CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. 2001-352

MASTER RECLAMATION PERMIT
WITH WASTE DISCHARGE REQUIREMENTS
FOR THE PRODUCTION AND PURVEYANCE OF RECYCLED WATER

FOR

CARLSBAD MUNICIPAL WATER DISTRICT
CARLSBAD WATER RECYCLING FACILITY
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On January 23,1984, this Regional Board adopted Order No. 84-10, "Water Reclamation Requirements for the City of Carlsbad for the Purveyance of Reclaimed Water, San Diego County." Order No. 84-10 established requirements under which the City of Carlsbad could purchase wholesale reclaimed water from the San Marcos County Water District's Meadowlark Water Reclamation Plant and sell the water to various users within the city.

2. On May 20, 1991, this Regional Board adopted Order No. 91-60, "Water Reclamation Requirements for the Purveyance of Reclaimed Water by the Carlsbad Municipal Water District, San Diego County." Order No. 91-60 superseded Order No. 84-10 and added the Shadowridge and Gafner Water Reclamation Plants as additional recycled water suppliers.

3. On December 16, 1998, this Regional Board adopted Order No. 98-200. The order established water reuse areas and required the discharger to implement appropriate and reasonable measures to prevent the discharge of reclaimed water from the reclaimed water storage ponds at the North La Costa Golf Course to San Marcos Creek and Batiquitos Lagoon. The measures included the termination of the discharge to the reservoirs when there is a potential for overflow.

4. On December 5, 2000, this Regional Board received a Report of Waste Discharge (RWD) submitted by the Carlsbad Municipal Water District (CMWD) for the Carlsbad Water Recycling Facility.

5. The proposed Carlsbad Water Recycling Facility (CWRF) is to be owned and operated by the CMWD. The facility is located immediately south of the Encina Water Pollution Control Facility (EWPCF) in the city of Carlsbad in San Diego County in Hydrologic Subarea (HSA) 904.51.

6. Secondary effluent from the EWPCF is to be used as influent for the CWRF.

7. The RWD contains a conceptual process schematic of the proposed CWRF, describing the facility as consisting of storage basins, continuous backwash granulated media filter, microfiltration/ultrafiltration, reverse osmosis, chlorine disinfection, and thickener.

8. In accordance with section 2200, Title 23 of the California Code of Regulation, the threat to water quality and complexity of the use of the treated wastewater from the CWRF is determined to be category IIB.

9. The CMWD is authorized to purchase and use up to 5.0 MGD of recycled water from the Vallecitos Water District's Meadowlark Water Reclamation Plant and up to 2.0 MGD of recycled water from the Leucadia County Water District's Gafner Water Reclamation Plant.

10. All recycled water discharges from the CWRF and from water purchased by the CMWD are to occur in the CMWD recycled water service area. The recycled water service area of the CMWD encompasses portions of the El Salto Hydrologic Subarea (HSA 904.21), the Los Monos Hydrologic Subarea (HSA 904.31), the Encinas Hydrologic Area (HA 904.40), the Batiquitios Hydrologic Subarea (HSA 904.51), and the Richland Hydrologic Subarea (HSA 904.52). All of the aforementioned hydrologic regions are located within the Carlsbad Hydrologic Unit (HU 904.00). The Basin Plan established municipal and domestic supply, agricultural supply, and industrial process supply as existing beneficial uses of ground water in HU 904.00 and for the aforementioned hydrologic regions.

11. This Regional Board, acting in accordance with section 13244 of the California Water Code, adopted the Water Quality Control Plan for the San Diego Basin (9), (hereinafter Basin Plan) on September 8, 1994. The Basin Plan was subsequently approved by the State Water Resources Control Board (SWRCB) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Board and approved by the SWRCB. The Basin Plan contains beneficial uses and water quality objectives.

12. The Basin Plan states that waters designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels specified in the California Code of Regulations, Title 22, Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels, Consumer Acceptance Limits), incorporated by reference, including future changes to the incorporated provisions as the changes take effect. The Basin Plan lists the following additional ground water quality objectives for the following hydrologic regions in HU 904.00:

BASIN PLAN GROUNDWATER WATER QUALITY OBJECTIVES (mg/L or as noted)													
(Concentrations not to be exceeded more than 10% of the time during any one year period)													
HYDROLOGIC AREA / SUBAREA[1]	TDS	Cl	SO_4	%Na[6]	NO_3	Fe	Mn	MBAS	B	ODOR	TURB NTU	COLOR UNITS	F
904.21 El Salto	3500	800	500	60	45	0.3	0.05	0.5	2.0	None	5	15	1.0
904.31 Los Monos[2]	3500	800	500	60	45	0.3	0.05	0.5	2.0	None	5	15	1.0
904.40 Encinas	3500[5]	800[5]	500[5]	60	45[5]	0.3[5]	0.05[5]	0.5	2.0[5]	None	5	15	1.0
904.50 San Marcos[3]	1000	400	500	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0
904.51 Batiquitos[4]	3500	800	500	60	45	0.3	0.05	0.5	2.0	None	5	15	1.0

[1]The water quality objectives do not apply westerly of the easterly boundary of Interstate 5.

[2]The water quality objectives apply to the portion of Subarea 904.31 bounded on the west by the easterly boundary of the Interstate 5 right-of-way and on the east by the easterly boundary of El Camino Real.

[3]The water quality objectives do not apply to hydrologic subareas 904.51 and 904.52 between Highway 78 and El Camino Real and to all lands which drain to Moonlight Creek and Encinitas Creek.

[4]The water quality objectives do not apply to hydrologic subareas 904.51 and 904.52 between Highway 78 and El Camino Real and to all lands which drain to Moonlight Creek and Encinitas Creek. The water quality objectives apply to the portion of Subarea 904.51 bounded on the south by the north shore of Batiquitos Lagoon, on the west by the easterly boundary of the Interstate 5 right-of-way and on the west by the easterly boundary of El Camino Real.

[5]Detailed salt balance studies are recommended for this area to determine limiting mineral concentration levels for discharge. On the basis on existing data, the tabulated objectives would probably be maintained in most areas. Upon completion of the salt balance studies, significant water quality objective revisions may be necessary. In the interim period of time, projects of ground water recharge with water quality inferior to the tabulated numerical values may be permitted following individual review and approval by the Regional Board if such projects do not degrade existing ground water quality to the aquifiers affected by the recharge.

[6]In some cases, Adjusted Sodium Adsorption Ratio (ASAR) may be a better indicator of the potential sodium hazard in irrigation water than percent sodium. The Regional Board may authorize the use of the ASAR instead of percent sodium to indicate the potential sodium hazard.

13. As stated in the Basin Plan, for discharges of recycled water not upgradient of municipal water supply reservoirs, numerical effluent limitations for constituents shall be at levels no lower than the quality of the basin's water supply concentration plus a typical incremental increase resulting from domestic water use, but not more than the Basin Plan ground water quality objectives.

14. A discharge in compliance with this Order will be consistent with the standards, policies, and regulations established in the Basin Plan for the achievement of water quality objectives.

15. For flows exceeding the existing storage capacity, the CWRF has authorization from the Encina Wastewater Authority to use the Encina Ocean Outfall, and as such is exempt from the required 84-day on-site storage capacity as required by the Basin Plan.

16. In establishing the requirements contained herein the Regional Board considered factors including, but not limited to, the following:

    a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose,

    b. Other waste discharges,

    c. The need to prevent nuisance,

    d. Past, present, and probable future beneficial uses of the hydrologic subunits under consideration,

    e. Environmental characteristics of the hydrologic subunits under consideration,

    f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area,

    g. Economic considerations,

    h. The need for additional housing within the region, and

    i. The need to develop and use recycled water.

17. The proposed project will make use of recycled water consistent with the goals of California Water Code, Division 7, Chapter 7, *Water Recycling Law.*

18. Pursuant to California Water Code (CWC) section 13523.1, this Regional Board, after consulting with, and receiving the recommendations of, the State Department of Health Services (State DHS) and any party who has requested in writing to be consulted and with the consent of the proposed permitee, issues a master reclamation permit to the recycled water supplier in lieu of issuing waste discharge requirements pursuant to CWC section 13263 or water reclamation requirements pursuant to CWC section 13523.

19. As specified by CWC section 13523.2, this Order includes the following: waste discharge requirements adopted pursuant to Article 4;

    - Requirements that the permittee comply with the uniform statewide criteria established by the State DHS pursuant to section 13521 and other applicable permit conditions for the use of recycled water;
    - Requirements for the discharger to establish and enforce rules and

regulations for recycled water users in accordance with statewide reclamation criteria;

- Requirements for the submittal of quarterly recycled water use summary reports;
- Requirements for the recycled water agency to conduct periodic inspections of the recycled water use sites; and
- Other requirements determined to be appropriate by this Regional Board.

20. In accordance with the *Memorandum Of Agreement Between The Department Of Health Services And The State Water Resources Control Board On Use Of Reclaimed Water,* this Order incorporates any conditions of approval submitted as part of the State DHS recommendations into water reclamation requirements proposed for adoption by this Regional Board.

21. This Regional Board has considered all water resource related environmental factors associated with the proposed discharge of waste from the proposed CWRF.

22. This Regional Board has notified the CMWD and all known interested parties of the intent to prescribe master reclamation permit requirements for the proposed discharge.

23. This Regional Board in a public meeting has heard and considered all comments pertaining to the proposed discharge of waste from the CWRF.

IT IS HEREBY ORDERED THAT, the Carlsbad Municipal Water District (hereinafter Recycled Water Agency), in order to meet the provisions contained in Division 7 of the California Water Code and Regulations adopted thereunder, shall comply with the following requirements for the discharge and purveyance of recycled water from the CWRF to HA 904.40 and HSA 904.21, 904.31, 904.51, and 904.52.

A. PROHIBITIONS

1. Discharge of wastes to lands which have not been specifically described in the RWD and for which valid waste discharge requirements are not in force are prohibited.

2. Discharges of treated or untreated solid or liquid waste to a navigable water or tributary of a navigable water are prohibited unless as authorized by an NPDES permit issued by this Regional Board.

3. Neither the treatment, storage, nor disposal of waste shall create a

pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code.

4. The discharge of treated wastewater shall not cause a violation of the prohibitions contained in the Basin Plan.

5. Total daily effluent flow from the CWRF in excess of 4 million gallons is prohibited.

B. DISCHARGE SPECIFICATIONS

1. Effluent used for landscape irrigation purposes shall be treated to the most restricted level in conformance with all applicable provisions of California Code of Regulations, Title 22, Division 4, Chapter 3 (Reclamation Criteria) for landscaping irrigation (currently section 60304 (b) and 60320.5). Recycled water from the CWRF shall not contain constituents in excess of the following limitations:

CONSTITUENT	30-DAY AVERAGE (mg/L)[1]	DAILY MAXIMUM (mg/L)[2]
Biochemical Oxygen Demand (BOD_5 @ 20°C)	30	45
Total Suspended Solids	30	45
pH (within limits shown at all times)	6.0 – 9.0	

[1]The 30-day average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any calendar month.

[2]The daily maximum effluent limitation shall apply to the results of a single composite or grab sample.

2. The median concentration of total coliform bacteria measured in the disinfected recycled water effluent from the CWRF shall not exceed a Most Probable Number (MPN) of 2.2 per 100 milliliters, utilizing the bacteriological results of the last seven days for which analyses have been completed; and the number of total coliform bacteria shall not exceed a MPN of 23 per 100 milliliters in more than one sample in any 30-day period. No sample shall exceed a MPN of 240 total coliform bacteria per 100 milliliters.

3. Turbidity concentration of the recycled water effluent from the CWRF shall not exceed a daily average value of 2 NTU (nephelometric turbidity units), shall not exceed 5 NTU more than 5% of the time during a 24-hour period, and shall not exceed 10 NTU at any time.

4. Discharges to a landscape impoundment must be terminated whenever

an overflow of the impoundment is imminent.

5. Recycled water from the CWRF shall not contain constituents in excess of the following limitations:

Constituent	Unit	Daily Maximum[1]	30-day Average[2]	12-Month Average[3]
TDS	mg/L	1200	--	1100
Chloride	mg/L	400	350	--
Sulfate	mg/L	400	--	350
Boron	mg/L	0.75	0.75	0.75
Iron	mg/L	0.4	0.3	0.3
Manganese	mg/L	0.06	--	0.05
Fluoride	mg/L	--	--	1.0
Methylene blue active substances	mg/L	--	--	0.5

[1]The 30-day average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any calendar month.

[2]The daily maximum effluent limitation shall apply to the results of a single composite or grab sample.

[3]The 12-month average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any 12 consecutive calendar month period.

C. RECYCLED WATER PURVEYANCE REQUIREMENTS

1. Prior to the initiation of the purveyance of recycled water project, the Recycled Water Agency must complete all of the following:

   a. Develop and submit for approval *Rules and Regulations for Recycled Water Users* governing the design and construction of recycled water use facilities and the use of recycled water to the Regional Board, the State DHS and the County of San Diego Department of Environmental Health (County DEH). Rules and regulations shall, at a minimum, include the requirements that are contained in Attachment No. 1 of this Order.

   b. Develop and submit for approval a program to conduct compliance inspections of recycled water reuse sites to the Regional Board, State DHS and County DEH. Inspections shall determine the status of compliance with the Recycled Water Agency's approved rules and regulations for recycled water users.

   c. Submit a report to the State DHS and the County DEH containing the information listed below. The Recycled Water Agency may submit a Master Plan report that covers more than one reuse site. The report shall include a detailed description of each reuse site identifying all of the information below:

(1) The number, location, and type of facilities within the use area proposing to use domestic and recycled water. "Facility" means any type of building or structure, or defined area of specific public use that utilizes or proposes to utilize a dual plumbed system.

(2) The specific boundaries of the proposed use site area including a map showing the location of each facility, drinking water fountain and impoundment to be served.

(3) The person or persons responsible for operation of the recycled water system at each use area.

(4) The specific use to be made of the recycled water at each use area.

(5) The methods to be used by the Recycled Water Agency to assure that the installation and operation of the recycled system will not result in cross connections between the recycled water piping system and the potable water piping system. This shall include a description of pressure, dye or other test methods to be used to test the system.

(6) Plans and specifications shall include the following and shall be submitted to the State DHS and County DEH for approval:

(a) Proposed piping system to be used,

(b) Pipe locations of both the recycled and potable systems,

(c) Type and location of the outlets and plumbing fixtures that will be accessible to the public,

(d) The methods and devices to be used to prevent backflow of recycled water into the public water system,

(e) Plan notes relating to recycled water specific installation and use requirements.

2. Subsequent to initiation of the purveyance of recycled water and prior to providing recycled water to a new use site, the Recycled Water Agency shall do the following:

a. Submit for review and approval a report that either certifies (by the agency) that the project conforms with what is described in the master plan or information to supplement what is described in the

master plan to the State DHS and the County DEH. A certification report shall document that all criteria described in *Recycled Water Purveyance Requirements C.1c* has been submitted to and approved by the appropriate regulatory agency. Information submitted as a supplement to the master plan shall document compliance with any criteria, as described by *Recycled Water Purveyance Requirements C.1c,* not met through submittal of the master plan.

b. The City of Carlsbad will perform a complete cross-connection shut down test, performed by a certified cross-connection control specialist, with oversight and monitoring provided by the County DEH.

c. Submit for review and approval documentation confirming the information submitted as part of Monitoring and Reporting Program No. 2001-352, Recycled Water Users Summary Report F.2 to the Regional Board.

d. Perform an alarm simulation shut down test after completion of the construction of CWRF, in the presence of a staff from the Regional Board and a sanitary engineer from the State DHS, to ensure that CWRF is properly operating.

e. Verify the modal contact time of the chlorination chamber, as defined under Title 22, Division 4, Chapter 3, Section 60301.600, through a tracer study to ensure that the effluent meets the requirements of Title 22. The results of this tracer study shall be submitted to the State DHS for review and approval.

3. The Recycled Water Agency shall do the following for all reuse sites:

a. Enforce recycled water rules and regulations,

b. Conduct recycled water reuse site compliance inspections in accordance with the program submitted in compliance with *Recycled Water Purveyance Requirements C.1b* of this Order,

c. Notify the State DHS and the County DEH of any incidence of recycled water backflow into the potable water system as soon as possible, but in no case later than 24 hours of finding the incident, and

d. Maintain a current list of all on-site recycled water supervisors.

D. FACILITY DESIGN AND OPERATION SPECIFICATIONS

1. PROPER OPERATION

The Recycled Water Agency shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Recycled Water Agency to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

2. CERTIFICATION REPORT

The wastewater treatment and disposal facilities for the CWRF shall be completely constructed and operable prior to the initiation of the discharge. The complete facilities shall have adequate capacity for the full design flow of 4 MGD. A report from the design engineer certifying the adequacy of each component of the treatment, storage, and disposal facilities shall be submitted by the discharger prior to commencement of the discharge. The certification report shall contain a requirement-by-requirement analysis based on acceptable engineering practices, of how the process and physical designs of the facilities will ensure compliance with the master reclamation permit. The design engineer shall affix their signature and engineering license number to the certification report and should submit it prior to construction of the facilities. Recycled water shall not be purveyed to a user until all of the following have occurred:

a. The certification report is received and approved by the Regional Board Executive Officer,

b. The Regional Board Executive Officer has been notified that the Title 22 report and the rules and regulations for recycled water reuse are approved by the State DHS and County DEH,

c. The Regional Board Executive Officer has been notified of the completion of facilities by the Recycled Water Agency,

d. An inspection of the facilities has been made by staff of the Regional Board, and

e. The Regional Board Executive Officer notifies the Recycled Water Agency by letter that recycled water purveyance can be initiated.

3. ENGINEERING REPORT

Prior to discharge of recycled water from the CWRF, the discharger shall meet the design, operational, and reliability requirements of Articles 7, 8, 9 and 10 of the California Code of Regulations, Title 22, Division 4, Chapter 3. The discharger shall prepare an engineering report conforming to the California Code of Regulations, Title 22, Engineering Report Guidelines, sections 3 and 4. The engineering report shall be submitted to the State DHS, County DEH, and the Regional Board Executive Officer.

4. WET WEATHER STORAGE

The discharger shall provide adequate storage facilities to contain recycled water during and after periods of rainfall when disposal by irrigation cannot be successfully practiced and to prevent the discharge of treated or untreated recycled water to any surface water body.

5. DISINFECTION PROCESS

Disinfection of recycled water shall comply with all requirements of California Code of Regulations, Title 22, Division 4. Disinfection may be accomplished by either:

a. A chlorine disinfection process that provides a CT (chlorine concentration times modal contact time) value of not less than 450 mg-min/liter at all times with a modal chlorine contact time of at least 90 minutes based on peak dry weather design flow; or

b. A disinfection process, that, when combined with the filtration process, has been demonstrated to reduce the concentration of plaque-forming units of F-specific bacteriophage MS2, or polio virus, per unit volume of water in the wastewater to one hundred thousandths (1/100,000) of the initial concentration in the filter influent throughout the range of qualities of wastewater that will occur during the recycling process. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.

6. OPERATION MANUAL

A copy of the facility operations manual shall be maintained at the Recycled Water Agency's facility and shall be available to operation personnel and Regional Board staff at all times. The following portions of the operations manual shall be posted at the treatment plant as a quick reference for treatment plant operators:

a. Alarm set points for secondary turbidity, tertiary turbidity and chlorine residual.

b. Levels at which flow will be diverted for secondary turbidity, tertiary turbidity and chlorine residual.

c. When to divert flow for high daily and weekly median total coliform.

d. When the authorities (State DHS, County DEH, Regional Board) will be notified of a diversion.

e. Names and numbers of those authorities to be notified in case of a diversion.

f. Frequency of calibration for turbidimeters and chlorine residual analyzers.

7. OPERATORS' CERTIFICATION

The Recycled Water Agency's wastewater treatment facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Chapter 3, Subchapter 14, Title 23 of the California Code of Regulations.

8. FLOOD PROTECTION

All waste treatment, storage and purveyance facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.

9. RUNOFF PROTECTION

All wastewater and recycled water storage facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour frequency storm. An exemption from this requirement has been granted for the reclaimed water storage ponds at the North La Costa Golf Course, which shall be operated to prevent discharges of reclaimed water from the reservoirs to San Marcos Creek and Batiquitos Lagoon. The measures shall include the termination of the discharge to the reservoirs when there is a potential for overflow.

10. MONITORING AND REPORTING

The Recycled Water Agency shall comply with the attached Monitoring and Reporting Program No. 2001-352, and future revisions thereto as specified by the Executive Officer. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. 2001-

352.

E. BIOSOLIDS SPECIFICATIONS

1. Collected screenings, sludges, other solids removed from liquid wastes, and filter backwash shall be disposed in a manner approved by the Executive Officer.

2. Management of all solids and sludge must comply with all applicable requirements of 40 CFR Parts 257, 258, 501 and 503; CWA Part 405(d), and Title 27, CCR, including all monitoring, record keeping and reporting requirements. Since the State of California, hence the State and Regional Boards, has not been delegated the authority by the USEPA to implement the sludge program, enforcement of sludge requirements of CFR Part 503 is under USEPA's jurisdiction. Once sludge leaves a facility, it is subject to all applicable local, state and federal laws and regulations.

3. All solids and sludge not returned to the Encina Water Pollution Control Facility must be disposed of in a municipal solid waste landfill, reused by land application or disposed of in a sludge-only landfill accordance with 40 CFR Parts 503 and 258, and Title 27 CCR. If the discharger desires to dispose of solids or sludge by a different method, a request for permit modification must be submitted to the USEPA and this Regional Board 180 days prior to the initiation of the alternative disposal.

4. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.

5. The solids and sludge treatment site and storage site shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

6. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the state.

7. The Recycled Water Agency shall submit a copy of each of the annual reports required by 40 CFR 503 to this Regional Board Executive Officer at the same time those reports are submitted to USEPA. The Recycled Water Agency shall also submit an annual report of the quantity and disposition of sludge generated in the previous calendar year.

F. STANDARD PROVISIONS

1. ENFORCEMENT

The Regional Board may initiate enforcement action against the recycled water agency, which may result in the termination of the recycled water supply, if any person uses, transports, or stores such water in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

2. DUTY TO COMPLY

The Recycled Water Agency must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for (a) enforcement action; (b) termination, revocation and reissuance, or modification of this Order; or (c) denial of a report of waste discharge in application for new or revised master reclamation permit requirements.

3. ENTRY AND INSPECTION

The Recycled Water Agency shall allow the Regional Board, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to do the following:

a. Enter upon the Recycled Water Agency's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Order,

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order,

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this Order, and

d. Sample or monitor, at reasonable times for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

4. CIVIL MONETARY REMEDIES

The California Water Code provides that any person who intentionally or

negligently violates any master reclamation permit requirements issued, reissued, or amended by this Regional Board shall be liable civilly in accordance with California Water Code section 13350 (d), (e), or (f).

5. PENALTIES FOR INVESTIGATION, MONITORING OR INSPECTION VIOLATIONS

The California Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor and is subject to a civil liability of up to 5,000 dollars for each day in which the violation occurs.

6. ENDANGERMENT OF HEALTH AND ENVIRONMENT

The Recycled Water Agency shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive Officer within 24 hours from the time the Recycled Water Agency becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Recycled Water Agency becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and 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 recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Officer within 24 hours:

a. Any bypass from any portion of the treatment facility. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility to other than a sewer system.

b. Any discharge of non-disinfected effluent or untreated wastewater resulting from sewer line breaks, obstruction, surcharge, or any other circumstances.

c. Any treatment plant upset which causes the effluent limitations of this Order to be exceeded including, but not limited to, the following:

(1) Failure of chlorination equipment

(2) Effluent total coliform bacteria greater than 240 MPN/100 ml

(3) Turbidity greater than 10 NTU

(4) CT less than 450 mg-min/L

7. PLANT OVERLFOW EVENTS

The discharger shall report all overflow events that occur at the CWRF. For purposes of this reporting requirement, an overflow event is defined as a discharge of treated or untreated wastewater at a location onsite and not authorized by waste discharge requirements and/or NPDES permit which results from a pump station failure, line break, obstruction, surcharge, or any other operational dysfunction. This reporting requirement applies to all overflow events other than those events subject to regulation under this Regional Board's Order No. 96-04, *General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies.* Overflows identified under this provision shall be reported to the Regional Board with the quarterly monitoring report for the period in which the overflow occurs.

8. UNAUTHORIZED DISCHARGES OF RECYCLED WATER

Any person who, without regard to intent or negligence, causes or permits an unauthorized discharge of 50,000 gallons or more of recycled water that has been treated to at least disinfected tertiary 2.2 recycled water or 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary 2.2 recycled water in or on any waters of the state, or causes or permits such unauthorized discharge to be discharged where it is, or probably will be, discharged in or on any waters of the state, shall, as soon as (1) that person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify this regional board in accordance with reporting requirements in standard provision F.6.

9. PRIOR NOTICE OF BYPASS

If a need for a discharge bypass is known in advance, the Recycled Water Agency shall submit prior notice (stating, at a minimum, the purpose, anticipated dates, duration, level of treatment, and volume of bypass) and, if at all possible, such notice shall be submitted at least 10 days prior to the date of the bypass. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility to other than a sewer system.

10. CORRECTIVE ACTION

The Recycled Water Agency shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

11. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the Recycled Water Agency that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the Recycled Water Agency shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies for example, when the primary source of power of the treatment facility is failed, reduced, or lost.

12. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these master reclamation permit requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Director of Environmental Health Services, County of San Diego in accordance with California Health and Safety Code section 5411.5 and the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Recycled Water Agency is in violation of a prohibition in the applicable Water Quality Control Plan.

13. PETROLEUM RELEASES

Except for a discharge which is in compliance with these master

reclamation permit requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan.

14. PERMIT REPOSITORY

A copy of this Order shall be maintained at the Recycled Water Agency's facility and shall be available to operating personnel at all times.

15. RETENTION OF RECORDS

The Recycled Water Agency shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

16. GENERAL REPORTING REQUIREMENT

The Recycled Water Agency shall furnish to the Executive Officer of this Regional Board, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Recycled Water Agency shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

17. PERMIT REVISION

This Order may be modified, revoked and reissued, or terminated for

cause including, but not limited to, the following:

a. Violation of any terms or conditions of this Order.

b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the Recycled Water Agency for the modification, revocation and reissuance, or termination of this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

18. CHANGE IN DISCHARGE

The Recycled Water Agency shall file a new Report of Waste Discharge at least 120 days prior to the following:

a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the wastes.

b. Significant change in the treatment or disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste.)

c. Change in the disposal area from that described in the findings of this Order.

d. Increase in flow beyond that specified in this Order.

e. Other circumstances which result in a material change in character, amount, or location of the waste discharge.

f. Any planned change in the regulated facility or activity which may result in noncompliance with this Order.

19. CHANGE IN OWNERSHIP

This Order is not transferable to any person except after notice to the Executive Officer. The Recycled Water Agency shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Recycled Water Agency containing a specific date for the transfer of this Order's responsibility and coverage between the current Recycled Water Agency and the new Recycled Water Agency. This agreement shall include an acknowledgement that the existing Recycled Water Agency is liable for

violations up to the transfer date and that the new Recycled Water Agency is liable from the transfer date on. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the Recycled Water Agency and incorporate such other requirements as may be necessary under the California Water Code.

20. INCOMPLETE REPORTS

Where the Recycled Water Agency becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information.

21. REPORT DECLARATION

All applications, reports, or information submitted to the Executive Officer shall be signed and certified as follows:

a. The Report of Waste Discharge shall be signed as follows:

(1) For a corporation - by a principal executive officer of at least the level of vice-president.

(2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.

b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if all of the following are true:

(1) The authorization is made in writing by a person described in paragraph (a) of this provision,

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, and

(3) The written authorization is submitted to the Executive Officer.

c. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all

attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

22. REGIONAL BOARD ADDRESS

The Recycled Water Agency shall submit reports required under this Order or other information required by the Executive Officer to the following address:

POTW Compliance Unit
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123

G. NOTIFICATIONS

1. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Recycled Water Agency from liability under federal, state or local laws, nor create a vested right for the Recycled Water Agency to continue the waste discharge.

2. U.S. EPA REVIEW

These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to section 402 of the Clean Water Act.

3. SEVERABILITY

The provisions of this Order are severable, and if any provision of this Order, or the application of any provision 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.

4. PREVIOUS ORDER

The requirements prescribed in this Order supercede the requirements prescribed in Order No. 98-200. This Order becomes effective on the date of adoption by the San Diego RWQCB.

5. EFFECTIVE DATE

This Order becomes effective on the date of adoption by the San Diego RWQCB.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on December 12, 2001.

JOHN H. ROBERTUS
Executive Officer

ATTACHMENT NO.1

TO

ORDER NO. 2001-352

RULES AND REGULATIONS FOR RECYCLED WATER USE PROJECTS

Pursuant to California Water Code (CWC) section 13523.1(b)(3), this Order requires the recycled water agency to establish and to enforce rules and regulations governing the design, construction and use of recycled water distribution and disposal systems by its customers. The rules and regulations shall be consistent with the following criteria:

- Title 22, Division 4, Chapter 3, *Wastewater Reclamation Criteria;*
- Title 17, Division 1, Chapter 5, Group 4, Article 1 & 2, of the California Code of Regulations;
- The State Department of Health Services (State DHS) *Guidelines For Use of Recycled Water, Guidelines for Use of Recycled Water for Construction Purposes, and the County of San Diego Department of Environmental Health (County DEH) Recycled Water Plan Check and Inspection Manual*;
- Any measures that are deemed necessary for protection of public health, such as the American Water Works Association (AWWA) California/Nevada section, *Guidelines for the Distribution of Non-Potable Water and Guidelines for Retrofitting To Recycled Water* or alternate measures that are acceptable to the State DHS.

At a minimum, the rules and regulations shall notify the users that:

1. The use of recycled water shall not cause pollution, contamination, or nuisance, as defined by section 13050 of the California Water Code.

2. The Recycled Water Agency, the Regional Board, the State DHS, and the County DEH or an authorized representative of these parties, upon presentation of proper credentials, shall have the right to enter upon the recycled water use site during reasonable hours, to verify that the user is complying with the Recycled Water Agency's rules and regulations.

3. The recycled water user shall provide written notification, in a timely manner, to the Recycled Water Agency of any material change or proposed change in the character of the use of recycled water.

4. Prior to the initiation of recycled water service, the recycled water user shall

submit plans and specifications for recycled water distribution facilities to the Recycled Water Agency.

5. The recycled water user shall designate a recycled water supervisor who is responsible for the recycled water system at each use area under the user's control. Specific responsibilities of the recycled water supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the Recycled Water Agency's rules and regulations, prevention of potential hazards and preservation of the recycled water distribution system plans in "as built" form. Designated recycled water supervisors shall obtain instruction in the use of recycled water from an institution approved by the State DHS and County DEH. Additional guidance regarding recycled water supervisor responsibilities and instruction requirements is provided in Attachments 17 and 18 of the *Recycled Water Plan Check and Inspection Manual* developed by the County DEH, and which are incorporated herein by reference.

6. The Recycled Water Agency may terminate service to a recycled water user who uses, transports, or stores such water in violation of the Recycled Water Agency's rules and regulations.

7. All recycled water storage facilities owned and/or operated by recycled water users shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour frequency storm unless the Regional Board Executive Officer approves relaxed storm protection measures for the facility.

8. All recycled water storage facilities owned and/or operated by recycled water users shall be protected against 100 - year frequency peak stream flows as defined by the San Diego County flood control agency unless the Regional Board Executive Officer approves relaxed storm protection measures for the facility. An exemption from this requirement has been granted for the reclaimed water storage ponds at the North La Costa Golf Course, which shall be operated to prevent discharges of reclaimed water from the reservoirs to San Marcos Creek and Batiquitos Lagoon. The measures shall include the termination of the discharge to the reservoirs when there is a potential for overflow.

9. The Regional Board may initiate enforcement action against any recycled water user who discharges recycled water in violation of any applicable discharge requirement prescribed by the Regional Board or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

10. A copy of the recycled water rules and regulations, irrigation system layout map, and a recycled water system operations manual shall be maintained at the use area. These documents shall be available to operating

personnel at all times.

11. Irrigation with disinfected tertiary recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

    a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.

    b. The well contains an annular seal that extends from the surface into the aquitard.

    c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

    d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

    e. The owner of the well approves of the elimination of the buffer zone requirement.

12. Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.

13. Irrigation with, or impoundment of, disinfected secondary-2.2 or disinfected secondary -23 recycled water shall not take place within 100 feet of any domestic water supply well.

14. Irrigation with, or impoundment of, undisinfected secondary recycled water shall not take place within 150 feet of any domestic water supply well.

15. Reclaimed water facilities shall be operated in accordance with best management practices (BMP's) to prevent direct human consumption of reclaimed water and to minimize misting, ponding, and runoff. BMP's shall be implemented that will minimize both public contact and discharge onto areas not under customer control.

16. Irrigation with reclaimed water shall be during periods of minimal human use of the service area. Consideration shall be given to allow an adequate dry-out time before the irrigated area will be used by the public.

17. All drinking fountains located within the approved use area shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff. Protection shall be by design, construction practice, or system operation.

18. Facilities that may be used by the public, including but not limited to eating surfaces and playground equipment and located within the approved use areas, shall be protected to the maximum extent possible by siting and/or

structure from contact by irrigation with recycled water spray, mist, or runoff. Protection shall be by design, construction practice or system operation.

19. Spray irrigation with recycled water, other than disinfected tertiary recycled water, shall not take place within 100 feet of the property line of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.

20. All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording and picture in a size no less than 4 inches high by 8 inches wide: "RECYCLED WATER - DO NOT DRINK". See Attachment No. 2 for the acceptable symbol. The sign(s) shall be of a size easily readable by the public.

21. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.

22. The recycled water piping system shall not include any hose bibs. Quick couplers that are different from that used on the potable water system may be used.

23. The public water supply shall not be used as a backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of Title 17 and the approval of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the Department of Health Services Policy Memo 95-004. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of Title 17, Division 1, Chapter 5, Group 4, Article 2.

24. No person other than the Recycled Water Agency shall deliver recycled water to a facility. Connection to the irrigation system by an individual residence is prohibited.

25. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 7.9, section 4049.54 of the California Health and Safety Code.

26. Reuse site shut down tests and inspections shall be monitored by the County DEH or the State DHS.

27. Customer complaints concerning recycled water use that may involve public illness shall be reported to the County DEH and the State DHS, and to the Recycled Water Agency who shall maintain a log of all customer complaints

regarding recycled water.

28. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with section 7605 of Title 17.

ATTACHMENT NO. 2

TO

ORDER NO. 2001-352

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

MONITORING AND REPORTING PROGRAM NO. 2001-352
FOR
CARLSBAD MUNICIPAL WATER DISTRICT
CARLSBAD WATER RECYCLING FACILITY
SAN DIEGO COUNTY

A. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this Order and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. Monitoring points shall not be changed without notification to and the approval of the Executive Officer.

2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than +10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this Order.

4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.

5. Monitoring results must be reported on discharge monitoring report forms approved by the Executive Officer.

6. If the discharger monitors any pollutants more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's

monitoring report. The increased frequency of monitoring shall also be reported.

7. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

8. Records of monitoring information shall include the following:

   a. The date, exact place, and time of sampling or measurements,
   b. The individual(s) who performed the sampling or measurements,
   c. The date(s) analyses were performed,
   d. The individual(s) who performed the analyses,
   e. The analytical techniques or method used, and
   f. The results of such analyses.

9. All monitoring instruments and devices that are used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

10. The discharger shall report all instances of noncompliance not reported under Provision F.6 of Order No. 2001-352 at the time monitoring reports are submitted. The reports shall contain the information described in Provision F.6.

11. The monitoring reports shall be signed by an authorized person as required by Provision F.21.

12. A composite sample is defined as a combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquot must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquot may be collected manually or automatically.

13. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

14. Sampling and analysis shall, at a minimum, be conducted in accordance with Article 6 of California Code of Regulations, Title 22, Division 4, Chapter 3 (Reclamation Criteria).

B. EFFLUENT MONITORING

1. Samples of the effluent discharged from the Carlsbad Water Recycling Facility (CWRF) shall be collected at a point downstream of the disinfection process and prior to any dilution.

2. The discharger is responsible for monitoring and reporting in accordance with the following criteria:

Monitoring and Reporting Program No. 2001-352

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY[3]	REPORTING FREQUENCY
Flowrate[1]	Gallons/Day	Continuous	Continuous	Monthly
Turbidity	NTU	Continuous	*	Monthly
Chlorine Residual[2]	mg/L	Continuous	**	Monthly
Chlorine Contact Time (CT)[2]	mg-min/L	Continuous	**	Monthly
Total Coliform	MPN/100ml	Grab	***	Monthly
Biochemical Oxygen Demand (BOD_5 @ 20°C)	mg/L	Composite	Once every 30 days	Quarterly
Total Suspended Solids	mg/L	Composite	Once every 30 days	Quarterly
Volatile Suspended Solids	mg/L	Composite	Once every 30 days	Quarterly
pH	Unit	Grab	Once every 30 days	Quarterly
Total Dissolved Solids	mg/L	Composite	Once every 30 days	Quarterly
Chloride	mg/L	Composite	Once every 30 days	Quarterly
Sulfate	mg/L	Composite	Once every 30 days	Quarterly
Boron	mg/L	Composite	Once every 30 days	Quarterly
Percent Sodium	%	Composite	Quarterly	Quarterly
Adjusted Sodium Adsorption Ratio[4]	---	Composite	Quarterly	Quarterly
EC	dS/m	Composite	Quarterly	Quarterly
Iron	mg/L	Composite	Once every 30 days	Quarterly
Manganese	mg/L	Composite	Once every 30 days	Quarterly
Methylene Blue Active Substances	mg/L	Composite	Annually	Annually
Aluminum	mg/L	Composite	Annually	Annually
Arsenic	mg/L	Composite	Annually	Annually
Barium	mg/L	Composite	Annually	Annually
Cadmium	mg/L	Composite	Annually	Annually
Chromium	mg/L	Composite	Annually	Annually
Copper	mg/L	Composite	Annually	Annually
Fluoride	mg/L	Composite	Annually	Annually
Lead	mg/L	Composite	Annually	Annually
Mercury	mg/L	Composite	Annually	Annually
Nickel	mg/L	Composite	Annually	Annually
Selenium	mg/L	Composite	Annually	Annually
Silver	mg/L	Composite	Annually	Annually
Zinc	mg/L	Composite	Annually	Annually

Notes: MPN/100 ml = Most Probable Number per 100 milliliters
mg/L = milligrams per liter
NTU = Nephelometric Turbidity Units
dS/m = deciseimens per meter

1 Report the daily total for influent, reclaimed effluent, recycled flows to Encina Water Pollution Control Facility, and discharge to the Encina Ocean Outfall.

2 Required if chlorine disinfection process is used. Disinfection using UV Irradiation will require additional monitoring requirements not currently specified in Order No. 2001-352.

3 The discharger shall increase the sampling frequency from once every 30 days to once every 7 days, from quarterly to monthly, and from annually to quarterly for any noted constituent that exceeds the limit specified by Discharge Specification B.1, B.2, B.3, and B.5 of Order No. 2001-352. The increased frequency of monitoring shall continue until the discharger achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the discharger shall resume sampling at the specified frequency.

4 The adjusted sodium adsorption ratio (Adj. SAR) is calculated as follows:

$$\text{Adj. SAR} = \frac{Na}{\sqrt{(Ca_x + Mg)/2}}$$

where Na, Ca_x, and Mg are in milliequivalent per liter (meq/L)

Ca_x is a modified Ca value calculated using Table 3-2 contained in *Irrigation with Reclaimed Municipal Wastewater, A Guidance Manual.*

* Effluent turbidity analyses shall be conducted continuously using a continuous monitoring and recording turbidimeter. Compliance with the daily average operating filter effluent turbidity limit of 2 NTU shall be determined by averaging the recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period. Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2-hours over a 24-hour period. Should the continuous turbidity meter and/or recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The discharger shall report monthly results of four-hour turbidity readings, average effluent turbidity (24-hours), 95 percentile effluent turbidity (24-hours), and daily maximum turbidity readings. Continuous turbidity monitoring must also be provided prior to filtration to ensure adequate process control, and automatically actuate coagulant feed when the turbidity of the secondary treated effluent is greater than 10 NTU.

** Chlorine concentrations shall be recorded by a continuous recording meter. Calculated CT (chlorine concentration multiplied by modal contact time) values shall be collected and recorded continuously. Compliance with CT requirements shall be determined at least daily. Minimum daily chlorine residual shall be reported monthly.

*** Samples for total coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures. Results of daily total coliform bacteria monitoring, running 7-day median determination, and maximum daily coliform reading in each of previous 12 months shall be reported monthly.

3. The discharger shall review the monitoring results for compliance with Order No. 2001-352 and submit a statement of compliance as part of the Monitoring and Reporting Program No. 2001-352. The statement of compliance shall identify and report all effluent limitation violations of Discharge Specifications B.1, B.2, B.3, and B.5 of this Order.

C. FILTRATION PROCESS MONITORING

If coagulation is not used as part of the treatment process, the turbidity of the filter influent and effluent shall be continuously measured. The discharger shall report orally to the Regional Board staff within 24-hours if effluent turbidity exceeds 2 NTU or if the influent turbidity exceeded 5 NTU, and shall describe the measures taken to automatically activate chemical addition or to divert wastewater should the turbidity of the influent to the filters exceed 5 NTU. The discharger shall submit a written report of the incident as part of the monthly monitoring report.

D. SEWAGE SOLIDS AND BIOSOLIDS

A record of the type, quantity, and manner of disposal and/or reuse of solids removed in the course of sewage treatment shall be maintained at the CWRF and be made available to Regional Board staff upon request.

A biosolids certification, certifying that the use and disposal of biosolids complies with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503 shall be submitted annually.

E. STORAGE PONDS

The Recycled Water Agency shall record storage pond monthly inflow and outflow, the volume of water in storage at the end of each month, the monthly volume of ground, municipal, and recycled water used, and total water consumption.

F. RECYCLED WATER USERS SUMMARY REPORT

1. The Recycled Water Agency shall submit a quarterly recycled water users summary report containing the following information:

   a. Total volume of recycled water supplied to all recycled water users for each month of the reporting period,
   b. Total number of recycled water use sites,
   c. Address of the recycled water use sites and
   d. Basin Plan name and number of hydrologic subarea underlying the recycled water use site.

2. The Recycled Water Agency shall submit an annual recycled water users compliance report containing the following information:

   a. Recycled water use site summary report.

      (1) Name of the reclaimed water reuse site
      (2) Owner of the reclaimed water use facility
      (3) Address of the reuse site
      (4) Name of the reclaimed water user supervisor
      (5) Phone number of the on-site water user supervisor
      (6) Mailing address of the recycled water use supervisor, if different from site address
      (7) Volume of reclaimed water delivered to the reuse site on a monthly basis

   b. Recycled water user site inspections.

      Number of reclaimed water reuse site inspections conducted by discharger/producer staff and identification of sites inspected for the year.

   c. Recycled water user violations of the Recycled Water Agency's rules and regulations.

      The Recycled Water Agency shall identify all recycled water users known to be in violation of the Recycled Water Agency's rules and regulations for recycled water users. The report shall include a description of the noncompliance and its cause, including the period of noncompliance, 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 recurrence of the noncompliance.

G. REPORT SCHEDULE

Monitoring reports shall be submitted to the Executive Officer in accordance with the following schedule:

Reporting Frequency	Report Period	Report Due
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the 1st day of the second month following the month of sampling

Monitoring and Reporting Program No. 2001-352

Quarterly	January - March April - June July - September October - December	May 1st August 1st, November 1st February 1st
Annually	January-December	February 1st

Monitoring reports shall be submitted to:

ATTN: POTW Compliance Unit
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Ordered by: _____
JOHN H. ROBERTUS
Executive Officer

Date: December 12, 2001