are new assets in the scenarios that are not on the asset lists. R: Yes, Los Vacaros.

Q: Are water purchases there to make up for any water supply deficits? R: Yes.

C: Early runs were for fishery measures. We should do runs for water supply and water quality. These scenarios don't do this. Need a scenario dedicated to providing water supply and water supply needs, while maintaining fish as best possible. Benefits to water supply are restrained by these environmental baselines. Need to gain water supply above Accord. R: The longer we get into Stage 1 the more assets we can develop for water supply.

C: There is a bias toward fish in these scenarios. We are shooting for the fish bar, why not the water supply bar. We could have a scenario with more of the assets in the WSR box.

C: How does a scenario define balance with clear definition of the end point. Looks like we have adopted formulas for political balance. Need to address baseline issues. The identified process will produce confusing results.

Q: How are fixed assets shared?

Q: How will you handle mitigation from using these assets and changing timing of exports and flows?

C: Scenarios with different bases need a common point of comparison. The bio bar is a target for comparison. We should strive to reach this target in each scenario and grade the scenarios as to how well they reached the targets. R: That is our intention.

C: Need to clarify environmental targets and move toward them in each scenario.

C: Water user b(2) is water users court position. Water users also have a bar like the eco bar. Eco bar will be very hard to reach.

C: Mitigation burden of CVPIA has fallen on one user group. CALFED efforts could be used to balance this.

C: CALFED feels compelled to see how assets perform to see points on the curve with or without concurrence.

C: Bar should be even higher early in stage 1. The DOI bar is not sufficient for fishing community. We would like a higher bar for fish. Bar is meeting requirements of law - that is not enough. R: No ones bar has been met.

C: Goal is to move forward and develop and analyze scenarios.

S: Can we add a third type: the environmental b(2) baseline. R: yes.

C: Unclear about baselines and differences among scenarios.

Q: How many scenarios can be accomplished in next two weeks? R: We can probably get all of them done.

V. Next Week's Agenda/Charge

DT: finish today's agenda. Frame baseline issues for next week. Define concepts of balance.

CT: Run three scenarios (six runs early and late). Near-term should be priority, but get a least one late stage 1 scenario run. Clearly define assumptions. Define common target/goal - compare how each scenario gets to those goals. Add suggested additions to Stage 1 assets.