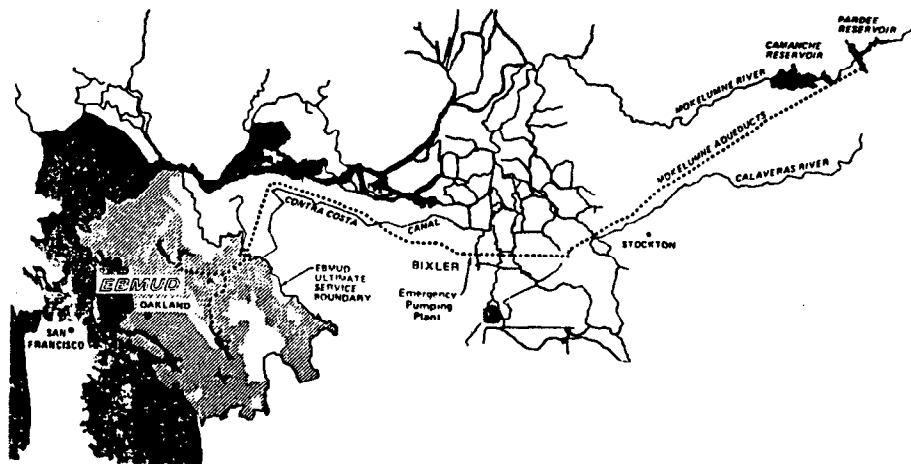


U. S. BUREAU OF RECLAMATION PETITION FOR TEMPORARY URGENCY CHANGE

ADDITION OF INDIAN SLOUGH
AS POINT OF DIVERSION TO SUPPLY
EAST BAY MUNICIPAL DISTRICT

APPLICATION 5626 ET AL

ORDER WR 88 - 15



SEPTEMBER 1988

STATE WATER RESOURCES CONTROL -BOARD

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STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Application 5626,)	
et al.,)	
U. S. BUREAU OF RECLAMATION,)	ORDER: WR 88- 15
)	
Petitioner,)	
)	SOURCE: Indian Slough
EAST BAY MUNICIPAL UTILITY DISTRICT,)	
)	COUNTIES: Alameda, Amador,
Real Party in Interest,)	Calaveras,
)	Contra Costa, and
CALIFORNIA DEPARTMENT OF FISH)	San Joaquin
AND GAME, et al.,)	
)	
Objectors.)	
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ORDER DENYING PETITION FOR
TEMPORARY URGENCY CHANGE

1.0 INTRODUCTION

The U. S. Bureau of Reclamation (Bureau) having filed a petition for a temporary urgency change to add an additional point of diversion and rediversion to the water right permits of the Central Valley Project; notice of the petition having been published in a newspaper of general circulation and mailed to persons who could be adversely affected by the proposed change; objections to the petition having been filed; a hearing having been held on July 13, 14, 27, and 28, 1988 by the State Water Resources Control Board (Board); the petitioner, real party in

interest, and objectors having appeared and presented testimony and exhibits and the evidence having been duly considered; the Board finds and concludes the following:

2.0 SUBSTANCE OF PETITION

The petition requests that a temporary point of diversion and rediversion be added to the points of diversion and rediversion currently specified in the following applications (permits): 5626 (12721), 5628 (11967), 9363 (12722), 9364 (12723), 13370 (11315), 13371 (11316), 15374 (11968), 15375 (11969), 16767 (11971), 17374 (11973), 17376 (12364). The additional point of diversion and rediversion would be located at the intake of the East Bay Municipal Utility District's (EBMUD) Bixler Emergency Pumping Plant (Bixler) which is located in Indian Slough within the Sacramento-San Joaquin Delta (California Coordinates: North 526,100, East 1,679,200; within NW1/4 of NE1/4 of Section 14, T1N, R3E, MDB&M). The change would be effective between July 15, 1988 and January 11, 1989. During the hearing on this matter, the Bureau requested that its petition be modified to change the 180-day period to begin September 15, 1988 (T,12:15-20). As a result of our denial of this petition, we do not need to decide this issue. The quantity of water diverted or rediverted pursuant to this petition would not exceed 37,500 acre-feet (af) (6,250 af per month); The maximum rate of diversion would be 140 cubic feet per second (cfs).

3.0 PROJECT DESCRIPTION

EBMUD proposes to pump Delta water from Indian Slough via Bixler and EBMUD's Mokelumne Aqueduct No. 2 east to Camanche Reservoir where it would be commingled with Mokelumne River water remaining in Camanche Reservoir and released to meet EBMUD's fishery and senior water right obligations on the lower Mokelumne River below Camanche Dam. In exchange for releasing the Delta water from Camanche Reservoir to meet its downstream obligations, EBMUD would deliver the Mokelumne River water from Pardee Reservoir (located upstream of Camanche Reservoir) to EBMUD customers in its service area.

The petition specified that the alternative of pumping Delta water west directly to EBMUD's service area be considered in addition to the alternative of pumping east to Camanche Reservoir. However, at the hearing on this matter, EBMUD requested that the westbound alternative not be considered at this time (TI,154:2-25). The Bureau may petition the Board in the future for consideration of this alternative.

4.0 OBJECTIONS TO PETITION

In response to the Notice of Petition and Public Hearing, objections were filed by the following persons:

- o California Department of Fish and Game (DFG)
- o Contra Costa Water District (CCWD)
- o San Joaquin County (County)
- o Joanne and Robert Hoffman

- o Bradford, Susan, and Harold Lange
- o North San Joaquin Water Conservation District (District)
- o Woodbridge Irrigation District (Woodbridge)
- o City of Lodi (Lodi)
- o Mokelumne River Riparian Rights Property Owners (Property Owners)
- o California Sportfishing Protection Alliance (CSPA)
- o Concerned Citizens for Improved Quality Water (Concerned Citizens)
- o Hoopa Valley Tribe
- o San Joaquin Farm Bureau Federation (Farm Bureau)

4.1 DFG

DFG's objection alleges that the proposed change will have a significant adverse environmental impact; is an unreasonable method of use and an unreasonable method of diversion; will injure lawful users of water; will have an unreasonable effect upon fish and wildlife; will violate Fish and Game Code Sections 5650, 5937, and 6100; will violate the Water Quality Control Plan (Basin Plan); and is not in the public interest.

4.2 CCWD

CCWD's objection alleges that the proposed change will injure lawful users of water and is not in the public interest.

4.3 County; Joanne and Robert Hoffman; Bradford, Susan, and Harold Lange

The objection filed by the County, the Hoffmans, and the Langes alleges that EBMUD does not have an urgent need for water from this project during the six-month period from July 15, 1988 to January 11, 1989 and that the Bureau and EBMUD have not complied with the National

Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), and with NPDES waste discharge requirements. It further alleges that the proposed change will violate the non-degradation policy of the Central Valley Basin Plan; will have substantial adverse environmental impacts upon fish, wildlife, recreation, and the instream beneficial uses of the lower Mokelumne River; will violate Water Code Sections 1243.5 and 1435 et seq. and Fish and Game Code Sections 1564 and 5650; will injure lawful users of water on the lower Mokelumne River; will have an adverse impact on public trust resources; is inconsistent with downstream users' rights to the use of Mokelumne River water; and is not in the public interest.

4.4 District

The District's objection alleges that substituting lower quality Delta water for Mokelumne River water will adversely affect agricultural and domestic uses and the proposed change is not in the public interest.

4.5 Woodbridge

Woodbridge's objection alleges that the proposed change will harm lawful users of Mokelumne River water; is contrary to law and beyond the jurisdiction of the Board; and is not in the public interest. It further alleges that EBMUD has not complied with CEQA and lacks an urgent need to place Delta water behind Camanche Dam.

4.6 Lodi

Lodi's objection alleges that the proposed change will have adverse impacts on the ground water from which Lodi draws its drinking water and on the recreational use of Lodi Lake caused by the introduction of

water hyacinths and non-native fish species. It further alleges that EBMUD has not complied with CEQA.

4.7 Property Owners

The Property Owner's objection alleges that the proposed change will injure lawful users of water, will have adverse environmental impacts, and will be contrary to law.

4.8 CSPA

CSPA's objection alleges that the proposed change will violate the public trust; will violate Article X, Section 2 of the California Constitution; will not be in the public interest; will have adverse environmental impacts on the Mokelumne River and the Delta; will be an unreasonable method of diversion; will injure lawful users of the waters of the Mokelumne River below Camanche Reservoir; will have unreasonable effects on fish, wildlife, and other instream beneficial uses; will violate water quality standards and objectives; will violate Fish and Game Code Sections 5650, 5937, and 6400; and will violate Water Code Sections 100, 275, 1243, 1257, and 1435. It also alleges that EBMUD lacks an urgent need for the project and has not complied with CEQA.

4.9 Concerned Citizens

The Concerned Citizens' objection alleges that EBMUD has not complied with CEQA and lacks an urgent need for the proposed change. It further alleges that the proposed change will have an adverse impact on water quality.

4.10 Hoopa Valley Tribe

The Hoopa Valley Tribe's objection alleges that the proposed change will have unreasonable adverse impacts on fish, wildlife, and other instream beneficial uses and will injure lawful users of water. It further alleges that the Bureau and EBMUD have not complied with NEPA and CEQA, and there is no water available for appropriation from the Trinity River.

4.11 Farm Bureau

The Farm Bureau's objection alleges that the proposed change will have adverse environmental impacts and will injure lawful users of the Mokelumne River. It further alleges that EBMUD does not have an urgent need for the proposed change.

5.0 APPLICABLE LAW

Water Code Section 1435, et seq., provides that a conditional, temporary change order may be issued by the Board to any permittee or licensee who has an urgent need to change a point of diversion, place of use, or purpose of use from that specified in the permit or license. In order to approve a temporary change order, the Board must make all of the following findings:

1. The petitioner has an urgent need to make the proposed change.
2. The proposed change may be made without injury to any other lawful user of water.

3. The proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses.
4. The proposed change is in the public interest.

Further, the Board is required to adopt findings to support change order conditions imposed to assure that the change is consistent with the above findings.

6.0 KEY ISSUES

The following key issues were noticed for the hearing on this matter:

1. Does EBMUD have an urgent need for the water?
2. Is the proposed change in the public interest?
3. Will the proposed change injure any lawful user of water?
4. Can the proposed change be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses?
5. What conditions should be made part of any order issued to assure that no lawful user of water is injured and that there are no unreasonable effects upon fish, wildlife, and other instream uses?

In addition to the key issues listed above, other relevant issues noticed for the hearing were:

1. Is the proposed change within the Board's jurisdiction?
2. Will the proposed change have an adverse environmental impact?

3. Will the proposed change result in waste, unreasonable method of use, or unreasonable method of diversion?
4. Will the proposed change impair public trust uses?
5. Is the proposed change contrary to law?
6. Will the proposed change conflict with a general or coordinated plan or with water quality objectives established pursuant to law (Water Code Section 10504)?

Because the evidence presented at the hearing on these issues was presented in the context of the key issues, the discussion below is limited to those issues.

7.0 URGENCY

EBMUD now has an urgent need to acquire an additional water supply in order to meet its requirements in the event of a third consecutive dry year and to put in place a system capable of delivering that additional supply.

EBMUD needs a minimum total carryover storage of 260,000 af by September 30 of any year (EBMUD 42). The amount of storage which is projected as of September 30, 1988 is 305,000 af (EBMUD 43) which is adequate.

Additions to storage depend upon rainfall and runoff. If 1989 is a repeat of 1977, 129,000 af will be added to storage (EBMUD 43). If 1989 is a one-in-twenty-year occurrence, 245,000 af will be added to storage (EBMUD 43). If 1989 is a one-in-ten-year occurrence, 300,000 af will be added to storage (EBMUD 43). The uses of that stored water include 240,000 af for consumption by EBMUD customers, 20,000 af for evaporation, and either 115,000 af (year similar to 1977) or 145,000 af (one-in-twenty or one-in-ten year) for downstream needs (EBMUD 43). Assuming 25 percent conservation by EBMUD customers, consumption would be reduced to 180,000 af. Therefore, without adequate rainfall and runoff next year, EBMUD may not meet its minimum carryover requirements as of September 30, 1989.

8.0 INJURY TO OTHER LAWFUL USERS OF WATER

The project proposed by EBMUD may impact lawful users who divert water from the lower Mokelumne River and rely on the Mokelumne River to recharge the ground water. EBMUD has proposed a variety of mitigation measures, but has not been able to show that those measures will eliminate potential injuries to other lawful water users.

8.1 Municipal and Domestic Water Users

The proposed project would increase the concentration of a number of constituents (such as trihalomethanes and sodium), which are of concern to municipal and domestic water users. EBMUD failed to show that the increased concentrations of these constituents would not harm these water users.

8.2 Agricultural Water Users

Issues which concern agricultural water users along the lower Mokelumne are water quality and the introduction of nuisance aquatic plants into irrigation canals. EBMUD admits that the water received by agricultural users from the proposed project would be of lesser quality than Mokelumne River water, but it asserts that the water would be suitable for irrigation purposes without potential adverse effects. This assertion assumes that the water from Indian Slough will be blended with water from Camanche Reservoir, that pumping will commence on August 1, 1988, and that the pool in Camanche Reservoir will be 40,000 af. It is further assumed that water will be diverted for irrigation only during the months of August and September 1988 (EBMUD 32:4-8).

The proposed diversion could introduce nuisance aquatic plants to Camanche Reservoir and the Mokelumne River. The reservoir and river do not presently contain these plants. The principal concern is the introduction of water hyacinth, which is subject to an ongoing state control program consisting principally of the use of the herbicide 2,4-D. There has been no success in eradicating water hyacinth in the Delta. Water hyacinth is a nuisance because it clogs irrigation pumps and canals, and affects recreational uses.

EBMUD proposes a multi-barrier approach to prevent the transfer of aquatic plants. The barriers would consist of:

1. coordination with the ongoing state. program for water hyacinth control in the Delta,
2. a 10-yard clear zone coupled with a log boom and debris fence at the Indian Slough intake,
3. a fish screen with openings of 3/32 inch (approximately 2mm),
4. chlorination of the water in transit to Camanche Reservoir,
5. entrapment basins at the point of discharge,
6. monitoring of the discharge area, and
7. surveys to identify aquatic plants presently in Camanche reservoir and Indian Slough (EBMUD 32:7-6).

The proposed screens would not be of small enough mesh to retain water hyacinth seeds (EBMUD 32:7-6); plant fragments smaller than the mesh would also enter the diversion (TI,149:3-5). Not all water hyacinth seeds sink and therefore some would be diverted and float through the proposed settling ponds. Chlorination may not kill the seeds, and "hard seeds" would survive chlorination. In experiments conducted by San Joaquin County consultants, where aquatic weeds from Indian Slough were chlorinated with doses identical to that proposed by EBMUD, it was found that photosynthesis still occurred in some plants. Chlorination may stimulate sprouting of the seeds (TI,283:5-18).

Water hyacinth seeds may be dormant for up to 15 years (TII,287:24-25); it has not been determined how long the monitoring program will

continue. If the hyacinth were introduced into the lower Mokelumne River system, it could become established in backwater areas of the River or in any large lake such as Lodi Lake (TII,291:8-18). The water hyacinth could also become established in irrigation canals. The Board finds that the risk of introducing water hyacinth is substantial and that the introduction of water hyacinth would injure lawful users of water on the Mokelumne River.

8.3 Riparian Water Users

A number of riparian water users along the lower Mokelumne River use the water for domestic and irrigation purposes. These users would be subject to the same effects as the municipal and agricultural users.

8.4 Mokelumne River Fish Installation

Water is used at the Mokelumne River Fish Installation for spawning and rearing of cold water fish. DFG (operator of the installation) would be adversely impacted by the proposed project because it would be unable to obtain water suitable for the production of salmonids due to changes in water temperature and turbidity. Fish diseases may also be introduced. (See Sections 9.1, 9.3, and 9.4.) DFG is subject to effluent limitations from the Mokelumne River Fish Installation which are contained in NPDES Order 86-042 issued by the Regional Water Quality Control Board, Central Valley Region. DFG testified that the proposed project may result in violation of this Order.

9.0 UNREASONABLE EFFECTS UPON FISH, WILDLIFE, AND OTHER INSTREAM BENEFICIAL USES

9.1 Importation of Fish Pathogens

The proposed diversion could result in the introduction of fish pathogens to Camanche Reservoir, the Mokelumne River, and the Mokelumne River Fish Installation. These pathogens include Vibrio sp., Mycobacterium sp. (which causes fish tuberculosis), Ceratomyxa shasta, and PKX (tentatively identified as the causative agent for proliferative kidney disease (PKD)). These pathogens are in Delta waters that EBMUD proposes to divert but are not in Camanche Reservoir or the Mokelumne River.

EBMUD proposes to add chlorine at a concentration of approximately 4 to 8 mg/l to maintain a residual of 1 mg/l after 18 hours to reduce the risks of transferring bacterial and viral fish diseases to a minimum (EBMUD 32:1-9). However, EBMUD was not able to show that chlorination would completely eliminate these pathogens. Because there are no known effective therapeutics for the treatment and control of Mycobacterium, Ceratomyxa, PKX, and PKD; and control measures for the control of Vibrio are expensive, time consuming, and are often only partially successful (DFG 8A), the Board finds that in this case the risk of introducing these pathogens is unreasonable.

9.2 Importation of Fish from the Delta to Camanche Reservoir and the Mokelumne River

To avoid loss of juvenile and adult fish resulting from the proposed diversion, EBMUD proposes to install fish screens at the Indian Slough intake per DFG specifications, with a slot width of 3/32 inches. That

slot size would exclude juvenile chinook salmon greater than 1.2 inches, American shad greater than 1 inch, and white sturgeon greater than 0.9 inch (EBMUD 32:1-7). The proposed fish screen would be designed to exclude the majority of fish, but not all fish (TI,185:21-24). EBMUD failed to show that the proposed chlorine dosage would eliminate all undesirable fish eggs and larvae. Consequently, some Delta fish could be introduced to Camanche Reservoir and the Mokelumne River. The Board finds that in this case the risk of introducing undesirable fish to the Mokelumne River is unreasonable.

9.3 Homing of Anadromous Fish

Introduction of Delta water in the Mokelumne River may interfere with the homing of adult chinook salmon and steelhead, which key on the scent of water from their home stream. The proposed diversion may adversely affect the homing of adult Chinook salmon returning to the Mokelumne River to spawn and may also adversely affect the imprinting of juveniles because the scent of the mix of Delta water with Mokelumne River water would be different from the scent of Mokelumne River water. The Board finds that in this case the risk of interfering with the homing of these fish is unreasonable.

9.4 Water Temperatures for Spawning of Chinook Salmon

Chinook spawning normally begins in the Mokelumne River about October. Water temperatures above 58° F are harmful to eggs. If the proposed diversion is not implemented, EBMUD will release water from Pardee into Camanche beginning in October at the rate of about 4,000-5,000 af per month. The volume of water in Camanche would be held at

10,000 af (EBMUD 32:Table 2-1). Release of Pardee Reservoir water into Camanche Reservoir will cool Camanche Reservoir water. October temperatures would be 60° F with Pardee releases and 62-65° F with the proposed introduction of Delta water. November temperatures would be in the low 50s with Pardee water and 56-60° F with Delta water. The high temperatures resulting from the introduction of Delta water would be significantly adverse to salmon reproduction.

9.5 Aquatic Plants

As mentioned above, the proposed diversion could result in the introduction of aquatic plants to Camanche Reservoir and the Mokelumne River which presently do not contain these plants. In addition, nutrient levels in Delta waters could stimulate growth of Cladophora which would smother river gravels (and therefore adversely affect salmon spawning) and clog fish screens.

10.0 THE PROPOSED CHANGE IS NOT IN THE PUBLIC INTEREST

The proposed change may cause adverse impacts on water quality, public health, fish, and agricultural operations. It may cause injury to other lawful users of water. Other alternatives appear to be available to EBMUD. Therefore, the Board finds that the proposed change is not in the public interest.

11.0 COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA does not apply to projects which a public agency rejects or disapproves. Public Resources Code Section 21080(b)(5), 14 California Code of Regulations 15270(a). Because the petition for a temporary

urgency change is denied, this order is not subject to CEQA, and no environmental documentation is required.

12.0'

CONCLUSIONS

1. The Board concludes that EBMUD has an urgent need to acquire an additional water supply in order to meet its requirements in the event of a third consecutive dry year and to put in place a system capable of delivering that additional supply. However, given the adverse effects of this proposed change, the adequacy of carryover storage as of September 30, 1988, and the availability of other alternatives to EBMUD, the Board concludes that EBMUD does not have an urgent need to divert the additional supply as proposed in the petition during the time period requested in the petition.
2. The Board concludes that the proposed change may not be made without injury to any other lawful user of water.
3. The Board concludes that the proposed change may not be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses.
4. The Board concludes that the proposed change is not in the public interest.
5. The Board concludes that the petition should be denied.

ORDER

IT IS HEREBY ORDERED that the petition for a temporary urgency change is denied.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on August 18, 1988.

AYE: W. Don Maughan
Darlene E. Ruiz
Edwin H. Finster
Danny Walsh

NO: None

ABSENT: Eliseo M. Samaniego

ABSTAIN: None


Maureen Marche
Administrative Assistant to the Board