Diversion Effects on Fisheries Technical Team
August 5, 1998, 1:00 pm to 5:00 pm

Meeting Minutes

Present:

Michael Thabault	Lee Miller	Paul Fujitani	Jim Buell
Michael Fris	Bruce Herbold	Larry Brown	Gary Bardini
Pat Brandes	Sheila Greene	Serge Birk	Sarah Cotter
Gary Stern	Steve Roberts	Chuck Hanson	Paul Marshall
Karl Halupka	Curtis Creel	Pete Rhoads	Rick Woodard
Pete Chadwick	Jim Snow	Bill Kier	Mark Cowin
Jim White	Mark Holland	Elise Holland	Ron Ott
Kevan Urquhart	Parviz Nader	Joe Miyamoto	
Dale Sweetnam	Tara Smith	BJ Miller	

DEFT members were briefed on several support activities conducted by the CALFED Modeling, CALFED Water Quality, and the Department of Water Resources DSM2 Modeling Teams. Discussion followed each presentation and the meeting minutes were as follows.

CALFED Operations Modeling

Gary Bardini of CALFED delivered a short presentation on the operation constraints that govern monthly export limits for the SWP, CVP, and Delta Outflow during critical and dry water years, and over a long-term period. This information was presented to provide additional detail on 6 specified DWRSIM operation studies that were provided to the DEFT at a prior meeting.

Discussion:

The detailed description of each export constraint should be provided. Specifically the difference between "no limitation" and "opportunity pumping" needs to be clarified. One DEFT member found "Delta Surplus Conditions" to be a misleading label and should also be clarified.

New Reoperation Studies

Elise Holland made a request for additional reoperation studies to aid in the DEFT process. The following reoperation scenarios are assumed to provide varying degrees of additional protection for fisheries. The study results will be evaluated to determine which, if any of the reoperation combinations provide the greatest water supply and

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fishery protection benefits. The new studies will include the following reoperation criteria:

1. Accord + AFRP (1995)
2. Accord + AFRP (1995) + In-Delta AFRP (1995)
3. Accord + AFRP (1995) + In-Delta AFRP (1995) + DEFT list of actions which include:
    - April – May VAMP
    - E/I Restrictions (.25 Feb-Jun, .55 Oct, .45 Nov, .45 Dec)
    - E/I Relaxations (.75 Aug, .75 Sep)
    - X2 Standard (1962 LOD)
4. Each of the preceding studies will also be conducted with a set of supply actions added, which include:
    - ISDP (Relaxed COE pumping restrictions at Banks PP)
    - Unlimited Joint Point of Diversion
    - 400 cfs Aqueduct Intertie
    - 350 TAF Madera Ranch Groundwater Bank

Each study will be compared at a 2020 level of development as time permits.

Discussion:

The biologic reasoning behind selecting these reoperation criteria should be qualified. In addition, the operation requirements currently in place should be reevaluated before any new studies are conducted.

CALFED Water Quality Team

Paul Marshall of CALFED delivered a short presentation summarizing the key water quality issues that affect fish. These issues included sediment effects, nutrient effects, heavy metal effects, mercury effects, drinking water effects, and pesticide effects.

Discussion:

The following additional water quality concerns were explored during discussion:

- Dredging of Delta channels may recirculate mercury that has settled out in sediments. There have been several mercury "hot spots" found along the Sacramento River and in the North Delta. CMARP has proposed several monitoring scenarios to assess this problem in the future.

- Temperature effects on immigration of salmon were not included as a water quality issue at this time.

- Iron Mountain Mine is the source of the majority of copper contamination in California streams. There is concern that if Spring Creek was to flood the mine, the influx of contaminated water into surrounding gravel spawning grounds could potentially destroy those fish populations. Water diverted from

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Shasta can be used to dilute the contaminated water in emergency situations; however, current law does not require this allocation.

- The summary of pesticide concerns provided on the handout was considered biased by some DEFT members, and additional research and alternative hypotheses should be included.

- The Colusa Drain is heavily contaminated. Most of the copper found in the Drain comes from agricultural runoff.

- Riparian fencing is one method used to reduce pathogens and nutrients derived from cattle waste. Several DEFT members suggested that locating these fenced areas in strategic spots such as along gravel spawning areas could create multiple benefits.

Future Action:

The CALFED Water Quality Team has six work groups assisting with developing a comprehensive list of actions to improve water quality in the Delta. The Water Quality Team is currently working on prioritizing a set of actions to be implemented in the first seven years as a part of the short-term CALFED plan.

Particle Tracking Model (PTM)

Tara Smith of the Department of Water Resources delivered a short presentation on the current capabilities of PTM. She emphasized that tidal fluctuations are implicit in the tracking model and presented an example of particle tracking.

Discussion:

PTM has been explored as a potential tool for tracking movement of fish and fish eggs throughout the Delta; however, some fishery biologists question the effectiveness of using PTM to predict the movement of fish because fish behavior is not incorporated into the PTM model.

Fishery Recovery Goals

Terry Mills defined the mission of the DEFT team as the following:

- Long-term (30 year) Through-Delta Recovery
- Develop a set of initial steps required to achieve recovery

The recovery goals for winter run salmon was presented as an example. Three main objectives were listed as necessary developments to ensure recovery:

- A population of 10,000 females or 20,000 total
- Cohort replacement rate >1
- Accurate measurement method

Studies conducted on cohort replacement rates indicate that the average replacement rate prior to listing in 1989 was 0.7. After listing, the replacement rate has maintained at >1 and small population increases have been noted. This is viewed as a positive step towards recovery; however, the initial population was so small that population increases are also very small, and the threat of extinction still exists.

The set of actions to be implemented in the first seven years will be considered a period of learning. CALFED's practice of Adaptive Management will allow for flexibility in determining actions for the rest of the long-term program.

Discussion:

Projections indicate that many fish species will not satisfy the "recovery" requirements within the 30-year recovery period. Some species may require more time for full recovery.

Future Actions:

The DEFT team must agree on several definitions of terms, such as "recovery". A list of definitions developed by the Conservation Team will be distributed for review and will eventually be presented to CALFED for approval.

Each of the common programs has developed a set of potential actions compiled in an August 4, 1998 draft report. The DEFT team should review these general actions and break them down into a prioritized set of specific actions to be included in the final report of recommendations to the Policy Group.

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