

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2002-0009-A01

Amending Order No. 99-5, NPDES No. CA8000188
Waste Discharge Requirements
for
Eastern Municipal Water District
Regional Water Reclamation System
Riverside County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

1. On June 25, 1999, the Board adopted Order No. 99-5, NPDES No. CA8000188, renewing waste discharge requirements for Eastern Municipal Water District (hereinafter discharger or EMWD) for the discharge of excess tertiary treated wastewater that cannot be percolated/evaporated and/or recycled to a pipeline that links into a single regionwide water recycling system connecting the four Regional Water Reclamation Facilities operated by EMWD. This pipeline ultimately discharges into Temescal Creek.
2. On October 8, 2001, the discharger requested that the Regional Board revise Order No. 99-5 to authorize the discharge of tertiary treated wastewater from EMWD's Regional Water Reclamation System to Lake Elsinore in coordination with Elsinore Valley Municipal Water District's (EVMWD) proposed implementation of a two-year pilot project. The pilot project is intended to address Lake Elsinore stabilization problems and to test the effects of the discharge of recycled water on the quality and beneficial uses of the Lake. EVMWD proposes to discharge recycled water from its Regional Water Reclamation Facility and to discharge groundwater from the three island wells located at the east end of the Lake. The volume of recycled water available from EVMWD for supplementing the Lake level is estimated to be 2.0 to 4.0 mgd (2,240 to 4,480 acre-feet per year). When EVMWD is unable to provide this volume of recycled water, the deficit could be filled by the discharge of recycled water by Eastern Municipal Water District (EMWD). The island wells have a production capacity sufficient to provide 3,000 to 5,000 acre-feet of water per year.
3. Lake Elsinore has an annual water deficit of about 7,500 acre-feet, and about 15,000 acre-feet in dry years. The Lake typically experiences a 4-5 foot elevation drop in normal years. The Lake has dried up completely in certain years. These elevation changes have resulted in significant adverse impacts on the quality and beneficial uses of the Lake, including contact and non-contact recreation, warm water aquatic habitat, and wildlife habitat. The combined water sources (recycled water and groundwater) from the pilot project would provide up to 9400 acre-feet of additional Lake water per year, which would be sufficient to offset estimated yearly evaporation losses.

4. The surface water elevation in the Lake is currently below 1,239 feet. The critical Lake level is 1,240 feet, below which recreational use is adversely impacted, there are detrimental increases in the concentrations of dissolved solids and nutrients, and aquatic life impacts occur, including fish kills.
5. Lake Elsinore is included on the Regional Board's Clean Water Act Section 303(d) list of impaired waters. In part, the impairment is caused by excessive levels of nutrients. Work is underway by Regional Board staff, in concert with interested parties, to develop a Total Maximum Daily Load (TMDL) to address this nutrient problem. Numerous studies have been conducted, and are being conducted as part of this TMDL effort, to identify the sources of nutrient inputs to the Lake and appropriate control measures. It is evident from these studies that creative methods will need to be employed to address the nutrient problem, since the Lake sediments themselves constitute the most significant source of nutrients. Controls on watershed sources of nutrients will not suffice; one or more programs for Lake remediation will also be necessary.
6. Discharges of recycled water constitute a new source of nutrient input to the Lake. Appropriate limitations on such discharges will be developed through the TMDL process. Since a TMDL has not yet been developed and approved, the discharges should be required to comply with the nutrient objectives specified in the Basin Plan for the Lake. The quality of these discharges does not now comply with these water quality objectives. The discharger cannot achieve immediate compliance with these objectives since additional treatment facilities would need to be constructed. However, given the declining levels in the Lake, the potential that the Lake could dry up completely, and the significant adverse impacts that changes in Lake level (or complete drying of the Lake) are known to have on the Lake's beneficial uses, there is an immediate need to take steps to increase and stabilize the water level of the Lake. The water quality and beneficial use benefits of increasing and stabilizing the Lake level outweigh the adverse consequences, if any, of allowing the short term, pilot scale discharge of recycled water with nutrients in excess of applicable objectives.
7. The discharger, EVMWD and the City of Lake Elsinore are well aware of the facts delineated in Findings 5 and 6, above, and agree that the pilot project is in the best interest of Lake Elsinore, its inhabitants, and its users.
8. The discharger proposes to discharge at Discharge Serial No. 001, located at latitude 33 40'30" longitude 117 20'0", where Wasson Canyon flood control channel intersects Temescal Creek. Discharges at Discharge Serial No. 001 will be diverted to flow toward Lake Elsinore.
9. To support the pilot replenishment project, it is necessary to amend Order No. 99-5 to allow the discharge of tertiary treated wastewater from Discharge Serial No. 001 (up to 1500 acre-feet of recycled water), when such discharge is necessary to supplement the recycled water discharge by EVMWD to meet the total planned recycled water discharge of 4480 acre-feet per year.

10. In accordance with Water Code Section 13389, the amendment of Order No. 99-5, NPDES No. CA8000188, is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.
11. The Regional Board has notified the discharger and other interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.
12. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. 99-5 be amended as follows:

1. Add Finding No. 7.
 7. The discharger proposes to discharge tertiary treated wastewater into Lake Elsinore from its Regional Water Reclamation System in coordination with Elsinore Valley Municipal Water District's (EVMWD) proposed implementation of a two-year pilot project. The pilot project is intended to address Lake Elsinore stabilization problems and to test the effects of the discharge of recycled water on the quality and beneficial uses of the Lake. The pilot project includes the discharge of up to 4480 acre-feet per year of recycled water and the discharge of up to 5000 acre-feet per year of groundwater pumped from three wells located at the east end of the Lake. The discharger would discharge up to 1,500 acre-feet per year of recycled water to the Lake only when it is necessary to supplement the recycled water discharge by EVMWD to meet the total planned recycled water discharge of 4480 acre-feet per year. The implementation of the pilot project, including any recycled water discharge by the discharger, is contingent on the amendment of the waste discharge requirements for EVWMD's Regional Water Treatment Facility (Order No. 00-1, as amended) to provide the requisite authorization.

2. Finding 8 is revised to read as follows:

8. The discharge points are described as follows:

| Discharge Serial No. | Latitude | Longitude | Description |
|----------------------|-----------|-----------|--|
| 001 | 33 40'30" | 117 20'0" | Primary discharge point where the Wasson Canyon flood control channel intersects Temescal Creek. Discharges will augment a wetlands enhancement project in Collier Marsh. A portion of the discharge may be diverted to flow towards Lake Elsinore with the construction of a diversion structure. |
| 002 | 33 39'45" | 117 18'0" | Secondary discharge point located at Temescal Creek and Nicholas Road |

3. Add Finding No. 12. as follows:

12. The discharge is to Lake Elsinore, the beneficial uses of which include:

- a. Water contact recreation,
- b. Non-contact water recreation,
- c. Warm freshwater habitat, and
- d. Wildlife habitat.

4. Renumber affected Finding paragraph numbers accordingly.

5. Provisions Section of Order No. 99-5, add Provision H.23. as follows:

23. There shall be no discharge of recycled water into Lake Elsinore until such time as:

- a. the waste discharge requirements for EVMWD's Regional Water Reclamation Facility (Order No. 00-1, NPDES No. CA 8000027, as amended) are amended to authorize the implementation of the pilot Lake Elsinore replenishment project, including the discharge of recycled water; and,
- b. the Executive Officer of the Regional Board has approved the Lake Elsinore monitoring and reporting program submitted by the Elsinore Valley Municipal Water District.

6. Provisions Section of Order No. 99-5, add Provision H.24. as follows:
 24. The discharger shall coordinate with Elsinore Valley Municipal Water District regarding the implementation of the two-year pilot Lake Elsinore replenishment project that includes the discharge of up to 4,480 acre-feet per year of recycled water to the Lake. The discharge of recycled water by the discharger shall be limited to the flows necessary to supplement the recycled water discharge by EVMWD to meet the total planned recycled water discharge of 4480 acre-feet per year. The discharge shall not exceed 1500 acre-feet per year. No discharge of recycled water to Lake Elsinore shall occur after February 1, 2004, when the pilot project will terminate.

7. Provisions Section of Order No. 99-5, add Provision H.25. as follows:
 25. By April 1, 2002, the discharger shall submit to the Regional Board and the Department of Health Services the following:
 - a. A Use Site Engineering Report, per Article 4, Section 60310 of Title 22, California Code of Regulations,
 - b. Source Water Assessment Protection Program for all municipal and domestic water supply wells within a 100 foot perimeter of the highest recorded surface water elevation of the Lake, and
 - c. Water balance study to assess, over the long run, what will be the percentage of recycled water contribution, natural storm runoff, and local groundwater wells (the so called "island wells").¹

8. Monitoring and Reporting Program No. 99-5, add new Section F. "Lake Elsinore Recycled Water Discharge Monitoring and Reporting:" as follows and re-letter subsequent section accordingly:
 - F. Lake Elsinore Recycled Water Discharge Monitoring and Reporting:

Whenever recycled water is discharged into Lake Elsinore, the volume of reclaimed water, and the date at which recycled water is supplied shall be recorded on a permanent log. A copy of the log of recycled wastewater discharged into Lake Elsinore shall be submitted every month. If no discharge occurs, a letter to that effect shall be submitted.

9. All other conditions and requirements of Order No. 99-5 shall remain unchanged.

¹ *Required documents in sub-paragraphs b. and c. are the same documents that are being required from EVMWD. Submittal of satisfactory documents by EVMWD would suffice for compliance with these reporting requirements by EMWD.*

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 23, 2002.

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

January 23, 2002

ITEM: 7

SUBJECT: Amendment to Order No. 99-5, NPDES No. CA8000188, Waste Discharge Requirements, Eastern Municipal Water District, Regional Water Reclamation System, Riverside County, Order No. R8-2002-0009-A01

DISCUSSION:

On June 25, 1999 the Regional Board adopted Order No. 99-5, NPDES No. CA8000188, prescribing waste discharge requirements for Eastern Municipal Water District's Regional Water Reclamation System, for the discharge of tertiary treated wastewater to Temescal Creek.

On October 8, 2001, Eastern Municipal Water District (EMWD) requested that the Regional Board revise Order No. 99-5 to authorize the implementation of a project that would include the discharge of tertiary treated wastewater from EMWD's Regional Water Reclamation System to Lake Elsinore. The intent of this project is to provide additional water to increase and help stabilize water levels in the Lake.

Lake Elsinore experiences substantial water level variation and, in certain years, dries completely. These changes in water level result in significant adverse effects on the water quality and beneficial uses of the Lake, including recreational opportunities and fish and wildlife habitat. The Lake has experienced a number of massive fish kills. These impacts in turn result in significant adverse impacts on the economy of the surrounding community. Currently, the Lake has an annual water deficit of about 7,500 acre-feet, and about 15,000 acre-feet in dry years. That is, more water is lost from the Lake through evaporation than comes into the Lake from precipitation and other sources. The Lake typically experiences a 4-5 foot elevation drop in normal years.

EMWD in cooperation with Elsinore Valley Municipal Water District (EVMWD) proposes to implement a two-year pilot project that includes the discharge to the Lake of tertiary treated recycled water and groundwater from three wells located at the east end of the Lake. (In a separate item on the Board's agenda, the Board will be asked to consider amendment of EVMWD's waste discharge requirements to authorize the discharge of up to 4480 acre-feet per year of tertiary treated recycled water, and the discharge of up to 5000 acre-feet per year of groundwater.) If EVMWD is unable to provide the 4480 acre-feet per year, any deficit could be made up with the discharge of recycled water by EMWD up to 1500 acre-feet per year. The combined discharges of recycled water and groundwater would provide up to 9,400 acre-feet of additional Lake water per year. These discharges would be sufficient to offset estimated yearly evaporation losses.

Lake Elsinore is included on the Regional Board's Clean Water Act Section 303(d) list of impaired waters. In part, the impairment is caused by eutrophication, or excessive levels of nutrients. Regional Board staff, in concert with other interested parties, are now working to develop a Total Maximum Daily Load (TMDL) to address this nutrient problem. Numerous studies have been conducted, and are being conducted as part of this TMDL effort, to identify the sources of nutrient inputs to the Lake and appropriate control measures. These studies demonstrate that innovative approaches will need to be employed to address the nutrient problem, since the Lake sediments themselves constitute the most significant source of nutrients. Controls on watershed sources of nutrients will not suffice; one or more programs for Lake remediation will also be necessary. (Board staff presented a Problem Statement concerning the nutrient problem in Lake Elsinore at a Regional Board workshop on November 16, 2000. This Problem Statement included a discussion of some of the Lake remediation options that are being considered.)

Discharges of recycled water would constitute a new source of nutrient input to the Lake. Appropriate limitations on these discharges will be developed through the TMDL process. Since a TMDL has not yet been developed and approved, the discharges should be required to comply with the applicable nutrient objectives specified in the Basin Plan for the Lake. The quality of these discharges does not now comply with these objectives, and it would take time to construct and implement the additional treatment facilities necessary to achieve compliance. However, there is an immediate need to take steps to increase and stabilize the water level of the Lake given the declining Lake level, the potential that the Lake could dry up completely, and the significant adverse impacts that changes in Lake level (or complete drying of the Lake) are known to have on the Lake's quality and beneficial uses. The water quality and beneficial use benefits of increasing and stabilizing the Lake level appear to outweigh the adverse consequences, if any, of allowing the short term, pilot scale discharge of recycled water with nutrients in excess of applicable objectives.

Regional Board staff have had extensive discussions with the EVMWD, EMWD, and City of Lake Elsinore staff concerning the merits and potential adverse consequences of implementing this pilot project. Clearly, these parties have long-standing knowledge and concern about the eutrophication problem in the Lake, and are conversant with the TMDL and permitting issues discussed above. The parties agree that the pilot project is in the best interest of Lake Elsinore, its inhabitants, and its users. Accordingly, Order No. R8-2002-0009-A01 is being proposed to amend Order No. 99-5 to authorize the implementation of the pilot project. Order No. R8-2002-0009-A01 requires the discharger to coordinate with EVMWD regarding implementation of a Lake monitoring program to be approved by the Executive Officer of the Regional Board prior to any discharge of recycled water to the Lake. In considering approval of this monitoring program, the Executive Officer will seek the input of interested parties.

RECOMMENDATION:

Adopt Order No. R8-2002-0009-A01 as presented.

Comments were solicited from the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) – Terry Oda
U.S. Army Corps of Engineers, Los Angeles District, - Regulatory Branch
U.S. Fish and Wildlife Service - Carlsbad
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality - James Kassel
State Water Resources Control Board, Division of Clean Water Programs, Office of Water
Recycling – Lynn Johnson
State Department of Water Resources - Glendale
State Department of Fish and Game - Long Beach
State Department of Health Services, San Diego – Steve Williams
Riverside County Environmental Health Services – Sam Martinez
Riverside County Flood Control and Water Conservation District - Mark Wills
Riverside County, Board of Supervisors – Supervisor Bob Buster
Santa Ana River Discharger’s Association (SARDA)
City of Lake Elsinore – City Manager
City of Canyon Lake – City Manager
Elsinore Valley Municipal Water District – Phillip Miller
Lee Lake Water District – John Pastore
Orange County Coastkeeper – Garry Brown
Lawyers for Clean Water C/c San Francisco Baykeeper
Montgomery Watson – Jeff Mohr
Best Best & Krieger, LLP – Arthur L. Littleworth