

DRAFT NOTES:
Water Management Coordination Team Meeting – 10/14/99
9:30-3:00

AGENDA:

- **Scenario # 1**
- **Modeling and Gaming Proposal**
- **Gaming assignments**
- **Urban Water Quality Targets for Stage 1**

Summary of Agreements/Actions/Assignments

WMCT Charge: Develop and analyze two scenarios: Early and Late Stage 1 with DOI b(2) baseline.

DOI b(2) Baseline: DOI b(2);

EWA: extra b(2) water, \$30-50 million of water purchase power, 100 TAF of ERP water, use of project facilities

Targets: fish, water supply, and water quality

Issues: Policy Group will have to decide who pays for ESA take limits.

Run #1 - 1992: D1485, ESA Upstream Restrictions Controlling (Pre CVPIA), additional refuge water, Trinity at 340TAF, American River modified D1400, New FERC flows, Pre-CVPIA Stanislaus per CVP Yield Study, Replacement pumping, Cross Valley, Folsom Reop per SAFCA, 1995 Demands/Hydrology

Run #2 - add WQCP

Run #3 - add New assets

Run #4 - add upstream AFRP and VAMP exports - modelable b(2) components

Analyses: Comparison of Rn #4 with Rn #3 provides base b(2) cost.; Comparison of Rn #2 with Rn #1 provides Accord cost.

Gaming Objectives: See if we can meet targets. Determine cost of actions. Manipulate system at some water cost.

15 years of gaming will show when b(2)/EWA actions are triggered. Shows how we will fill in holes with EWA. Will show how much EWA water is needed. Will help with b(2) accounting. With few assets available in early Stage 1 run we may not do much, but we will learn a lot - later stage 1 we will accomplish more with more assets. Useful to see how far we get toward new fish assurances bar and various tradeoffs. Provides insight into priorities. Provides measure of effects/benefits. Gives estimate of how much water is needed to get to bar. Needed to show how b(2) and EWA assets work together with synergies to meet targets. Shows how flexible standards work better than prescriptive standards.

Value of Gaming to DT: (1) value of assets; (2) shows what we need to meet bars; and (3) shows how well b(2) helps get to bar and what holes EWA fills with how much water cost. Shows value of flexibility. Rules will be very valuable to DT.

Actions:

- Need input from FWS on b(2) actions.
- We need to show rules we followed in gaming.
- Need Dick's ERP Flows
- Need to develop preprocessing for water quality gaming mechanisms
- Need other biological data to supplement salvage data for gaming.
- Need to develop pre and post processing tools for gaming.
- Need rules for using assets

Game Team Assignments :

- Paul, Bruce, Mike, Dave, BJ, Dave B., Dave F., Karl with support from Russ and TomC
- Meet Monday at J&S (26th and Vst) in auditorium

Responsibility for answering DT questions?

- water supply effects/benefits - BJ

- water quality - Dave B.
- fish - Mike F. and Jim W. with support from Bruce and Karl.

I. Introductions - Ron Ott

Our Charge:

- Develop and analyze two scenarios: Early and Late Stage 1 with DOI b(2) baseline.
- Look at results of these before we do other scenarios.
- Majority of assets to water supply.
- \$30-50 million for EWA water purchases.
- Targets/objectives: Agency fish targets, water users supply targets, and urban water quality target.

DOI b(2) Baseline:

- Oct-Jan use up 350 TAF in additional export reductions to CVP water users; storm recovery of reservoir storage used erases debt.
- Feb-Sep use 530 TAF and any Oct-Jan debt erased to meet Accord (WQCP). Meeting Accord may require more or less. If less, balance goes to EWA. If more, burden on water contractors. (Example: if Accord cost CVP 650TAF with 450 TAF of b(2) credits, along with 350 TAF of upstream b(2) credits, then another 200 CVP contractor impacts.)
- Required to have 800 TAF of water supply impacts (dedication of yield).
- We can't use DWRSIM to model these actions - but we can use daily gaming process and model to account for water "by hand" as we did before.
- Starting Baseline: 1992 pre-Accord with D1485. Work from this base.
- b(2) water can be used toward fish targets - lots of flexibility in use of b(2) in-Delta; less flexibility with upstream b(2) but once applied there is flexibility in use downstream.

EWA:

- extra b(2) water,
- \$30-50 million of water purchase power
- 100 TAF of ERP water for upstream ERP targets
- objective: use to fill in deficiencies (holes) in fish targets that b(2) did not meet.
- gauge effectiveness based on how well we meet targets
- may not meet targets every year; work within our means

Targets:

- fish targets
- water supply targets (we have crude estimate)
- water quality targets (provided in handout by Dave Briggs)

Magic Water:

- water needed to fully meet targets above that available from assets assigned.

- Issue: unclear whether it is simply estimated or actually applied in gaming and models.

Scenario Performance Measure:

- how close scenario gets to targets, or
- how much extra water is needed to reach targets.

Comments:

C: Fish target - long VAMP is scaring people (e.g. this spring). With b(2) water we can probably get close.

C: Concerned about mixing targets (env + water supply).

C: Water users want to clarify that accepting targets as objectives does not mean they are realistic or scientifically justified.

C: Scenario will not generate enough water supply - may be 1 MAF short - if so it's a waste of time. Projects would release any assets - they will need everything to conserve supply - defensive mode. SWP may not be able to cooperate with b(2). R: Such policy issues are for WMDT to address not CT. We only do tech studies for DT. Inappropriate to judge otherwise.

C: Assets allocated to water supply have little value.

II. Gaming Proposal - Dave Fullerton

- Dave summarized his memo on gaming.
- Model as much as we can - game the remainder
- Use magic water to meet any target deficits.
- Need less magic water as assets are developed.
- EWA will need some of Increased Banks Capacity.
- Magic money to buy magic water.
- Water quality targets will be met in gaming but will not affect our gaming of EWA and b(2). May have some synergies.
- Assign assets favoring WS
- Too much magic water will reduce the value of the game
- EWA will get some of Expanded Banks (Apr-May?)
- EWA will get some of used capacity of JPOD, but CVP has priority; EWA will get some if space is available.
- Borrowing power from San Luis will be collateral based.
- DCC will be operated as before for WQ
- JPOD covers refuge water (refuge wheeling)
- GW assets will have 100 TAF total
- Expanded Banks will be 7180 Jul-Sep with caveat that we can do 8500 if permitted in early or late stage 1.

- ERP flows will be responsibility of EWA but 100 TAF of asset is assigned to EWA for this.
- ERP flows are a target as are ESA targets.
- Post processor needed to do accounting.
- Need clarification from MWD on Time Shifting with Castaic for San Luis Lowpoint.
- Gaming will keep track of which assets are called on.
- Trinity not included.
- Water supply reliability account included included with EWA.
- Drop Shasta storage asset.

Discussion:

S: Suggest pre-gaming b(2), the adding EWA actions. R: Need to keep decisions involving both together.

C: Baseline should include OCAP measures for smelt and winter run.

S: start with (1) 92 DWRSIM run; follow with (2) Accord DWRSIM run; follow with (3) DWRSIM of DOI b(2); then game with EWA assets.

S: Accord should include WQCP exports and San Joaquin flows.

Q: Can DWRSIM Run # 2 be accomplished? R: Yes, #2 only involves Accord b(2) measures.

C: May not be able to do Run (3).

C: Could include more b(2) actions in Run (3)

Q: Do ESA actions vary with run? R: No, the same for all scenarios.

Q: Can we separate out the cost of b(2) and EWA? Finding out how big an EWA is needed is key. R: We should do b(2) and EWA together, but account for them separately.

Q: Are smelt BO requirements in Run # 2? R: Assume water will be there in background.

Q: Who pays for ESA reductions (for limiting take)? R: b(2) or EWA not projects.

Q: Who pays b(2) or EWA or other for (1) take, (2) VAMP, and (3) Trinity?

S: Sharing formulas are not necessary in Game 1 because there is no sharing of assets - only need to concentrate on deficits/shortages.

Q: What about In-Delta storage in early or late Stage 1? R: Not in Stage 1.

C: Post processor need

C: Water supply reliability account?? Included with EWA.

Q: How do we handle changing obligations for winter run take? R: complicated.

Issue: Policy Group will have to decide who pays for ESA take limits. Accord assumed thus game “take” as in the past. Assume EWA makes up the water to reduce take.

C: Shasta storage expansion should be dropped. No benefit seen from analysis. (5TAF / year)

C: ESA is a backstop for everything.

C: b(2) can't be used for Trinity.

C: Need to breakdown costs and benefits.

Q: What about mitigation for expanding Banks? R: not a problem for early stage 1. We don't look at mitigation for single assets - overall program benefit will alleviate individual mitigation needs.

C: Extra closures of DCC will have to be made up with other actions to protect WQ.

III. Modeling Instructions

Run #1 - 1992:

- D1485
- ESA Upstream Restrictions Controlling (Pre CVPIA)
- Includes additional refuge water
- Trinity at 340TAF
- American River modified D1400
- New FERC flows
- Pre-CVPIA Stanislaus per CVP Yield Study
- Replacement pumping for striped bass
- + Cross Valley
- + Folsom Reop per SAFCA
- 1995 Demands/Hydrology

Run #2 - Baseline for Prescriptions (WQCP + Run #1 Features)

- + VAMP flows with exports limited to 100% of San Joaquin flows
- + Stanislaus Interim Op Water
- Smelt opinion covered

Run #3 = Run #2 plus the following:

- Banks @ 7180 Jul-Sep; 6680 + 1/3rd Vernalis Nov-Mar; 6680 Apr-Jun
- Intertie
- JPOD (asset to water supply)
- Refuge Wheeling

Run #4 = everything in Run #3 + all that can be modeled in DWRSIM

- upstream AFRP
- VAMP exports
- then game remaining b(2) and EWA actions
- no b(2) accounting in DWRSIM
- post-processing needed in gaming - with more than one option/opinion on allocation of water cost.
- flag b(2) use

Analyses:

- Comparison of Rn #4 with Rn #3 provide base b(2) cost.
- Comparison of Rn #2 with Rn #1 provide Accord cost.

C: Rn's 1, 2, & 4 sequence is close to water users b(2) proposal.

C: Rn's 1, 2, and 3 make sense; 1, 2, & 4 cost too much water. Rn 4 is informational.

C: Rn 4 will be useful in evaluating Upstream AFRP.

Action: Need input from FWS on b(2) actions.

S: Use old DWRSIM runs for now to represent new runs so we can start gaming.

C: Flows will change with new baselines - concern about how we interpret biol historical data - 15 years of historical fish data. R: Treat salvage data as before - by hand in gaming.

Gaming Objective/Purpose/Value/Benefit:

Q: What is our objective in gaming? What do we hope to accomplish? R: See if we can meet targets. Determine cost of actions. Manipulate system at some water cost.

C: Gaming is not going to give us anything new for DT. R: Biological goals are to give assurances. 15 years of gaming will show when b(2)/EWA actions are triggered. Shows how we will fill in holes with EWA. Will show how much EWA water is needed. Will help with b(2) accounting. If we DWRSIM model only, we will overestimate how much water is needed to reach environmental targets.

C: Gaming needs to be more efficient. Need to find ways to save time. Develop standard approaches so we don't have to repeat every decision and action.

C: With few assets available in early Stage 1 run we may not do much, but we will learn a lot - later stage 1 we will accomplish more with more assets.

C: Gaming is useful to see how far we get to bar and various tradeoffs. Provides insight into priorities.

C: Gaming provides measure of effects/benefits. Gives estimate of how much water is needed to get to bar.

C: Not clear on how we represent effects/benefits.

C: Gaming will tell us more, but not sure about the numbers we will get.

C: Without gaming what would we do

C: Gaming needed to show how b(2) and EWA assets work together with synergies to meet targets.

C: Gaming shows how flexible standards work better than prescriptive standards - but not sure how it will help DT.

R: DT will want to see how close we can get to bar and how much it will cost. Need gaming to answer our charge from DT.

R: There would be substantial input from gaming to DT: (1) value of assets; (2) shows what we need to meet bars; and (3) shows how well b(2) helps get to bar and what holes EWA fills with how much water cost.

R: Shows value of flexibility.

R: Rule will be very valuable to DT. **Action:** We need to show rules we followed in gaming.

IV. How do we answer DT questions?

- BJ Miller will be responsible for answering questions as to how well we did for water supply.
- Dave Briggs will address water quality
- Mike Fris and Jim White will address fish with support from Bruce Herbold and Karl Halupka

V. Game Team Assignments -Ron Ott

- Paul, Bruce, Mike, Dave, BJ, Dave B., Dave F., Karl with support from Russ and TomC
- 1981-1995 daily model is ready
- Dicks ERP Flows
- Other Biol survey data to supplement salvage data.
- Pre and Post processing needs development
- Charge is to develop rules for using assets
- Dave B needs to develop preprocessing process for water quality gaming mechanisms
- Meet Monday at J&S (26th and Vst) in auditorium

Q: How will we account as we go? R: Need accounting process with b(2) counter.