California Regional Water Quality Control Board
Santa Ana Region

March 4, 2005

STAFF REPORT

ITEM: **11**

SUBJECT: Amendment of Order No. R8-2002-0024, NPDES No. CA8000316, Waste Discharge Requirements for Western Riverside County Regional Wastewater Authority's Western Riverside County Regional Wastewater Treatment Plant - Order No. R8-2005-0008

DISCUSSION:

On December 3, 2002, the Regional Board adopted Order No. R8-2002-0024, NPDES No. CA8000316, prescribing waste discharge requirements (WDR) for Western Riverside County Regional Wastewater Authority (WRCRWA) for the discharge of tertiary treated wastewater from Western Riverside County Regional Wastewater Treatment Plant (WRCRWTP) to Reach 3 of the Santa Ana River. Order No. R8-2002-0024 replaced Order No. 97-2, which regulated the discharges from the facility. Order 97-2 originally included water recycling requirements. At the request of the discharger, the water recycling requirements were not included in Order No. R8-2002-0024.

On July 6, 2004, Regional Board staff received a letter from the City of Norco requesting information regarding regulatory requirements for the use of recycled water within the City of Norco. The letter stated that the City of Norco has received a grant to construct a recycled water pipeline as part of the Southern California Integrated Watershed Program. Consequently, the City of Norco proposes to use recycled water for the irrigation of a park and other landscape areas and to supply recycled water to two ornamental lakes, Lake Norconian and a lake on the Arrow development site. The City's letter indicated that the recycled water would be provided by the Western Riverside County Regional Wastewater Treatment Plant, which is operated by Western Riverside County Regional Wastewater Authority (WRCRWA).

On August 20, 2004, Regional Board staff responded to the City of Norco's July 6, 2004 letter. The City of Norco was advised that the Regional Board has issued a National Pollutant Elimination System (NPDES) permit to WRCRWA for the discharge of tertiary treated wastewater to surface waters and that the issued permit did not include recycling requirements that would allow WRCRWA to supply recycled water to possible users. Staff advised the City of Norco that WRCRWA needed to request that their current permit, Order No.R8-2002-0024, NPDES No.CA8000316, be amended to include "Recycled Water Requirements" before WRCRWA can provide recycled water to the City and that WRCRWA must also obtain approval from the California Department of Health Services and meet Title 22 requirements for such use.

On November 19, 2004, WRCRWA requested amendment of Order No. R8-2002-0024 to authorize WRCRWA to provide recycled wastewater to possible customers for reuse. WRCRWA prepared a "Regional Wastewater Reclamation Plant Title 22 Report" in June 1998. WRCRWTP is a tertiary treatment facility that meets Title 22 requirements and is designed to produce recycled water for reuse. The treatment plant has been in operation for the last six years.

In addition to the inclusion of recycled water requirements, the amendment will also include biosolids requirements, which were inadvertently not included in Order No. R8-2002-0024.

On January 22, 2004, the Regional Board adopted Resolution No. R8-2004-0001, amending the Basin Plan. This amendment updated the total dissolved solids (TDS) and nitrogen management plan for the Santa Ana Region and incorporated revised groundwater subbasin boundaries, now called "management zones", and new TDS and nitrate-nitrogen water quality objectives for the new management zones.. The Basin Plan amendment has been approved by the State Water Resources Control Board and the Office of Administrative Law. With those approvals, the groundwater-related provisions of the amendment became effective. The surface water provisions of the amendment are awaiting approval by the U.S. Environmental Protection Agency, but do not bear on the requirements for recycled water use in the WRCRWA service area. This Order implements relevant, approved requirements of the Basin Plan amendment for this proposed use of recycled water in the WRCRWA service area.

The management zones that would be affected by recycled water use by the City of Norco are the Temescal and Chino South Management Zones. No assimilative capacity for TDS or nitrate-nitrogen is available in either management zone. That is, current ambient TDS and nitrate-nitrogen water quality exceeds established water quality objectives in both management zones. Accordingly, recycled water discharges to these management zones must be limited to the management zone objectives. The Basin Plan amendment includes nitrogen loss coefficients that can be applied in calculating effluent limits necessary to assure compliance with affected groundwater management zone nitrate-nitrogen objectives. A loss coefficient of 25% has been applied in calculating the nitrogen limitations in this Order.

The following shows the proposed changes to the Order. Additions are bold and highlighted. Deletions are stricken-out.

1. Page 13 of 30 of Order No. R8-2002-0024, insert new Discharge Specifications A.7. as follows:

   7. The use of recycled water in the Temescal and/ or Chino South groundwater management zones that contain TDS and TIN constituents in excess of the following concentration limits is prohibited:

GROUNDWATER MANAGEMENT ZONE	Constituent	12-Month Average Concentration (mg/l)
Temescal	TDS	770
	TIN	13.3
Chino South	TDS	680
	TIN	5.6

2. Page 16 of 30 of Order No. R8-2002-0024, insert new Section E and Section F as follows and renumber succeeding Sections accordingly:

E. BIOSOLIDS REQUIREMENTS:

1. Collected screenings, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Chapter 15, Division 3, Title 23, of the California Code of Regulations and approved by the Executive Officer.

2. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. (see also Section J.7. – Permit Re-opening, Revision, Revocation, and Re-issuance).

3. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and EPA Regional Administrator at least 90 days in advance of the change.

4. The discharger shall take all reasonable steps to minimize or prevent any discharge or biosolids use or disposal that has the potential of adversely affecting human health or the environment.

F. WATER RECYCLING REQUIREMENTS:

1. The use of recycled water shall only commence after final approval for such use is granted by the California Department of Health Services (CDHS). The Producer/User shall provide the Regional Board with a copy of the CDHS approval letter within 30 days of the approval notice.

2. The discharger shall be responsible for assuring that recycled water is delivered and utilized in conformance with this Order, the recycling criteria contained in Title 22, Division 4, Chapter 3, Sections 60301 through 60355, California Code of Regulations, and the "Guidelines for Use of Reclaimed Water" by the California Department of Health Services. The discharger shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with this Order.

3. The discharger shall establish and enforce Rules and Regulations for Recycled Water users, governing the design and construction of recycled water use facilities and the use of recycled water in accordance with the uniform statewide recycling criteria established pursuant to the California Water Code Section 13521.

a. **Use of recycled water by the discharger shall be consistent with its Rules and Regulations for Recycled Water Use.**

b. **Any revisions made to the Rules and Regulations shall be subject to the review of the Regional Board, the California Department of Health Services, and the County of Riverside Department of Environmental Health. The revised Rules and Regulations or a letter certifying that the discharger's Rules and Regulations contain the updated provisions in this Order, shall be submitted to the Regional Board within 60 days of adoption of this Order by the Regional Board.**

4. The discharger shall, within 60 days of the adoption of this Order, review and update as necessary its program to conduct compliance inspections of recycled water reuse sites. Inspections shall determine the status of compliance with the discharger's Rules and Regulations for Recycled Water Use.

5. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in a pollution or nuisance, or adversely affect water quality, as defined in the California Water Code.

6. Prior to delivering recycled water to any new user, the discharger shall submit to the Regional Board, the California Department of Health Services and the Riverside County Health Department a report containing the following information for review and approval:

a. **The average number of persons estimated to be served at each use site area on a daily basis.**

b. **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 used.**

c. **The person or persons responsible for operation of the recycled water system at each use area.**

d. **The specific use to be made of the recycled water at each use area.**

e. **The methods to be used to assure that the installation and operation of the recycled system will not result in cross connections between the recycled water and potable water piping systems. This shall include a description of the pressure, dye or other test methods to be used to test the system.**

f. **Plans and specifications which include following:**

1) **Proposed piping system to be used.**

2) **Pipe locations of both the recycled and potable systems.**

3) **Type and location of the outlets and plumbing fixtures that will be accessible to the public.**

4) **The methods and devices to be used to prevent backflow of recycled water into the potable water system.**

5) **Plan notes relating to specific installation and use requirements.**

7. **An on-site supervisor responsible for the operation of the recycled water distribution system shall be designated by the user. The supervisor shall be responsible for enforcing this Order, prevention of potential hazards, the installation, operation and maintenance of the distribution system, maintenance of the distribution and irrigation system plans in "as-built" form, and for the distribution of the recycled wastewater in accordance with this Order.**

3. Change title header of Order No. R8-2002-0024 from Waste Discharge Requirements to Waste Discharge **and Producer/User Water Recycling** Requirements.

4. Page 20 of 21 of Monitoring and Reporting Requirements No. R8-2002-0024, insert new Section K. as follows and renumber following Section to Section L., accordingly:

K. <u>WATER RECYLING MONITORING AND REPORTING</u>:

1. **Whenever recycled water is supplied to a user, the volume of recycled water, the user of recycled water, the locations of those sites including the names of the groundwater management zone underlying the recycled water use sites, type of use (e.g. irrigation, industrial, etc) and the dates at which water is supplied shall be recorded. A summary report of water use by groundwater management zones shall be submitted annually. This report shall be included in the annual report required in Section A.13. above.**

2. **Whenever recycled water is supplied to recharge either the Temescal or Chino South groundwater management zone, the total inorganic nitrogen concentration and the volume of recycled water recharged shall be monitored monthly. The monitoring report shall be submitted quarterly together with the required monthly monitoring report.**

5. Page 20 of 21 of Monitoring and Reporting Requirements No. R8-2002-0024, newly renumbered Section L., replace Table in paragraph 1. as follows as follows:

L.~~K~~ REPORTING

1. Monitoring reports shall be submitted by the dates in the following schedule:

Report	Reporting	Report Due Date
Influent and effluent constituents	Monthly	By the last day of the month following the monitoring period
Quarterly Report for Recycled Water User	**Quarterly**	"
Receiving Water Monitoring	"	"
Toxicity Testing for discharges to Santa Ana River only	See Section D.10., above	"
Biosolids Monitoring	Quarterly	"
Quarterly Pretreatment Compliance Status Reports (see Section J.1., above)	Quarterly	By the last day of the month following the monitoring period
Annual Priority Pollutants Analysis	Annually	By the last day of the month following the monitoring period
Fish Flesh Testing	"	March 31, each year
Annual Water Supply Parameters from each source	"	Fourth Monday of October
Annual Pretreatment Reporting (see Section J.2., above)	"	April 1, each year
Storm Water Monitoring Reports	"	July 1, each year
Salt Offset Reporting	Annually	April 1, each year
Annual Monitoring Report (see Section A.13., above)	Annually	April 1, each year

RECOMMENDATION:

Adopt Order No. R8-2005-0008, as presented.

Comments were solicited from the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) – Doug Eberhardt
U.S. Army District, Los Angeles, Corps of Engineers, Regulatory Branch
U.S. Fish and Wildlife Service - Carlsbad
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality- James Maughan
State Water Resources Control Board, Division of Financial assistance – Diana Robles

California Department of Health Services, Carpinteria - Jeff Stone
California Department of Health Services, San Diego – Steve Williams
State Department of Water Resources - Glendale
State Department of Fish and Game - Long Beach
Orange County Water District - Nira Yamachika
Riverside County Flood Control and Water Conservation District – Jason Uhley
Riverside County Department of Environmental Health Services – Sandy Bunchek
Santa Ana River Dischargers Association
Santa Ana Watershed Project Authority – General Manager
Inland Empire Utilities Agency – Richard Atwater
Chino Basin Watermaster
City of Norco - City Manager
Home Gardens Sanitary District - Manager
Jurupa Community Services District - Manager
Western Municipal Water District – John Rossi
Aklufi & Wysocki – David Wysocki
Western Riverside County Regional Wastewater Authority – Jeffrey L. Minkler
Orange County Coastkeeper
Lawyers for Clean Water

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2005-0008
Amending Order No. R8-2002-0024, NPDES No. CA8000316
Waste Discharge and Producer/User Water Recycling Requirements

for

Western Riverside County Regional Wastewater Authority
Western Riverside County Regional Wastewater Treatment Plant
Riverside County

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

1. On December 3, 2002, the Board adopted Order No. R8-2002-0024, NPDES No. CA8000316, prescribing Waste Discharge Requirements for Western Riverside County Regional Wastewater Authority's (WRCRWA) Western Riverside County Regional Wastewater Treatment Plant (WRCRWTP) for the discharge of tertiary treated wastewater to Reach 3 of the Santa Ana River.

2. On November 19, 2004, WRCRWA requested that Order No. R8-2002-0024 be amended to include water recycling requirements to allow WRCRWA to provide recycled wastewater for reuse by possible customers.

3. On January 6, 1977, the State Board adopted a water recycling policy regarding the issuance of wastewater reclamation requirements to primary users of reclaimed water. This Order incorporates requirements for the production and use of recycled water in conformance with the "Policy and Action Plan for Water Reclamation in California" adopted by the State Board and "Reclamation Criteria" (Title 22 Division 4 California Code of Regulations (CCR)) adopted by the California Department of Health Services. The Regional Board has consulted with the California Department of Health Services regarding these requirements and has incorporated its recommendations.

4. WRCRWA has operated for the past six years the WRCRWTP, a tertiary treatment facility that meets the CDHS reclamation criteria.

5. It is appropriate to authorize WRCRWA to produce and supply recycled water to customers, in light of the need for recycled water for irrigation and landscaping in the City of Norco and other areas.

6. On February 19, 1993, the USEPA issued a final rule for the use and disposal of sewage sludge, 40 CFR, Part 503. This rule requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. The State of California has not been delegated the authority to implement this program, therefore, the U.S. Environmental Protection Agency is the implementing agency. However, this Order incorporates the Regional Board biosolids requirements that were inadvertently not included in Order No. R8-2002-0024.

TENTATIVE

7. On January 22, 2004, the Regional Board adopted Resolution No. R8-20004-0001 amending the Basin Plan. This amendment updates the total dissolved solids (TDS) and nitrogen management plan for the Santa Ana Region and incorporates revised groundwater subbasin boundaries, now termed "management zones" and new TDS and nitrate-nitrogen water quality objectives for the new management zones. The Basin Plan amendment has been approved by the State Water Resources Control Board and the Office of Administrative Law. With those approvals, the groundwater-related provisions of the amendment became effective. The surface water provisions of the amendment are awaiting approval by the U.S. Environmental Protection Agency, but do not bear on the requirements for recycled water use in the WRCRWA service area. This Order implements relevant, approved requirements of the Basin Plan amendment for this proposed use of recycled water in the WRCRWA service area.

8. The management zones that would be affected by recycled water use in the discharger's service area are the Temescal and Chino South Management Zones. These management zones lack TDS and nitrate-nitrogen assimilative capacity. Accordingly, recycled water discharges to these management zones must be limited to the management zone objectives. The Basin Plan amendment includes nitrogen loss coefficients that can be applied in calculating effluent limits necessary to assure compliance with affected groundwater management zone nitrate-nitrogen objectives. A nitrogen loss coefficient of 25% has been applied in calculating the nitrogen limitations in this Order.

9. In accordance with Water Code Section 13389, amending the 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.

10. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.

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

IT IS HEREBY ORDERED that Order No. 2002-0024 be amended as follows:

1. Page 13 of 30 of Order No. R8-2002-0024, insert new Discharge Specifications A.7. as follows:

    7. The use of recycled water in the Temescal and/or Chino South groundwater management zones that contain TDS and TIN constituents in excess of the following concentration limits is prohibited:

Groundwater Management Zone	Constituent	12-Month Average Concentration (mg/l)
Temescal	TDS	770
	TIN	13.3
Chino South	TDS	680
	TIN	5.6

2. Page 16 of 30 of Order No. R8-2002-0024, insert new Section E and Section F as follows and renumber succeeding Sections accordingly:

E. <u>BIOSOLIDS REQUIREMENTS</u>:

1. Collected screenings, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with Chapter 15, Division 3, Title 23, of the California Code of Regulations and approved by the Executive Officer.

2. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. (see also Section J.7. – Permit Re-opening, Revision, Revocation, and Re-issuance).

3. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and EPA Regional Administrator at least 90 days in advance of the change.

4. The discharger shall take all reasonable steps to minimize or prevent any discharge or biosolids use or disposal that has the potential of adversely affecting human health or the environment.

F. <u>WATER RECYCLING REQUIREMENTS</u>:

1. The use of recycled water shall only commence after final approval for such use is granted by the California Department of Health Services (CDHS). The Producer/User shall provide the Regional Board with a copy of the CDHS approval letter within 30 days of the approval notice.

2. The discharger shall be responsible for assuring that recycled water is delivered and utilized in conformance with this Order, the recycling criteria contained in Title 22, Division 4, Chapter 3, Sections 60301 through 60355, California Code of Regulations, and the "Guidelines for Use of Reclaimed Water" by the California Department of Health Services. The discharger shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with this Order.

3. The discharger shall establish and enforce Rules and Regulations for Recycled Water users, governing the design and construction of recycled water use facilities and the use of recycled water in accordance with the uniform statewide recycling criteria established pursuant to the California Water Code Section 13521.

   a. Use of recycled water by the discharger shall be consistent with its Rules and Regulations for Recycled Water Use.

   b. Any revisions made to the Rules and Regulations shall be subject to the review of the Regional Board, the California Department of Health Services, and the County of Riverside Department of Environmental Health. The revised Rules and Regulations or a letter certifying that the discharger's Rules and Regulations contain the updated provisions in this Order, shall be submitted to the Regional Board within 60 days of adoption of this Order by the Regional Board.

4. The discharger shall, within 60 days of the adoption of this Order, review and update as necessary its program to conduct compliance inspections of recycled water reuse sites. Inspections shall determine the status of compliance with the discharger's Rules and Regulations for Recycled Water Use.

5. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in a pollution or nuisance, or adversely affect water quality, as defined in the California Water Code

6. Prior to delivering recycled water to any new user, the discharger shall submit to the Regional Board, the California Department of Health Services and the Riverside County Health Department a report containing the following information for review and approval:

   a. The average number of persons estimated to be served at each use site area on a daily basis.
   b. 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 used.
   c. The person or persons responsible for operation of the recycled water system at each use area.
   d. The specific use to be made of the recycled water at each use area.
   e. The methods to be used to assure that the installation and operation of the recycled system will not result in cross connections between the recycled water and potable water piping systems. This shall include a description of the pressure, dye or other test methods to be used to test the system.
   f. Plans and specifications which include following:
      1) Proposed piping system to be used.
      2) Pipe locations of both the recycled and potable systems.

3) Type and location of the outlets and plumbing fixtures that will be accessible to the public.

4) The methods and devices to be used to prevent backflow of recycled water into the potable water system.

5) Plan notes relating to specific installation and use requirements.

7. An on-site supervisor responsible for the operation of the recycled water distribution system shall be designated by the user. The supervisor shall be responsible for enforcing this Order, prevention of potential hazards, the installation, operation and maintenance of the distribution system, maintenance of the distribution and irrigation system plans in "as-built" form, and for the distribution of the recycled wastewater in accordance with this Order.

3. Change title header of Order No. R8-2002-0024 from Waste Discharge Requirements to Waste Discharge and Producer/User Water Recycling Requirements.

4. Page 20 of 21 of Monitoring and Reporting Requirements No. R8-2002-0024, insert new Section K. as follows and renumber following Section to Section L., accordingly:

K. <u>WATER RECYCLING MONITORING AND REPORTING</u>:

1. Whenever recycled water is supplied to a user, the volume of recycled water, the user of recycled water, the locations of those sites including the names of the groundwater management zone underlying the recycled water use sites, type of use (e.g. irrigation, industrial, etc) and the dates at which water is supplied shall be recorded. A summary report of water use by groundwater management zones shall be submitted annually. This report shall be included in the annual report required in Section A.13. above.

2. Whenever recycled water is supplied to recharge either the Temescal or Chino South groundwater management zone, the total inorganic nitrogen concentration and the volume of recycled water recharged shall be monitored monthly. The monitoring report shall be submitted quarterly together with the required monthly monitoring report.

5. Page 20 of 21 of Monitoring and Reporting Requirements No. R8-2002-0024, newly renumbered Section L., replace Table in paragraph 1. as follows:

L. REPORTING

1. Monitoring reports shall be submitted by the dates in the following schedule:

Report	Reporting	Report Due Date
Influent and effluent constituents	Monthly	By the last day of the month following the monitoring period
Quarterly Report for Recycled Water User	Quarterly	"
Receiving Water Monitoring	"	"
Toxicity Testing for discharges to Santa Ana River only	See Section D.10., above	"
Biosolids Monitoring	Quarterly	"
Quarterly Pretreatment Compliance Status Reports (see Section J.1., above)	Quarterly	By the last day of the month following the monitoring period
Annual Priority Pollutants Analysis	Annually	By the last day of the month following the monitoring period
Fish Flesh Testing	"	March 31, each year
Annual Water Supply Parameters from each source	"	Fourth Monday of October
Annual Pretreatment Reporting (see Section J.2., above)	"	April 1, each year
Storm Water Monitoring Reports	"	July 1, each year
Salt Offset Reporting	Annually	April 1, each year
Annual Monitoring Report (see Section A.13., above)	Annually	April 1, each year

6. All other conditions and requirements of Order No. R8-2002-0024 and M&RP No. R8-2002-0024 shall remain unchanged.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on March 4, 2005.

Gerard J. Thibeault
Executive Officer