

KCB

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of)
)
CITY OF STOCKTON)
)
Requesting Review of Waste Discharge)
Requirements Order No. 94-324, NPDES)
Permit No. CA0079138 Issued by the)
California Regional Water Quality)
Control Board, Central Valley Region.)
Our File No. A-937.)
)

ORDER NO. WQ 96-09

BY THE BOARD:

On October 28, 1994, the Central Valley Regional Water Quality Control Board (CVRWQCB) adopted Waste Discharge Requirements Order No. 94-324, NPDES Permit No. CA0079138 (NPDES permit) for the discharge from the City of Stockton's wastewater treatment plant, which discharges into the San Joaquin River. The City of Stockton (City, Stockton, or Petitioner) filed a petition with the State Water Resources Control Board (SWRCB) objecting to certain provisions in the NPDES permit and requesting a stay of the permit until the SWRCB completed its review of the petition. In March 1995 the SWRCB adopted an order approving a Stipulation for Order Issuing Limited Stay between the City of Stockton and the CVRWQCB (SWRCB Order No. WQ 95-1). The stipulation provides that the effluent limitations for ammonia and the receiving water limitations for dissolved oxygen in the NPDES permit are stayed.

On March 21, 1996, the SWRCB adopted an order to consider Stockton's petition on its own motion and continuing the stay until the SWRCB proceeding is complete.

I. BACKGROUND

The petition includes numerous contentions but the primary issue raised by the petition concerns the effluent limitations for carbonaceous biochemical oxygen demand (CBOD) and ammonia and the receiving water limitations for dissolved oxygen (DO). The CVRWQCB established the CBOD and ammonia effluent limitations to reduce adverse impacts of the discharge on DO levels in the San Joaquin River.

There are two DO water quality objectives that apply to this discharge. The Water Quality Control Plan, Central Valley Region, Third Edition, for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) establishes a water quality objective for DO of 5 mg/l throughout the year.¹ The Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (1995 Bay/Delta Plan) contains a more stringent 6 mg/l DO water quality objective for the segment of the San Joaquin River from Turner Cut to Stockton during

¹ The Basin Plan was adopted in May 1995 after the NPDES permit was issued. The same DO water quality objective was included in the water quality control plan that was in effect at the time the permit was adopted. (Water Quality Control Plan for the Central Valley Region, Second Edition, the Sacramento River Basin, the Sacramento-San Joaquin Delta Basin, the San Joaquin River Basin, p. III-5.) The term "Basin Plan" as used in this order applies to both water quality control plans.

September through November.² The 1995 Bay/Delta Plan specifies that if it is infeasible for the waste discharger to meet this objective immediately, a time extension or schedule of compliance may be granted, but the objective must be met by September 1, 2005.

The Basin Plan water quality objective for DO was established before 1977. The 1995 Bay/Delta Plan water quality objective for DO was originally established in 1991 in the Water Quality Control Plan for Salinity for the San Francisco Bay/Sacramento-San Joaquin Delta (1991 Bay/Delta Plan). The 1991 Bay/Delta Plan, which was superseded by the 1995 Bay/Delta Plan, did not authorize a time extension or schedule of compliance for achieving the water quality objective.

In 1990 Stockton applied to renew its 1986 NPDES permit, which would expire in 1991. In the course of application review, the City and CVRWQCB staff agreed that additional information was needed to address important permit renewal issues, including the impact of the discharge on downstream DO concentrations. The City proposed completing a San Joaquin River Computer Model (river model) to address some of these information needs. The CVRWQCB agreed to postpone the permit renewal process

² This water quality objective was incorporated into the Basin Plan in May 1995. The 6 mg/l water quality objective is more stringent than 5 mg/l because discharge constituents that reduce dissolved oxygen must be more strictly controlled to achieve a higher level of DO in the receiving water. For the purpose of this order, the 5 mg/l DO water quality objective is referred to as the Basin Plan DO water quality objective and the 6 mg/l (September through November) water quality objective is referred to as the 1995 Bay/Delta Plan DO water quality objective.

to give the City time to complete the river model. In September 1993 the City submitted a report, based on the river model, regarding the impact of the discharge on DO in the San Joaquin River (A Report on Dissolved Oxygen In San Joaquin River Near Stockton Outfall, September 1993 (1993 Model Report), prepared by Carl W. Chen, Ph.D., P.E., and Robert Schanz, M.S., P.E.).

Based on its review of the 1993 Model Report and other information in the record, the CVRWQCB staff concluded that although the City had complied with effluent limitations in its existing permit, the water quality objectives for DO in the Basin Plan and the 1991 Bay/Delta Plan were not achieved in the receiving water. Consequently, the CVRWQCB staff proposed more stringent effluent limitations in the draft NPDES permit as follows:

TIME PERIOD	CBOD (mg/l)			NH ₃ (mg/l)		
	Monthly Avg.	Weekly Avg.	Daily Max.	Monthly Avg.	Weekly Avg.	Daily Max.
Dec. 1-Mar. 31	20	--	--	no nitrification required	--	--
Apr. 1-Oct. 31	10	20	25	2	4	5
Nov. 1-Nov. 30	15	23	30	10	15	--

These effluent limitations vary depending on the time of year. The City objected to the most stringent limitations: 10 mg/l for CBOD (monthly average) and 2 mg/l ammonia (monthly

average) during April through October. It objected on several grounds. First, the City claimed that compliance with these effluent limitations would be unreasonably expensive. The City is in the process of designing and constructing improvements to its treatment plant. It represented that these improvements are planned to achieve effluent quality of 10 mg/l CBOD and 7 mg/l ammonia. The City asserted that the cost of constructing the incremental improvement to achieve an effluent quality of 2 mg/l ammonia would be \$35 million plus additional financing costs of \$15 million. Second, the City asserted that it could not complete improvements to comply with the effluent limitations during the five-year life of the NPDES permit and this would unfairly subject it to enforcement actions. Finally, the City argued that even without its discharge, the DO levels in the area of its discharge would not consistently comply with the Basin Plan and 1991 Bay/Delta Plan water quality objectives. The City claimed that this water quality impairment was caused by man-made conditions, including Delta export pumping and other operations, which reduce and reverse flows in the San Joaquin River near Stockton.

Despite the City's objections, the CVRWQCB adopted the NPDES permit with the effluent limitations recommended by staff. The NPDES permit findings acknowledge that other causes contribute to the low DO levels, but that the City's discharge contributes to the violation of the DO water quality objectives

and that more stringent effluent limitations for CBOD and ammonia would substantially reduce that contribution. The CVRWQCB adopted the following finding, based on the information in the river model:

"14. . . . (3) Critical water quality conditions occur in the fall and spring, due to a high mass loading of BOD and ammonia; (4) The current discharge contributes up to 43% of the oxygen demand to the river during critical low river dissolved oxygen periods, under current Delta flow conditions, as simulated in the model over the calibration period; (5) Addition of activated sludge/nitrification units to provide a CBOD (Carbonaceous Biochemical Oxygen Demand) of 5 mg/l and ammonia of 0.5 mg/l will significantly improve water quality by raising the dissolved oxygen level during critical periods from 2.5 to 3.0 mg/l, and increasing the dissolved oxygen in the summer by an additional 1.0 mg/l. These treatment system improvements will decrease the discharge's contribution to 20% or less of the oxygen demand to the river during critical low river dissolved oxygen periods, without actions from other sources. Even with the treatment plant improvements, the water quality objective will still not be met; (6) The San Joaquin River in the vicinity of Stockton would not meet the receiving water dissolved oxygen standards even if the Stockton discharge were eliminated; (7) Delta water management, particularly the Clifton Court and Tracy pumping facilities have a strong influence on river flows and water quality; and (8) When the rock barriers are installed at the Old River confluence, river flow is predominantly downstream, and the dissolved oxygen sag occurs in the Deep Water Channel. Without the rock barriers, Delta pumping draws river flows upstream and the dissolved oxygen sag occurs upstream of the treatment plant discharge; (9) The installation of a flow gage at the Stockton outfall will greatly improve the accuracy of the model." (NPDES permit Finding No. 14.)

The CVRWQCB also accommodated some of the City's concerns. It found that treatment down to 5 mg/l CBOD and 0.5 mg/l ammonia, which would provide the greatest reduction of

oxygen demand by the discharge, was not cost effective and, instead, permitted the less costly 10 mg/l CBOD and 2 mg/l ammonia effluent limitations (NPDES permit Finding No. 17.)³ The CVRWQCB also found that because there are other causes of low DO in the river, it was not reasonable to require the City to reduce the impact of its discharge on DO beyond the requirements of the NPDES permit "until appropriate corrective action is taken against other parties contributing to the problem". (NPDES permit Finding No. 18.) The CVRWQCB also determined that it would not hold the City responsible if the river fails to meet DO water quality objectives as long as the City is in compliance with the CBOD and ammonia effluent limitations in the NPDES permit. (*Id.*)

Because the City cannot comply with the CBOD and ammonia effluent limitations until plant improvements are designed and constructed, staff recommended that the CVRWQCB adopt a cease and desist order with a compliance time schedule and interim effluent limitations. The City objected to this enforcement order and argued that the CVRWQCB had authority to include a time schedule in the NPDES permit without finding it in violation of the permit. Staff advised the CVRWQCB that they had no such authority. Ultimately, the CVRWQCB took no action in

³ A range of effluent limitations for CBOD and ammonia and a range of impacts on DO in the river are set forth in Table 1, page 9 and figure 6 (mis-labeled figure 4), page 10 of the 1993 Model Report.

this regard. They did not adopt a cease and desist order and they did not include a compliance schedule in the NPDES permit.

The petition, which was filed with the SWRCB pursuant to Water Code Section 13320, raises numerous contentions challenging various aspects of the NPDES permit, the 1991 Bay/Delta Plan, and the Basin Plan. Challenges to the 1991 Bay/Delta Plan and the Basin Plan based on Article 3 of Chapter 4 of the Porter-Cologne Water Quality Control Act (commencing with Water Code § 13240, concerning adoption of water quality control plans and water quality objectives) may not be raised by petition under Water Code Section 13320. (*Hampson v. Superior Court* (1977) 67 Cal.App.3d 472, 136 Cal.Rptr. 722.) Accordingly, all contentions challenging water quality control plans are dismissed. All other contentions in the petition that are not specifically reviewed in this order are also dismissed because they fail to raise substantial issues that are appropriate for review. (23 Calif. Code Regs. § 2052, *People v. Barry* (1987) 194 Cal.App.3d 158, 239 Cal.Rptr. 349.)

II. CONTENTIONS AND FINDINGS

1. Contention: Petitioner alleges that the CVRWQCB should have included a time schedule in the NPDES permit to provide the City time to comply with the new CBOD and ammonia effluent limitations and DO receiving water limitations.

Finding: The SWRCB dealt with this issue recently in *The Matter of the Petition of City and County of San Francisco*,

et al. (1995), Order No. WQ 95-4. Relying on the opinion of the U.S. EPA Administrator *In the Matter of Star-Kist Caribe, Inc.*, NPDES Appeal No. 88-5, the SWRCB stated:

"[I]f a water quality standard was adopted prior to July 1, 1977 and did not undergo any substantive change after that date, immediate compliance is mandatory [A] compliance schedule can be included in a permit for a state water quality standard adopted or revised after July 1, 1977, only if the standard itself or the state's regulations implementing the standard specifically authorize a schedule of compliance." (Order No. WQ 95-4, *supra*, at 15.)

Immediate compliance with water quality standards adopted prior to July 1, 1977, is required by Clean Water Act⁴ Section 301(b)(1)(C), which provides that in order to accomplish the objectives of the Clean Water Act there must be achieved by July 1, 1977, limitations necessary to meet state water quality standards. (33 U.S.C. § 1311(b)(1)(C).) The requirements of Section 301(b)(1)(C) must be implemented by NPDES permits (Clean Water Act § 402(a) and (b); 33 U.S.C. § 1342(a) and (b).) The SWRCB has already determined that if a discharger cannot comply with permit provisions that implement this requirement, the CVRWQCB should adopt a cease and desist order containing a compliance schedule and interim effluent limitations and receiving water limitations. (Order No. WQ 95-4, *supra*, at 7.; Water Code § 13301.)

In this case, the Basin Plan DO objective of 5 mg/l was adopted before July 1, 1977. Clean Water Act Section

⁴ 33 U.S.C. §§ 1251 *et seq.*

301(b)(1)(C) precludes the NPDES permit from including a time schedule authorizing a delay in compliance with that DO water quality objective. The CVRWQCB should, therefore, adopt a cease and desist order with interim effluent limitations and a compliance schedule for achieving compliance with effluent limitations necessary to comply with the Basin Plan DO objective (if the City cannot immediately comply with the effluent limitations after they are reconsidered in accordance with this order, below).

On the other hand, the 1995 Bay/Delta Plan DO objective of 6 mg/l (during September through November) was not established until 1991 and the 1995 Bay/Delta Plan specifically authorizes a time extension or compliance schedule that may extend to September 1, 2005. Because the 1995 Bay/Delta Plan was adopted after the NPDES permit was issued, a time extension or compliance schedule for the 1995 Bay/Delta Plan DO objective was not included. It would be appropriate to do so now. The NPDES permit will be remanded to the CVRWQCB to establish a time extension or compliance schedule to implement effluent limitations and receiving water limitations necessary to comply with the 1995 Bay/Delta Plan DO water quality objective.

2. Contention: Petitioner contends that the effluent limitations in the NPDES permit are too stringent because DO levels that are less than water quality objectives would occur even if the City did not discharge to the river.

Finding: As noted above, Clean Water Act Section 301(b)(1)(C) requires NPDES permits to provide for immediate achievement of limitations to meet pre-July 1, 1977 water quality standards. (33 U.S.C. §§ 1311(b)(1)(C), 1342(a) and (b).) Regulations implementing the Clean Water Act require effluent limitations to control pollutant parameters that are or may be discharged at a level that will cause or contribute to a violation of a water quality objective. (40 C.F.R. § 122.44(d)(1)(i), emphasis added.) Based on the information it had at the time, the CVRWQCB adopted appropriate effluent limitations for CBOD and ammonia in accordance with the Clean Water Act and implementing regulations.

The SWRCB has already determined in the 1995 Bay/Delta Plan that although there are several causes contributing to the problem, the City's discharge contributes to the violation of the water quality objectives for DO and that regulation of the discharge is one means of addressing the DO problem. The 1995 Bay/Delta Plan states:

"Factors which contribute to low levels of dissolved oxygen in the lower San Joaquin River include: the Stockton Wastewater Treatment Plant; upstream sources of biochemical oxygen demand (BOD); the deepened Stockton ship channel; the commercial use of the dead-end portion of the ship channel; the enlarged turning basin at the Port of Stockton; and low river flows in the fall. Feasible measures to implement the dissolved oxygen objective in this plan include: (1) regulating the effluent discharged from the Stockton Wastewater Treatment Plant and other upstream discharges that contribute to the BOD load; (2) providing adequate flows in the San Joaquin River; and (3) installing barriers at locations (e.g., head of

Old River) to increase flows in the river past Stockton." (1995 Bay/Delta Plan, p. 28, emphasis added.)

The City's own model supports the conclusion, based on data for river flows during 1988 through 1991 that the City's discharge contributes to low DO levels.

However, flow conditions in the San Joaquin River have changed significantly after the data used in the model was collected.⁵ On December 15, 1994, representatives of state and

⁵ When reviewing a petition under Water Code Section 13320, the SWRCB may include in the record any other relevant evidence which, in its judgement, should be considered to effectuate and implement the policies of this division. (Water Code § 13320(b).) There are causes other than the City's discharge that contribute to the low DO levels in the river. It is appropriate to consider current information regarding those sources. The parties were notified of the documents that will be added to the record and given an opportunity to comment. The following documents are added to the record for review of this petition:

- a. Principles for Agreement on Bay-Delta Standards Between the State of California and the Federal Government (Delta Accord), December 15, 1994.
- b. Letter from Roger K. Patterson, Bureau of Reclamation, to Hilda Diaz-Soltero, National Marine Fisheries Service, and Wayne White, U.S. Fish and Wildlife Service, December 21, 1994, Subject: Proposed Implementation of Principles of Agreement on Bay-Delta Standards Between the State of California and the Federal Government.
- c. Memorandum from Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, to Regional Director, U.S. Bureau of Reclamation, March 6, 1995, Subject: Formal Consultation and Conference on Effects of Long-term Operation of the Central Valley Project and State Water Project on the Threatened Delta Smelt, Delta Smelt Critical Habitat, and Proposed Threatened Sacramento Splittail.
- d. Letter from Assistant Administrator for Fisheries, National Marine Fisheries Service, to Regional Director, U.S. Bureau of Reclamation, May 17, 1995, Subject: Amendment to CVP-OCAP biological opinion and incidental take statement.
- e. SWRCB Order WR 95-6, Order Regarding Petition for Changes in Water Rights That Authorize Diversion and Use of Waters Affecting the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, In the Matter of the Petition for Changes in the Water Rights Authorizing Diversion and Use of Waters in the Watershed of the Sacramento-San Joaquin Delta, held by California Department of Water Resources and United

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States Bureau of Reclamation, June 8, 1995.

- f. Application of Department of Water Resources for a U.S. Army Corps of Engineers permit for the South Delta Temporary Barriers Project - Grant Line Canal Barrier, April 26, 1995, Application No. 199500265.
- g. U.S. Army Corps of Engineers public notice of Application No. 199500265 of the Department of Water Resources to place fill in the Grant Line Canal, July 3, 1995.
- h. SWRCB Revised Notice of Preparation of an Environmental Impact Report for a Water Right Decision to Implement Objectives Contained in the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.
- i. SWRCB Notice of Public Workshop, Development of a Water Right Decision to Implement Requirements for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, August 29 and 30, September 18 and 19, 1995.
- j. SWRCB Notice of Public Workshop on the Need for Physical Barriers in the Southern Delta of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary to Protect Beneficial Uses of Water, November 15, 1995.
- k. SWRCB Transcript of Public Workshop on the Need for Physical Barriers in the Southern Delta of the San Francisco Bay/Sacramento-San Joaquin, November 15, 1995.
- l. Comments of the Department of Water Resources submitted to the SWRCB at the November 15, 1995 workshop.
- m. SWRCB Revised Notice of Public Workshops, Development of a Water Right Decision to Implement Requirements for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, February 20 and 21, and March 12 and 13, 1996.
- n. SWRCB transcript of Public Workshop, Development of a Water Right Decision to Implement Requirements for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, March 12, 1996.
- o. Comments of the City of Stockton regarding alternatives to achieve dissolved oxygen objectives, submitted to the SWRCB at the March 12, 1996 workshop.
- p. Comments of the Department of Water Resources submitted to the SWRCB at the March 12, 1996 workshop.
- q. Comments of the San Joaquin Tributaries Association submitted to the SWRCB at the March 12, 1996 workshop.
- r. Comments of the Joint California Water Users submitted to the SWRCB at the March 12, 1996 workshop.
- s. Comments of the South Delta Water Agency submitted to the SWRCB at the March 12, 1996 workshop.

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federal government and several urban, agricultural, and environmental groups signed "Principles of Agreement on Bay-Delta Standards Between the State of California and the Federal Government" (Delta Accord). Under the Delta Accord, the parties proposed some limits on water exports from the Bay/Delta and changes in some operations of Delta facilities. The terms of the Delta Accord have been clarified and implemented through biological opinions and incidental take statements issued by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service under the Endangered Species Act (16 USC §§ 1531 et seq.). These terms have been implemented by the State Water Project and the federal Central Valley Project and have improved water flows within the Sacramento-San Joaquin Delta Estuary. Consistent terms have also been incorporated into the 1995 Bay/Delta Plan and some of the requirements in the 1995 Bay/Delta Plan were put into the permits of the State Water Project and the Central Valley Project pursuant to SWRCB Order WR 95-6.

These flow changes may have improved DO levels in the San Joaquin River and it is possible that analysis of these changes, using the river model, might demonstrate that less stringent effluent limitations for CBOD and ammonia are appropriate. It is also possible that no change in these

⁵(...continued)

t... *Comments of the Federal Ecosystem Directorate (Club FED) submitted to the SWRCB at the March 12, 1996 workshop.*

effluent limitations would be justified. The CVRWQCB should reconsider the effluent limitations for CBOD and ammonia based on the river flows as required by the biological opinions. The NPDES permit is remanded to the CVRWQCB for this purpose.⁶

Another change in Delta operations which could affect future DO levels is under consideration. The Department of Water Resources (DWR) is completing a draft environmental impact report (EIR) for construction of several barriers in the Delta, including a barrier at the head of the Old River that will improve DO levels by reducing flow reversals. The draft EIR is scheduled to be completed in early 1996 and a final EIR is scheduled for summer of 1996. However, DWR has not decided whether to construct a permanent barrier and if it is constructed, it will not be fully operable until 2001. Also, DWR plans to operate the permanent barrier only in October and November. The October and November installation will have little effect during the warm season when the most stringent effluent limitations for CBOD and ammonia in the NPDES permit apply (April

⁶ When reconsidering the effluent limitations, the CVRWQCB should also consider the following recommendations of SWRCB technical staff:

- a. The NPDES permit is inconsistent in regard to use of the units of ammonia. The discussion in the NPDES permit appears to use "ammonia as nitrogen". The monitoring report requirements only specify reporting ammonia as ammonia and require the discharger to calculate the unionized ammonia as nitrogen. The total ammonia should be expressed as "ammonia as nitrogen".
- b. As the NPDES permit requires calculation of unionized ammonia from total ammonia, temperature, and pH, it is recommended that the calculation formula and table of disassociation constants, K_a , be attached to the Reporting and Monitoring program for the NPDES permit to reduce any misinterpretation or use of incorrect formula.

through October). DWR is considering operation in September and the spring but adverse environmental impacts may preclude operation of the barrier at a time other than October and November.⁷

DO levels in the river may also be affected in the future by an SWRCB decision implementing the 1995 Bay/Delta Plan DO water quality objective. The SWRCB has held a series of workshops regarding this issue in September 1995, November 1995, and March 1996. It is possible that a decision changing Bay/Delta operations may derive from this proceeding and may improve DO levels in the river. However, because the proceeding is not currently intended to implement DO objectives other than the September through November 1995 Bay/Delta Plan DO water quality objective, it would only incidentally improve DO levels during other months (April through August) when the most stringent NPDES effluent limitations apply. In any event, this SWRCB proceeding is in the early stages. It is not foreseeable what proposals will be included in a resulting decision.

It would not be appropriate to consider the permanent barrier or the planned SWRCB decision implementing the 1995

⁷ DWR has installed a temporary barrier during most years for over twenty years and will continue to do so. This temporary barrier is installed during October and November and so, like the planned permanent barrier, will not affect DO during the time that the most stringent CBOD and ammonia effluent limitations are imposed, except for October. It is not clear from the record whether the temporary barrier's effect on DO levels was considered by the CVRWQCB when it adopted the NPDES permit. If the CVRWQCB did not consider it, it should do so when it reconsiders the CBOD and ammonia effluent limitations on remand.

Bay/Delta Plan when establishing effluent limitations in the NPDES permit for compliance with the Basin Plan DO objective. The NPDES permit must provide for immediate compliance with the Basin Plan DO objective because it was adopted before July 1, 1977. The permanent barrier will not be complete before 2001 and the SWRCB decision is still in the early stages, and so neither project will affect immediate compliance with the Basin Plan DO water quality objective.

While the CVRWQCB may not consider future projects when adopting effluent limitations to immediately implement the Basin Plan DO water quality objective, it may consider future projects for the purpose of future compliance with time schedules.

When establishing compliance schedules for the 1995 Bay/Delta Plan DO objective (in the NPDES permit) and the Basin Plan DO objective (in a cease and desist order), the CVRWQCB may consider that, over the next 5 to 10 years, the DO problem may be substantially mitigated through means other than effluent limitations. The permanent Old River barrier will probably be complete and might be operating during warm weather. Other operational changes may have occurred in the Bay/Delta that increase DO levels. The City may expand its reclamation program, reducing the mass loading of CBOD and ammonia without reducing the concentration of those pollutants in the effluent.⁸ The time

⁸ This order does not make or imply any findings with respect to the feasibility of water reclamation or the schedule on which it could be implemented.

schedules could be crafted to permit alternatives like these if they can be demonstrated to achieve the goal of compliance with the water quality objectives within the time period provided.⁹

3. Contention: The receiving water limitations for DO should be removed from the NPDES permit.

Finding: The receiving water limitations portion of the NPDES permit does not contain a provision that specifically refers to DO. The applicable receiving water limitation states:

"[A] receiving water condition not in conformance with the limitation is not necessarily a violation of this order. The Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred (see also Finding No. 18).

"The discharge shall not cause the following in the receiving water: . . .

"13. Violations of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board pursuant to the CWA and regulations adopted thereunder."

The Receiving Water Limitations portion of the NPDES permit refers to Finding No. 18, which refers to compliance with the receiving water limitation for DO as follows:

"Accordingly, until such time as this study [of all sources of oxygen demanding substances in the area] is complete and appropriate action is taken against other contributing parties, the Board does not intend to take

⁹ Petitioner is concerned that Clean Water Act anti-backsliding rules (33 U.S.C. § 1342(o)) might prevent the CVRWQCB from relaxing ammonia effluent limitations if receiving water quality improves or if Stockton chooses an alternative (e.g., reclamation) to reduce the discharge's impact on dissolved oxygen. The CVRWQCB should address this concern by incorporating flexibility into the NPDES permit to revise effluent limitations to accommodate future improvement to receiving water dissolved oxygen levels and alternatives for reducing the discharge's impact on dissolved oxygen.

action against the Discharger if the river fails to meet the dissolved oxygen objective, as long as the Discharger consistently achieves compliance with the new Carbonaceous Biological Oxygen Demand and Ammonia effluent limitation in this permit."

This finding implies that if the City fails to comply with the new CBOD and ammonia effluent limitations, it will be subject to enforcement action for any violation of DO water quality objectives in the area of the discharge. Because the City cannot comply with the new CBOD and ammonia effluent limitations for several years, it is concerned that it might be subject to enforcement actions for water quality objective violations that it did not cause or that it is unable to avoid. This concern is reasonable considering that in Finding No. 14, the CVRWQCB states that:

"The San Joaquin River in the vicinity of Stockton would not meet the receiving water dissolved oxygen standard even if the Stockton discharge were eliminated."

This issue can be resolved by deleting the portion of Finding No. 18 quoted above and deleting the reference to Finding No. 18 in the receiving water limitations portion of the NPDES permit. This will leave the general receiving water limitation in place and will leave the CVRWQCB with discretion to enforce that limitation if it finds the City culpable for the violation. This amendment shall be adopted by the CVRWQCB when the NPDES permit is remanded to the CVRWQCB.

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III. CONCLUSIONS

Based upon the above discussion, the SWRCB concludes as follows:

1. The NPDES permit (Order No. 94-324) cannot legally include a time schedule for compliance with the 5 mg/l DO water quality objective, which was established prior to July 1, 1977. The time schedule and interim effluent limitations should be included in a cease and desist order if the City cannot immediately comply with the effluent limitations after they are reconsidered pursuant to this order.

2. The NPDES permit should include a time extension or compliance schedule which may extend to September 1, 2005, the time for compliance with the 6 mg/l DO (September through November) water quality objective.

3. The CVRWQCB should reconsider the effluent limitations to implement the 5 mg/l DO water quality objective and the 6 mg/l DO (September through November) water quality objective in light of improved river flows due to the current requirements under the federal Endangered Species Act and current operations of the State Water Project and the federal Central Valley Project.

4. Future changes in Delta operations and the City's reclamation project may be considered as alternatives to more stringent effluent limitations for the purpose of crafting

compliance schedules for both DO water quality objectives if the alternatives provide an equivalent level of protection.

5. The finding that provides that the CVRWQCB will not initiate enforcement action against the City for receiving water violations of DO water quality objectives as long as the City complies with new CBOD and ammonia effluent limitations should be deleted to assure that the CVRWQCB only initiates enforcement if the City is culpable for such violations.

IV. ORDER

IT IS HEREBY ORDERED that:

1. The NPDES permit, Order No. 94-324, is remanded to the CVRWQCB for review and revision consistent with the discussion and findings of this order as follows:

a. Reconsider the CBOD and ammonia effluent limitations in the NPDES permit, taking into consideration the river flows and conditions under current regulatory requirements and operational practices including temporary barrier operation at the head of the Old River. The CVRWQCB should incorporate flexibility into the NPDES permit to revise the effluent limitations to accommodate future improvement to receiving water dissolved oxygen levels and alternatives for reducing the discharge's impact on dissolved oxygen. The specific method for incorporating this in the NPDES permit is within the discretion of the CVRWQCB. Also consider recommendations of the SWRCB

technical staff regarding units of ammonia and calculation of unionized ammonia.

b. Establish a time extension or compliance schedule in the NPDES permit to implement effluent limitations and receiving water limitations necessary to comply with the 1995 Bay/Delta Plan DO water quality objective.

c. Adopt a cease and desist order with interim effluent limitations and a compliance schedule for achieving compliance with effluent limitations necessary to comply with the Basin Plan DO water quality objective (if the City cannot immediately comply with them after they have been reconsidered as stated above).

d. When establishing a time extension or compliance schedule in the NPDES permit or a compliance schedule in the cease and desist order, the CVRWQCB may consider future projects, including changes in Delta operations and expansion of the City's reclamation project, as alternatives to compliance with more stringent CBOD and ammonia effluent limitations, if these alternatives can be demonstrated to achieve the goal of compliance with the applicable DO water quality objectives within the time period permitted in the time extension or compliance schedule.

e. Amend Finding No. 18 and delete the reference to Finding No. 18 in the receiving water limitations portion of the NPDES permit.

2. The stay of the effluent limitations for ammonia and receiving water limitations for DO that was established in SWRCB Order No. WQ 95-1 is continued in effect until the CVRWQCB completes the review and revision required in this order. In all other respects, the NPDES permit shall remain in full force and effect.

IT IS FURTHER ORDERED that in all other respects, the petition 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 May 29, 1996.

AYE: John P. Caffrey, Chairman
John W. Brown, Vice Chairman
Marc Del Piero, Member
James M. Stubchaer, Member
Mary Jane Forster, Member

NO: None.

ABSENT: None.

ABSTAIN: None.


Maureen Marché
Administrative Assistant to the Board

