California Regional Water Quality Control Board
Santa Ana Region

January 22, 2004

ITEM: 5

SUBJECT: Waste Discharge Requirements for Elsinore Valley Municipal Water District, Canyon Lake Water Treatment Plant, City of Canyon Lake, Riverside County - Order No. R8-2004-0004, NPDES Permit No. CA8000392

DISCUSSION:

On December 18, 2004, the Elsinore Valley Municipal Water District (EVMWD) submitted a Report of Waste Discharge for continued discharge of filter backwash water from their Canyon Lake Water Treatment Plant to Canyon Lake (also known as Railroad Canyon Reservoir) under the National Pollutant Discharge Elimination System (NPDES). The facility is located at 81 Via de la Valle in the City of Canyon Lake (see Attachment A for the facility location).

Approximately 9 mgd of water from Canyon Lake is pumped into the Canyon Lake Water Treatment Plant for treatment prior to distribution into the potable water supply system. The water treatment process begins with rapid mixing and addition of polyaluminum chloride at a concentration of 30 ppm and cationic polymer at a concentration of 4 ppm, followed by coagulation, flocculation, and sedimentation, then filtration through four dual media filters and finally chlorination. A timed sludge blowoff in the clarifier separates 0.2 mgd of sediment and water to the sanitary sewer for treatment at the EVMWD Regional Wastewater Treatment Plant on Chaney Street (see Attachment B for the schematic drawing).

Periodically, as much as 0.60 mgd of the filtered water is used to backwash the filters. The backwash wastewater is discharged to a 1-million-gallon capacity concrete-lined holding pond for settlement. A 2-day detention period allows residual coagulants to separate remaining solids and allows chlorine to dissipate. Settled sludge at the bottom of the pond is manually cleaned out once every five years. A maximum of 0.60 mgd of decanted water is pumped out from one of two outlets located 10 and 6 feet above the bottom of the pond and discharged to Canyon Lake. The discharge outfall is located 75 feet downstream of the intake barge on the Lake. This discharge occurs on a daily basis during the high water demand seasons, generally in the months of April to December.

The beneficial uses of Canyon Lake include municipal and domestic supply; groundwater recharge; water contact recreation; non-contact water recreation; warm freshwater habitat; and wildlife habitat. The proposed Order sets a monthly average limit for total suspended solids at 20 mg/l based on the California Department of Health Services recommendation for the discharge of treated backwash water into the lake and a daily maximum limit for chlorine residual of 0.1 mg/l, respectively. These limits should be adequate to protect the beneficial uses of the receiving waters.

RECOMMENDATION:

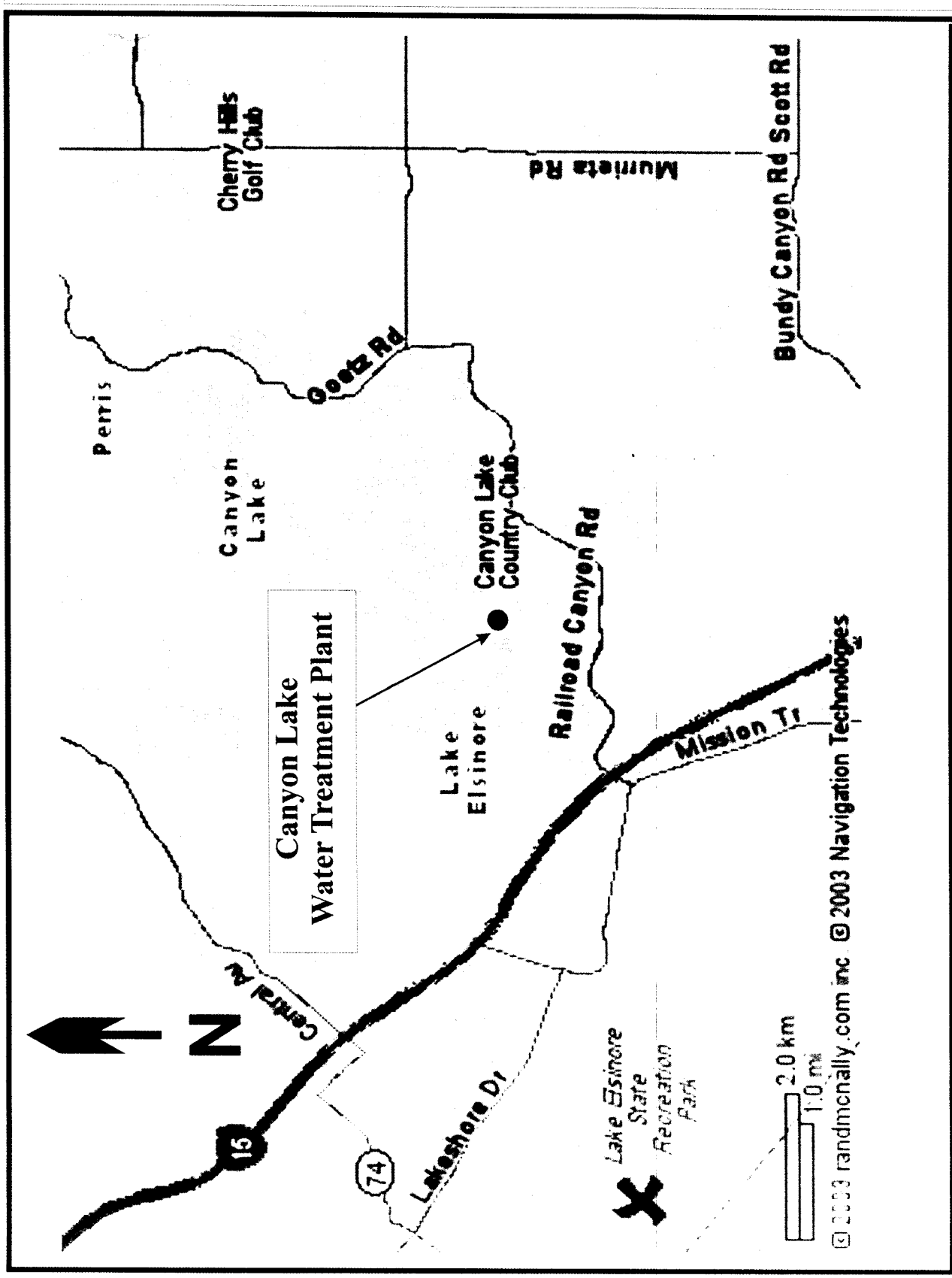
Adopt Order No. R8-2004-0004, NPDES Permit No. CA8000392, as presented.

Comments were solicited from the following :

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) – Doug Eberhardt
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 Maughan
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 Department - Sandy Bunchek
Riverside County Flood Control and Water Conservation
City of Lake Elsinore - City Manager
Canyon Lake Property Owners Association
Orange County Coastkeeper – Garry Brown
Lawyers for Clean Water C/c San Francisco Baykeeper
Elsinore Valley Municipal Water District – Ronald E. Young, General Manager

Attachment A

Order No. RB-2004-0004 Staff Report
Elsinore Valley Municipal Water District, Filter Backwash Discharges
Canyon Lake Water Treatment Plant, Canyon Lake

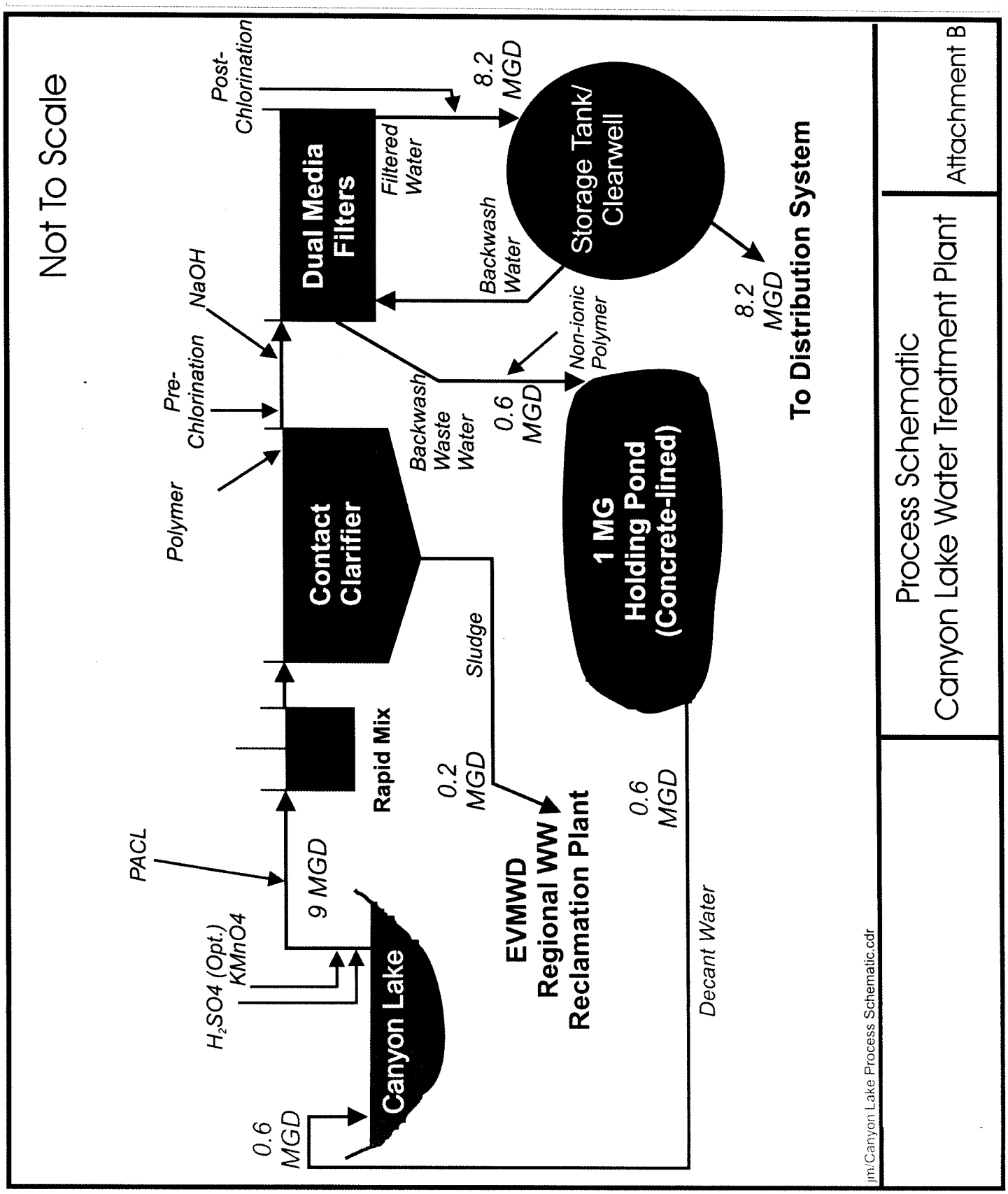


Canyon Lake Water Treatment Plant
Location Map

Attachment A

Attachment B

Order No. RB-2004-0004 Staff Report
Elsinore Valley Municipal Water District, Filter Backwash Discharges
Canyon Lake Water Treatment Plant, Canyon Lake



California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2004-0004
NPDES No. CA8000392

Waste Discharge Requirements
for
Elsinore Valley Municipal Water District
Canyon Lake Water Treatment Plant
Filter Backwash Discharges To Canyon Lake
City of Canyon Lake, Riverside County

TENTATIVE

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

1. Elsinore Valley Municipal Water District (hereinafter EVMWD or discharger) owns and operates Canyon Lake Water Treatment Plant (Facility). The Facility treats approximately 9 million gallons per day (mgd) of water from Canyon Lake (also known as Railroad Canyon Reservoir). Lake water is pumped into the Facility for treatment prior to distribution into EVMWD's potable water supply system.

2. The treatment process at the Facility includes coagulation/flocculation, sedimentation in a clarifier, dual media filtration, and chlorination. Periodically, 0.60 mgd of filtered water is used to backwash the four filters. The filter backwash, at maximum flow of 0.60 mgd, is discharged to a concrete-lined holding basin. Clarified backwash water is then discharged into Canyon Lake. The outfall of the discharge is 75 feet away from the intake point. This discharge occurs on a daily basis during the high water demand seasons, generally, in the months of April to December.

3. The discharge is currently regulated under Waste Discharge Requirements Order No. 98-47, NPDES No. CA8000392 issued on April 17, 1998. Order No. 98-47 expired on April 1, 2003.

4. On December 18, 2003, the EVMWD submitted a Report of Waste Discharge for continuing the discharge of clarified filter backwash wastewater into Canyon Lake from the Facility under the National Pollutant Discharge Elimination System (NPDES).

5. The Facility and discharge outfall are located at 81 Via de la Valle in the City of Canyon Lake, within Section 2, T6S, R4W, SBB&M.

6. A Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan identifies water quality objectives and beneficial uses for waters in the Santa Ana Region. The requirements contained in this Order are necessary to implement the Basin Plan.

7. The discharge is to Canyon Lake, the beneficial uses of which include:

   a. Municipal and domestic supply,

California Regional Water Quality Control Board
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Waste Discharge Requirements
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7. The discharge is to Canyon Lake, the beneficial uses of which include:

   a. Municipal and domestic supply,

b. Groundwater recharge,
c. Water contact recreation,
d. Non-contact water recreation,
e. Wildlife habitat, and
f. Warm freshwater habitat.

8. In accordance with Water Code Section 13389, the issuance of waste discharge requirements for this discharge 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.

9. The Board has considered antidegradation pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, and finds this discharge is consistent with those provisions.

10. Effluent limitations and national standards of performance established pursuant to Section 301, 302, 303(d), 304, and 306 of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

11. The 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 for a public hearing and an opportunity to submit their written views and recommendations.

12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Divisions 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and the regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Specifications

1. The discharge of wastes containing constituent concentrations in excess of the following limits is prohibited:

CONSTITUENT	CONCENTRATION LIMIT	
	Daily Maximum	Monthly Average
Total Suspended Solids	35 mg/l	20 mg/l
Turbidity	5 NTU	--
Chlorine Residual	0.1 mg/l	--

B. Receiving Water Limitations

1. The discharge of wastes shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board or State Board, as required by the Federal CWA and regulations adopted thereunder.

2. The discharge shall not cause any of the following:

   a. Coloration of the receiving waters that causes a nuisance or adversely affects beneficial uses.

   b. Taste or odor producing substances to be in the receiving water at concentrations which cause a nuisance or adversely affect beneficial uses.

   c. The deposition of oil, grease, wax, or other materials in concentrations which result in a visible film or in the coating of objects in the water, or which cause a nuisance or affect beneficial uses.

   d. The deposition of objectionable deposits along the lakeshore or the bottom of the lake.

   e. The depletion of the dissolved oxygen concentration below 5.0 mg/l in Canyon Lake. In addition, the waste discharge shall not cause the median dissolved oxygen concentration to fall below 85% of saturation or the 95th percentile concentration to fall below 75% of saturation within a 30-day period.

   f. The temperature of the lake water to be raised above 90°F (32°C), which normally occurs during the period of June through October, nor above 78°F (26°C) during the rest of the year.

   g. A change in the ambient pH levels more than 0.5 pH units.

   h. The presence of radioactive materials in concentrations which are deleterious to human, plant or animal life.

   i. The increase in the amount of suspended or settleable solids of the receiving waters that will cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors.

   j. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving waters. The discharge shall not result in the degradation of inland surface water communities and populations, including vertebrate, invertebrate, and plant species, and

   k. The bioaccumulation of chemicals in aquatic resources to levels that are harmful to human health.

3. The discharger shall take all reasonable steps to minimize any adverse impact to receiving waters resulting from noncompliance with any effluent limitations specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

C. Prohibitions

1. The discharge of oil, trash, industrial waste sludge, or other solids directly to the surface waters in this region or in any manner that will ultimately affect surface waters in this region is prohibited.

2. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

3. The discharge of wastes to property not owned or controlled by the discharger is prohibited.

4. Odors, vectors, and other nuisances of waste origin are prohibited.

D. Provisions

1. This Order shall become effective upon its adoption. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the CWA, or amendments thereto, that shall become effective 10 days after the date of adoption, provided the Regional Administrator of the EPA has no objection. If the Regional Administrator objects to its issuance, this Order shall not serve as an NPDES permit until such objection is withdrawn.

2. No discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.

3. This Order expires on January 1, 2009. The discharger must file an application in accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

4. The discharger shall comply with all requirements of this Order.

5. The discharger shall comply with Monitoring and Reporting Program No. R8-2004-0004. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order to include an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected. Any such modifications may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

6. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

7. The discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement.

8. This Order is not transferable to any person except after notice to and approval by the Regional Board.

9. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.

10. This Order does not convey any property rights of any sort, or any exclusive privilege.

11. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

12. Any violation of this Order constitutes a violation of the CWA, its regulations, and the California Water Code, and is grounds for enforcement action and/or termination of the authorization to discharge.

13. Except for data determined to be confidential under Section 308 of the Clean Water Act (CWA), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the Regional Water Quality Control Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential.

14. The Regional Board, EPA, and other authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
    b. Access to copy any records that are kept under the conditions of the order;
    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
    d. To photograph, sample and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA.

15. The discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided to the Executive Officer (909-782-4130) and the Office of Emergency Services (1-800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within five days and shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates/times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Executive Officer or the Executive Officer's designee may waive the above-required written report on a case-by-case basis.

E. Permit Reopening, Revision, Revocation, and Reissuance:

1. This Order may be reopened to address any changes in State or federal plans, policies or regulations which would affect the quality requirements for the discharges.

2. This Order may be modified, revoked and reissued, or terminated for cause. No permit condition will be stayed by the filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order, or by a notification of anticipated noncompliance or planned changes.

3. This Order may be reopened to include effluent limitations for pollutants determined to be present in significant amounts in the discharge through any monitoring program.

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 22, 2004.

_____

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2004-0004

For

Elsinore Valley Municipal Water District
Canyon Lake Water Treatment Plant
Filter Backwash Discharges To Canyon Lake
City of Canyon Lake, Riverside County

A. Monitoring Guidelines

Monitoring and reporting shall be in accordance with the following:

1. All sampling and sample preservation shall be in accordance with the current edition of *"Standard Methods for he Examination of Water and Wastewater"* (American Public Health Association).

2. All laboratory analyses shall be performed in accordance with test procedures under 40 CFR 136 (revised as of May 14, 1999) "Guidelines Establishing Test Procedures for the Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this monitoring and reporting program (M&RP). In addition, the Regional Board and/or EPA, at their discretion, may specify test methods that are more sensitive than those specified in 40 CFR 136.

3. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or EPA or at laboratories approved by the Executive Officer of the Regional Board.

4. The discharger shall conduct acute toxicity testing as specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA-821-R-02-012, Fifth Edition, October 2002). Using a control and 100% effluent, static renewal survival (pass/fail) tests for 96 hours shall be conducted using the water flea (Ceriodaphnia dubia) for the required annual test under this permit. The effluent tests must be conducted concurrent with reference toxicant tests. The effluent and reference toxicant tests must meet all test acceptability criteria as specified in the acute manual[1]. If the test acceptability criteria are not achieved, then the discharger must re-sample and re-test within 14 days. The test results must be reported according to the acute manual chapter on Report Preparation, and shall be attached to the monitoring reports. The use of alternative methods for measuring acute toxicity may be considered by the Executive Officer on a case-by-case basis.

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[1] *"Acute manual" refers to protocols described in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" (EPA-821-R-02-012, Fifth Edition, October 2002).*

In the event that the required annual toxicity test fails, the discharger shall stop any discharge of wastewater to waters of the U.S. and shall retest within 14 days of receiving the notice of failure and shall determine the cause of the failure. The discharger shall stop any discharge of wastewater to waters of the U.S. until such time that the cause of toxicity is determined and appropriately addressed. Commencement of any discharge shall be with prior approval by the Executive Officer.

5. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. The flow measurement system shall be calibrated at least once per year, or even more frequently, to ensure continued accuracy.

6. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Effluent samples shall be collected downstream of the last addition of waste to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters.

7. Whenever the discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

8. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Executive Officer at any time. Records of monitoring information shall include:

    a. The date(s), exact place, and time of sampling;
    b. The individual(s) who performed the sampling, and/or measurements;
    c. The date(s) analyses were performed;
    d. The laboratory(ies) that performed the analyses;
    e. The individual(s) who performed the analyses;
    f. The analytical techniques or methods used;
    g. All sampling and analytical results;
    h. All monitoring equipment calibration and maintenance records;
    i. All original strip charts from continuous monitoring devices;
    j. All data used to complete the application for this Order; and
    k. Copies of all reports required by this Order.

9. Daily samples shall be collected on a discharge day.

10. Weekly samples shall be collected on a representative day of each week.

11. Annual samples shall be collected in July through September of each year.

B. **Effluent Monitoring**

1. The following shall be the monitoring program for this discharge:

Constituent	Sample type	Units	Minimum Frequency of Analysis
Flow	Estimate	gpd	Daily
Total Suspended Solids	Grab	mg/l	Weekly
Turbidity	"	NTU	"
Residual Chlorine	"	mg/l	"
Coliform	"	MPN	"
Acute Toxicity Test	"	Pass/Fail	Annually

C. **Reporting**

Reporting shall be in accordance with the following:

1. All monitoring reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22 and shall be submitted under penalty of perjury.

2. All reports shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge limitation.

3. All reports shall be signed by either a principal executive officer or ranking elected or appointed official or a duly authorized representative of a principal executive officer or ranking elected or appointed official. A duly authorized representative of a principal executive officer or ranking elected or appointed official may sign the reports only if;

   a. the authorization is made in writing by a principal executive officer or ranking elected or appointed official,

   b. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position), and

   c. the written authorization is submitted to the Regional Board.

   Each person signing a report required by this Order or other information requested by the Regional Board shall make the following certification:

" I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate[2], and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharger into full compliance with requirements at the earliest time, and an estimate of the date when the discharger will be in compliance. The discharger shall notify the Regional Board by letter when compliance with the time schedule has been achieved.

5. Quarterly monitoring reports shall be submitted by the 15th day of February, May, August, and November following the monitoring period and shall include:

   a. The results of all chemical analyses for the previous three month, and annual samples whenever applicable,

   b. The daily flow data,

   c. A summary of the month's activities including a report detailing compliance or noncompliance with the task for the specific schedule date, and

   d. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

Ordered by_____
Gerard J. Thibeault
Executive Officer

January 22, 2004

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[2] *For the purposes of this certification the term "accurate" refers to the veracity of the information submittal and not to the performance characteristics of the measurement system.*