California Regional Water Quality Control Board
Santa Ana Region

March 18, 2010

ITEM:

SUBJECT: Amending Order No. R8-2009-0021, NPDES No. CA8000409, Waste Discharge and Producer/User Reclamation Requirements for Inland Empire Utilities Agency, Regional Water Recycling Facilities, Order No. 2010-0008

DISCUSSION:

Summary:

On July 20, 2009, the Regional Board adopted Order No. R8-2009-0021, NPDES No. CA8000409, prescribing Waste Discharge and Producer / User Requirements for the Inland Empire Utilities Agency (IEUA) Regional Water Recycling Facilities.

On October 11, 2009, the State of California Legislature enacted Water Code Section 13148, relating to water softeners. This new law authorizes any local agency that owns or operates a community sewer system or water recycling facility to take action, by ordinance or resolution, to control salinity inputs from residential self-regenerating water softeners to protect the quality of the waters of the state, if the appropriate regional board makes a finding at a public hearing that the control of residential salinity input will contribute to the achievement of water quality objectives.

Order No. 2010-0008 makes this finding through an amendment of Order No. 2009-0021, thus enabling IEUA and its member agencies to regulate the discharge of salts from residential self-regenerating water softeners into their systems pursuant to Water Code Section 13148.

Background:

Water Code Section 13148 allows local agencies more control over salinity by giving them additional authority to regulate residential self-regenerating water softeners, especially in areas of the state with water bodies adversely impacted by salinity and high use groundwater basins that are hydrogeologically vulnerable to salinity pollution.

The Santa Ana River Basin, including the Chino Basin, faces water quality challenges due to salinity pollution resulting from historical agricultural and other activities. Producing high quality recycled water is imperative to the regional initiative within IEUA's service area to maximize beneficial reuse of recycled water through landscape irrigation, industrial reuse and groundwater recharge. Reuse of recycled water is a critical component of the regional plans to reliably meet current and future water needs for the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland and other communities within IEUA's service area.

The Basin Plan Amendment (Resolution No. R8-2004-0001) currently has in place a salt and nutrient management plan for the Santa Ana River Basin. The plan included a revised TDS wasteload allocation for discharges to the Santa Ana River and its tributaries, revised findings regarding Nitrogen and Total Dissolved Solids (TDS) assimilative capacity in groundwater, and a plan for water recycling in the Region. These findings were based on considerations of the factors specified in Water Code Section 13241 and the state's antidegradation policy (SWRCB Resolution No. 68-16), as well as the economic implications of all recommended changes to the plan. The Basin Plan amendments were based on sound and objective science reflecting the culmination of the multi-year, multi-million dollar (approximately $3.5 million) studies conducted by the community-based Regional N/TDS Task Force to review groundwater TDS and nitrate-nitrogen objectives, groundwater subbasin boundaries, the TIN and TDS wasteload allocations and other components of the N/TDS management plan.

The 2004 Basin Plan Amendment specifically recognizes IEUA's Salinity Management Action Plan, initiated in 2001, to reduce TDS entering its wastewater treatment plants from all sources and includes the requirement that IEUA regulate the use of new and existing residential self-regenerating water softeners to the extent allowed by law (including provision of incentives for the removal of on-site residential self-regenerative water softeners and encouragement of the use of exchange canisters and other water softener technology that does not introduce salt into the residential sewer system). The Regional Board found that the 2004 Basin Plan Amendment would protect beneficial uses and provide maximum benefit to the users of the Santa Ana River Basin and to the State of California.

The Chino Basin Optimum Basin Management Program (OBMP), adopted by the Chino Basin Watermaster in 2000, provides a comprehensive plan for increasing the yield from the Chino Basin through improved water quality treatment and enhanced groundwater recharge. Salinity management is identified as a critical issue in the OBMP and the program recommends investments of over $250 million in desalter facilities to control salinity impacts on the Santa Ana River and downstream communities in Orange County. Annually, over 33,000 tons of salt are exported out of the Chino Basin through implementation of IEUA's Salinity Management Action Plan through the use of non-reclaimable pipelines. Salinity in the IEUA service area is also managed by the use of groundwater desalters to create or augment water supplies and optimizing chemical additions needed in the wastewater treatment process. Studies completed in 2004 show that the region would avoid an estimated $430 million in future costs if IEUA did not have to desalt recycled water at its wastewater treatment plants to comply with the Regional Board Basin Plan Amendment permit conditions for its recycled water program. Similarly, a 2006 report showed a net economic impact to the region of between $238 million and $439 million if access to the use of recycled water was lost as a result of the loss of hydraulic control of the Chino Basin and replacement imported water had to be purchased from MWD.

In October 2006, IEUA, in partnership with the National Water Research Institute, Southern California Water Coalition, the Water Quality Association/Pacific Water Quality Association and the Claremont Graduate University, completed a comprehensive Salinity Characterization Study for the Carbon Canyon Water Reclamation Facility (CCWRF), one of the five wastewater treatment facilities within IEUA's service area. The study found that the residential use of self-regenerating water softeners contributed about 10% of the controllable salt inputs to the recycled water and 5% of the overall TDS in CCWRF influent (25 mg/L), consistent with other studies that have estimated the average TDS contribution from residential use of self-regenerating water softeners for this region. The residential use of self-regenerating water softeners was identified as a significant source of controllable TDS within IEUA's regional system. This source of TDS is expected to increase in the future if steps are not taken to educate residential users about the impact of TDS loading on recycled water supplies and the options available for reducing/eliminating salinity inputs.

In September 2008, IEUA in partnership with the Metropolitan Water District of Southern California, the National Water Research Institute, and the Southern California Water Coalition initiated a successful rebate program for the voluntary removal of residential self-regenerating water softeners which has resulted in the elimination of over 130 self-regenerating water softeners and a reduction of 30 tons of salt as of December 2009.

Order No. R8-2010-0008

Water Code Section 13148(e) states that before a local agency may take action to control salinity input from residential self-regenerating water softeners pursuant to that section, the Regional Board must make a finding that "… the control of residential salinity input will contribute to the achievement of water quality objectives". The Water Code then lists several water quality actions that the Regional Board could adopt to make this finding. Inclusion of the finding within waste discharge requirements is one of those actions.

The proposed order would amend Order No. R8-2009-0021 by adding the following finding:

> *Y.* ***Self-Regenerating Water Softeners****. The Basin Plan Amendment noted in Finding H, above, includes a salt and nutrient management plan for this region and a requirement that IEUA implement a salinity management program including the regulation of new and existing residential self-regenerating water softeners to the extent allowed by law. The salt and nutrient management plan was based on evidence in the record demonstrating that managing salinity inputs in this manner would ensure attainment of water quality objectives and protection of beneficial uses.*
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> *The control of residential use of self-regenerating water softeners will contribute to the achievement of the water quality objectives approved in the Basin Plan Amendment. This finding is based on evidence in the record demonstrating that salinity input from residential use of self-regenerating water softeners is a significant source of controllable TDS within IEUA's*

sewer system and that adverse regional economic impacts will result if residential use of self-regenerating water softeners is not controlled.

RECOMMENDATIONS:

Adopt Order No. R8-2010-0008 as presented.

COMMENT SOLICITATION:

Comments were solicited from the discharger and the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - David W. Smith
U.S. Army District, Los Angeles, Corps of Engineers - Regulatory Branch
U.S. Fish and Wildlife Service, Carlsbad – Christine Medak
State Water Resources Control Board, Office of the Chief Counsel – David Rice
California Department of Public Health, San Diego - Steve Williams
State Department of Water Resources, Glendale – Charles Keene
State Department of Fish and Game, Los Alamitos - Ms. Latonio
Riverside County Environmental Health Department - Sandy Bunchek
Riverside County Flood Control & WCD -- Jason Uhley/Albert Martinez
Santa Ana River Dischargers Association - Ed Filadelfia
Santa Ana Watershed Project Authority – Celeste Cantu/Mark Norton
Orange County Water District - Nira Yamachika
Orange County Coastkeeper - Garry Brown
Lawyers for Clean Water C/c San Francisco Baykeeper
Inland Empire Waterkeeper – Autumn DeWoody
Natural Resources Defense Council - David Beckman
Pacific Water Quality Association – Michael Mecca

California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2010-0008

Amending Order No. R8-2009-0021, NPDES No. CA 8000409
Waste Discharge and Producer / User Reclamation Requirements
for
Inland Empire Utilities Agency
Regional Water Recycling Facilities
Surface Water Discharges and Recycled Water Use

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

1. On July 20, 2009, the Regional Water Quality Control Board (the Regional Board) adopted Order No. R8-2009-0021, NPDES No. CA8000409, prescribing Waste Discharge and Producer / User Requirements for the Inland Empire Utilities Agency (IEUA) Regional Water Recycling Facilities.

2. On February 3, 2009, the State Water Resources Control Board adopted the Recycled Water Policy (Resolution No. 2009-0011). It is the intent of the policy that salts and nutrients from all sources be managed in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Board found that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects.

3. On October 11, 2009, the State of California enacted Water Code Section 13148, relating to water softeners. This new law authorizes any local agency that owns or operates a community sewer system or water recycling facility to take action, by ordinance or resolution, to control salinity inputs from residential self-regenerating water softeners to protect the quality of the waters of the state, if the appropriate regional board makes a finding, after a public hearing, that the control of residential salinity input will contribute to the achievement of water quality objectives. Water Code Section 13148 allows local agencies more control over salinity by giving local agencies additional authority to regulate residential self-regenerating water softeners, especially in areas of the state with water bodies adversely impacted by salinity and high use groundwater basins that are hydrogeologically vulnerable to salinity pollution.

4. The Santa Ana River Basin, including the Chino Basin, faces water quality challenges due to salinity pollution resulting from historical agricultural and other activities. Producing high quality recycled water is imperative to the regional initiative within IEUA's service area to maximize beneficial reuse of recycled water through landscape irrigation, industrial reuse and groundwater recharge.

Reuse of recycled water is a critical component of the regional plans to reliably meet current and future water needs for the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland and other communities within IEUA's service area.

5. The Basin Plan Amendment (Resolution No. R8-2004-0001) currently has in place a salt and nutrient management plan for the Santa Ana River Basin. The plan included a revised TDS wasteload allocation for discharges to the Santa Ana River and its tributaries, revised findings regarding Nitrogen and Total Dissolved Solids (TDS) assimilative capacity in groundwater, and a plan for water recycling in the Region. These findings were based on considerations of the factors specified in Water Code Section 13241 and the state's antidegradation policy (SWRCB Resolution No. 68-16), as well as the economic implications of all recommended changes to the plan. The Basin Plan amendments were based on sound and objective science reflecting the culmination of the multi-year, multi-million dollar (approximately $3.5 million) studies conducted by the community-based Regional N/TDS Task Force to review groundwater TDS and nitrate-nitrogen objectives, groundwater subbasin boundaries, the TIN and TDS wasteload allocations and other components of the N/TDS management plan.

6. The 2004 Basin Plan Amendment specifically recognizes IEUA's Salinity Management Action Plan, initiated in 2001, to reduce TDS entering its wastewater treatment plants from all sources and includes the requirement that IEUA regulate the use of new and existing residential self-regenerating water softeners to the extent allowed by law (including provision of incentives for the removal of on-site residential self-regenerative water softeners and encouragement of the use of exchange canisters and other water softener technology that does not introduce salt into the residential sewer system). The Regional Board found that the 2004 Basin Plan Amendment would protect beneficial uses and provide maximum benefit to the users of the Santa Ana River Basin and to the State of California.

7. The Chino Basin Optimum Basin Management Program (OBMP), adopted by the Chino Basin Watermaster in 2000, provides a comprehensive plan for increasing the yield from the Chino Basin through improved water quality treatment and enhanced groundwater recharge. Salinity management is identified as a critical issue in the OBMP and the program recommends investments of over $250 million in desalter facilities to control salinity impacts on the Santa Ana River and downstream communities in Orange County. Annually, over 33,000 tons of salt are exported out of the Chino Basin through implementation of IEUA's Salinity Management Action Plan through the use of non-reclaimable pipelines. Salinity in the IEUA service area is also managed by the use of groundwater desalters to create or augment water supplies and optimizing chemical additions needed in the wastewater treatment process. Studies completed in 2004 show that the region would avoid an estimated $430 million in future costs if IEUA did not have to desalt recycled water at its wastewater treatment plants to comply with the

Regional Board Basin Plan Amendment permit conditions for its recycled water program. Similarly, a 2006 report showed a net economic impact to the region of between $238 million and $439 million if access to the use of recycled water was lost as a result of the loss of hydraulic control of the Chino Basin and replacement imported water had to be purchased from MWD.

8. In October 2006, IEUA, in partnership with the National Water Research Institute, Southern California Water Coalition, the Water Quality Association/Pacific Water Quality Association and the Claremont Graduate University, completed a comprehensive Salinity Characterization Study for the Carbon Canyon Water Reclamation Facility (CCWRF), one of the five wastewater treatment facilities within IEUA's service area. The study found that the residential use of self-regenerating water softeners contributed about 10% of the controllable salt inputs to the recycled water and 5% of the overall TDS in CCWRF influent (25 mg/L), consistent with other studies that have estimated the average TDS contribution from residential use of self-regenerating water softeners for this region. The residential use of self-regenerating water softeners was identified as a significant source of controllable TDS within IEUA's regional system. This source of TDS is expected to increase in the future if steps are not taken to educate residential users about the impact of TDS loading on recycled water supplies and the options available for reducing/eliminating salinity inputs.

9. In September 2008, IEUA in partnership with the Metropolitan Water District of Southern California, the National Water Research Institute, and the Southern California Water Coalition initiated a successful rebate program for the voluntary removal of residential self-regenerating water softeners which has resulted in the elimination of over 130 self-regenerating water softeners and a reduction of 30 tons of salt as of December 2009.

10. It is appropriate to amend Order No. R8-2009-0021 to include the provision for control of residential self-regenerating water softeners.

11. In accordance with Water Code Section 13389, amending the wastewater 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.

12. 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.

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

IT IS HEREBY ORDERED that Order No. R8-2009-0021 be amended as follows:

1. Order No. R8-2009-0021, page 13 of 40, add Finding Y. as follows:

   Y. **Self-Regenerating Water Softeners**. The Basin Plan Amendment noted in Finding H, above, includes a salt and nutrient management plan for this region and a requirement that IEUA implement a salinity management program including the regulation of new and existing residential self-regenerating water softeners to the extent allowed by law. The salt and nutrient management plan was based on evidence in the record demonstrating that managing salinity inputs in this manner would ensure attainment of water quality objectives and protection of beneficial uses.

   The control of residential use of self-regenerating water softeners will contribute to the achievement of the water quality objectives approved in the Basin Plan Amendment. This finding is based on evidence in the record demonstrating that salinity input from residential use of self-regenerating water softeners is a significant source of controllable TDS within IEUA's sewer system and that significant regional economic impacts will result if residential use of self-regenerating water softeners is not controlled.

2. This amendment shall become effective upon the adoption of this Order.

3. All other conditions and requirements of Order No. R8-2009-0021 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 18, 2010.

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Gerard J. Thibeault, Executive Officer