

Santa Ana Regional Water Quality Control Board

TO: Vicky Whitney
Deputy Director, Division of Water Quality
State Water Resources Control Board



FROM: Kurt V. Berchtold
Executive Officer
SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

DATE: June 27, 2014

**SUBJECT: EXECUTIVE OFFICER CORRECTIONS: SALT MANAGEMENT PLAN BASIN
PLAN AMENDMENTS ADOPTED UNDER RESOLUTION NO. R8-2014-0005**

On April 25, 2014, the Santa Ana Regional Water Board adopted Resolution No. R8-2014-0005, approving amendments to the Basin Plan for the Santa Ana Region that revise the 2004 Salt Management Plan and incorporate other Basin Plan changes. The amendments are shown in the attachment to Resolution No. R8-2014-0005, which is the underline/strikeout version of the amendments.

Based on comments received and in reviewing the amendments in preparation for State Water Board consideration of adoption, it has come to my attention that certain non-substantive corrections are required. These corrections are shown below.

The final version of the amendments are shown in the corrected Attachment 1 to Resolution No. R8-2014-0005 which is attached to this memo. Also attached is a clean version of the corrected amendments.

If there are any questions concerning these corrections, please contact Hope Smythe at 951-782-4493 or Hope.Smythe@waterboards.ca.gov.

June 27, 2014, Corrections to Attachment 1 – Basin Plan Amendments (R8-2014-0005)

1. **Existing Basin Plan, pages 5-20, 5-21:** Revise the following discussion on **Assimilative Capacity** to delete all references to **Tables 5-3 and 5-4** as follows:

~~Tables 5-3 and 5-4 show the assimilative capacity available in management zones for which “maximum benefit” objectives have been specified.~~ As described in Chapter 4 and later in this Chapter, the application of these “**maximum benefit**” objectives is contingent on the implementation of certain projects and programs by specific dischargers as part of their maximum benefit demonstrations. Assimilative capacity created by these projects/programs will be allocated to the party(-ies) responsible for implementing them.

Chapter 3 delineates the Prado Basin Management Zone, and Chapter 4 identifies the applicable TDS and nitrogen objectives for this Zone (the objectives for the surface waters that flow in this Zone). No assimilative capacity exists in this zone.

These assimilative capacity findings are significant from a regulatory perspective. If there is assimilative capacity in the receiving waters for TDS, nitrogen or other constituents, a waste discharge may be of poorer quality than the objectives for those constituents for the receiving waters, as long as the discharge does not cause violation of the objectives and provided that antidegradation requirements are met. However, if there is no assimilative capacity in the receiving waters, ~~such as the management zones identified in Tables 5-3 and 5-4,~~ the numerical limits in the discharge requirements cannot exceed the receiving water objectives or the degradation process would be accelerated.¹ This rule was expressed clearly by the State Water Resources Control Board in a decision regarding the appropriate TDS discharge limitations for the Rancho Caballero Mobilehome park located in the Santa Ana Region (Order No. 73-4, the so called “Rancho Caballero decision”) [Ref. 7]. However, this rule is not meant to restrict overlying agricultural irrigation, or similar activities, such as landscape irrigation. Even in management zones without assimilative capacity, groundwater may be pumped, used for agricultural purposes in the area and returned to the management zone from which it originated.

In regulating waste discharges to waters with assimilative capacity, the Regional Board will proceed as follows. (see also Section III.B.6., Special Considerations – Subsurface Disposal Systems).

If a discharger proposes to discharge wastes that are at or below (i.e., better than) the current ambient TDS and/or nitrogen water quality, then the discharge will not be expected to result in the lowering of water quality, and no antidegradation analysis will

¹ A discharger may conduct analyses to demonstrate that discharges at levels higher than the objectives would not cause or contribute to the violation of the established objectives. See, for example, the discussion of wasteload allocations for discharges to the Santa Ana River and its tributaries (Section III. B. 4.) If the Regional Board approves this demonstration, then the discharger would be regulated accordingly.

be required. TDS and nitrogen objectives are expected to be met. Such discharges clearly implement the Basin Plan and the Board can permit them to proceed. Of course, other pertinent requirements, such as those of the California Environmental Quality Act (CEQA) must also be satisfied. For groundwater management zones, current ambient quality ~~is as defined in Table 5-3 and Table 5-4, or as these Tables may be revised (through the Basin Plan amendment process)~~ **will be determined every three years** pursuant to the detailed monitoring program to be conducted by dischargers in the watershed (see Section V., Salt Management Plan – Monitoring Program Requirements).

2. **Proposed Basin Plan Amendments, page 4 of 62, Resolution No. R8-2014-0005. Insert the following to the Assimilative Capacity discussion:**

Since adoption of the 2004 Basin Plan amendment and per Basin Plan requirements, ambient quality and assimilative capacity findings have been, and will continue to be, updated every three years. **Following Regional Board approval at a duly noticed Public Hearing,** ~~the~~ updated findings of ambient quality and assimilative capacity will be posted on the Regional Board's web-site and will be used for regulatory purposes.

3. **Proposed Basin Plan Amendments, Page 7 of 62, Revise the following discussion on Wastewater Reclamation to delete all references to Table 5-7 (note – the proposed deletion of references to Table 5-7 was identified in the January 31, 2014 proposed amendments, but was inadvertently deleted from the April 25, 2014 amendments). The complete revised text showing deletion of Table 5-7 is shown as follows:**

5. Wastewater Reclamation

Wastewater is presently being reclaimed in the Santa Ana Watershed in a number of different ways:

3. Groundwater Recharge by Percolation

This type of reclamation is common throughout the Region. Most wastewater treatment plants that do not discharge directly to the River discharge their effluent to percolation ponds. All of the treated wastewater in the upper Santa Ana Basin that is not directly reclaimed for commercial agricultural and landscape irrigation purposes, or discharged directly to the Santa Ana River, is returned to local or downstream groundwater management zones by percolation. In Orange County, reclaimed water is used for greenbelt and landscape irrigation, and injected into coastal aquifers to control sea water intrusion.

~~Significant additional~~ reclamation activities are planned in the Region, ~~as reflected in Table 5-7.~~ The Chino Basin Watermaster, Inland Empire Utilities Agency, Yucaipa Valley Water District, the City of Beaumont and the San Timoteo Watershed Management Authority propose to implement extensive groundwater recharge projects using recycled water. To accommodate these projects and other water and wastewater management strategies, these agencies have made

the requisite demonstrations necessary to support the “maximum benefit” TDS and nitrate-nitrogen water quality objectives specified in this Plan for certain groundwater management zones (see Chapter 4). The recharge projects will provide reliable sources of additional water supply needed to support expected development within the agencies’ areas of jurisdiction. These agencies’ “maximum benefit” programs are described in detail in Section VI. of this Chapter.

4. Existing Basin Plan, Page 5-36, continuing Wastewater Reclamation Discussion, delete reference to Table 5-7 as follows:

The Salt Management Plan draws a balance between the benefits and problems of reclamation by including carefully planned reclamation activities in the watershed. The Recommended Plan provides for reclamation within the upper basin, ~~as shown in Table 5-7~~. All recycled water recharge projects will be regulated pursuant to the process identified in the discussion regarding assimilative capacity, and in accordance with the “maximum benefit” implementation strategies identified later in this Chapter (see section VI., Maximum Benefit Implementation Plans for Salt Management).

5. Existing Basin Plan, Page 5-29, #4. TDS and Nitrogen Wasteload Allocations for the Santa Ana River. With the deletion of Table 5-7 from the Basin Plan, it is necessary to maintain a reference to the reclamation/reuse plans that formed the basis of the 2004 TDS and Nitrogen Wasteload Allocations. Clarification that references to Table 5-7 are specifically referencing Table 5-7 of the 2004 Salt Plan Amendments, is provided as follows:

WEI performed three model evaluations in order to assess wasteload allocation scenarios through the year 2010. These included a “baseline plan” and two alternative plans (“2010-A” and “2010-B”). The baseline plan generally assumed the TDS and TIN limits and design flows for POTWs specified in waste discharge requirements as of 2001. These limits implemented the wasteload allocations specified in the 1995 Basin Plan when it was approved in 1995. A TDS limit of 550 mg/L was assumed for the Rapid Infiltration and Extraction Facility (RIX) and the analysis assumed a 540 mg/L TDS for the City of Beaumont. The baseline plan also assumed reclamation activities at the level specified in the 1995 Basin Plan, when it was approved. The purpose of the baseline plan assessment was to provide an accurate basis of comparison for the results of evaluation of the two alternative plans. For alternative 2010-A, it was generally assumed that year 2001 discharge effluent limits for TDS and TIN applied to POTW discharges, but projected year 2010 surface water discharge amounts were applied. TDS limits of 550 mg/L and 540 mg/L were again assumed for RIX and the City of Beaumont discharges. The same *limited reclamation and reuse* included in the baseline plan was assumed (see [R8-2004-0001, 2004 Salt Plan Amendments](#), Table 5-7 in Section III.B.5.). For alternative 2010-B, POTW discharges were also generally limited to the 2001 TDS and TIN effluent limits (RIX was again held to 550 mg/L and Beaumont to 540 mg/L). However, in this case, large increases in wastewater recycling and reuse were assumed ([R8-2004-0001, 2004 Salt Plan Amendments](#), Table 5-7), resulting in the reduced surface water discharges projected for 2010.

ATTACHMENT TO RESOLUTION NO. R8-2014-0005

(Proposed Basin Plan amendments changes are shown as **strikeout** for deletions and **underline** for additions)

Chapter 2, Plans and Policies

Page 2-4, Insert under "State Board Policies":

- New and/or revised Statewide Plans and Policies are posted on the State Water Resources Control Board's website at the following link:

http://www.waterboards.ca.gov/plans_policies/

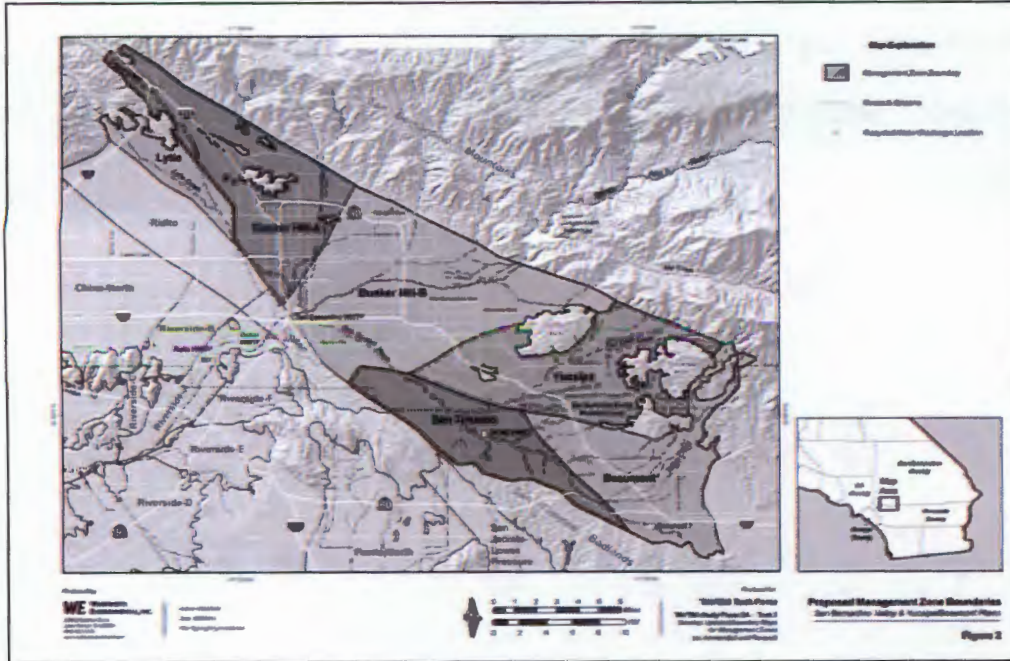
- Policy on Onsite Wastewater Treatment Systems (Resolution No. 2012-0032, adopted by the State Water Resources Control Board on June 19, 2012)

This Policy (OWTS Policy) regulates the siting, design, operation, and maintenance of onsite wastewater treatment systems. The Policy implements the California Water Code, Chapter 4.5, Division 7, § 13290-13291.7 by establishing statewide regulations and standards for permitting onsite wastewater systems. The OWTS Policy specifies criteria for existing, new and replacement onsite systems and establishes a conditional waiver of waste discharge requirements for onsite systems that comply with the Policy.

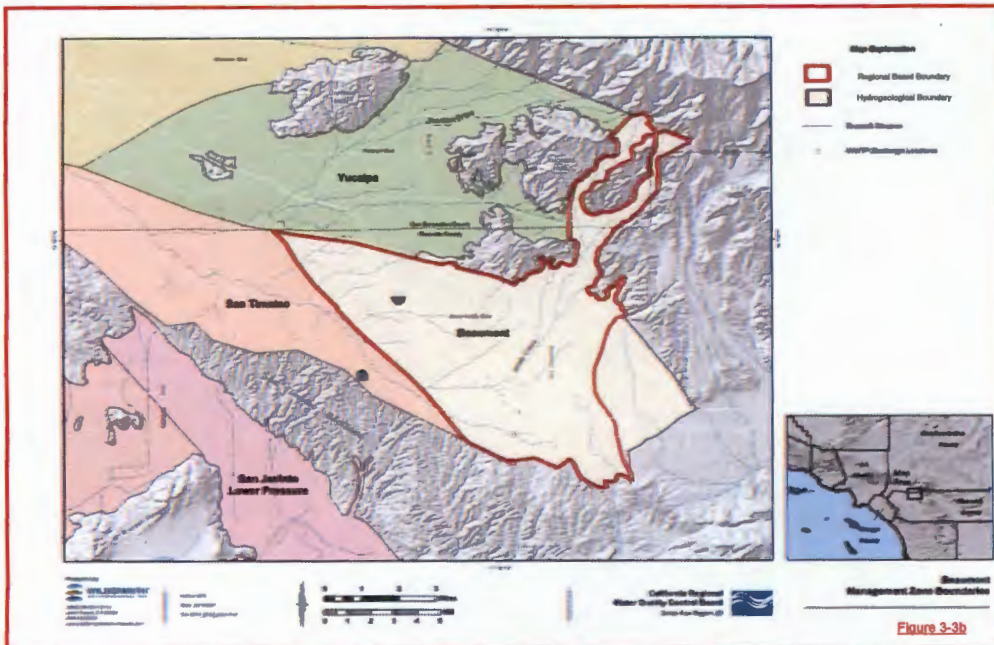
Chapter 3, "Beneficial Uses"

Page 3-12, Figure 3-3; Management Zone Boundaries – San Bernardino Valley and Yucaipa/Beaumont Plains

- Re- number Figure as Figure 3-3a – Legal Boundary



- Number new map as Figure 3-3b – Beaumont Management Zone



- Add the following footnote to the map

The eastern-most boundary of the Beaumont Management Zone is defined by the jurisdictional boundary, established in the California Water Code, between the Santa Ana Regional Water Board (Santa Ana Water Board) and the Colorado River Regional Water Board (Colorado Water Board). This legal boundary separates the two regions based on topography and surface water drainage. However, with respect to groundwater flow and quality, hydrogeological and water quality data indicate that the Beaumont groundwater management zone actually extends to the east of the current legal boundary, into the jurisdictional domain of the Colorado Water Board. The Santa Ana and Colorado Water Boards will work together to coordinate regulatory actions for discharges that occur in this area of the management zone.

Chapter 5, "Implementation"

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II.B.1. Salt Assimilative Capacity

Some waters in the Region have assimilative capacity for additions of TDS and/or nitrogen; that is, wastewaters with higher TDS/nitrogen concentrations than the receiving waters are diluted sufficiently by natural processes, including rainfall or recharge, such that the TDS and nitrogen objectives of the receiving waters are met. The amount of assimilative capacity, if any, varies depending on the individual characteristics of the waterbody in question and must be reevaluated over time.

The 2004 adoption of new groundwater management zone boundaries (Chapter 3) and new TDS and nitrate-nitrogen objectives for these management zones (Chapter 4), pursuant to the work of the Nitrogen/TDS Task Force, necessitated the re-evaluation of the assimilative capacity findings initially incorporated in the 1995 Basin Plan. To conduct this assessment, the Nitrogen-TDS study consultant calculated current ambient TDS and nitrate-nitrogen water quality using the same methods and protocols as were used in the calculation of historical ambient quality (see Chapter 4). The analysis focused on representing current water quality as a 20-year average for the period from 1978 through 1997. [Ref. 1]. For each management zone, current TDS and nitrate-nitrogen water quality were compared to water quality objectives (historical water quality)¹. Assimilative capacity was also assessed relative to the "maximum benefit" objectives established for certain management zones. If the current quality of a management zone is the same as or poorer than the specified water quality objectives, then that management zone does not have assimilative capacity. If the current quality is better than the specified water quality objectives, then that management zone has assimilative capacity. The difference between the objectives and current quality is the amount of assimilative capacity available.

Since adoption of the 2004 Basin Plan amendment and per Basin Plan requirements, ambient quality and assimilative capacity findings have been, and will continue to be, updated every three years. Following Regional Board approval at a duly noticed Public Hearing, the updated findings of ambient quality and assimilative capacity will be posted on the Regional Board's web-site and will be used for regulatory purposes.

¹ As noted in Chapter 4, ammonia-nitrogen and nitrite-nitrogen data were also included in the analysis, where available. This occurred for a very limited number of cases and ammonia-nitrogen and nitrite-nitrogen concentrations were insignificant.

~~Tables 5-3 and 5-4 show the water quality objectives and ambient quality for TDS and nitrate-nitrogen, respectively, for each management zone. These tables also list the TDS and nitrate-nitrogen assimilative capacity of the management zones, if any. Of the thirty-seven (37) management zones, twenty-seven (27) lack assimilative capacity for TDS, and thirty (30) lack assimilative capacity for nitrate-nitrogen (this assumes the "maximum benefit" objectives are in effect). five (5) management zones for which there were insufficient data to calculate TDS and/or nitrate-nitrogen water quality objectives and, therefore, assimilative capacity. For regulatory purposes, these 5 management zones are assumed to have no assimilative capacity. Dischargers to these management zones may demonstrate that assimilative capacity for TDS and/or nitrate-nitrogen is available. If the Regional Board approves this demonstration, then the discharger would be regulated accordingly.~~

~~As indicated in Table 5-3, it will be assumed for most regulatory purposes that there is no assimilative capacity for TDS in the Orange County groundwater management zone. The 20 mg/L of management zone wide TDS assimilative capacity calculated for this zone will be allocated to discharges resulting from groundwater remediation and other legacy contaminant removal projects implemented within the Orange County Management Zone.~~

~~Tables 5-3 and 5-4 show the assimilative capacity available in management zones for which "maximum benefit" objectives have been specified. As described in Chapter 4 and later in this Chapter, the application of these "maximum benefit" objectives is contingent on the implementation of certain projects and programs by specific dischargers as part of their maximum benefit demonstrations. Assimilative capacity created by these projects/programs will be allocated to the party(-ies) responsible for implementing them.~~

Chapter 3 delineates the Prado Basin Management Zone, and Chapter 4 identifies the applicable TDS and nitrogen objectives for this Zone (the objectives for the surface waters that flow in this Zone). No assimilative capacity exists in this zone.

These assimilative capacity findings are significant from a regulatory perspective. If there is assimilative capacity in the receiving waters for TDS, nitrogen or other constituents, a waste discharge may be of poorer quality than the objectives for those constituents for the receiving waters, as long as the discharge does not cause violation of the objectives and provided that antidegradation requirements are met. However, if there is no assimilative capacity in the receiving waters, ~~such as the management zones identified in Tables 5-3 and 5-4,~~ the numerical limits in the discharge requirements cannot exceed the receiving water objectives or the degradation process would be accelerated.² This rule was expressed clearly by the State Water Resources Control Board in a decision regarding the appropriate TDS discharge limitations for the Rancho Caballero Mobilehome park located in the Santa Ana Region (Order No. 73-4, the so called "Rancho Caballero decision") [Ref. 7]. However, this rule is not meant to restrict overlying agricultural irrigation, or similar activities, such as landscape irrigation. Even in management zones without assimilative capacity, groundwater may be pumped, used for agricultural purposes in the area and returned to the management zone from which it originated.

² A discharger may conduct analyses to demonstrate that discharges at levels higher than the objectives would not cause or contribute to the violation of the established objectives. See, for example, the discussion of wasteload allocations for discharges to the Santa Ana River and its tributaries (Section III. B. 4.) If the Regional Board approves this demonstration, then the discharger would be regulated accordingly.

In regulating waste discharges to waters with assimilative capacity, the Regional Board will proceed as follows. (see also Section III.B.6., Special Considerations – Subsurface Disposal Systems).

If a discharger proposes to discharge wastes that are at or below (i.e., better than) the current ambient TDS and/or nitrogen water quality, then the discharge will not be expected to result in the lowering of water quality, and no antidegradation analysis will be required. TDS and nitrogen objectives are expected to be met. Such discharges clearly implement the Basin Plan and the Board can permit them to proceed. Of course, other pertinent requirements, such as those of the California Environmental Quality Act (CEQA) must also be satisfied. For groundwater management zones, current ambient quality ~~is as defined in Table 5-3 and Table 5-4, or as these Tables may be revised (through the Basin Plan amendment process)~~ will be determined every three years pursuant to the detailed monitoring program to be conducted by dischargers in the watershed (see Section V., Salt Management Plan – Monitoring Program Requirements).

[section discussion continues with no further revisions]

Table 5-3
Total Dissolved Solids (TDS) Assimilative Capacity Findings

Management Zone	Water Quality Objective (mg/L)	Current Ambient (mg/L)	Assimilative Capacity (mg/L)
UPPER SANTA ANA RIVER BASIN			
Beaumont—"max benefit" ¹	330	290	40
Beaumont—"antideg"	230	290	None
Bunker Hill A	310	350	None
Bunker Hill B	330	260	70
Colton	410	430	None
Chino North—"max benefit"	420	300	120
Chino 1—"antideg"	280	310	None
Chino 2—"antideg"	250	300	None
Chino 3—"antideg"	260	280	None
Chino South	680	720	None
Chino East	730	760	None
Cucamonga—"max benefit" ¹	380	260	120
Cucamonga—"anti-deg"	210	260	None
Lytle	260	240	20
Rialto	230	230	None
San Timoteo—"max benefit" ¹	400	300	100
San Timoteo—"anti-deg"	300	300	None
Yucaipa—"max benefit" ¹	370	330	40
Yucaipa—"antideg"	320	330	None
MIDDLE SANTA ANA RIVER BASIN			
Arlington	980	— ¹	None
Bedford	— ¹	— ¹	None
Coldwater	380	380	None
Elsinore	480	480	None
Lee Lake	— ¹	— ¹	None
Riverside A	560	440	120
Riverside B	290	320	None
Riverside C	680	760	None
Riverside D	810	— ¹	None
Riverside E	720	720	None
Riverside F	660	580	80
Temescal	770	780	None
Warm Springs	— ¹	— ¹	None
SAN JACINTO RIVER BASINS			
Canyon	230	220	10
Hemet South	730	1030	None
Lakeview—Hemet North	520	830	None
Menifee	1020	3360	None
Perris North	570	750	None
Perris South	1260	3190	None
San Jacinto Lower	520	730	None
San Jacinto Upper	320	370	None
LOWER SANTA ANA RIVER BASINS			
Irvine	910	910	None
La Habra	— ¹	— ¹	None
Orange County ²	580	560	None ²
Santiago	— ¹	— ¹	None

¹ Not enough data to estimate TDS concentrations; management zone is presumed to have no assimilative capacity. If assimilative capacity is demonstrated by an existing or proposed discharger, that discharge would be regulated accordingly.

² For the purposes of regulating discharges other than those associated with projects implemented within the Orange County Management Zone to facilitate remediation projects and/or to address legacy contamination, no assimilative capacity is assumed to exist.

³ Assimilative capacity created by "maximum benefit" objectives is allocated solely to agency(ies) responsible for "maximum benefit" implementation (see Section VI.).

Table 5-4
Nitrate Nitrogen (NO₃-N) Assimilative Capacity Findings

Management Zone	Water Quality Objective (mg/L)	Current Ambient (mg/L)	Assimilative Capacity (mg/L)
UPPER SANTA ANA RIVER BASINS			
Beaumont—"max benefit" ²	5.0	2.6	2.4
Beaumont—"antideg"	1.5	2.6	None
Bunker Hill A	2.7	4.5	None
Bunker Hill B	7.3	5.5	1.8
Colton	2.7	2.9	None
Chino North—"max benefit" ²	5.0	7.4	None
Chino 1—"antideg"	5.0	8.4	None
Chino 2—"antideg"	2.9	7.2	None
Chino 3—"antideg"	3.5	6.3	None
Chino South	4.2	8.8	None
Chino East	10	29.1	None
Cucamonga—"max benefit" ²	5.0	4.4	0.6
Cucamonga—"anti-deg"	2.4	4.4	None
Lytle	1.5	2.8	None
Rialto	2.0	2.7	None
San Timoteo—"max benefit" ²	5.0	2.9	2.1
San Timoteo—"anti-deg"	2.7	2.9	None
Yucaipa—"max benefit" ²	5.0	5.2	None
Yucaipa—"antideg"	4.2	5.2	None
MIDDLE SANTA ANA RIVER BASINS			
Arlington	10.0	— ¹	None
Bedford	— ¹	— ¹	None
Coldwater	1.5	2.6	None
Elsinore	1.0	2.6	None
Lee Lake	— ¹	— ¹	None
Riverside A	6.2	4.4	1.8
Riverside B	7.6	8.0	None
Riverside C	8.3	15.5	None
Riverside D	10.0	— ¹	None
Riverside E	10.0	14.8	None
Riverside F	9.5	9.5	None
Temescal	10.0	13.2	None
Warm Springs	— ¹	— ¹	None
SAN JACINTO RIVER BASINS			
Canyon	2.5	1.6	0.9
Hemet South	4.1	5.2	None
Lakeview—Hemet North	1.8	2.7	None
Menifee	2.8	5.4	None
Perris North	5.2	4.7	0.5
Perris South	2.5	4.9	None
San Jacinto Lower	1.0	1.9	None
San Jacinto Upper	1.4	1.9	None
LOWER SANTA ANA RIVER BASINS			
Irvine	5.9	7.4	None
La Habra	— ¹	— ¹	None
Orange County	3.4	3.4	None
Santiago	— ¹	— ¹	None

¹ Not enough data to estimate nitrate nitrogen concentrations

² Assimilative capacity created by "maximum benefit" objectives is allocated solely to agency(ies) responsible for "maximum benefit" implementation (see Section VI.).

Page 5-25ff**3. Nitrogen Loss Coefficient**

The City of Riverside [also](#) presented data to the Task Force regarding nitrogen transformation and losses associated with wetlands. These data support a nitrogen loss coefficient of 50%, rather than 25%, for the lower portions of Reach 3 of the Santa Ana River that overlie the Chino South groundwater management zone. [Ref. 9]. In fact, the data indicate that nitrogen losses from wetlands in this part of Reach 3 can be greater than 90%. However, given the limited database, the Task Force again recommended a conservative approach, i.e., 50% in this area, with confirmatory monitoring.

Eastern Municipal Water District also presented data that support a 60% nitrogen loss coefficient in the San Jacinto Basin [Ref 10F]. This 60% nitrogen loss is only applicable to discharges to the following management zones that overlie the San Jacinto Basin: Perris North, Perris South, San Jacinto Lower Pressure, San Jacinto Upper Pressure, Lakeview-Hemet North, Menifee, Canyon and Hemet South.

Page 5-29ff**4. TDS and Nitrogen Wasteload Allocations for the Santa Ana River**

WEI performed three model evaluations in order to assess wasteload allocation scenarios through the year 2010. These included a “baseline plan” and two alternative plans (“2010-A” and “2010-B”). The baseline plan generally assumed the TDS and TIN limits and design flows for POTWs specified in waste discharge requirements as of 2001. These limits implemented the wasteload allocations specified in the 1995 Basin Plan when it was approved in 1995. A TDS limit of 550 mg/L was assumed for the Rapid Infiltration and Extraction Facility (RIX) and the analysis assumed a 540 mg/L TDS for the City of Beaumont. The baseline plan also assumed reclamation activities at the level specified in the 1995 Basin Plan, when it was approved. The purpose of the baseline plan assessment was to provide an accurate basis of comparison for the results of evaluation of the two alternative plans. For alternative 2010-A, it was generally assumed that year 2001 discharge effluent limits for TDS and TIN applied to POTW discharges, but projected year 2010 surface water discharge amounts were applied. TDS limits of 550 mg/L and 540 mg/L were again assumed for RIX and the City of Beaumont discharges. The same limited reclamation and reuse included in the baseline plan was assumed (see [R8-2004-0001, 2004 Salt Plan Amendments](#), Table 5-7 in Section III.B.5.). For alternative 2010-B, POTW discharges were also generally limited to the 2001 TDS and TIN effluent limits (RIX was again held to 550 mg/L and Beaumont to 540 mg/L). However, in this case, large increases in wastewater recycling and reuse were assumed ([R8-2004-0001, 2004 Salt Plan Amendments](#), Table 5-7), resulting in the reduced surface water discharges projected for 2010.

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5. Wastewater Reclamation

Wastewater is presently being reclaimed in the Santa Ana Watershed in a number of different ways:

3. Groundwater Recharge by Percolation

This type of reclamation is common throughout the Region. Most wastewater treatment plants that do not discharge directly to the River discharge their effluent to percolation ponds. All of the treated wastewater in the upper Santa Ana Basin that is not directly reclaimed for commercial agricultural and landscape irrigation purposes, or discharged directly to the Santa Ana River, is returned to local or downstream groundwater management zones by percolation. In Orange County, reclaimed water is used for greenbelt and landscape irrigation, and injected into coastal aquifers to control sea water intrusion.

Significant additional reclamation activities are planned in the Region, ~~as reflected in Table 5-7.~~ The Chino Basin Watermaster, Inland Empire Utilities Agency, Yucaipa Valley Water District, the City of Beaumont and the ~~San Timoteo Watershed Management Authority~~ City of Banning propose to implement extensive groundwater recharge projects using recycled water. To accommodate these projects and other water and wastewater management strategies, these agencies have made the requisite demonstrations necessary to support the "maximum benefit" TDS and nitrate-nitrogen water quality objectives specified in this Plan for certain groundwater management zones (see Chapter 4). The recharge projects will provide reliable sources of additional water supply needed to support expected development within the agencies' areas of jurisdiction. These agencies' "maximum benefit" programs are described in detail in Section VI. of this Chapter.

The Yucaipa Valley Regional Brine line and a reverse osmosis facility at the Water Purification Facility, located at the Wochholz Regional Water Recycling Facility will facilitate groundwater replenishment reuse in the upper groundwater management zones of the Santa Ana Watershed. Treated wastewater will receive extensive advanced treatment, including microfiltration, reverse osmosis and disinfection using ultraviolet light. The recharge of recycled water will enhance both the quality of and quantity of groundwater resources, the major source of water supply in the area.

In Orange County, significant reclamation activities include the implementation of the Groundwater Replenishment System, a joint effort of the Orange County Water District and Orange County Sanitation District. Treated wastewater provided by the Sanitation District ~~will~~ receive extensive advanced treatment, including microfiltration, reverse osmosis, and disinfection using ultraviolet light and hydrogen peroxide. In the first phase of the project, approximately 70, 000 acre-feet per year of highly treated recycled water will be produced and distributed to groundwater recharge facilities and to injection wells used to maintain a seawater intrusion barrier. The System will enhance both the quality and quantity of groundwater resources, the major source of water supply in the area. It will reduce the need for imported water and prevent, or at least delay, the need for an additional ocean outfall for disposal of the wastewater treated by the Sanitation District. Implementation of the GWR System ~~and will be phased—~~operation of Phase 1 ~~will begin~~ began in 2007~~8~~. Future phases to expand the capacity of the GWR System are possible planned.

4. Dual Water Supply Systems

Given increasing demands for water supply but diminishing resources, there is great interest in using reclaimed water in office buildings and the like for flushing toilets and urinals. Clearly, the addition of this water supply source must be carefully planned and overseen to prevent public health problems. No dual systems have been implemented as yet in the upper basin; in Orange County, the Irvine Ranch Water District has implemented dual systems (a reclaimed water system in addition to a potable supply) in a number of office buildings in its service area, with the approval of the Department of Health Services and the Regional Board.

The Salt Management Plan draws a balance between the benefits and problems of reclamation by including carefully planned reclamation activities in the watershed. The Recommended Plan provides for reclamation within the upper basin, ~~as shown in Table 5-7~~. All recycled water recharge projects will be regulated pursuant to the process identified in the discussion regarding assimilative capacity, and in accordance with the “maximum benefit” implementation strategies identified later in this Chapter (see section VI., Maximum Benefit Implementation Plans for Salt Management).

Table 5-7
Wastewater Reclamation

Subbasin (Management Zone) Receiving Reclaimed Water	Source	Amount AFY 2010-A ¹	Amount AFY 2010-B ²
Beaumont MZ	Beaumont, City of	250	1,500
Yucaipa MZ	Yucaipa Valley Water District	—	6,400
Bunker Hill B MZ	San Bernardino, City of and Colton, City of	117	26,200
Colton MZ	Rialto, City of	200	
Chino North MZ	IEUA RP-1	1,200	48,000
Chino North MZ	IEUA RP-2A	2,470	
Chino North MZ	IEUA RP-4	3,300	
Chino North MZ	California Institute for Men	650	650
Chino North MZ	Upland Golf Course	31	31
Temescal MZ	Corona, City of	1,000	3,100
	TOTAL	9,218	86,000

¹—wastewater reclamation assumed in 2010-A is the same as that assumed in the 1995 Basin Plan when approved in 1994/1995 (also known as Table 5-7)

²—wastewater reclamation assumed in 2010-B as identified by POTWs (see Ref. 3, 5).

Salt Management Plan (Chapter 5)

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V. Other Projects and Programs

In addition to the regulatory efforts of the Regional Board described in the preceding section, water and wastewater purveyors and other parties in the watershed have implemented, and propose to implement, facilities and programs designed to address salt problems in the groundwater of the Region. These include the construction of brine lines, and groundwater desalters, recycled water demineralization systems, implementation of programs to enhance the recharge of high quality storm water and imported water, where available, and re-injection of recycled water to maintain salt water intrusion barriers in coastal areas. These projects and programs are motivated by the need to protect and augment water supplies, as well as to facilitate compliance with waste discharge requirements.

A. Brine Lines

There are two brine line systems in the Region, the Inland Empire Brine Line, formerly known as the Santa Ana Regional Interceptor (SARI), and the older Chino Basin Non-Reclaimable Line (NRL). These lines are used to transport brine wastes out of the basin for treatment and disposal to the ocean. They are a significant part of industrial waste management and essential for operation of desalters in the upper watersheds.

1. Inland Empire Brine Line

The SARI Inland Empire Brine Line (Brine Line) was constructed and is owned by SAWPA. It is approximately 93 miles of 16 inch to 84 inch pipeline connected to the Orange County Sanitation District treatment facilities. SAWPA owns capacity rights in SARI downstream of Prado Dam. The line extends from the Orange County Line near Prado Dam northeast to the San Bernardino area. The Brine Line has been extended southerly to serve the San Jacinto Watershed. SARI Brine Line Reach 5 extends up the Temescal Canyon from the City of Corona to the Eastern Municipal Water District (EMWD) brine line terminus in the Lake Elsinore area. EMWD's Menifee Desalter and other high salinity discharges from EMWD and Western Municipal Water District now have access to the brine line.

The Brine Line, Reach IVE has been extended to the east about 15 miles from the City of San Bernardino to Yucaipa Water District's Wochholz Regional Water Recycling Facility. The Brine Line will be utilized by Yucaipa Valley Water District and the Mountainview Power Plant for brine disposal.

2. Chino Basin Non-Reclaimable Waste Line

The Chino Basin Non-Reclaimable Waste Line (NRWL) is connected to the Los Angeles County Sanitation District sewer system in the Pomona area. The NRWL, which is owned and operated by Inland Empire Utilities Agency, exports non-reclaimable industrial wastes and brine from the Chino Basin. It extends eastward from the Los Angeles County Line to the City of Fontana. It was originally built to serve industries including the Kaiser Steel Company and Southern California Edison Power Plants.

B. Groundwater Desalters

The studies leading to the development of the TDS/Nitrogen management plan included in this Basin Plan when it was approved in 1995 demonstrated that it was not realistic to achieve compliance with all the nitrogen and TDS objectives for the groundwater subbasins then identified within the Region. Long-term historic land use practices, particularly agriculture, have left an enormous legacy of salts that are now in the unsaturated soils overlying the groundwater subbasins (now, newly defined groundwater management zones). A significant amount of these salts will, over time, degrade groundwater quality. The programs of groundwater extraction, treatment, and replenishment needed to completely address these historic salt loads were shown to far exceed the resources available to implement them.

While the boundaries of the groundwater management zones have been revised and new TDS and nitrate-nitrogen water quality objectives established, the salt legacy problem remains. The construction and operation of groundwater desalters to extract and treat poor quality groundwater continues to be an essential component of salt management in the Region. Such projects will be increasingly important to protect local water supplies and to provide supplemental, reliable sources of potable supplies.

A number of groundwater desalters have already been constructed, and more are planned. These facilities are described below.

1. Upper Santa Ana Basin

In the Upper Santa Ana Basin, the Santa Ana Watershed Project Authority constructed ~~and operates~~ the Arlington desalter, which is now owned and operated by Western Municipal Water District. This desalter, with a capacity of about 7 MGD, treats water extracted from the Arlington Management Zone, which was heavily impacted by historic agricultural activities.

In the Chino Basin, the Chino Desalter Authority operates the Chino 1 desalter, which is planned for expansion from 8 MGD to 13 MGD capacity. Additional desalters and desalter capacity will be constructed as part of a "maximum benefit" proposal by the Chino Basin Watermaster and the Inland Empire Utilities Agency (see Section VI., Maximum Benefit Implementation Plans for Salt Management).

The City of Corona began operation of the Temescal desalter in late 2001 with product water. ~~The desalter has a~~ capacity of 10 MGD. In 2004, the City is currently expanding expanded the desalter plant capacity by adding a fourth train to increase the product water capacity by 5 MGD for a current total of 15 MGD. ~~It is expected to be operational in early 2004~~. The product water is used to supplement current other municipal supplies as a blending source. The improved TDS quality of these supplies is an important part of the City's efforts to assure compliance with waste discharge requirements.

In the San Timoteo Watershed areas, desalters will be implemented as necessary for the Yucaipa and Beaumont areas, as discussed in detail in Section VI., Maximum Benefit San Timoteo Watershed Salt Management Plan.

2. San Jacinto Watershed

EMWD operates the Menifee desalter, which has a capacity of about 3 MGD. Product water is

added to the EMWD municipal supply system, and the waste brine is discharged to a non-reclaimable waste disposal system that is ultimately connected to the SAWPA SARI system. The desalter extracts groundwater from the Perris South and Menifee Management Zones, both of which are adversely affected by historic salt loads contributed largely by agricultural activities.

EMWD plans to construct a desalter with capacity of about 4.5 MGD to treat poor quality water extracted from the Perris South and Lakeview/Hemet North Management Zones. The purpose of this facility is to stop subsurface migration of poor quality groundwater from the Perris South Management Zone into the Lakeview/Hemet North Management Zone.

3. Orange County

The Tustin ~~Seventeenth Street Desalter Nitrate Removal project~~, which began operation in 1996 ~~reduces high nitrate and TDS concentrations from groundwater pumped by Tustin's Seventeenth Street wells~~, adding approximately 3,000 acre-feet of water annually to Tustin's domestic water supply. ~~A second facility, Tustin's Main Street Treatment Plant, began operating in 1989 with a yield of 2,000 acre-feet per year. The plant reduces nitrate levels from groundwater produced by Tustin's Main Street wells. Treatment systems~~ employing reverse osmosis and ion exchange. ~~are operating at two wells that had been shut-down because of excessive nitrate concentrations.~~ The Orange County Water District and Irvine Ranch Water District (IRWD) ~~are moving forward with~~ cooperated to build the Irvine Desalter, a dual-purpose regional groundwater remediation and water supply project located in the City of Irvine and its sphere of influence. The project consists of an extensive seven-well groundwater extraction and collection system, a treatment system, a five-mile brine disposal pipeline, a finished water delivery system, and ancillary facilities. While providing approximately ~~6,700~~ 8,000 acre-feet per year to IRWD for potable and non-potable supply, the desalter will extract and treats brackish groundwater and captures an overlapping regional plume of TCE-contaminated groundwater demonstrated to have originated from the former U.S. Marine Corps Air Station-El Toro.

C. Recharge of ~~Stormwater~~ Storm Water and/or Imported Water

The Orange County Water District, San Bernardino Valley Water Conservation District and other agencies in the Region operate extensive facilities designed to enhance the capture and recharge of high quality ~~stormwater~~ storm water. More such facilities are planned as part of "maximum benefit" proposals by the Chino Basin Watermaster/Inland Empire Utilities Agency, ~~Yucaipa Valley Water District, San Timoteo Watershed Management Authority and the City of Beaumont~~ and agencies implementing the maximum benefit programs in the San Timoteo watershed (Section VI., Maximum Benefit Implementation Plans for Salt Management). These proposals also include efforts to import and recharge high quality State Water Project water, when it is available. These activities increase both the quantity and quality of available groundwater resources.

D. Sea Water Intrusion Barriers

The Orange County Water District operates advanced facilities designed to provide significantly enhanced tertiary treatment of secondary treated municipal wastewater from the Orange County Sanitation District's (Sanitation District) Fountain Valley Reclamation Plant No. 1. The recycled water is injected into a series of wells located along Ellis Avenue in the City of Fountain Valley to maintain the Talbert Gap Seawater Intrusion Barrier. The

treatment facility, ~~currently known as Water Factory 21, will be supplanted by~~ the Groundwater Replenishment System (GWRS), ~~being~~ **was** constructed jointly by Orange County Water District and the Sanitation District (see preceding section on wastewater reclamation).

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V. Salt Management Plan – Monitoring Program Requirements (insert at end of section)

Subsequent to the approval of the Region's Salt and Nutrient Management Plan in 2004, a new task force, the "Basin Monitoring Program Task Force" (BMPTF) was formed to implement the requisite nitrogen/TDS monitoring and analyses programs described previously. SAWPA serves as the administrator for the BMPTF.

The Task Force includes the following agencies:

- Eastern Municipal Water District
- Inland Empire Utilities Agency
- Orange County Water District
- City of Riverside
- Lee Lake Water District
- Elsinore Valley Municipal Water District
- Irvine Ranch Water District
- Colton/San Bernardino Regional Tertiary Treatment and Wastewater Reclamation Authority
- Chino Basin Watermaster
- Yucaipa Valley Water District
- City of Beaumont
- City of Corona
- City of Redlands
- City of Rialto
- Jurupa Community Services District
- Western Riverside Co. Regional Wastewater Authority

The Santa Ana Regional Water Quality Control Board and SAWPA are also signatories to the BMPTF agreement.

As indicated above (Section V.A and V.B), the task force agencies are required to conduct the following investigations:

1. Recomputation of the Ambient Water Quality – every three years
2. Preparation of a Water Quality Report for the Santa Ana River – annually

Declaration of Conformance

Another major activity that the BMPTF completed in March 2010 was the development of a "Declaration of Conformance" for approval by the Regional Board and the State Water Resources Control Board. With the Declaration, the Task Force and Regional Board declared conformance with the then-new State Board Recycled Water Policy requirements for the completion of a salt and nutrient management plan for the Santa Ana Region, and other requirements of this Policy. This finding of conformance was based on the work of the Nitrogen/TDS Task Force. That work resulted in the 2004 adoption of Basin Plan amendments to incorporate a revised salt and nutrient management plan for the Region

(Resolution No. R8-2004-0001). Further, the Declaration documented conformance with the emerging constituents monitoring requirements in the Policy through the "Emerging Constituents Sampling and Investigation Program", submitted to the Regional Board on an annual basis by the Emerging Constituents Program Task Force. The Sampling and Investigation Program will be reviewed annually and revised as necessary and will integrate the State Board's recommendations when they become available. Finally, the Declaration of Conformance documents the analyses and procedures that will be used to streamline the permitting process for recycled water projects, as required by the Policy.

The Declaration of Conformance was formally adopted by resolution of the Regional Board on March 18, 2010 (Resolution No. R8-2010-0012) and formally submitted to the State Board on April 12, 2010.

Salt Monitoring Cooperative Agreement

In January 2008, the Regional Board entered into a Cooperative Agreement with several water and wastewater agencies in the Santa Ana River Watershed to analyze and report the amount of salt and nitrates entering local groundwater aquifers as a consequence of recharging imported water in the region. The "Cooperative Agreement to Protect Water Quality and Encourage the Conjunctive Use of Imported Water in the Santa Ana River Basin" is Attachment A to Resolution No. R8-2008-0019.

As with the BMPTF effort underwritten by local stakeholders, the Cooperative Agreement obligates signatories to assess current groundwater quality every three years. In addition, the signatories have agreed to estimate every six years the changes that are likely to occur in groundwater quality as a result of on-going and expected projects that recharge imported water. By emphasizing the use of "real-time" monitoring, rather than complex fate and transport models, the Regional Board is better able to evaluate the effects of these recharge projects.

The parties of the Cooperative Agreement execute the terms of the agreement through a workgroup that meets regularly under the administration of SAWPA. As the informal administrator, SAWPA assists in coordination among the signatories of the necessary basin salinity monitoring and modeling reports, along with final compilation and submittal of the reports to the Regional Board by the deadlines defined in the agreement.

Page 5-59ff,**VI. Maximum Benefit Implementation Plans for Salt Management****B. Salt Management – San Timoteo Watershed****1. San Timoteo and Yucaipa Management Zone – Yucaipa Valley Water District**

Two sets of objectives have been adopted for the San Timoteo and Yucaipa Management Zones; the “maximum benefit” objectives and objectives based on historic ambient quality (“antidegradation” objectives) (see Chapter 4). The application of the “maximum benefit” objectives relies on the implementation by the Yucaipa Valley Water District (YVWD) (and in the case of the San Timoteo Management Zone, by the City of Beaumont/STWMA (see discussion below)) of a specific program of projects and requirements [Ref. 10D]. This program is a part of a watershed-scale water resources management plan designed by YVWD and other members of the San Timoteo Watershed Management Authority (STWMA) (the City of Beaumont, the Beaumont-Cherry Valley Water District and the South Mesa Water Company) to assure reliable supplies to meet present and anticipated demands. The projected water demands for the Yucaipa area for the year 2030 require approximately an additional 10,000 AF/Y of supplemental water, including State Water Project water, water imported from local sources, recharged storm water and recycled water. YVWD is in the process of implementing the water resources management plan, which includes enhanced recharge of stormwater and recycled water, optimizing direct use of recycled and imported water, and conjunctive use.

In addition to its water supply responsibilities, YVWD provides sewage collection and treatment services within its service area. YVWD operates a wastewater treatment facility that currently discharges tertiary treated wastewater to San Timoteo Creek, Reach 3. This unlined reach of the Creek overlies and recharges the San Timoteo groundwater management zone.

Table 5-9a identifies the projects and requirements that must be implemented by YVWD to demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained. An implementation schedule is also specified. The Regional Board will revise YVWD’s waste discharge requirements to require that these commitments be met. It is assumed that maximum benefit is demonstrated, and that the “maximum benefit” water quality TDS and nitrate-nitrogen objectives apply to the Yucaipa and San Timoteo Management Zones, as long as the schedule is being met³. If the Regional Board determines that the maximum benefit program is not being implemented effectively in accordance with the schedule shown in Table 5-9a (and in the case of the San Timoteo Management Zone, the commitments and schedule shown in Table 5-10a (see next section)), then maximum benefit is not demonstrated and the “antidegradation” TDS and nitrate-nitrogen objectives apply. In this situation, the Regional Board will require mitigation for TDS and nitrate-nitrogen discharges affecting these management zones that took place in excess of limits based on the “antidegradation” objectives. As for Chino Basin Watermaster and Inland Empire Utilities Agency, discharges in excess of the antidegradation objectives that must be considered for mitigation include both recycled water and imported water, at TDS concentrations in excess of the antidegradation objectives. Mitigation by groundwater extraction and desalting must be adjusted to address concentrations of salt and nitrogen in the basin, not simply salt load.

³ Application of “maximum benefit” objectives for the San Timoteo Management Zone is also contingent on the timely implementation of the commitments by the City of Beaumont and the San Timoteo Watershed Management Authority which are discussed in the next section.

Table 5-9a

Yucaipa Valley Water District Maximum Benefit Commitments

Description of Commitment	Compliance Date— as soon as possible, but no later than
<p>1. Surface Water Monitoring Program</p> <p>a. Submit Draft Monitoring Program to Regional Board</p> <p>b. Implement Monitoring Program</p> <p>c. Quarterly data report submittal</p> <p>d. Annual data report submittal</p>	<p>a. January 23, 2005</p> <p>b. Within 30 days from Regional Board approval of monitoring plan</p> <p>c. April 15, July 15, October 15, January 15</p> <p>d. February 15th</p>
<p>2. Groundwater Monitoring Program</p> <p>a. Submit Draft Monitoring Program to Regional Board</p> <p>b. Implement Monitoring Program</p> <p>c. Annual data report submittal</p>	<p>a. January 23, 2005</p> <p>b. Within 30 days from Regional Board approval of monitoring plan</p> <p>c. February 15th</p>
<p>3. Desalter(s) and Brine Disposal Facilities</p> <p>a. Submit plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to operational as soon as possible but no later than 7 years from date of Regional Board approval of plan/schedule.</p> <p>b. Implement the plan and schedule</p>	<p>a. Within 6 months of either of the following:</p> <p>i. When YVWD's effluent 5-year running average TDS exceeds 530 mg/L; and/or</p> <p>ii. When volume-weighted average concentration in the Yucaipa MZ of TDS exceeds 360 mg/L.</p> <p>b. Within 30 days from Regional Board approval of monitoring plan</p>
<p>4. Non-potable water supply</p> <p>Implement non-potable water supply system to serve water for irrigation purposes. The non-potable supply shall comply with a 10-year running average TDS concentration of 415 mg/L or less</p>	<p>December 23, 2014</p>

Description of Commitment	Compliance Date — as soon as possible, but no later than
<p>5. Recycled water recharge</p> <p>The recharge of recycled water in the Yucaipa or San Timoteo Management Zones shall be limited to the amount that can be blended with other recharge sources to achieve a 5-year running average equal to or less than the "maximum benefit" objectives for TDS and nitrate-nitrogen for the relevant Management Zone(s).</p> <p>a. Submit baseline report of amount, locations, and TDS and nitrogen quality of stormwater/imported water recharge.</p> <p>b. Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations. For stormwater recharge used for blending, submit documentation that the recharge is the result of YVWD enhanced recharge facilities/programs</p>	<p>Compliance must be achieved by end of 5th year after initiation of recycled water use/recharge operations.</p> <p>a. Prior to initiation of construction of basins/other facilities to support enhanced stormwater/imported water recharge.</p> <p>b. Annually, by January 15th, after initiation construction of facilities/implementation of programs to support enhanced recharge.</p>
<p>6. Ambient groundwater quality determination</p>	<p>July 1, 2005 and every 3 years thereafter</p>
<p>7. Replace denitrification facilities (necessary to comply with TIN wasteload allocation specified in Table 5-5)</p>	<p>New facilities shall be operational no later than December 23, 2007</p>
<p>8. YVWD recycled water quality improvement — plan and schedule</p> <p>a. Submit plan and schedule</p> <p>b. Implement plan and schedule</p>	<p>a. 60 days after the TDS 12-month running average effluent quality equals or exceeds 530 mg/L for 3 consecutive months and/or the 12-month running average TIN concentration equals or exceeds 6 mg/L in any month (once replacement denitrification facilities are in place)</p> <p>b. Upon approval by Regional Board</p>
<p>9. Remove/reduce the discharge of YVWD effluent — from the unlined portion of San Timoteo</p>	

Description of Commitment	Compliance Date — as soon as possible, but no later than
<p>—Creek</p> <p>a. Submit proposed plan/schedule</p> <p>b. Implement plan/schedule</p>	<p>a. June 23, 2005</p> <p>b. Upon Regional Board approval</p>
<p>10. Construct the Western Regional Interceptor for Dunlap Acres</p> <p>a. Submit proposed construction plan and schedule. The schedule shall assure the completion of construction as soon as possible but no later than January 1, 2010.</p> <p>b. Implement plan and schedule</p>	<p>a. June 23, 2005</p> <p>b. Upon Regional Board approval</p>

~~A. Description of Yucaipa Valley Water District Commitments~~

~~1. Surface Water Monitoring Program (Table 5-9a, # 1)~~

~~The YVWD shall develop and submit for Regional Board approval a surface water monitoring program for San Timoteo Creek and the Santa Ana River Reaches 4 and 5. The monitoring program must be implemented within 30 days of Regional Board approval of the monitoring plan, and six months of data must be generated prior to the implementation of any changes made to the effluent discharge points and before any recycled water is used in the Yucaipa or San Timoteo Management Zones.~~

~~At a minimum, the surface water monitoring program shall include the collection of monthly measurements of TDS and nitrogen components in San Timoteo Creek and Santa Ana River, Reaches 4 and 5 (see Table 5-9b). Data reports shall be submitted to the Regional Board's Executive Officer by April 15, July 15, October 15 and January 15 each year. An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by February 15th of each year.~~

~~2. Groundwater Monitoring Program (Table 5-9a, #2)~~

~~The purpose of the Groundwater Monitoring Program is to identify the effects of the implementation of the San Timoteo and Yucaipa Management Zones maximum benefit water quality objectives on water levels and water quality within the San Timoteo and Yucaipa Management Zones. Prior to discharge of recycled water to the San Timoteo and/or Yucaipa Management Zones, YVWD shall submit to the Regional Board for approval a groundwater monitoring program to determine ambient water quality in the San Timoteo and Yucaipa Management Zones. The groundwater monitoring program must be implemented within 30 days of approval by the Regional Board.~~

~~An annual report, including all raw data and summarizing the results of the approved groundwater monitoring program, shall be submitted to the Regional Board by February 15th of each year.~~

~~3. Desalters and Brine Disposal (Table 5-9a, #3)~~

~~YVWD anticipates that demineralization of groundwater or recycled water will be necessary in the future. YVWD is committed to construct and operate desalting and brine disposal facilities when:~~

- ~~1) The 5-year running average TDS concentration in recycled water produced at the YVWD wastewater treatment plant exceeds 530 mg/L; or~~
- ~~2) The volume-weighted TDS concentration in the Yucaipa Management Zone reaches or exceeds 360 mg/L~~

~~The construction of these facilities will be in accordance with a plan and schedule submitted by YVWD and approved by the Regional Board. The schedule shall assure that these facilities are in place within 7 years of Regional Board approval. These facilities shall be designed to stabilize or reverse the degradation trend evidenced by effluent and/or management zone quality.~~

~~4. Non-potable water supply distribution system (Table 5-9a, #4)~~

~~A key element of the YVWD's water resources management plan is the construction of a non-potable supply system to serve a mix of recycled water and un-treated imported water for irrigation uses. The intent of blending these sources is to minimize the impact of recycled water use on the Yucaipa and San Timoteo Management Zones.~~

~~Parts of this system are under design and construction. A higher proportion of State Project water will be used in wet, surplus years, while larger amounts of recycled water will be used in dry, deficit years. YVWD will produce a non-potable supply with a running ten-year average TDS concentration for the Yucaipa Management Zone of 415 mg/L.~~

Table 5—9b

Surface Water Monitoring Sites for Monitoring Water Quality and Quantity
Yucaipa Valley Water District

Site Name	Discharge	Owner	Type	Discharge Monitoring	Water Quality			
Monitoring	Frequency	Period	Frequency	Period	Analyses			
11057500, Gage	San Timoteo Creek	USGS	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
At Barton Rd.	San Timoteo Creek	YVWD	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
At San Timoteo Canyon Rd.	San Timoteo Creek	YVWD	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
Above confluence	San Timoteo Creek	YVWD	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
Yucaipa Creek								
Above YVWD	San Timoteo Creek	YVWD	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
Discharge								
11059300 Gage	Santa Ana River	USGS	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
At Waterman Ave	Santa Ana River	YVWD	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec	TDS, TIN, Physical
Recharged to	State Water Project	YVWD	Total Discharge	Monthly	Jan-Dec	Monthly	Jan-Dec	TDS, Nitrate-N
Yucaipa MZ								
Recharged to	Storm water	YVWD	Total Discharge	Monthly	Jan-Dec	Monthly	Jan-Dec	TDS, Nitrate-N
Yucaipa MZ								

5. Recycled Water Use (Table 5-9a, # 5)

The use and recharge of recycled water within the Yucaipa Management Zone is a critical component of the YVWD water management plan and is necessary to maximize the use of the water resources of the Yucaipa area. The demonstration of "maximum benefit" and the continued application of the "maximum benefit" objectives depends on the combined recharge (recycled water, imported water, storm water) to the Yucaipa Management Zone of a 5-year annual average (running average) TDS concentration of 370 mg/L and nitrate-nitrogen concentration of 5 mg/L. If recycled water recharge in the proposed San Timoteo Management Zone is pursued, then the application of the "maximum benefit" objectives will depend on the combined recharge to that Zone of 5-year annual average (running average) concentrations of 400 mg/L or

less TDS, and 5 mg/L or less nitrate-nitrogen.

To meet this requirement, YVWD will establish a fund to purchase imported water from local sources and/or the State Water Project and will recharge water with a TDS concentration less than 300 mg/L (recent long term historical average of water delivered from the State Project). YVWD will also pursue implementation, with the City of Yucaipa and the San Bernardino County Flood Control District, of the Yucaipa Water Capture and Resource Management Complex by December 31, 2010.

Accordingly, the use of recycled water for groundwater recharge in the Yucaipa or San Timoteo Management Zone shall be limited to the amount that can be blended in the management zone on a volume-weighted basis with other sources of recharge to achieve 5-year running average concentrations less than or equal to the "maximum benefit" objectives for the affected groundwater management zone. The 25% nitrogen loss coefficient will be applied in determining the amount of recharge of other water sources that must be achieved to meet the 5-year running average nitrogen concentrations.

6. Ambient Groundwater Quality Determination (Table 5-9a, # 6)

By July 1, 2005, and every three years thereafter, YVWD shall submit a determination of ambient TDS and nitrate-nitrogen quality in the San Timoteo and Yucaipa Management Zones. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater management zones within the region. [Ref. 1].

7. Replacement of Denitrification Facilities (Table 5-9a, #7)

YVWD shall replace existing denitrification facilities to provide effluent total inorganic nitrogen quality (6 mg/L) needed to assure compliance with the "maximum benefit" nitrate-nitrogen objective of the San Timoteo and Yucaipa Management Zones (see Wasteload Allocation section of this Chapter). A maximum three year schedule for completion of these facilities will be required. This schedule will be specified in a revised NPDES permit for YVWD's discharges to San Timoteo Creek.

8. YVWD Recycled Water Management (Table 5-9a, #8)

YVWD expects to limit the TDS concentration in its effluent to less than or equal to 540 mg/L by using a low TDS source water supply for potable uses, selective desalting of either source water and/or recycled waters, and minimizing the TDS waste increment. YVWD is currently constructing a 12-MGD treatment plant to treat and serve State Project Water. The plant will also be able to treat low TDS Mill Creek and Santa Ana River water. When necessary, YVWD will construct desalters to reduce either the TDS concentration in water supplied to customers or the TDS concentration in the effluent. YVWD will also use best efforts to enact ordinances and other requirements to minimize the TDS use increment.

Within 60 days after the YVWD 12-month running average concentration for TDS equals or exceeds 530 mg/L for 3 consecutive months, or the 12-month running average TIN concentration equals or exceeds 6 mg/L in any month (once replacement denitrification facilities are in place), YVWD shall submit to the Regional Board a plan and time schedule for implementation of measures to insure that the average agency wastewater effluent quality does not exceed 540 mg/L and 6 mg/L for TDS and TIN, respectively. The plan and schedule are to be implemented upon approval by the Regional Board.

9. Relocation of San Timoteo Creek Discharge (Table 5-9a, #9)

YVWD has established the goal of eliminating its discharge to the unlined reach of San Timoteo Creek by 2008. First priority will be given to the direct reuse and limited recharge of this recycled water in the YVWD service area (principally the area overlying the Yucaipa Management Zone). The District may construct a pipeline to convey the recycled water to the San Jacinto watershed for reuse. The District is also planning the construction of a pipeline to convey recycled water downstream to the lined reach of the Creek (Reach 1A) to minimize recycled water effects on the San Timoteo Management Zone. In the long term, discharges

to this area of the Creek are likely to be infrequent and limited to the wintertime, when the recycled water cannot be used in the YVWD (or potentially, the San Jacinto) service areas. However, YVWD is obligated to maintain flows in the Creek to support existing riparian habitat (State Board Order No. WW-26) and may need to continue recycled water discharges at some level. Groundwater and imported State Project water may also be used as alternative water sources.

Whole or partial removal of the discharge from the unlined reach of San Timoteo Creek would improve the quality of groundwater in the San Timoteo Management Zone and supplement recycled water supplies available for reuse elsewhere in the service area.

By June 23, 2005, YVWD shall submit a proposed plan and schedule to remove/reduce the discharge of recycled water to the unlined reach of San Timoteo Creek. The plan and schedule shall be implemented upon Regional Board approval.

10. Construction of Western Regional Interceptor (Table 5-9a, # 10)

YVWD will construct the Western Regional Interceptor to provide wastewater collection and treatment services to Dunlap Acres in order to mitigate what has been identified as a poor quality groundwater area due to prior agricultural use and existing septic systems. The Dunlap Acres area was inadvertently omitted from the Yucaipa-Calimesa septic tank subsurface disposal system prohibition established by the Regional Board in 1973. The interceptor includes the construction of a major wastewater interceptor pipeline, a force main and pump station. YVWD committed to complete construction of these facilities prior to 2010. Regional Board action may be necessary to require connection of properties to the wastewater collection system, when it is completed.

By June 23, 2005, YVWD shall submit a plan and schedule for construction of the Interceptor. The Interceptor is to be complete no later than January 1, 2010. YVWD shall implement the plan and schedule upon Regional Board approval.

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the "maximum benefit" objectives, the Regional Board will revise the NPDES permit for YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

The discharge limits for TDS and TIN will be specified as an annual volume-weighted average not to exceed 540 mg/L TDS and 6 mg/L TIN. These limits are based on the "maximum benefit" wasteload allocations shown in Table 5-5. A schedule not to exceed December 23, 2007 for compliance with this TIN limit shall be included in the permit. This schedule will enable YVWD to replace its existing denitrification facilities. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative limits are also specified in Table 5-5. Compliance schedules for these alternative limits will be specified in YVWD's waste discharge requirements, as necessary.

YVWD will be required to implement measures to improve effluent quality when the 12-month running average effluent TDS quality equals or exceeds 530 mg/L for 3 consecutive months, and/or when the 12-month running average TIN concentration equals or exceeds 6 mg/L in any month (once replacement denitrification facilities are in place).

YVWD's waste discharge requirements will require that recycled water used for recharge shall be limited to the amount that can be blended with other water sources, such as stormwater or imported water, to achieve 5-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the affected management zone (Yucaipa or San Timoteo). Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water

recharge in these management zones.

The effluent limits for YVWD, which establish an upper limit on TDS and TIN concentrations of recycled water discharged in the Yucaipa and/or San Timoteo Management Zones, are a cornerstone of the maximum benefit demonstration. The cap on effluent TDS and TIN concentrations provides a controlling point for management of TDS and nitrogen water quality. YVWD will be required to initiate the building of a desalter and brine disposal line when the 5-year running average TDS in YVWD's effluent reaches 530 mg/L, or when the volume weighted average TDS concentration in the Yucaipa Management Zone reaches 360 mg/L. YVWD will immediately implement a salt management program to reduce the salts entering the District's wastewater treatment plant. This salt management program will include: 1) provision of incentives for the removal of on-site regenerative water softeners and the use of off-site regenerative systems; and 2) percolation of State Water Project water into the Yucaipa Management Zone when State Water Project water has low TDS. Implementing these measures will assure that the groundwater quality remains at or below the Yucaipa Management Zone objective of 360 mg/L TDS. Maintenance of this ambient groundwater quality is necessary, in turn, to assure that YVWD's wastewater treatment facility is able to meet the effluent TDS limits. Yucaipa Management Zone groundwater is a significant component of the water supplied in YVWD's service area, and its quality thus has an important effect on effluent quality. Poor ambient quality will preclude YVWD from meeting effluent limits without desalting.

YVWD will be required to submit proposed plans and schedules for the removal/reduction of its wastewater discharges from the unlined reach of San Timoteo Creek and for the construction of the Western Regional Interceptor. YVWD's revised permit will also reflect the surface and groundwater monitoring program requirements described above. This includes the determination of ambient quality in the San Timoteo and Yucaipa Management Zones.

2. Review of Project Status

No later than 2005, and every three years thereafter (to coincide with the Regional Board's triennial review process), the Regional Board intends to review the status of the activities planned and executed by the YVWD to demonstrate maximum benefit and justify continued implementation of the "maximum benefit" water quality objectives. This review is intended to determine whether the commitments specified above and summarized in Table 5-9a are met. As indicated above, if, as a result of this review, the Regional Board finds that the YVWD commitments are not met and after consideration at a duly noticed Public Hearing, the Regional Board will make a finding that the lowering of water quality associated with TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. By default, the scientifically derived "antidegradation" objectives for the San Timoteo (300 mg/L for TDS, 2.7 mg/L for nitrate nitrogen) and Yucaipa (320 mg/L for TDS and 4.2 mg/L for nitrate nitrogen Management Zones would become effective (see Chapter 4).

Furthermore, in the event that the projects and actions specified in Table 5-9a are not implemented, the Regional Board will require that the YVWD mitigate the adverse water quality effects, both on the immediate and downstream waters, that resulted from the recycled water discharges based on the "maximum benefit" objectives.

2. San Timoteo and Beaumont Management Zones—City of Beaumont and San Timoteo Watershed Management Authority (STWMA)

As shown in Chapter 4, two sets of TDS and nitrate-nitrogen objectives have been adopted for both the San Timoteo and Beaumont Management Zones: the “maximum benefit” objectives and objectives based on historic ambient quality (the “antidegradation” objectives). The application of the “maximum benefit” objectives for these Management Zones is contingent on the implementation of commitments by the City of Beaumont/STWMA (and, in the case of the San Timoteo Management Zone, by the Yucaipa Valley Water District (YVWD; see preceding discussion)) to implement a specific water and wastewater resources management program [Ref. 10E]. This program is part of a coordinated effort by the member agencies of STWMA to develop and implement projects that will assure reliable water supplies to meet rapidly increasing demands in this area. The San Timoteo Watershed Management Program (STWMP) developed by STWMA entails enhanced recharge of native and recycled water, maximizing the direct use of recycled water, optimizing the direct use of imported water, recharge and conjunctive use.

Wastewater collection and treatment services in the STWMA service area are provided by the City of Beaumont, as well as YVWD. Beaumont discharges tertiary treated wastewater to Coopers Creek, a tributary of San Timoteo Creek, Reach 3. This unlined reach of the Creek overlies and recharges the San Timoteo groundwater management zone.

Table 5-10a identifies the projects and requirements that must be implemented by Beaumont/STWMA to demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained. STWMA, acting for all its member agencies, has committed to conduct the regional planning and monitoring activities necessary to implement these “maximum benefit” commitments, and the San Timoteo Watershed Management Program as a whole. Table 5-10a also specifies an implementation schedule. The Regional Board will revise the City of Beaumont’s waste discharge requirements and take other actions as necessary to require that these commitments be met. It is assumed that maximum benefit is demonstrated, and that the “maximum benefit” water quality TDS and nitrate-nitrogen objectives apply to the Beaumont and San Timoteo Management Zones, as long as the schedule is being met⁴. If the Regional Board determines that the maximum benefit program is not being implemented effectively in accordance with the schedule shown in Table 5-10a (and in the case of the San Timoteo Management Zone, the commitments and schedule shown in Table 5-9a (see preceding section)), then maximum benefit is not demonstrated, and the “antidegradation” TDS and nitrate-nitrogen objectives apply. In this situation, the Regional Board will require mitigation for TDS and nitrate-nitrogen discharges affecting these management zones that took place in excess of limits based on the “antidegradation” objectives.

⁴ Application of “maximum benefit” objectives for the San Timoteo Management Zone is also contingent on the timely implementation of the commitments by the Yucaipa Valley Water District which are discussed in the preceding section.

Table 5-10a

City of Beaumont and San Timoteo Watershed Management Authority
Maximum Benefit Commitments

Description of Commitment	Compliance Date— as soon as possible, but no later than
<p>1. Surface Water Monitoring Program</p> <p>a. Submit Draft Monitoring Program to Regional Board</p> <p>b. Implement Monitoring Program</p> <p>c. Quarterly data report submittal</p> <p>d. Annual data report submittal</p>	<p>a. January 23, 2005</p> <p>b. Within 30 days from Regional Board approval of monitoring plan</p> <p>c. April 15, July 15, October 15, January 15</p> <p>d. February 15th</p>
<p>2. Groundwater Monitoring Program</p> <p>a. Submit Draft Monitoring Program to Regional Board</p> <p>b. Implement Monitoring Program</p> <p>c. Annual data report submittal</p>	<p>a. January 23, 2005</p> <p>b. Within 30 days from Regional Board approval of monitoring plan</p> <p>c. February 15th</p>
<p>3. Desalter(s) and Brine Disposal Facilities</p> <p>a. Submit plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to be operational as soon as possible but no later than 7 years from date of Regional Board approval of plan/schedule.</p> <p>b. Implement the plan and schedule</p>	<p>a. Within 6 months of either of the following:</p> <p>i. When Beaumont's effluent 5-year running average TDS exceeds 480 mg/L; and/or</p> <p>ii. When volume weighted average concentration in the Yucaipa MZ of TDS exceeds 320 mg/L</p> <p>b. Within 30 days from Regional Board approval of monitoring plan</p>

Description of Commitment	Compliance Date— as soon as possible, but no later than
<p>4. Non-potable water supply</p> <p>Implement non-potable water supply system to serve water for irrigation purposes. The non-potable supply shall comply with a 10-year running average TDS concentration of 300 mg/L or less</p>	<p>December 23, 2014</p>
<p>5. Recycled water recharge</p> <p>The recharge of recycled water in the Beaumont or San Timoteo Management Zones shall be limited to the amount that can be blended with other recharge sources to achieve a 5-year running average equal to or less than the "maximum benefit" objectives for TDS and nitrate-nitrogen for the relevant Management Zone(s):</p> <p>a. Submit baseline report of amount, locations, and TDS and nitrogen quality of stormwater/imported water recharge.</p> <p>b. Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations. For stormwater recharge used for blending, submit documentation that the recharge is the result of City of Beaumont/STWMA enhanced recharge facilities/programs</p>	<p>Compliance must be achieved by end of 5th year after initiation of recycled water use/recharge operations.</p> <p>a. Prior to initiation of construction of basins/other facilities to support enhanced stormwater/imported water recharge.</p> <p>b. Annually, by January 15th, after initiation construction of facilities/implementation of programs to support enhanced recharge.</p>
<p>6. Ambient groundwater quality determination</p>	<p>July 1, 2005 and every 3 years thereafter</p>
<p>7. Replace denitrification facilities (if necessary to comply with TIN wasteload allocation specified in Table 5-5)</p>	<p>Compliance with 6 mg/L TIN limitation to be achieved by December 23, 2007</p>
<p>8. City of Beaumont recycled water quality improvement plan and schedule</p> <p>a. Submit plan and schedule</p>	<p>a. 60 days after the TDS 12-month running average effluent quality equals or exceeds 480 mg/L for 3 consecutive months and/or the 12-month running average TIN concentration equals or exceeds 6 mg/L in any month (once facility/operational changes needed to achieve 6 mg/L TIN are in place)</p>

Description of Commitment	Compliance Date — as soon as possible, but no later than
b. Implement plan and schedule	b. Upon approval by Regional Board
<p>9. Remove/reduce the discharge of Beaumont's effluent from the unlined portion of San Timoteo Creek</p> <p>a. Submit proposed plan/schedule</p> <p>b. Implement plan/schedule</p>	<p>a. June 23, 2005</p> <p>b. Upon Regional Board approval</p>

A. Description of City of Beaumont, San Timoteo Watershed Authority Commitments

1. Surface Water Monitoring Program (Table 5-10a, #1)

The City of Beaumont and the STWMA shall develop and submit for Regional Board approval a surface water monitoring program for San Timoteo, Little San Gorgonio and Noble Creeks at the locations listed in Table 5-10b. The monitoring program must be implemented within 30 days of Regional Board approval of the monitoring plan, and six months of data must be generated prior to the implementation of any changes to the effluent discharge points and before any recycled water is used in the Beaumont or San Timoteo Management Zones.

At a minimum, the surface water monitoring program shall include the collection of monthly measurements of TDS and nitrogen components at locations in San Timoteo, Little San Gorgonio and Noble Creeks (see Table 5-10b). Data reports shall be submitted to the Regional Board's Executive Officer by April 15, July 15, October 15 and January 15 each year. An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted February 15th of each year.

2. Groundwater Monitoring Program (Table 5-10a, #2)

The purpose of the groundwater monitoring program is to identify the effects of the implementation of the Beaumont and San Timoteo Management Zone maximum benefit TDS and nitrate-nitrogen water quality objectives on water levels and water quality within the Beaumont and San Timoteo Management Zones. Prior to discharge of recycled water to the Beaumont and/or San Timoteo Management Zone, the City of Beaumont and the STWMA shall submit to Regional Board for approval a groundwater monitoring program to determine ambient water quality in the Beaumont and San Timoteo Management Zones. The groundwater monitoring program must be implemented within 30 days of approval by the Regional Board.

An annual report, including all raw data and summarizing the results of the approved groundwater

monitoring program, shall be submitted to the Regional Board by February 15th of each year.

3. Desalters and Brine Disposal (Table 5-10a. #3)

The City of Beaumont and the STWMA shall construct and operate desalting facilities and brine disposal facilities when:

- a. The 5-year running average TDS concentration in recycled water produced at the City of Beaumont wastewater treatment plant exceeds 480 mg/L, or
- b. The volume-weighted TDS concentration in the Beaumont Management Zone equals or exceeds 320 mg/L.

The construction of these facilities will be in accordance with a plan and schedule submitted by Beaumont/STWMA and approved by the Regional Board. The schedule shall assure that these facilities are in place within 7 years of Regional Board approval. These facilities shall be designed to stabilize or reverse the degradation trend evidenced by effluent and/or management zone quality.

Table 5—10b

Surface Water Monitoring Sites for Monitoring Water Quality and Quantity
City of Beaumont & San Timoteo Watershed Management Authority

Site Name	Discharge	Owner	Type	Discharge Monitoring		Water Quality Monitoring	
				Frequency	Period	Frequency	Period
Analyses							
Above confluence With Coopers Cr.	San Timoteo Creek	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec TDS, TIN, Physical
Near Hinda Sec. 35 T2S, R2W	San Timoteo Creek	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec TDS, TIN, Physical
Above confluence With San Timoteo Creek	Coopers Creek	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec TDS, TIN, Physical
At Freeway 10	Little San Gorgonio Cr.	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec TDS, TIN, Physical
At Freeway 10	Noble Creek	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Bi-weekly	Jan-Dec TDS, TIN, Physical
Recharged to Beaumont MZ	State Water Project	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Monthly	Jan-Dec TDS, Nitrate-N
Recharged to Beaumont MZ	Storm water	Beaumont & STWMA	Total Discharge	Bi-weekly	Jan-Dec	Monthly	Jan-Dec TDS, Nitrate-N

4. Non-potable water supply distribution system (Table 5-10a, #4)

Like YVWD, the City of Beaumont is constructing a non-potable water system that will convey untreated State Project water and recycled water for irrigation within its service area. The intent of blending these sources is to minimize the impact of recycled water use on groundwater quality in the proposed Beaumont and San Timoteo Management Zones. A higher proportion of State Project water will be used in wet, surplus years, while larger amounts of recycled water will be used in dry, deficit years.

5. Recycled Water Use (Table 5-10a, #5)

The use of recycled water within the Beaumont Management Zone is a critical component of the City of Beaumont and STWMA water management plan and is necessary to maximize the use of the water resources of the Beaumont area.

The demonstration of "maximum benefit" and the continued application of the "maximum benefit" objectives depends on the combined recharge (recycled water, imported water, storm water) to the Beaumont Management Zone of a 5-year annual average (running average) TDS concentration of 330 mg/L and a nitrate-nitrogen concentration of 5 mg/L. If recycled water recharge in the San Timoteo Management Zone is pursued, then the application of the "maximum benefit" objectives will depend on the combined recharge to that Zone of 5-year annual average (running average) concentrations of 400 mg/L or less TDS, and 5 mg/L or less nitrate-nitrogen.

To comply with this requirement, the STWMA member agencies are developing plans to recharge and store State Project water in the proposed Beaumont Management Zone. The Beaumont-Cherry Valley Water District (BCVWD) is developing a new 80-acre groundwater recharge project that will increase storm water recharge in the Beaumont Basin by 4,100 acre-ft/yr. This facility will also be used to recharge State Water project water. The City of Beaumont is also developing storm water recharge in facilities in newly developing areas, which is expected to result in the recharge of an additional 2,400 acre-ft/yr of stormwater runoff.

Accordingly, the use of recycled water for use or recharge in the Beaumont or San Timoteo Management Zone shall be limited to the amount that can be blended on a volume-weighted basis with other sources of recharge to achieve 5-year running average concentrations less than or equal to the "maximum benefit" objectives for the affected groundwater management zone. The 25% nitrogen loss coefficient will be applied in determining the amount of recharge of other water sources that must be achieved to meet the 5-year running average nitrogen concentrations.

6. Ambient Groundwater Quality Determination (Table 5-10a, #6)

By July 1, 2005, and every three years thereafter, the City of Beaumont and STWMA shall submit a determination of ambient TDS and nitrate-nitrogen quality in the Beaumont and San Timoteo Management Zones. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater management zones within the region [Ref. 1].

7. Replacement/modification of denitrification facilities (Table 5-10a, #7)

The City of Beaumont has committed to produce recycled water with a 12-month average TIN concentration of 6 mg/L or less by 2008. This may be accomplished via operational changes, or may require the installation/modification of facilities. This TIN effluent quality is specified in the TIN wasteload allocation (see Table 5-5) and is necessary to assure compliance with the proposed "maximum benefit" nitrate-nitrogen objective for the Beaumont and San Timoteo Management Zones (5 mg/L). An appropriate schedule, not to exceed December 23, 2007 for compliance with this effluent limit will be specified in a revised NPDES permit for the City.

8. ~~City of Beaumont Wastewater Management (Table 5-10a, #8)~~

~~Beaumont expects to limit the TDS concentration in its effluent to less than or equal to 490 mg/L by using a low TDS source water supply for potable uses, selective desalting of either source water and/or recycled waters, and minimizing the TDS waste increment.~~

~~Within 60 days after the Beaumont 12-month running average concentration for TDS equals or exceeds 480 mg/L for 3 consecutive months, or the 12-month running average TIN concentration equals or exceeds 6 mg/L in any month (once facility/operational changes needed to achieve 6 mg/L TIN are in place), the City of Beaumont shall submit to the Regional Board a plan and time schedule for implementation of measures to insure that the average agency wastewater effluent quality does not exceed 490 mg/L and 6 mg/L for TDS and TIN, respectively. The plan and schedule are to be implemented upon approval by the Regional Board.~~

9. ~~Relocation of San Timoteo Creek Discharge (Table 5-10a, #9)~~

~~Like YVWD, Beaumont has established the goal of eliminating its discharge to the unlined reach of San Timoteo Creek by 2008 to minimize the impacts of these discharges on the San Timoteo Management Zone. The STWMP anticipates that Beaumont's recycled water will be almost completely reused within the Beaumont area for landscape irrigation, habitat enhancement, and potentially for groundwater recharge. Like YVWD, Beaumont and STWMA are also considering the export of a portion of Beaumont's surplus recycled water to the San Jacinto basin, where the TDS objectives are higher than those for the Beaumont Management Zone and recycled water demands are greater than supplies. Some limited recycled water discharge to Coopers Creek and thence /San Timoteo Creek may need to be continued to support existing riparian habitat.~~

~~Whole or partial removal of the discharge from the unlined reach of San Timoteo Creek would improve the quality of groundwater in the San Timoteo Management Zone and supplement recycled water supplies available for reuse elsewhere in the service area.~~

~~By June 23, 2005, Beaumont/STWMA shall submit a proposed plan and schedule to remove/reduce the discharge of recycled water to the unlined reach of San Timoteo Creek. The plan and schedule shall be implemented upon Regional Board approval.~~

B. ~~Implementation by Regional Board~~

1. ~~Revision of City of Beaumont NPDES Permit~~

~~To implement the "maximum benefit" objectives, the Regional Board will revise the NPDES permit for the City of Beaumont wastewater discharge to reflect the commitments described above, as appropriate. This includes the following:~~

~~The discharge limits for TDS and TIN will be specified as an annual volume-weighted average not to exceed 490 mg/L TDS and 6 mg/L TIN. These limits are based on the wasteload allocation shown in Table 5-5. A schedule not to exceed December 23, 2007 for compliance with this TIN limit shall be included in the permit. This schedule will enable Beaumont to make the necessary facility/operational changes. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative limits are also specified in Table 5-5. Compliance schedules for these alternative limits will be specified in Beaumont's waste discharge requirements, as necessary.~~

~~Beaumont will be required to implement measures to improve effluent quality when the 12-month running average effluent TDS quality equals or exceeds 480 mg/L for 3 consecutive months, and/or when the 12-month running average TIN concentration equals or exceeds 6 mg/L in any month (once the facility/operational changes necessary to assure compliance with the 6 mg/L limit are in place).~~

Beaumont's waste discharge requirements will require that recycled water used for recharge shall be limited to the amount that can be blended with other water sources, such as stormwater or imported water, to achieve 5-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the affected management zone (Beaumont or San Timoteo).

The effluent limits for the City of Beaumont, which establish an upper limit on TDS and TIN concentrations of recycled water discharged in the management zones, are a key part of the maximum benefit demonstration. The cap on effluent TDS and TIN concentrations provides a controlling point for management of TDS and nitrogen water quality. The City of Beaumont has committed to initiate the building of a groundwater desalter and brine disposal line when the TDS in the City's effluent reaches 480 mg/L. Further, the City will immediately implement a salt management program to reduce the salts entering the City's wastewater treatment plant. This salt management program will include: 1) provision of incentives for the removal of on-site regenerative water softeners and the use of off-site regenerative systems; and 2) percolation of State Water Project water into the Beaumont Management Zone when State Water Project water has low TDS. Implementing these measures will assure that the groundwater quality remains at or below the Beaumont management zone objective of 330 mg/L TDS. Maintenance of this ambient groundwater quality is necessary, in turn, to assure that the City's wastewater treatment facility is able to meet the effluent TDS limits. Beaumont Management Zone groundwater is a component of the water supplied to the City and its quality thus has an important effect on the effluent quality. Poor ambient quality will preclude the City from meeting effluent limits without desalting.

Beaumont will be required to submit a proposed plan and schedule for the removal/reduction of its wastewater discharges from the unlined reach of San Timoteo Creek. Beaumont's revised permit will also reflect the surface and groundwater monitoring program requirements described above. This includes the determination of ambient quality in the San Timoteo and Beaumont Management Zones.

2. Review of Project Status

No later than 2005, and every three years thereafter (to coincide with the Regional Board's triennial review process), the Regional Board intends to review the status of the activities planned and executed by the City of Beaumont and STWMA to demonstrate maximum benefit and justify continued implementation of the "maximum benefit" water quality objectives. This review is intended to determine whether the commitments specified above and summarized in Table 5-10a are met. As indicated above, if, as a result of this review, the Regional Board finds that the City of Beaumont and STWMA commitments are not met and after consideration at a duly noticed Public Hearing, the Regional Board will make a finding that the lowering of water quality associated with TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. By default, the scientifically derived "antidegradation" objectives for the Beaumont and San Timoteo Management Zones would become effective (230 mg/L TDS and 1.5 mg/L nitrate-nitrogen for the Beaumont Management Zone; 300 mg/L TDS and 2.7 mg/L nitrate-nitrogen for the San Timoteo Management Zone (see Chapter 4).

Furthermore, in the event that the projects and actions specified in Table 5-10a are not implemented, the Regional Board will require that the City of Beaumont and STWMA mitigate the adverse water quality effects, both on the immediate and downstream waters, that resulted from the recycled water discharges based on the "maximum benefit" objectives. As for CBW/EUA and YAWD, discharges in excess of the antidegradation objectives that must be considered for mitigation include both recycled water and imported water, at TDS concentrations in excess of the antidegradation objectives. Mitigation by groundwater extraction and desalting must be adjusted to address concentrations of salt and nitrogen in the basin, not simply salt load.

Page 5-59ff.**B. Salt Management – San Timoteo Watershed**

The 2004 amendments to the Basin Plan established both “antidegradation” and “maximum benefit” nitrogen and TDS objectives for the Yucaipa, San Timoteo and Beaumont Groundwater Management Zones (see Chapter 4). These Groundwater Management Zones are within the San Timoteo Watershed. The agencies that proposed the “maximum benefit” objectives committed to implement specific programs of projects and actions that were also identified in the 2004 Salt Management Plan incorporated in the Basin Plan. These programs were intended to assure that water quality consistent with the maximum benefit to the people of the state would be maintained with the application of the “maximum benefit” objectives. These commitments included the implementation of surface and groundwater monitoring programs, use of recycled water supplies for non-potable uses and construction and operation of desalting facilities to manage recycled water quality.

In 2014 amendments to the Salt Management Plan, changes to these “maximum benefit” commitments and the parties responsible for them were made based on a regional strategy for the San Timoteo Watershed [Ref 10D] developed and proposed by the Yucaipa Valley Water District, the City of Beaumont, the City of Banning, Beaumont-Cherry Valley Water District and the San Geronio Pass Agency. The Regional Strategy initially addressed the Maximum Benefit program in the Beaumont Groundwater Management Zone; however, in order to have a consistent approach throughout the San Timoteo Watershed, the Regional Strategy approach was expanded to the San Timoteo and Yucaipa Groundwater Management Zones. The goal of this strategy is to assure reliable water supplies to meet present and anticipated demands. The “maximum benefit” commitments of each responsible agency are described below and shown in Tables 5-9a (Yucaipa Groundwater Management Zone), 5-9b (San Timoteo Groundwater Management Zone) and 5-9c (Beaumont Groundwater Management Zone). These commitments must be implemented by the responsible agencies in accordance with the prescribed schedule in order to assure that water quality consistent with maximum benefit to the people of the state will be maintained.

The Regional Board will revise waste discharge requirements as appropriate to require implementation of these commitments. For each groundwater management zone, it is assumed that maximum benefit is demonstrated, and that the “maximum benefit” water quality TDS and nitrate-nitrogen objectives apply as long as the commitments and schedule applicable to that groundwater management zone are satisfied. If the Regional Board determines that any or all of the maximum benefit programs are not being implemented effectively in accordance with the schedule(s) shown in Tables 5-9a through 5-9c, then maximum benefit is not demonstrated and the “antidegradation” TDS and nitrate-nitrogen objectives apply. In this situation, the Regional Board will require mitigation for TDS and nitrate-nitrogen discharges to the affected groundwater management zone that took place in excess of limits based on the “antidegradation” objectives for that Groundwater Management Zone. As specified for Chino Basin Watermaster and Inland Empire Utilities Agency (see Section VI.A, above), discharges in excess of the antidegradation objectives that must be considered for mitigation include both recycled water and imported water at TDS concentrations in excess of the antidegradation objectives. Mitigation by groundwater extraction and desalting must be adjusted to address concentrations of salt and nitrogen in the basin, not simply salt load.

1. Yucaipa Groundwater Management Zone - Yucaipa Valley Water District

The application of the "maximum benefit" objectives established for the Yucaipa Groundwater Management Zone relies on the implementation by the Yucaipa Valley Water District (YVWD) of the specific program of projects and requirements shown in Table 5-9a. These "maximum benefit" commitments were updated and revised in 2014 based on YVWD's ongoing activities to implement the 2004 program and the regional strategy YVWD helped to develop. The projected water demands for the Yucaipa area for the year 2030 require approximately an additional 10,000 AF/Y of supplemental water, which may include State Water Project water, water imported from local sources, recharged storm water and recycled water. The goal is to meet these demands through implementation of the "maximum benefit" commitments, which include enhanced recharge of storm water and recycled water, optimizing direct use of recycled and imported water, desalting of wastewater and/or groundwater and conjunctive use.

In addition to its water supply responsibilities, YVWD provides sewage collection and treatment services within its service area. YVWD operates a wastewater treatment facility that currently discharges tertiary treated wastewater to San Timoteo Creek, Reach 3. This unlined reach of the Creek overlies and recharges the San Timoteo Groundwater Groundwater Management Zone (see 2. San Timoteo Groundwater Management Zone – Yucaipa Valley Water District and the City of Beaumont). In response to commitments in the 2004 Salt Management Plan, YVWD has taken steps to improve recycled water quality, including the installation of new denitrification facilities and the design and construction of the Yucaipa Valley Regional Brineline and reverse osmosis treatment systems at the Wochholz Regional Water Recycling Facility. The desalting facilities are expected to be complete by June 30, 2015.

Dilution of recycled water with water to meet the 370 mg/L TDS concentration and the 5 mg/L nitrate-N concentration recycled water recharge and direct use requirements will be limited to new water recharge such as reverse osmosis permeate (diluent), imported water or new storm water. New storm water recharge is defined as storm water recharged in quantities greater than historical amounts (net increase) over the groundwater management zone since January 1, 2004. January 2004 corresponds to the month and year when the Regional Board authorized the original maximum benefit objectives and compliance commitments by adopting Resolution No. R8-2004-0001.

Table 5-9a

Yucaipa Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agency – Yucaipa Valley Water District

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>1. Surface Water Monitoring Program</u></p> <p><u>a. Submit Draft Revised Monitoring Program to Regional Board</u></p> <p><u>b. Implement Revised Monitoring Program</u></p> <p><u>c. Submit Draft Revised Monitoring Program(s) (subsequent to that required in "a", above) to Regional Board</u></p> <p><u>d. Implement Revised Monitoring Program (s)</u></p> <p><u>e. Annual data report submittal</u></p>	<p><u>a. (**30 days from Regional Board approval of BPA)</u></p> <p><u>b. Upon Executive Officer approval</u></p> <p><u>c. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Executive Officer and in accordance with the schedule prescribed by the Executive Officer</u></p> <p><u>d. Upon Executive Officer approval</u></p> <p><u>e. April 15th</u></p>
<p><u>2. Groundwater Monitoring Program</u></p> <p><u>a. Submit Draft Revised Monitoring Program(s)</u></p> <p><u>b. Implement revised monitoring plan(s)</u></p> <p><u>c. Annual data report submittal</u></p>	<p><u>a. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Executive Officer and in accordance with the schedule prescribed by the Executive Officer</u></p> <p><u>b. Upon Executive Officer approval</u></p> <p><u>c. April 15th</u></p>
<p><u>3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</u></p> <p><u>Complete construction of Desalter and Brine Disposal Facilities</u></p>	<p><u>June 30, 2015 (or as provided by the Executive Officer - see text below)</u></p>
<p><u>4. Non-potable water supply</u></p> <p><u>Implement non-potable water supply system to serve water for irrigation purposes and/or direct non-potable reuse. The non-potable supply used in the Yucaipa Groundwater Management Zone shall comply with a 10-year running average TDS concentration of 370 mg/L or less, and in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the nitrate-nitrogen shall be</u></p>	<p><u>June 30, 2015</u></p>

Table 5-9a

Yucaipa Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agency – Yucaipa Valley Water District

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</u></p>	
<p><u>5. Recycled water recharge</u></p> <p><u>The recharge of recycled water in the Yucaipa Groundwater Management Zone shall be limited to the amount that can be blended with other recharge sources or reverse osmosis diluent to achieve a 10-year running average equal to or less than the 370 mg/L "maximum benefit" TDS objective and less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</u></p> <p><u>c. Submit for Executive Officer approval, a proposed methodology for computing baseline and "new" storm water recharge.</u></p> <p><u>The methodology will be posted for public comment for 30 days. If there are significant comments received, the Executive Officer will present the report to the Regional Board for its consideration at a regularly scheduled meeting.</u></p> <p><u>b. Submit baseline report of amount, locations, and TDS and nitrogen quality of water/imported water recharge per the approved methodology (#5a).</u></p> <p><u>c. Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations. For storm water recharge used for blending, submit documentation that the recharge is the result of YVWD enhanced recharge facilities/programs</u></p>	<p><u>Compliance must be achieved by end of 10th year after initiation of recycled water use/recharge operations.</u></p> <p><u>b. 6 months prior to initiation of construction of any basin/other facility to support enhanced storm water/imported water recharge.</u></p> <p><u>c. 1 year from Executive Officer approval of methodology.</u></p> <p><u>c. Annually, by April 15th, after construction of facilities/implementation of programs to support enhanced recharge.</u></p>
<p><u>6. Antidegradation Objectives Salt Mitigation Plan</u></p> <p><u>a. Submit a proposed Salt Mitigation Plan and Implementation Schedule</u></p> <p><u>b. Implement Salt Mitigation Plan</u></p>	<p><u>a. Within (**1 year from OAL approval of BPA)</u></p> <p><u>b. Within 30 days of Regional Board finding that maximum benefit no longer being achieved</u></p>
<p><u>7. Ambient groundwater quality determination</u></p>	<p><u>July 1, 2014 and every 3 years thereafter</u></p>

A. Description of Yucaipa Valley Water District Commitments for the Yucaipa Management Zone

1. Surface Water Monitoring Program (Table 5-9a, # 1)

A surface water monitoring program was developed, approved and implemented in response to the maximum benefit commitments initially incorporated in the Basin Plan in 2004 (Resolution No. R8-2004-0001). The Regional Board approved the Surface Water Monitoring Program in 2005 (Resolution No. R8-2005-0065). Subsequently, the need to revise the monitoring program was recognized and appropriate amendments were adopted in 2014 (Resolution No. R8-2014-0005). These include the requirement that by (**30 days from Regional Board approval of the BPA**), YVWD shall submit a revised surface water monitoring program to the Regional Board for approval. The monitoring program must be implemented upon Executive Officer approval.

It is expected that the monitoring program will be reviewed as it is implemented over time, and that further updates may be necessary. YVWD committed to review the surface water monitoring program (and the groundwater monitoring program, see #2, below) as part of the determination of ambient groundwater quality, which occurs every three years pursuant to Basin Plan requirements (see #6, below). Though considered unlikely, it is possible that more frequent review and revision of these monitoring programs may be necessary. Accordingly, the Basin Plan requires review of the surface water monitoring program in coordination with the ambient quality determination and, further, that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring is to be implemented upon Executive Officer approval.

An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by April 15th of each year.

2. Groundwater Monitoring Program (Table 5-9a, #2)

In response to the maximum benefit program requirements established in 2004 (Resolution No. R8-2004-0001), in 2005, YVWD submitted a proposed groundwater monitoring program. The Regional Board approved a groundwater monitoring program to determine ambient water quality in the Yucaipa Groundwater Management Zone (Resolution No. R8-2005-0065). The purpose of the groundwater monitoring program is to identify the effects of the implementation of the Yucaipa Groundwater Management Zone maximum benefit water quality objectives on water levels and water quality within the Yucaipa Groundwater Management Zone. The groundwater monitoring program has been implemented since 2005 and must continue to be implemented.

The existing groundwater monitoring implemented by YVWD to comply with the Maximum Benefit program authorized by the 2004 amendments to the salt management plan shall be continued into the future until a new monitoring plan is approved by the Executive Officer. Any new monitoring plan developed by YVWD shall preserve the geospatial distribution of groundwater wells and the sampling of those wells utilized in the existing Regional Board-approved maximum benefit monitoring program.

As noted above, the groundwater monitoring program will be reviewed as part of regular ambient groundwater quality determinations and may be revised. Once again, more frequent review and revision may be necessary as the monitoring program is implemented over time.

Accordingly, the Basin Plan requires that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report, including all raw data and summarizing the results of the approved groundwater monitoring program, shall be submitted to the Regional Board by April 15th of each year.

3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9a, #3)

YVWD anticipated that demineralization of groundwater or recycled water would be necessary in the future to protect the Yucaipa Groundwater Management Zone and has constructed desalting and associated brine disposal facilities. YVWD shall ensure that the planned demineralization system is operational by June 30, 2015. The Executive Officer may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9a.

4. Non-potable Water Supply Distribution System (Table 5-9a, # 4)

A key element of YVWD's water resources management plan is the construction of a non-potable supply system to serve a mix of recycled water, diluent from the Wochholz Regional Water Recycling Facility and un-treated imported water, treated backwash water from the Yucaipa Valley Regional Water Filtration Facility and/or storm water for irrigation uses and other direct non-potable reuse. The intent is to minimize the use of potable water for non-potable uses. For use in the Yucaipa Groundwater Management Zone, YVWD will produce a non-potable supply with a running 10-year average TDS concentration equal to or less than 370 mg/L and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the 10-year running average nitrate-nitrogen concentration shall comply with 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). To meet this "maximum benefit" objective, YVWD will blend the recycled water with other water sources or desalt the recycled water.

Compliance with the non-potable water supply TDS and/or nitrate-nitrogen objective shall be measured in the non-potable water system as a weighted 10-year average of all water sources added to that system and used within the Yucaipa Groundwater Management Zone.

As part of the Maximum Benefit Annual Report, YVWD shall report on the TDS and nitrogen quality and quantity of all sources of non-potable water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations utilized in the Yucaipa Groundwater Management Zone.

5. Recycled Water Recharge (Table 5-9a, # 5)

The use and recharge of recycled water within the Yucaipa Groundwater Management Zone are necessary to maximize the use of the water resources in the Yucaipa area. The demonstration of "maximum benefit" and the continued application of the "maximum benefit" objectives are contingent on the recharge of recycled water to the Yucaipa Groundwater Management Zone of a 10-year annual average (running average) TDS concentration of 370 mg/L and nitrate-nitrogen concentration of 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to

assure that the "maximum benefit" objective of 5 mg/L will be met). These concentrations may be achieved by desalting or other treatment of the recycled water, and/or by blending the recycled water with other sources, such as imported water, storm water and reverse osmosis permeate diluent.

Compliance with these concentrations shall be measured at the point of discharge(s) to the recharge facility as a weighted average concentration of the recycled water and other sources, if any, used for blending.

As part of the Maximum Benefit Annual Report, YVWD shall report on the TDS and nitrogen quality and quantity of all sources of recharged water and summarize the annual and 10-year running annual weighted TDS and nitrogen average concentrations recharged to the Yucaipa Groundwater Management Zone.

6. Antidegradation Salt Mitigation Plan (Table 5-9a, #6)

Within (**1 year of approval by OAL of the BPA**), YVWD shall submit a Salt Mitigation Plan to mitigate excess salt loading above the antidegradation water quality objectives. The Salt Mitigation Plan shall provide a conceptual framework for mitigation projects should the Regional Board make a finding that the lowering of water quality associated with the "maximum benefit" TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. The Salt Mitigation Plan must be implemented within 30 days of a Regional Board finding that maximum benefit is no longer being achieved.

7. Ambient Groundwater Quality Determination (Table 5-9a, # 6)

By July 1, 2014, and every three years thereafter, YVWD shall submit a determination of ambient TDS and nitrate-nitrogen quality in the Yucaipa Groundwater Management Zone. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater Management Zones within the region. [Ref. 1].

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the "maximum benefit" objectives, the Regional Board will revise the waste discharge and producer/user reclamation requirements permit for YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For surface water discharges that affect the Yucaipa Groundwater Management Zone discharge limits for TDS and TIN will be specified as an annual volume-weighted average not to exceed 370 mg/L TDS and 6.7 mg/L TIN. These limits are based on the "maximum benefit" objectives of the Yucaipa Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in YVWD's waste discharge requirements, as necessary and appropriate.

YVWD's waste discharge and producer/user reclamation requirements will require that the recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water, imported water or reverse osmosis diluent, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Yucaipa Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use purposes in the Yucaipa Groundwater Management Zone shall be limited to the amount that can be blended with other water sources, such as storm water, imported water or reverse osmosis diluent, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Yucaipa Groundwater Management Zone. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the Yucaipa Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

2. Review of Project Status

The Regional Board intends to review periodically YVWD's implementation of the maximum benefit program commitments described above and summarized in Table 5-9a. This review is intended to determine whether the commitments are met, and whether the application of the "maximum benefit" objectives continues to be justified. As indicated above, if, as a result of this review, the Regional Board finds that the YVWD commitments are not met, then the Regional Board may make the finding that the "maximum benefit" objectives are not consistent with the maintenance of water quality that is of maximum benefit to the people of the state, and that the more stringent "antidegradation" objectives for the Yucaipa Management Zone (320 mg/L for TDS and 4.2 mg/L for nitrate-nitrogen; see Chapter 4) must apply instead for regulatory purposes. In the event that the Regional Board makes these determinations, the Regional Board will require that the YVWD implement the Salt Mitigation Plan (see commitment # 6) and mitigate the adverse water quality effects, both on the immediate and downstream waters, which resulted from recycled water discharges based on the "maximum benefit" objectives.

2. San Timoteo Groundwater Management Zone – Yucaipa Valley Water District and the City of Beaumont

The application of the “maximum benefit” objectives established for the San Timoteo Groundwater Management Zone relies on the implementation by both the Yucaipa Valley Water District (YVWD) and the City of Beaumont of the specific program of projects and requirements shown in Table 5-9b [Ref. 10D]. Since the Salt Management Plan was amended in 2004 to incorporate “maximum benefit” commitments applicable to the San Timoteo Management Zone, both YVWD and the City of Beaumont have been engaged in implementing those commitments.

As discussed above, YVWD operates a wastewater treatment facility that discharges a portion of its treated effluent to San Timoteo Creek, Reach 3, which overlies and recharges the San Timoteo Groundwater Management Zone. Similarly, the City of Beaumont provides sewage collection and treatment services within its service area, and a portion of the treated wastewater discharged to Reach 3 of San Timoteo Creek, also recharges the San Timoteo Groundwater Management Zone. Surface water discharges by both YVWD and the City affect groundwater quality in the San Timoteo Groundwater Management Zone. Consistent with the 2004 “maximum benefit” commitments, both the District and the City must identify and implement an acceptable plan to address the adverse water quality impacts of their wastewater discharges.

Dilution of recycled water with water to meet the 400 mg/L TDS concentration and the 5 mg/L nitrate-N concentration recycled water recharge and direct use requirements will be limited to new recharge such as reverse osmosis permeate (diluent), imported water or new storm water. New storm water recharge is defined as storm water recharged in quantities greater than historical amounts (net increase) over the groundwater management zone since January 1, 2004. January 2004 corresponds to the month and year when the Regional Board authorized the original maximum benefit objectives and compliance commitments by adopting Resolution No. R8-2004-0001.

Table 5-9b

**San Timoteo Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agencies – Yucaipa Valley Water District and the City of Beaumont

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>1. Surface Water Monitoring Program</u></p> <p><u>a. Submit Draft Revised Monitoring Program to Regional Board</u></p> <p><u>b. Implement Revised Monitoring Program</u></p> <p><u>c. Submit Draft Revised Monitoring Program(s) (subsequent to that required in "a", above) to Regional Board</u></p> <p><u>d. Implement Revised Monitoring Program(s)</u></p> <p><u>e. Annual data report submittal</u></p>	<p><u>a. (**30 days from Regional Board approval of BPA)</u></p> <p><u>b. Upon Executive Officer approval</u></p> <p><u>c. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</u></p> <p><u>d. Upon Executive Officer approval</u></p> <p><u>e. April 15th</u></p>
<p><u>2. Groundwater Monitoring Program</u></p> <p><u>a. Submit Draft Revised Monitoring Program(s)</u></p> <p><u>b. Implement revised monitoring plan(s)</u></p> <p><u>c. Annual data report submittal</u></p>	<p><u>a. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</u></p> <p><u>b. Upon Executive Officer approval</u></p> <p><u>c. April 15th</u></p>
<p><u>3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</u></p> <p><u>Complete construction of Desalter and Brine Disposal Facilities</u></p>	<p><u>June 30, 2015 (or as provided by the Executive Officer - see text below)</u></p>

Table 5-9b

San Timoteo Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agencies – Yucaipa Valley Water District and the City of Beaumont

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>4. City of Beaumont, Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</u></p> <p>a. <u>Submit detailed plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to operational as soon as possible but no later than 5 years from date of Executive Officer approval of plan/schedule or as provided by the Executive Officer (see text below).</u></p> <p>b. <u>Implement the plan and schedule</u></p>	<p>a. <u>January 30, 2015</u></p> <p>b. <u>Upon Executive Officer approval</u></p>
<p><u>5. YVWD, City of Beaumont Non-potable water supply</u></p> <p><u>Implement non-potable water supply system to serve water for irrigation purposes and direct non-potable reuse. The non-potable supply used in the San Timoteo Groundwater Management Zone shall comply with a 10-year running average TDS concentration of 400 mg/L or less, and in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the nitrate-nitrogen shall be less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</u></p>	<p><u>December 31, 2015</u></p>
<p><u>6. Recycled water recharge/habitat maintenance discharge</u></p> <p><u>The recharge of recycled water in the San Timoteo Groundwater Management Zone or discharge to San Timoteo Creek to maintain the riparian habitat shall be limited to the amount that can be blended with other recharge sources or reverse osmosis diluent to achieve a 10-year running average equal to or less than the 400 mg/L "maximum benefit" TDS objective and less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</u></p> <p>a. <u>Submit for Executive Officer approval, a proposed methodology for computing baseline and new storm water recharge.</u></p> <p><u>The methodology will be posted for public comment for 30 days. If there are significant comments received, the Executive Officer will present the report to the Regional Board for its consideration at a regularly scheduled meeting.</u></p> <p>b. <u>Submit baseline report of amount, locations, and TDS and</u></p>	<p><u>Compliance must be achieved by end of 10th year after initiation of recycled water use/recharge operations.</u></p> <p>a. <u>6 months prior to initiation of construction of anybasin/other facility to support enhanced storm water/imported water recharge.</u></p> <p>b. <u>1 year from Executive Officer approval of methodology.</u></p>

Table 5-9bSan Timoteo Groundwater Management Zone
Maximum Benefit CommitmentsResponsible Agencies – Yucaipa Valley Water District and the City of Beaumont

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>nitrogen quality of "new" storm water/imported water recharge per the approved methodology (#6a).</u></p> <p>c. <u>Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations. For storm water recharge used for blending, submit documentation that the recharge is the result of YVWD and/or City of Beaumont enhanced recharge facilities/programs.</u></p>	<p>c. <u>Annually, by April 15th, after construction of facilities/implementation of programs to support enhanced recharge.</u></p>
<p><u>7. Improve quality of surface water discharges to the San Timoteo Groundwater Management Zone</u></p> <p>a. <u>Submit plan and schedule to comply with underlying San Timoteo Groundwater Management Zone Maximum Benefit TDS and nitrate-nitrogen water quality objectives</u></p> <p>b. <u>Implement upon approval</u></p>	<p>a. <u>(*30 days from Regional Board approval of BPA*)</u></p> <p>b. <u>Upon Executive Officer approval</u></p>
<p><u>8. Antidegradation Objectives Salt Mitigation Plan</u></p> <p>a. <u>Submit a proposed Salt Mitigation Plan and Implementation Schedule</u></p> <p>b. <u>Implement Salt Mitigation Plan</u></p>	<p>a. <u>Within (**1 year from OAL approval of BPA)</u></p> <p>b. <u>Within 30 days of Regional Board finding that maximum benefit no longer being achieved</u></p>
<p><u>9. Ambient groundwater quality determination</u></p>	<p><u>July 1, 2014 and every 3 years thereafter</u></p>

A. Description of Yucaipa Valley Water District (YVWD), City of Beaumont Commitments for the San Timoteo Management Zone1. Surface Water Monitoring Program (Table 5-9b, # 1)

A surface water monitoring program was developed, approved and implemented in response to the maximum benefit commitments initially incorporated in the Basin Plan in 2004 (Resolution No. R8-2004-0001). The Regional Board approved the Surface Water Monitoring Program in 2005 (Resolutions No. R8-2005-0065 and R8-2005-0066). Subsequently, the need to revise the monitoring program was recognized and appropriate amendments were adopted in 2014 (Resolution No. R8-2014-0005). These include the requirement that by (**30 days from

Regional Board approval of the BPA**), YVWD and the City of Beaumont shall submit a revised surface water monitoring program to the Regional Board for approval. The monitoring program must be implemented upon Executive Officer approval.

It is expected that the monitoring program will be reviewed as it is implemented over time, and that further updates may be necessary. YVWD and the City of Beaumont committed to review the surface water monitoring program (and the groundwater monitoring program, see #2, below) as part of the determination of ambient groundwater quality, which occurs every three years pursuant to Basin Plan requirements (see #6, below). Though considered unlikely, it is possible that more frequent review and revision of these monitoring programs may be necessary. Accordingly, the Basin Plan requires review of the surface water monitoring program in coordination with the ambient quality determination and, further, that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring is to be implemented upon Executive Officer approval.

An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by April 15th of each year.

2. Groundwater Monitoring Program (Table 5-9a, #2)

In response to the maximum benefit program requirements established in 2004 (Resolution No. R8- 2004-0001), in 2005, YVWD and the City of Beaumont submitted a proposed groundwater monitoring program. The Regional Board approved a groundwater monitoring program to determine ambient water quality in the Yucaipa and San Timoteo Groundwater Management Zones (Resolutions No. R8-2005-0065 and R8-2005-0066). The purpose of the groundwater monitoring program is to identify the effects of the implementation of the San Timoteo Groundwater Management Zone "maximum benefit" water quality objectives on water levels and water quality within the San Timoteo Groundwater Management Zone. The groundwater monitoring program has been implemented since 2005. YVWD and the City of Beaumont have since installed additional wells as part of revised groundwater monitoring workplans to ensure adequate data are collected for ambient quality determination. The workplans were approved in 2009 (Resolution No. R8-2009-0034 for YVWD and R8-2009-0035 for the City of Beaumont).

The existing groundwater monitoring implemented by the City of Beaumont and YVWD to comply with the Maximum Benefit program authorized by the 2004 amendments to the salt management plan shall be continued into the future on a cooperative basis until a new monitoring plan is approved by the Executive Officer. Any new monitoring plan developed by the City of Beaumont and/or YVWD shall preserve the geospatial distribution of groundwater wells and the sampling of those wells utilized in the existing Regional Board-approved maximum benefit monitoring program.

As noted above, the groundwater monitoring program will be reviewed as part of regular ambient groundwater quality determinations and may be revised. Once again, more frequent review and revision may be necessary as the monitoring program is implemented over time. Accordingly, the Basin Plan requires that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report, including all raw data and summarizing the results of the approved

groundwater monitoring program, shall be submitted to the Regional Board by April 15th of each year.

3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9b, #3)

YVWD anticipated that demineralization of groundwater or recycled water would be necessary in the future to protect the San Timoteo Groundwater Management Zone and has planned and designed desalting and associated brine disposal facilities. YVWD shall ensure that the planned desalter system is operational by June 30, 2015. The Executive Officer may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9b.

4. City of Beaumont Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9b, #4)

The City of Beaumont shall construct and operate desalting facilities and brine disposal facilities to improve recycled water quality and/or other sources of non-potable supply. A detailed desalter/brine line plan and schedule shall be submitted by January 30, 2015. The schedule shall assure that these facilities are in place within 5 years of Executive Officer approval. The Executive Officer may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9b.

5. YVWD/City of Beaumont Non-potable Water Supply Distribution System (Table 5-9b, # 5)

Both YVWD and the City of Beaumont are planning for the construction of a non-potable supply system to serve a mix of recycled water, un-treated imported water, reverse osmosis permeate (diluent) and/or storm water for irrigation uses and direct non-potable reuse. The intent is to minimize the use of potable water for non-potable uses. Both YVWD and/or the City of Beaumont will produce a non-potable supply for use within the San Timoteo Groundwater Management Zone with a running ten-year average TDS concentration of 400 mg/L, and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the 10-year running average nitrate-nitrogen concentration shall comply with 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). To meet this "maximum benefit" objective, YVWD/City of Beaumont will blend the recycled water with other water sources or desalt the recycled water.

Compliance with the non-potable water supply TDS and/or nitrate-nitrogen objective shall be measured in the non-potable water system as a weighted 10-year average of all water sources added to that system and used within the San Timoteo Groundwater Management Zone.

As part of the Maximum Benefit Annual Report, YVWD and the City of Beaumont shall report on the TDS and nitrogen quality and quantity of all sources of non-potable water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations utilized in the San Timoteo Groundwater Management Zone.

6. Recycled Water Recharge/ Riparian Habitat Maintenance Discharge (Table 5-9b, #6)

The use and recharge of recycled water within the San Timoteo Groundwater Management Zone or the discharge of recycled water to San Timoteo Creek to maintain the riparian habitat

and the demonstration of "maximum benefit" are contingent on the recharge/discharge of recycled water as a 10-year annual average (running average) TDS concentration of 400 mg/L and nitrate-nitrogen concentration of 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). These concentrations may be achieved by desalting or other treatment of the recycled water, and/or by blending the recycled water with other sources, such as imported water, reverse osmosis permeate (diluent) and/or storm water.

Compliance with these concentrations shall be measured at the point of discharge(s) to the recharge facility or at the end of pipe for a recycled water discharge as a weighted average concentration of the recycled water and other sources, if any, used for blending.

As part of the Maximum Benefit Annual Report, YVWD and/or the City of Beaumont shall report on the TDS and nitrogen quality and quantity of all sources of recharged water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations recharged to the San Timoteo Groundwater Management Zone.

7. Improve Surface Water Discharge Quality to the San Timoteo Groundwater Management Zone (Table 5-9b, #7)

YVWD and the City of Beaumont wastewater discharges to the unlined reach of San Timoteo Creek impact the quality of the San Timoteo Groundwater Management Zone. In order to protect underlying groundwater Management Zone quality, by (*30 days from Regional Board approval of this Basin Plan amendment), the City of Beaumont and YVWD shall submit a proposed plan and schedule to improve the quality of wastewater discharged to the portion of San Timoteo Creek overlying the San Timoteo Groundwater Management Zone in order to assure compliance with the Groundwater Management Zone "maximum benefit" objectives. A contingency plan and schedule to meet the "antidegradation" objectives for the Groundwater Management Zone shall also be identified and implemented upon a finding by the Regional Board that "maximum benefit" is not demonstrated and that the "antidegradation" objectives apply. The plan must be implemented upon Executive Officer approval.

8. Antidegradation Objectives Salt Mitigation Plan (Table 5-9b, #8)

Within (**1 year of approval by OAL of the BPA**), YVWD and the City of Beaumont shall submit a Salt Mitigation Plan to mitigate excess salt loading above the antidegradation water quality objectives. The Salt Mitigation Plan shall provide a conceptual framework for mitigation projects should the Regional Board make a finding that the lowering of water quality associated with the "maximum benefit" TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. The Salt Mitigation Plan must be implemented within 30 days of a Regional Board finding that maximum benefit is no longer being achieved.

9. Ambient Groundwater Quality Determination (Table 5-9b, # 8)

By July 1, 2014, and every three years thereafter, YVWD and the City of Beaumont shall submit a determination of ambient TDS and nitrate-nitrogen quality in the San Timoteo Groundwater Management Zone. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater Management Zones within the region. [Ref. 1].

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the “maximum benefit” objectives, the Regional Board will revise the waste discharge requirements and producer/user reclamation requirements for the YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For surface water discharges that affect the San Timoteo Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 400 mg/L TDS and 6.7 mg/L TIN. These limits are based on the “maximum benefit” objectives of the San Timoteo Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the YVWD’s waste discharge requirements, as necessary and appropriate.

YVWD’s waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water, reverse osmosis permeate (diluent) or imported water, to achieve 10-year running average concentrations equal to or less than the “maximum benefit” TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water, reverse osmosis permeate (diluent), or imported water, to achieve 10-year running average concentrations equal to or less than the “maximum benefit” TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified for recycled water recharge and re-use in the San Timoteo Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

2. Revision to the City of Beaumont NPDES Permit

To implement the “maximum benefit” objectives, the Regional Board will revise the waste discharge requirements for the City of Beaumont’s wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For discharges to the San Timoteo Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average not to exceed 400 mg/L TDS and 6.7 mg/L TIN to be determined at the end of pipe. These limits are based on the “maximum benefit” objectives of the San Timoteo Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative limits are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the City’s waste discharge requirements, as necessary and appropriate.

The City of Beaumont's waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone. The use of recycled water for irrigation and other direct reuse shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the San Timoteo Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

3. Review of Project Status

The Regional Board intends to review periodically YVWD's and the City of Beaumont's implementation of the maximum benefit program commitments described above and summarized in Table 5-9b. This review is intended to determine whether the commitments are met, and whether the application of the "maximum benefit" objectives continues to be justified. As indicated above, if, as a result of this review, the Regional Board finds that the YVWD and/or the City of Beaumont commitments are not met, then the Regional Board may make the finding that the "maximum benefit" objectives are not consistent with the maintenance of water quality that is of maximum benefit to the people of the state, and that the more stringent "antidegradation" objectives for the San Timoteo Groundwater Management Zone (300 mg/L for TDS and 2.7 mg/L for nitrate-nitrogen; see Chapter 4) must apply instead for regulatory purposes. In the event that the Regional Board makes these determinations, the Regional Board will require that YVWD and/or the City of Beaumont, either individually or collectively, implement the Salt Mitigation Plan (see commitment # 8) and mitigate the adverse water quality effects, both on the immediate and downstream waters, which resulted from recycled water discharges based on the "maximum benefit" objectives.

3. Beaumont Groundwater Management Zone – Yucaipa Valley Water District, the City of Beaumont, the City of Banning, Beaumont Cherry Valley Water District, San Gorgonio Pass Agency

The application of the “maximum benefit” objectives established for the Beaumont Groundwater Management Zone is contingent on the implementation of commitments by the YVWD, the City of Beaumont, the City of Banning, Beaumont Cherry Valley Water District (BCVWD), and the San Gorgonio Pass Water Agency (Pass Agency) to implement a specific water and wastewater resources management program identified in the Regional Strategy [Ref. 10D]. This program is part of a coordinated effort by these agencies to develop and implement projects that will assure reliable water supplies to meet rapidly increasing demands in this area. The Regional Strategy entails enhanced recharge of native and recycled water, maximizing the direct use of recycled water, optimizing the direct use of imported water, recharge and conjunctive use. The maximum benefit commitments identified in the Regional Strategy for the Beaumont Groundwater Management Zone will be implemented by the City of Beaumont, BCVWD, YVWD, the Pass Agency and the City of Banning. The Regional Strategy forms the basis for the Beaumont Groundwater Management Zone maximum benefit program discussed below.

Wastewater collection and treatment services are provided by the City of Beaumont, the City of Banning, as well as YVWD. The City of Beaumont discharges tertiary treated wastewater to Cooper’s Creek, a tributary of San Timoteo Creek, Reach 3. This unlined reach of the Creek overlies and recharges both the Beaumont and San Timoteo Groundwater Management Zones. The City of Banning does not currently utilize recycled water in the Beaumont Management Zone. The City of Banning has selected to participate in the Maximum Benefit program and commitments if it becomes necessary to use recycled water.

Table 5-9c identifies the projects and requirements that must be implemented by the cities of Beaumont and Banning, YVWD, BCVWD, and the Pass Agency to demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained with the applications of the “maximum benefit” objectives. Table 5-9c also specifies an implementation schedule. The Regional Board will revise waste discharge requirements for the City of Beaumont and YVWD, and will work with the Colorado River Water Board to ensure discharges from the City of Banning comply with the maximum benefit requirements. The Regional Board will also consider issuance of waste discharge requirements for BCVWD and take other actions as necessary to require that these commitments be met by the responsible parties.

Dilution of recycled water with water to meet the 330 mg/L TDS concentration and the 5 mg/L nitrate-N concentration recycled water recharge and direct use requirements will be limited to new water recharge such as reverse osmosis permeate (diluent), imported water or new storm water. New storm water recharge is defined as storm water recharged in quantities greater than historical amounts (net increase) over the groundwater management zone since January 1, 2004. January 2004 corresponds to the month and year when the Regional Board authorized the original maximum benefit objectives and compliance commitments by adopting Resolution No. R8-2004-0001.

Table 5-9c
Beaumont Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agencies – Yucaipa Valley Water District, City of Beaumont, City of Banning, San Geronio Pass Water Agency, Beaumont Cherry Valley Water District

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>1. Surface Water Monitoring Program</u></p> <p><u>a. Submit Draft Revised Monitoring Program to Regional Board</u></p> <p><u>b. Implement Revised Monitoring Program</u></p> <p><u>c. Submit Draft Revised Monitoring Program(s) (subsequent to that required in "a", above) to Regional Board</u></p> <p><u>d. Implement Revised Monitoring Program (s)</u></p> <p><u>e. Annual data report submittal</u></p>	<p><u>a. (**30 days from Regional Board approval of BPA)</u></p> <p><u>b. Upon Executive Officer approval</u></p> <p><u>c. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</u></p> <p><u>d. Upon Executive Officer approval</u></p> <p><u>e. April 15th</u></p>
<p><u>2. Groundwater Monitoring Program</u></p> <p><u>a. Submit Draft Revised Monitoring Program(s)</u></p> <p><u>b. Implement revised monitoring plan(s)</u></p> <p><u>c. Annual data report submittal</u></p>	<p><u>a. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</u></p> <p><u>b. Upon Executive Officer approval</u></p> <p><u>c. April 15th</u></p>
<p><u>3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</u></p> <p><u>Complete construction of Desalter and Brine Disposal Facilities</u></p>	<p><u>June 30, 2015 (or as provided by the Executive Officer - see text below)</u></p>
<p><u>4. City of Beaumont, Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</u></p> <p><u>a. Submit detailed plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to operational as soon as possible but no later than 5 years from date of Executive Officer approval of plan/schedule or as</u></p>	<p><u>a. January 30, 2015</u></p>

Table 5-9c
Beaumont Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agencies – Yucaipa Valley Water District, City of Beaumont, City of Banning, San Geronio Pass Water Agency, Beaumont Cherry Valley Water District

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>provided by the Executive Officer (see text below).</u></p> <p><u>b. Implement the plan and schedule</u></p>	<p><u>b. Upon Executive Officer approval</u></p>
<p><u>5. City of Banning, Wastewater and/or Groundwater Salt Mitigation Plan</u></p> <p><u>a. Submit detailed plan and schedule for achieving compliance with the maximum benefit objectives.</u></p> <p><u>b. Implement the plan and schedule</u></p>	<p><u>a. 6 months prior to initiation of the use recycled water application or recharge</u></p> <p><u>b. Upon Executive Officer approval</u></p>
<p><u>6. Non-potable recycled water supply</u></p> <p><u>YVWD, the City of Beaumont, the City of Banning (at the onset of recycled water use in the Beaumont Basin), BCVWD and the Pass Agency shall implement non-potable water supply systems (utilizing recycled water) to serve water for irrigation purposes and direct non-potable reuse. The non-potable supplies used in the Beaumont Groundwater Management Zone shall comply with a 10-year running average TDS concentration of 330 mg/L or less and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the nitrate-nitrogen shall be less than or equal to the 5 mg/L nitrate-nitrogen “maximum benefit” objective (taking the nitrogen loss coefficient into consideration).</u></p>	<p><u>December 31, 2015</u></p>
<p><u>7. Recycled water recharge</u></p> <p><u>The recharge of recycled water in the Beaumont Groundwater Management Zone shall be limited to the amount that can be blended with other recharge sources or reverse osmosis diluent to achieve a 10-year running average equal to or less than the 330 mg/L “maximum benefit” TDS objective and less than or equal to the 5 mg/L nitrate-nitrogen “maximum benefit” objective (taking the nitrogen loss coefficient into consideration).</u></p> <p><u>Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations.</u></p> <p><u>For any discharger proposing to utilize “new” storm water as a blending source, the following steps must be followed:</u></p> <p><u>a. Submit for Executive Officer approval, a report that identifies the methodology used in calculating baseline (2004) and “new” storm water (post 2004) recharge. The report shall identify the amount, locations, TDS and nitrogen quality of storm water recharge and any imported water recharge. Further, the report shall identify the manner in which the</u></p>	<p><u>Compliance must be achieved by end of 10th year after initiation of recycled water use/recharge operations.</u></p> <p><u>Annually, by April 15th, after initiation construction of facilities/implementation of programs to support enhanced recharge.</u></p> <p><u>a. 6 months prior to initiation of construction of any basins/other facilities to support enhanced storm water/imported water recharge</u></p>

Table 5-9c
Beaumont Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agencies – Yucaipa Valley Water District, City of Beaumont, City of Banning, San Gorgonio Pass Water Agency, Beaumont Cherry Valley Water District

<u>Description of Commitment</u>	<u>Compliance Date – as soon as possible, but no later than</u>
<p><u>enhanced storm water/imported water recharge facility will assure, individually or with other facilities, compliance with the 330 mg/L TDS and 5 mg/L nitrate-nitrogen 10-year running average “maximum benefit” objective.</u></p> <p><u>The report will be posted for public comment for 30 days. If there are significant adverse comments received on this report, the Executive Officer will present the report to the Regional Board for its consideration at a regularly scheduled meeting.</u></p> <p><u>b. Submit 5-year plan for implementation of additional storm water recharge facilities to ensure compliance with the 330 mg/L TDS and the 5 mg/L 10-year running average “maximum benefit” objective.</u></p>	<p><u>b. Submit as part of each Report of Waste Discharge (ROWD)</u></p>
<p><u>8. Antidegradation Salt Mitigation Plan</u></p> <p><u>a. Submit a proposed Salt Mitigation Plan and Implementation Schedule</u></p> <p><u>b. Implement Salt Mitigation Plan</u></p>	<p><u>a. Within (**1 year from OAL approval of BPA)</u></p> <p><u>b. Within 30 days of Regional Board finding that maximum benefit no longer being achieved</u></p>
<p><u>9. Ambient groundwater quality determination</u></p>	<p><u>July 1, 2014 and every 3 years thereafter</u></p>

A. Description of Yucaipa Valley Water District (YVWD), City of Beaumont, Beaumont Cherry Valley Water District (BCVWD), City of Banning, San Gorgonio Pass Water Agency (Pass Agency) Commitments for the Beaumont Management Zone

1. Surface Water Monitoring Program (Table 5-9c, # 1)

A surface water monitoring program was developed, approved and implemented in response to the maximum benefit commitments initially incorporated in the Basin Plan in 2004 (Resolution No. R8-2004-0001). The Regional Board approved the Surface Water Monitoring Program in 2005 (Resolution No. R8-2005-0066). Subsequently, the need to revise the monitoring program was recognized and appropriate amendments were adopted in 2014 (Resolution No. R8-2014-0005). These include the requirement that by (**30 days from Regional Board approval of the BPA**), YVWD BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall submit a revised surface water monitoring program to the Regional Board for approval. The monitoring program must be implemented upon Executive Officer approval.

It is expected that the monitoring program will be reviewed as it is implemented over time, and that further updates may be necessary. YVWD, the City of Beaumont, the City of Banning, the Pass Agency and BCVWD committed to review the surface water monitoring program (and the groundwater monitoring program, see #2, below) as part of the determination of ambient groundwater quality, which occurs every three years pursuant to Basin Plan requirements (see #6, below). Though considered unlikely, it is possible that more frequent review and revision of these monitoring programs may be necessary. Accordingly, the Basin Plan requires review of the surface water monitoring program in coordination with the ambient quality determination and, further, that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by April 15th of each year.

2. Groundwater Monitoring Program (Table 5-9c, #2)

In response to the maximum benefit program requirements established in 2004 (Resolution No. R8- 2004-0001), a proposed groundwater monitoring program was submitted in 2005. The Regional Board approved a groundwater monitoring program to determine ambient water quality in the Beaumont Groundwater Management Zone (Resolution No. R8-2005-0066). The purpose of the Groundwater Monitoring Program is to identify the effects of the implementation of the Beaumont Groundwater Management Zone maximum benefit water quality objectives on water levels and water quality within the Beaumont Groundwater Management Zone. The groundwater monitoring program has been implemented since 2005 and YVWD, the City of Beaumont, the City of Banning, the Pass Agency and BCVWD must continue to implement that program.

The existing groundwater monitoring implemented by the City of Beaumont and YVWD to comply with the Maximum Benefit program authorized by the 2004 amendments to the salt management plan shall be continued into the future on a cooperative basis by all of the maximum benefit partners until a new monitoring plan is approved by the Executive Officer. Any new monitoring plan developed shall preserve the geospatial distribution of groundwater wells and the sampling of those wells utilized in the existing Regional Board-approved maximum benefit monitoring program.

As noted above, the groundwater monitoring program will be reviewed as part of regular ambient groundwater quality determinations and may be revised. Once again, more frequent review and revision may be necessary as the monitoring program is implemented over time. Accordingly, the Basin Plan requires that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report, including all raw data and summarizing the results of the approved groundwater monitoring program, shall be submitted to the Regional Board by April 15th of each year.

3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9c, #3)

YVWD anticipated that demineralization of groundwater or recycled water would be necessary in the future to protect the Beaumont Groundwater Management Zone and has constructed desalting and associated brine disposal facilities. YVWD shall ensure that the planned desalter system is operational by June 30, 2015. The Regional Board may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9a.

4. City of Beaumont Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9c, #4)

The City of Beaumont shall construct and operate desalting facilities and brine disposal facilities to improve recycled water quality and/or other sources of non-potable supply. A detailed desalter/brine line plan and schedule shall be submitted by January 30, 2015. The schedule shall assure that these facilities are in place within 5 years of Executive Officer approval. The Executive Officer may extend the compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9c.

5. City of Banning Salt Mitigation Plan (Table 5-9c, #5)

The City of Banning shall submit a plan and schedule to improve recycled water quality and/or other sources of non-potable supply. The plan and schedule shall be submitted 6 months prior to the initiation of recycled water application or recharge and must be implemented upon Executive Officer approval.

6. Non-potable Recycled Water Supply Distribution System (Table 5-9c, # 6)

A key element of resources management plan in areas overlying the Beaumont Groundwater Management Zone is the construction of a non-potable supply system to serve a mix of recycled water and un-treated imported water and/or storm water for irrigation uses and direct non-potable reuse. The intent is to minimize the use of potable water for non-potable uses. YVWD, the City of Beaumont and the City of Banning will produce a non-potable supply with a running ten-year average TDS concentration for the Beaumont Groundwater Management Zone of 330 mg/L and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the 10-year running average nitrate-nitrogen concentration shall comply with 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). To meet this "maximum benefit" objective, YVWD, the City of Beaumont and the City of Banning, BCVWD and San Geronio Pass Agency will blend the recycled water with other water sources or desalt the recycled water as needed.

Compliance with the non-potable water supply TDS and nitrate-nitrogen objective shall be measured in the non-potable water system as a weighted 10-year running average of all water sources added to that system and used within the Beaumont Groundwater Management Zone.

As part of the Maximum Benefit Annual Report, YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall report on the TDS and nitrogen quality and quantity of all sources of non-potable water and summarize the annual and 10-year annual weighted TDS

and nitrogen average concentrations utilized in the Beaumont Groundwater Management Zone.

7. Recycled Water Recharge (Table 5-9c, # 7)

The use and recharge of recycled water within the Beaumont Groundwater Management Zone are necessary to maximize the use of the water resources of the Beaumont area. The demonstration of "maximum benefit" and the continued application of the "maximum benefit" objectives are contingent on the recharge of recycled water to the Beaumont Groundwater Management Zone of a 10-year annual average (running average) TDS concentration of 330 mg/L and nitrate-nitrogen concentration of 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). These concentrations may be achieved by desalting or other treatment of the recycled water, and/or by blending the recycled water with other sources, such as imported water and/or storm water.

Compliance with these concentrations shall be measured at the point of discharge(s) to the recharge facility as a weighted average concentration of the recycled water and other sources, if any, used for blending.

As part of the Maximum Benefit Annual Report, YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall report on the TDS and nitrogen quality and quantity of all sources of recharged water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations recharged to the Beaumont Groundwater Management Zone.

8. Antidegradation Objectives Salt Mitigation Plan (Table 5-9c, #8)

Within (**1 year of approval by OAL of the BPA**), YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall submit a Salt Mitigation Plan to mitigate excess salt loading above the antidegradation water quality objectives. The Salt Mitigation Plan shall provide a conceptual framework for mitigation projects should the Regional Board make a finding that the lowering of water quality associated with the "maximum benefit" TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. The Salt Mitigation Plan must be implemented within 30 days of a Regional Board finding that maximum benefit is no longer being achieved.

9. Ambient Groundwater Quality Determination (Table 5-9c, # 8)

By July 1, 2014, and every three years thereafter, YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall submit a determination of ambient TDS and nitrate-nitrogen quality in the Beaumont Groundwater Management Zone. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater Management Zones within the region. [Ref. 1].

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the “maximum benefit” objectives, the Regional Board will revise the waste discharge requirements and producer/user reclamation requirements for the YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For any surface water discharges that affect the Beaumont Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 330 mg/L TDS and 6.7 mg/L TIN. These limits are based on the “maximum benefit” objectives of the Beaumont Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the YVWD’s waste discharge requirements, as necessary and appropriate.

YVWD’s waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as new storm water or imported water, to achieve 10-year running average concentrations equal to or less than the “maximum benefit” TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the “maximum benefit” TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified for recycled water recharge and re-use in the Beaumont Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

2. Revision to the City of Beaumont NPDES Permit

To implement the “maximum benefit” objectives, the Regional Board will revise the waste discharge requirements and producer/user reclamation requirements for the City of Beaumont wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For surface water discharges that affect the Beaumont Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 330 mg/L TDS and 6.7 mg/L TIN. These limits are based on the “maximum benefit” objectives of the Beaumont Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the City of Beaumont’s waste discharge requirements, as necessary and appropriate.

The City of Beaumont's waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the Beaumont Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

3. Revision of City of Banning NPDES Permit

Discharges from the City of Banning are currently regulated by the Colorado River Water Board. To implement the "maximum benefit" objectives, the Santa Ana Water Board will work with the Colorado River Water Board to revise the NPDES permit for the City of Banning's wastewater discharge to reflect the commitments described below, as appropriate.

For any surface water discharges that affect the Beaumont Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 330 mg/L TDS and 6.7 mg/L TIN. These limits are based on the "maximum benefit" objectives of the Beaumont Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the City of Banning's waste discharge requirements, as necessary and appropriate.

The City of Banning waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the Beaumont Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

4. Review of Project Status

The Regional Board intends to review periodically YVWD, the City of Beaumont, the City of

Banning, BCVWD and the Pass Agency's implementation of the maximum benefit program commitments described above and summarized in Table 5-9c. This review is intended to determine whether the commitments are met, and whether the application of the "maximum benefit" objectives continues to be justified. As indicated above, if, as a result of this review, the Regional Board finds that the commitments are not met, then the Regional Board may make the finding that the "maximum benefit" objectives are not consistent with the maintenance of water quality that is of maximum benefit to the people of the state, and that the more stringent "antidegradation" objectives for the Beaumont Groundwater Management Zone (230 mg/L for TDS and 1.5 mg/L for nitrate-nitrogen; see Chapter 4) must apply instead for regulatory purposes. In the event that the Regional Board makes these determinations, the Regional Board will require that YVWD, the City of Beaumont, the City of Banning, BCVWD and the Pass Agency, either individually or collectively, implement the Salt Mitigation Plan (see commitment # 6) and mitigate the adverse water quality effects, both on the immediate and downstream waters, which resulted from recycled water discharges based on the "maximum benefit" objectives.

Page 5-90ff

Insert the following language

Minimum Lot Size Requirements and Exemption Criteria for New Developments Using On-Site Septic Tank-Subsurface Leaching/Percolation Systems

[These Requirements shall sunset no later than May 13, 2018. If a Local Agency Management Plan (LAMP) developed pursuant to the State Water Resources Control Board's Onsite Wastewater Treatment System Policy is approved prior to that date, the LAMP shall supersede these requirements as of the date of approval.]

Page 5-204ff

Update the Chapter 5 references as follows:

REFERENCES:

1. Wildermuth Environmental, Inc., TIN/TDS – Phase 2A of the Santa Ana Watershed, Development of Groundwater Management Zones, Estimation of Historic and Current TDS and Nitrogen Concentrations in Groundwater, Final Technical Memorandum,” July 2000.
2. Wildermuth Environmental, Inc., “Santa Ana Watershed Data Collection and Management Program, Final Technical Memorandum,” October 2001.
3. Wildermuth Environmental, Inc., “TIN/TDS Study - Phase 2B of the Santa Ana Watershed, Wasteload Allocation Investigation Memorandum,” October 2002.
4. Wildermuth Environmental, Inc., Memo to TIN/TDS Task Force, “Transmittal of Final Tables, Figures and CD in Support of Basin Plan Amendments – TIN/TDS Study,” October 2002.
5. Wildermuth Environmental, Inc., “June 2003 Addendum TIN/TDS Study – Phase 2B of the Santa Ana Watershed Wasteload Allocation Investigation,” July 2003
6. California Regional Water Quality Control Board – Santa Ana Region, “Guidelines for Sewage Disposal from Land Developments,” January 1979.
7. State Water Resources Control Board, “Order No. 73-4, Rancho Caballero Decision,” April 1972.
8. Department of Water Resources, “Mineral Increases from Municipal Use of Water in the Santa Ana River Basin,” Memorandum Report, June 1982.
9. City of Riverside, Memo from Rod Cruze to TIN/TDS Task Force,” Nitrogen Loss Assumptions for Reach 3 of the Santa Ana River,” April 2002.
- 10A. ~~California Regional Water Quality Control Board – Santa Ana Region, Staff Report, “Santa Ana River at Prado Dam, Results of Annual Water Quality Sampling for 2002”, April 2003. — Santa Ana Watershed Project Authority,~~ (leave blank)
- 10B. Chino Basin Watermaster, Letter to Gerard Thibeault, “Chino Basin Watermaster Proposal for New Total Dissolved Solids (TDS) and Nitrogen Water Quality Objectives for the Chino and Cucamonga Basins Based on Maximum Beneficial Use,” December 2002.
- 10C. Chino Basin Watermaster, “Chino Basin Optimum Basin Management Plan,” 1999.
- 10D. ~~Yucaipa Valley Water District, Letter to Gerard Thibeault, “Yucaipa Valley Water District Proposal for New Total Dissolved Solids (TDS) and Total Inorganic Nitrogen Water Quality Objectives for the San Timoteo and Yucaipa Management Zones Based on Maximum Beneficial Use,” January 2002.~~ City of Banning, Beaumont Cherry Valley Water District, San Gorgonio Pass Water Agency, Yucaipa Valley Water District, (2011), Proposed Regional Implementation of Maximum Benefit Commitments for the Beaumont Management Zone. Preliminary Draft

10E. San Timoteo Watershed Management Agency, Letter to Gerard Thibeault, "Revised San Timoteo Watershed Management Agency Proposal for New Total Dissolved Solids (TDS) and Total Inorganic Nitrogen Water Quality Objectives for the Beaumont, San Timoteo and Yucaipa Management Zones Based on Maximum Beneficial Use," December 2002 (Revised November 11, 2003).

10F. Daniel B. Stephens & Associates. (2007), Quantification of Nitrogen Removal Under Recycled Water Ponds, Prepared for Eastern Municipal Water District.

ATTACHMENT TO RESOLUTION NO. R8-2014-0005 – “Clean Version”

Chapter 2, Plans and Policies

Page 2-4, Insert under “State Board Policies”:

- New and/or revised Statewide Plans and Policies are posted on the State Water Resources Control Board’s website at the following link:

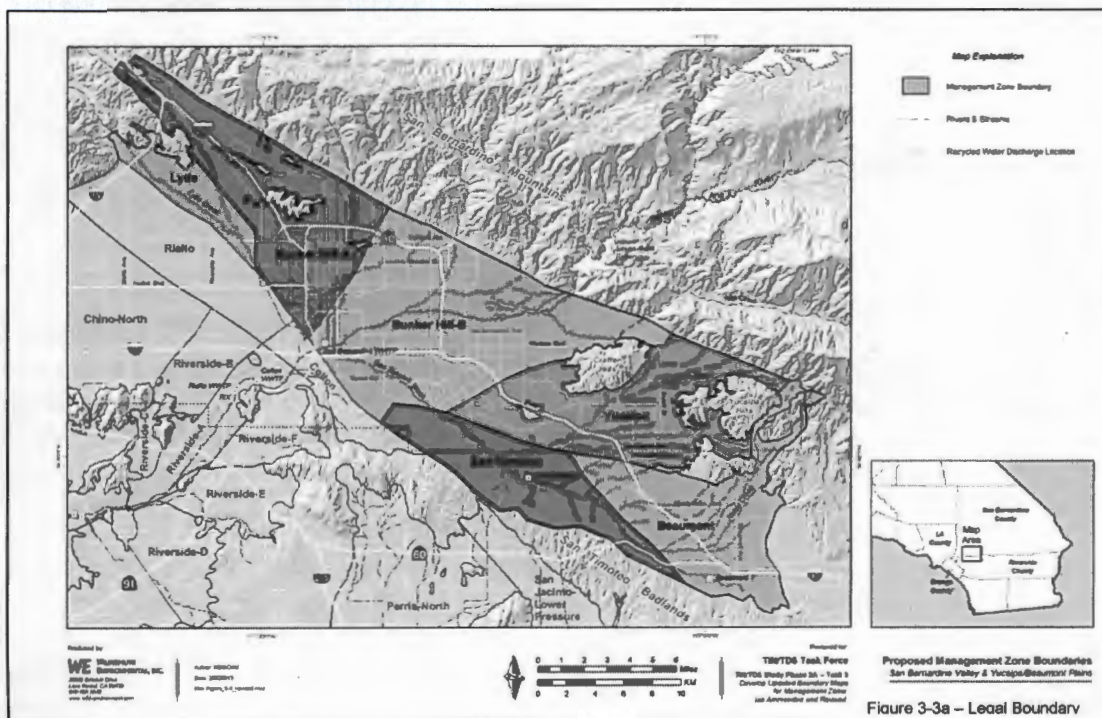
http://www.waterboards.ca.gov/plans_policies/

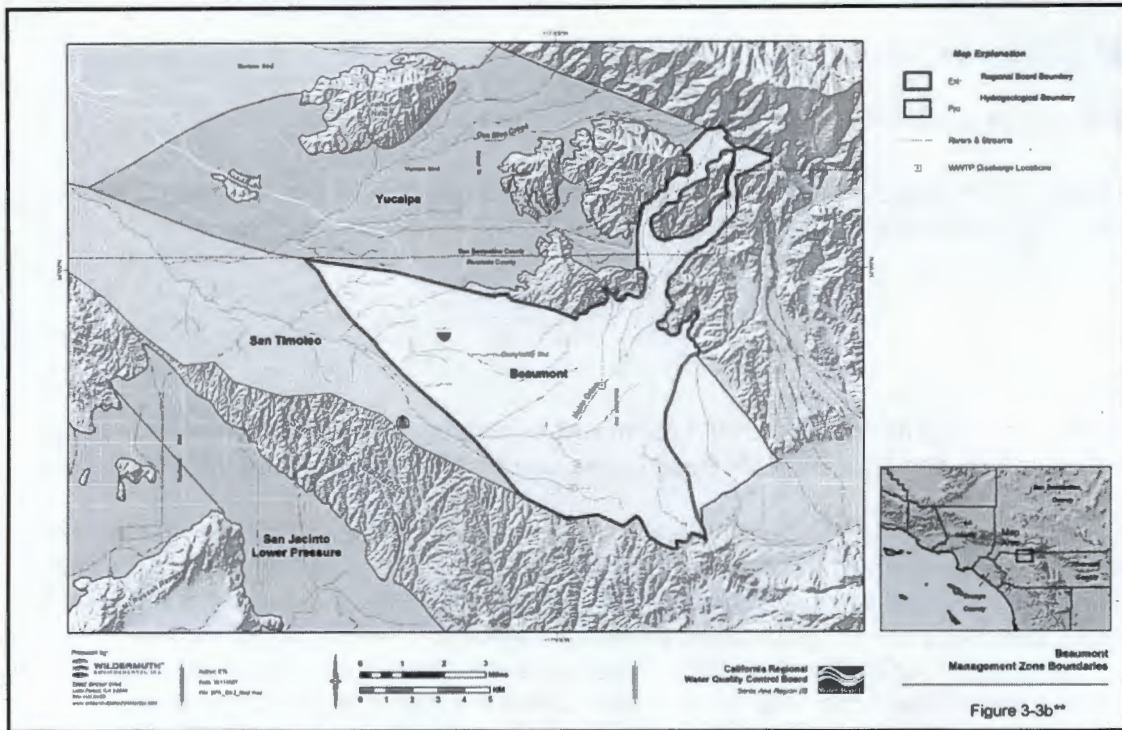
- **Policy on Onsite Wastewater Treatment Systems (Resolution No. 2012-0032, adopted by the State Water Resources Control Board on June 19, 2012)**

This Policy (OWTS Policy) regulates the siting, design, operation, and maintenance of onsite wastewater treatment systems. The Policy implements the California Water Code, Chapter 4.5, Division 7, § 13290-13291.7 by establishing statewide regulations and standards for permitting onsite wastewater systems. The OWTS Policy specifies criteria for existing, new and replacement onsite systems and establishes a conditional waiver of waste discharge requirements for onsite systems that comply with the Policy.

Chapter 3, “Beneficial Uses”

Page 3-12, Figure 3-3; Management Zone Boundaries – San Bernardino Valley and Yucaipa/Beaumont Plains





** The eastern-most boundary of the Beaumont Management Zone is defined by the jurisdictional boundary, established in the California Water Code, between the Santa Ana Regional Water Board (Santa Ana Water Board) and the Colorado River Regional Water Board (Colorado Water Board). This legal boundary separates the two regions based on topography and surface water drainage. However, with respect to groundwater flow and quality, hydrogeological and water quality data indicate that the Beaumont groundwater management zone actually extends to the east of the current legal boundary, into the jurisdictional domain of the Colorado Water Board. The Santa Ana and Colorado Water Boards will work together to coordinate regulatory actions for discharges that occur in this area of the management zone.

Chapter 5, “Implementation”

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II.B.1. Salt Assimilative Capacity

Some waters in the Region have assimilative capacity for additions of TDS and/or nitrogen; that is, wastewaters with higher TDS/nitrogen concentrations than the receiving waters are diluted sufficiently by natural processes, including rainfall or recharge, such that the TDS and nitrogen objectives of the receiving waters are met. The amount of assimilative capacity, if any, varies depending on the individual characteristics of the waterbody in question and must be reevaluated over time.

The 2004 adoption of new groundwater management zone boundaries (Chapter 3) and new TDS and nitrate-nitrogen objectives for these management zones (Chapter 4), pursuant to the work of the Nitrogen/TDS Task Force, necessitated the re-evaluation of the assimilative capacity findings initially incorporated in the 1995 Basin Plan. To conduct this assessment, the Nitrogen-TDS study

consultant calculated current ambient TDS and nitrate-nitrogen water quality using the same methods and protocols as were used in the calculation of historical ambient quality (see Chapter 4). The analysis focused on representing current water quality as a 20-year average for the period from 1978 through 1997. [Ref. 1]. For each management zone, current TDS and nitrate-nitrogen water quality were compared to water quality objectives (historical water quality)¹. Assimilative capacity was also assessed relative to the “maximum benefit” objectives established for certain management zones. If the current quality of a management zone is the same as or poorer than the specified water quality objectives, then that management zone does not have assimilative capacity. If the current quality is better than the specified water quality objectives, then that management zone has assimilative capacity. The difference between the objectives and current quality is the amount of assimilative capacity available.

Since adoption of the 2004 Basin Plan amendment and per Basin Plan requirements, ambient quality and assimilative capacity findings have been, and will continue to be, updated every three years. Following Regional Board approval at a duly noticed Public Hearing, the updated findings of ambient quality and assimilative capacity will be posted on the Regional Board’s web-site and will be used for regulatory purposes.

As described in Chapter 4 and later in this Chapter, the application of the “maximum benefit” objectives is contingent on the implementation of certain projects and programs by specific dischargers as part of their maximum benefit demonstrations. Assimilative capacity created by these projects/programs will be allocated to the party(-ies) responsible for implementing them.

Chapter 3 delineates the Prado Basin Management Zone, and Chapter 4 identifies the applicable TDS and nitrogen objectives for this Zone (the objectives for the surface waters that flow in this Zone). No assimilative capacity exists in this zone.

These assimilative capacity findings are significant from a regulatory perspective. If there is assimilative capacity in the receiving waters for TDS, nitrogen or other constituents, a waste discharge may be of poorer quality than the objectives for those constituents for the receiving waters, as long as the discharge does not cause violation of the objectives and provided that antidegradation requirements are met. However, if there is no assimilative capacity in the receiving waters, the numerical limits in the discharge requirements cannot exceed the receiving water objectives or the degradation process would be accelerated.² This rule was expressed clearly by the State Water Resources Control Board in a decision regarding the appropriate TDS discharge limitations for the Rancho Caballero Mobilehome park located in the Santa Ana Region (Order No. 73-4, the so called “Rancho Caballero decision”) [Ref. 7]. However, this rule is not meant to restrict overlying agricultural irrigation, or similar activities, such as landscape irrigation. Even in management zones without assimilative capacity,

¹ As noted in Chapter 4, ammonia-nitrogen and nitrite-nitrogen data were also included in the analysis, where available. This occurred for a very limited number of cases and ammonia-nitrogen and nitrite-nitrogen concentrations were insignificant.

² A discharger may conduct analyses to demonstrate that discharges at levels higher than the objectives would not cause or contribute to the violation of the established objectives. See, for example, the discussion of wasteload allocations for discharges to the Santa Ana River and its tributaries (Section III. B. 4.) If the Regional Board approves this demonstration, then the discharger would be regulated accordingly.

groundwater may be pumped, used for agricultural purposes in the area and returned to the management zone from which it originated.

In regulating waste discharges to waters with assimilative capacity, the Regional Board will proceed as follows. (see also Section III.B.6., Special Considerations – Subsurface Disposal Systems).

If a discharger proposes to discharge wastes that are at or below (i.e., better than) the current ambient TDS and/or nitrogen water quality, then the discharge will not be expected to result in the lowering of water quality, and no antidegradation analysis will be required. TDS and nitrogen objectives are expected to be met. Such discharges clearly implement the Basin Plan and the Board can permit them to proceed. Of course, other pertinent requirements, such as those of the California Environmental Quality Act (CEQA) must also be satisfied. For groundwater management zones, current ambient quality will be determined every three years pursuant to the detailed monitoring program to be conducted by dischargers in the watershed (see Section V., Salt Management Plan – Monitoring Program Requirements).

[section discussion continues with no further revisions]

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3. Nitrogen Loss Coefficient

The City of Riverside presented data to the Task Force regarding nitrogen transformation and losses associated with wetlands. These data support a nitrogen loss coefficient of 50%, rather than 25%, for the lower portions of Reach 3 of the Santa Ana River that overlie the Chino South groundwater management zone. [Ref. 9]. In fact, the data indicate that nitrogen losses from wetlands in this part of Reach 3 can be greater than 90%. However, given the limited database, the Task Force again recommended a conservative approach, i.e., 50% in this area, with confirmatory monitoring.

Eastern Municipal Water District also presented data that support a 60% nitrogen loss coefficient in the San Jacinto Basin [Ref 10F]. This 60% nitrogen loss is only applicable to discharges to the following management zones that overlie the San Jacinto Basin: Perris North, Perris South, San Jacinto Lower Pressure, San Jacinto Upper Pressure, Lakeview-Hemet North, Menifée, Canyon and Hemet South.

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4. TDS and Nitrogen Wasteload Allocations for the Santa Ana River

WEI performed three model evaluations in order to assess wasteload allocation scenarios through the year 2010. These included a “baseline plan” and two alternative plans (“2010-A” and “2010-B”). The baseline plan generally assumed the TDS and TIN limits and design flows for POTWs specified in waste discharge requirements as of 2001. These limits implemented the wasteload allocations specified in the 1995 Basin Plan when it was approved in 1995. A TDS limit of 550 mg/L was assumed for the Rapid Infiltration and

Extraction Facility (RIX) and the analysis assumed a 540 mg/L TDS for the City of Beaumont. The baseline plan also assumed reclamation activities at the level specified in the 1995 Basin Plan, when it was approved. The purpose of the baseline plan assessment was to provide an accurate basis of comparison for the results of evaluation of the two alternative plans. For alternative 2010-A, it was generally assumed that year 2001 discharge effluent limits for TDS and TIN applied to POTW discharges, but projected year 2010 surface water discharge amounts were applied. TDS limits of 550 mg/L and 540 mg/L were again assumed for RIX and the City of Beaumont discharges. The same limited reclamation and reuse included in the baseline plan was assumed (see R8-2004-0001, 2004 Salt Plan Amendments, Table 5-7 in Section III.B.5.). For alternative 2010-B, POTW discharges were also generally limited to the 2001 TDS and TIN effluent limits (RIX was again held to 550 mg/L and Beaumont to 540 mg/L). However, in this case, large increases in wastewater recycling and reuse were assumed (R8-2004-0001, 2004 Salt Plan Amendments, Table 5-7), resulting in the reduced surface water discharges projected for 2010.

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5. Wastewater Reclamation

Wastewater is presently being reclaimed in the Santa Ana Watershed in a number of different ways:

3. Groundwater Recharge by Percolation

This type of reclamation is common throughout the Region. Most wastewater treatment plants that do not discharge directly to the River discharge their effluent to percolation ponds. All of the treated wastewater in the upper Santa Ana Basin that is not directly reclaimed for commercial agricultural and landscape irrigation purposes, or discharged directly to the Santa Ana River, is returned to local or downstream groundwater management zones by percolation. In Orange County, reclaimed water is used for greenbelt and landscape irrigation, and injected into coastal aquifers to control sea water intrusion.

Significant additional reclamation activities are planned in the Region. The Chino Basin Watermaster, Inland Empire Utilities Agency, Yucaipa Valley Water District, the City of Beaumont and the City of Banning propose to implement extensive groundwater recharge projects using recycled water. To accommodate these projects and other water and wastewater management strategies, these agencies have made the requisite demonstrations necessary to support the "maximum benefit" TDS and nitrate-nitrogen water quality objectives specified in this Plan for certain groundwater management zones (see Chapter 4). The recharge projects will provide reliable sources of additional water supply needed to support expected development within the agencies' areas of jurisdiction. These agencies' "maximum benefit" programs are described in detail in Section VI. of this Chapter.

The Yucaipa Valley Regional Brine line and a reverse osmosis facility at the Water Purification Facility, located at the Wochholz Regional Water Recycling Facility will facilitate groundwater replenishment reuse in the upper groundwater management zones of the Santa Ana Watershed. Treated wastewater will receive extensive advanced treatment, including microfiltration, reverse osmosis and disinfection using ultraviolet light.

The recharge of recycled water will enhance both the quality of and quantity of groundwater resources, the major source of water supply in the area.

In Orange County, significant reclamation activities include the implementation of the Groundwater Replenishment System, a joint effort of the Orange County Water District and Orange County Sanitation District. Treated wastewater provided by the Sanitation District will receive extensive advanced treatment, including microfiltration, reverse osmosis, and disinfection using ultraviolet light and hydrogen peroxide. In the first phase of the project, approximately 70, 000 acre-feet per year of highly treated recycled water will be produced and distributed to groundwater recharge facilities and to injection wells used to maintain a seawater intrusion barrier. The System will enhance both the quality and quantity of groundwater resources, the major source of water supply in the area. It will reduce the need for imported water and prevent, or at least delay, the need for an additional ocean outfall for disposal of the wastewater treated by the Sanitation District. Implementation of the GWR System and operation of Phase 1 began in 2008. Future phases to expand the capacity of the GWR System are planned.

4. Dual Water Supply Systems

Given increasing demands for water supply but diminishing resources, there is great interest in using reclaimed water in office buildings and the like for flushing toilets and urinals. Clearly, the addition of this water supply source must be carefully planned and overseen to prevent public health problems. No dual systems have been implemented as yet in the upper basin; in Orange County, the Irvine Ranch Water District has implemented dual systems (a reclaimed water system in addition to a potable supply) in a number of office buildings in its service area, with the approval of the Department of Health Services and the Regional Board.

The Salt Management Plan draws a balance between the benefits and problems of reclamation by including carefully planned reclamation activities in the watershed. The Recommended Plan provides for reclamation within the upper basin. All recycled water recharge projects will be regulated pursuant to the process identified in the discussion regarding assimilative capacity, and in accordance with the "maximum benefit" implementation strategies identified later in this Chapter (see section VI., Maximum Benefit Implementation Plans for Salt Management).

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V. Other Projects and Programs

In addition to the regulatory efforts of the Regional Board described in the preceding section, water and wastewater purveyors and other parties in the watershed have implemented, and propose to implement, facilities and programs designed to address salt problems in the groundwater of the Region. These include the construction of brine lines, groundwater desalters, recycled water demineralization systems, implementation of programs to enhance the recharge of high quality storm water and imported water, where available, and re-injection of recycled water to maintain salt water intrusion barriers in coastal areas. These projects and programs are motivated by the need to protect and augment water supplies, as well as to facilitate compliance with waste discharge requirements.

A. Brine Lines

There are two brine line systems in the Region, the Inland Empire Brine Line, formerly known as the Santa Ana Regional Interceptor (SARI), and the older Chino Basin Non-Reclaimable Line (NRL). These lines are used to transport brine wastes out of the basin for treatment and disposal to the ocean. They are a significant part of industrial waste management and essential for operation of desalters in the upper watersheds.

1. Inland Empire Brine Line

The Inland Empire Brine Line (Brine Line) was constructed and is owned by SAWPA. It is approximately 93 miles of 16 inch to 84 inch pipeline connected to the Orange County Sanitation District treatment facilities. SAWPA owns capacity rights in SARI downstream of Prado Dam. The line extends from the Orange County Line near Prado Dam northeast to the San Bernardino area. The Brine Line has been extended southerly to serve the San Jacinto Watershed. Brine Line Reach 5 extends up the Temescal Canyon from the City of Corona to the Eastern Municipal Water District (EMWD) brine line terminus in the Lake Elsinore area. EMWD's Menifee Desalter and other high salinity discharges from EMWD and Western Municipal Water District now have access to the brine line.

The Brine Line, Reach IVE has been extended to the east about 15 miles from the City of San Bernardino to Yucaipa Water District's Wochholz Regional Water Recycling Facility. The Brine Line will be utilized by Yucaipa Valley Water District and the Mountainview Power Plant for brine disposal.

2. Chino Basin Non-Reclaimable Waste Line

The Chino Basin Non-Reclaimable Waste Line (NRWL) is connected to the Los Angeles County Sanitation District sewer system in the Pomona area. The NRWL, which is owned and operated by Inland Empire Utilities Agency, exports non-reclaimable industrial wastes and brine from the Chino Basin. It extends eastward from the Los Angeles County Line to the City of Fontana. It was originally built to serve industries including the Kaiser Steel Company and Southern California Edison Power Plants.

B. Groundwater Desalters

The studies leading to the development of the TDS/Nitrogen management plan included in this Basin Plan when it was approved in 1995 demonstrated that it was not realistic to achieve compliance with all the nitrogen and TDS objectives for the groundwater subbasins then identified within the Region. Long-term historic land use practices, particularly agriculture, have left an enormous legacy of salts that are now in the unsaturated soils overlying the groundwater subbasins (now, newly defined groundwater management zones). A significant amount of these salts will, over time, degrade groundwater quality. The programs of groundwater extraction, treatment, and replenishment needed to completely address these historic salt loads were shown to far exceed the resources available to implement them.

While the boundaries of the groundwater management zones have been revised and new TDS and nitrate-nitrogen water quality objectives established, the salt legacy problem remains. The construction and operation of groundwater desalters to extract and treat poor quality

groundwater continues to be an essential component of salt management in the Region. Such projects will be increasingly important to protect local water supplies and to provide supplemental, reliable sources of potable supplies.

A number of groundwater desalters have already been constructed, and more are planned. These facilities are described below.

1. Upper Santa Ana Basin

In the Upper Santa Ana Basin, the Santa Ana Watershed Project Authority constructed the Arlington desalter, which is now owned and operated by Western Municipal Water District. This desalter, with a capacity of about 7 MGD, treats water extracted from the Arlington Management Zone, which was heavily impacted by historic agricultural activities.

In the Chino Basin, the Chino Desalter Authority operates the Chino 1 desalter, which is planned for expansion from 8 MGD to 13 MGD capacity. Additional desalters and desalter capacity will be constructed as part of a "maximum benefit" proposal by the Chino Basin Watermaster and the Inland Empire Utilities Agency (see Section VI., Maximum Benefit Implementation Plans for Salt Management).

The City of Corona began operation of the Temescal desalter in late 2001 with product water capacity of 10 MGD. In 2004, the City expanded the desalter plant capacity by adding a fourth train to increase the product water capacity by 5 MGD for a current total of 15 MGD. The product water is used to supplement other municipal supplies as a blending source. The improved TDS quality of these supplies is an important part of the City's efforts to assure compliance with waste discharge requirements.

In the San Timoteo Watershed areas, desalters will be implemented as necessary for the Yucaipa and Beaumont areas, as discussed in detail in Section VI., Maximum Benefit San Timoteo Watershed Salt Management Plan.

2. San Jacinto Watershed

EMWD operates the Menifee desalter, which has a capacity of about 3 MGD. Product water is added to the EMWD municipal supply system, and the waste brine is discharged to a non-reclaimable waste disposal system that is ultimately connected to the SAWPA SARI system. The desalter extracts groundwater from the Perris South and Menifee Management Zones, both of which are adversely affected by historic salt loads contributed largely by agricultural activities.

EMWD plans to construct a desalter with capacity of about 4.5 MGD to treat poor quality water extracted from the Perris South and Lakeview/Hemet North Management Zones. The purpose of this facility is to stop subsurface migration of poor quality groundwater from the Perris South Management Zone into the Lakeview/Hemet North Management Zone.

3. Orange County

The Tustin Seventeenth Street Desalter, which began operation in 1996 reduces high nitrate and TDS concentrations from groundwater pumped by Tustin's Seventeenth Street wells, adding approximately 3,000 acre-feet of water annually to Tustin's domestic water supply. A second facility, Tustin's Main Street Treatment Plant, began operating in 1989

with a yield of 2,000 acre-feet per year. The plant reduces nitrate levels from groundwater produced by Tustin's Main Street wells, employing reverse osmosis and ion exchange. The Orange County Water District and Irvine Ranch Water District (IRWD) cooperated to build the Irvine Desalter, a dual-purpose regional groundwater remediation and water supply project located in the City of Irvine and its sphere of influence. The project consists of an extensive seven-well groundwater extraction and collection system, a treatment system, a five-mile brine disposal pipeline, a finished water delivery system, and ancillary facilities. While providing approximately 8,000 acre-feet per year to IRWD for potable and non-potable supply, the desalter extracts and treats brackish groundwater and captures an overlapping regional plume of TCE-contaminated groundwater demonstrated to have originated from the former U.S. Marine Corps Air Station-EI Toro.

C. Recharge of Storm Water and/or Imported Water

The Orange County Water District, San Bernardino Valley Water Conservation District and other agencies in the Region operate extensive facilities designed to enhance the capture and recharge of high quality storm water. More such facilities are planned as part of "maximum benefit" proposals by the Chino Basin Watermaster/Inland Empire Utilities Agency, and agencies implementing the maximum benefit programs in the San Timoteo watershed (Section VI., Maximum Benefit Implementation Plans for Salt Management). These proposals also include efforts to import and recharge high quality State Water Project water, when it is available. These activities increase both the quantity and quality of available groundwater resources.

D. Sea Water Intrusion Barriers

The Orange County Water District operates advanced facilities designed to provide significantly enhanced tertiary treatment of secondary treated municipal wastewater from the Orange County Sanitation District's (Sanitation District) Fountain Valley Reclamation Plant No. 1. The recycled water is injected into a series of wells located along Ellis Avenue in the City of Fountain Valley to maintain the Talbert Gap Seawater Intrusion Barrier. The treatment facility, the Groundwater Replenishment System (GWRS), was constructed jointly by Orange County Water District and the Sanitation District (see preceding section on wastewater reclamation).

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V. Salt Management Plan – Monitoring Program Requirements (insert at end of section)

Subsequent to the approval of the Region's Salt and Nutrient Management Plan in 2004, a new task force, the "Basin Monitoring Program Task Force" (BMPTF) was formed to implement the requisite nitrogen/TDS monitoring and analyses programs described previously. SAWPA serves as the administrator for the BMPTF.

The Task Force includes the following agencies:

- Eastern Municipal Water District
- Inland Empire Utilities Agency
- Orange County Water District
- Chino Basin Watermaster
- Yucaipa Valley Water District
- City of Beaumont

- City of Riverside
- Lee Lake Water District
- Elsinore Valley Municipal Water District
- Irvine Ranch Water District
- Colton/San Bernardino Regional Tertiary Treatment and Wastewater Reclamation Authority
- City of Corona
- City of Redlands
- City of Rialto
- Jurupa Community Services District
- Western Riverside Co. Regional Wastewater Authority

The Santa Ana Regional Water Quality Control Board and SAWPA are also signatories to the BMPTF agreement.

As indicated above (Section V.A and V.B), the task force agencies are required to conduct the following investigations:

1. Recomputation of the Ambient Water Quality – every three years
2. Preparation of a Water Quality Report for the Santa Ana River – annually

Declaration of Conformance

Another major activity that the BMPTF completed in March 2010 was the development of a “Declaration of Conformance” for approval by the Regional Board and the State Water Resources Control Board. With the Declaration, the Task Force and Regional Board declared conformance with the then-new State Board Recycled Water Policy requirements for the completion of a salt and nutrient management plan for the Santa Ana Region, and other requirements of this Policy. This finding of conformance was based on the work of the Nitrogen/TDS Task Force. That work resulted in the 2004 adoption of Basin Plan amendments to incorporate a revised salt and nutrient management plan for the Region (Resolution No. R8-2004-0001). Further, the Declaration documented conformance with the emerging constituents monitoring requirements in the Policy through the “Emerging Constituents Sampling and Investigation Program”, submitted to the Regional Board on an annual basis by the Emerging Constituents Program Task Force. The Sampling and Investigation Program will be reviewed annually and revised as necessary and will integrate the State Board’s recommendations when they become available. Finally, the Declaration of Conformance documents the analyses and procedures that will be used to streamline the permitting process for recycled water projects, as required by the Policy.

The Declaration of Conformance was formally adopted by resolution of the Regional Board on March 18, 2010 (Resolution No. R8-2010-0012) and formally submitted to the State Board on April 12, 2010.

Salt Monitoring Cooperative Agreement

In January 2008, the Regional Board entered into a Cooperative Agreement with several water and wastewater agencies in the Santa Ana River Watershed to analyze and report the amount of salt and nitrates entering local groundwater aquifers as a consequence of recharging imported water in the region. The “Cooperative Agreement to Protect Water Quality and Encourage the Conjunctive Use of Imported Water in the Santa Ana River Basin” is Attachment A to Resolution No. R8-2008-0019.

As with the BMPTF effort underwritten by local stakeholders, the Cooperative Agreement obligates signatories to assess current groundwater quality every three years. In addition, the signatories have agreed to estimate every six years the changes that are likely to occur in groundwater quality as a result of on-going and expected projects that recharge imported water. By emphasizing the use of "real-time" monitoring, rather than complex fate and transport models, the Regional Board is better able to evaluate the effects of these recharge projects.

The parties of the Cooperative Agreement execute the terms of the agreement through a workgroup that meets regularly under the administration of SAWPA. As the informal administrator, SAWPA assists in coordination among the signatories of the necessary basin salinity monitoring and modeling reports, along with final compilation and submittal of the reports to the Regional Board by the deadlines defined in the agreement.

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B. Salt Management – San Timoteo Watershed

The 2004 amendments to the Basin Plan established both “antidegradation” and “maximum benefit” nitrogen and TDS objectives for the Yucaipa, San Timoteo and Beaumont Groundwater Management Zones (see Chapter 4). These Groundwater Management Zones are within the San Timoteo Watershed. The agencies that proposed the “maximum benefit” objectives committed to implement specific programs of projects and actions that were also identified in the 2004 Salt Management Plan incorporated in the Basin Plan. These programs were intended to assure that water quality consistent with the maximum benefit to the people of the state would be maintained with the application of the “maximum benefit” objectives. These commitments included the implementation of surface and groundwater monitoring programs, use of recycled water supplies for non-potable uses and construction and operation of desalting facilities to manage recycled water quality.

In 2014 amendments to the Salt Management Plan, changes to these “maximum benefit” commitments and the parties responsible for them were made based on a regional strategy for the San Timoteo Watershed [Ref 10D] developed and proposed by the Yucaipa Valley Water District, the City of Beaumont, the City of Banning, Beaumont-Cherry Valley Water District and the San Geronio Pass Agency. The Regional Strategy initially addressed the Maximum Benefit program in the Beaumont Groundwater Management Zone; however, in order to have a consistent approach throughout the San Timoteo Watershed, the Regional Strategy approach was expanded to the San Timoteo and Yucaipa Groundwater Management Zones. The goal of this strategy is to assure reliable water supplies to meet present and anticipated demands. The “maximum benefit” commitments of each responsible agency are described below and shown in Tables 5-9a (Yucaipa Groundwater Management Zone), 5-9b (San Timoteo Groundwater Management Zone) and 5-9c (Beaumont Groundwater Management Zone). These commitments must be implemented by the responsible agencies in accordance with the prescribed schedule in order to assure that water quality consistent with maximum benefit to the people of the state will be maintained.

The Regional Board will revise waste discharge requirements as appropriate to require implementation of these commitments. For each groundwater management zone, it is assumed that maximum benefit is demonstrated, and that the “maximum benefit” water quality TDS and nitrate-nitrogen objectives apply as long as the commitments and schedule applicable to that groundwater management zone are satisfied. If the Regional Board determines that any or all of the maximum benefit programs are not being implemented effectively in accordance with the schedule(s) shown in Tables 5-9a through 5-9c, then maximum benefit is not demonstrated and the “antidegradation” TDS and nitrate-nitrogen objectives apply. In this situation, the Regional Board will require mitigation for TDS and nitrate-nitrogen discharges to the affected groundwater management zone that took place in excess of limits based on the “antidegradation” objectives for that Groundwater Management Zone. As specified for Chino Basin Watermaster and Inland Empire Utilities Agency (see Section VI.A, above), discharges in excess of the antidegradation objectives that must be considered for mitigation include both recycled water and imported water at TDS concentrations in excess of the antidegradation objectives. Mitigation by groundwater extraction and desalting must be adjusted to address concentrations of salt and nitrogen in the basin, not simply salt load.

1. Yucaipa Groundwater Management Zone - Yucaipa Valley Water District

The application of the “maximum benefit” objectives established for the Yucaipa Groundwater Management Zone relies on the implementation by the Yucaipa Valley Water District (YVWD) of the specific program of projects and requirements shown in Table 5-9a. These “maximum benefit” commitments were updated and revised in 2014 based on YVWD’s ongoing activities to implement the 2004 program and the regional strategy YVWD helped to develop. The projected water demands for the Yucaipa area for the year 2030 require approximately an additional 10,000 AF/Y of supplemental water, which may include State Water Project water, water imported from local sources, recharged storm water and recycled water. The goal is to meet these demands through implementation of the “maximum benefit” commitments, which include enhanced recharge of storm water and recycled water, optimizing direct use of recycled and imported water, desalting of wastewater and/or groundwater and conjunctive use.

In addition to its water supply responsibilities, YVWD provides sewage collection and treatment services within its service area. YVWD operates a wastewater treatment facility that currently discharges tertiary treated wastewater to San Timoteo Creek, Reach 3. This unlined reach of the Creek overlies and recharges the San Timoteo Groundwater Management Zone (see 2. San Timoteo Groundwater Management Zone – Yucaipa Valley Water District and the City of Beaumont). In response to commitments in the 2004 Salt Management Plan, YVWD has taken steps to improve recycled water quality, including the installation of new denitrification facilities and the design and construction of the Yucaipa Valley Regional Brine and reverse osmosis treatment systems at the Wochholz Regional Water Recycling Facility. The desalting facilities are expected to be complete by June 30, 2015.

Dilution of recycled water with water to meet the 370 mg/L TDS concentration and the 5 mg/L nitrate-N concentration recycled water recharge and direct use requirements will be limited to new water recharge such as reverse osmosis permeate (diluent), imported water or new storm water. New storm water recharge is defined as storm water recharged in quantities greater than historical amounts (net increase) over the groundwater management zone since January 1, 2004. January 2004 corresponds to the month and year when the Regional Board authorized the original maximum benefit objectives and compliance commitments by adopting Resolution No. R8-2004-0001.

Table 5-9a

**Yucaipa Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agency – Yucaipa Valley Water District

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>1. Surface Water Monitoring Program</p> <p>a. Submit Draft Revised Monitoring Program to Regional Board</p> <p>b. Implement Revised Monitoring Program</p> <p>c. Submit Draft Revised Monitoring Program(s) (subsequent to that required in "a", above) to Regional Board</p> <p>d. Implement Revised Monitoring Program (s)</p> <p>e. Annual data report submittal</p>	<p>a. (**30 days from Regional Board approval of BPA)</p> <p>b. Upon Executive Officer approval</p> <p>c. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Executive Officer and in accordance with the schedule prescribed by the Executive Officer</p> <p>d. Upon Executive Officer approval</p> <p>e. April 15th</p>
<p>2. Groundwater Monitoring Program</p> <p>a. Submit Draft Revised Monitoring Program(s)</p> <p>b. Implement revised monitoring plan(s)</p> <p>c. Annual data report submittal</p>	<p>a. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Executive Officer and in accordance with the schedule prescribed by the Executive Officer</p> <p>b. Upon Executive Officer approval</p> <p>c. April 15th</p>
<p>3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</p> <p>Complete construction of Desalter and Brine Disposal Facilities</p>	<p>June 30, 2015 (or as provided by the Executive Officer - see text below)</p>
<p>4. Non-potable water supply</p> <p>Implement non-potable water supply system to serve water for irrigation purposes and/or direct non-potable reuse. The non-potable supply used in the Yucaipa Groundwater Management Zone shall comply with a 10-year running average TDS concentration of 370 mg/L or less, and in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the nitrate-nitrogen shall be</p>	<p>June 30, 2015</p>

Table 5-9a

**Yucaipa Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agency – Yucaipa Valley Water District

Description of Commitment	Compliance Date – as soon as possible, but no later than
less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).	
<p>5. Recycled water recharge</p> <p>The recharge of recycled water in the Yucaipa Groundwater Management Zone shall be limited to the amount that can be blended with other recharge sources or reverse osmosis diluent to achieve a 10-year running average equal to or less than the 370 mg/L "maximum benefit" TDS objective and less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</p> <p>a. Submit for Executive Officer approval, a proposed methodology for computing baseline and "new" storm water recharge.</p> <p>The methodology will be posted for public comment for 30 days. If there are significant comments received, the Executive Officer will present the report to the Regional Board for its consideration at a regularly scheduled meeting.</p> <p>b. Submit baseline report of amount, locations, and TDS and nitrogen quality of water/imported water recharge per the approved methodology (#5a).</p> <p>c. Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations. For storm water recharge used for blending, submit documentation that the recharge is the result of YVWD enhanced recharge facilities/programs</p>	<p>Compliance must be achieved by end of 10th year after initiation of recycled water use/recharge operations.</p> <p>b. 6 months prior to initiation of construction of any basin/other facility to support enhanced storm water/imported water recharge.</p> <p>c. 1 year from Executive Officer approval of methodology.</p> <p>c. Annually, by April 15th, after construction of facilities/implementation of programs to support enhanced recharge.</p>
<p>6. Antidegradation Objectives Salt Mitigation Plan</p> <p>a. Submit a proposed Salt Mitigation Plan and Implementation Schedule</p> <p>b. Implement Salt Mitigation Plan</p>	<p>a. Within (**1 year from OAL approval of BPA)</p> <p>b. Within 30 days of Regional Board finding that maximum benefit no longer being achieved</p>
7. Ambient groundwater quality determination	July 1, 2014 and every 3 years thereafter

A. Description of Yucaipa Valley Water District Commitments for the Yucaipa Management Zone

1. Surface Water Monitoring Program (Table 5-9a, # 1)

A surface water monitoring program was developed, approved and implemented in response to the maximum benefit commitments initially incorporated in the Basin Plan in 2004 (Resolution No. R8-2004-0001). The Regional Board approved the Surface Water Monitoring Program in 2005 (Resolution No. R8-2005-0065). Subsequently, the need to revise the monitoring program was recognized and appropriate amendments were adopted in 2014 (Resolution No. R8-2014-0005). These include the requirement that *by (**30 days from Regional Board approval of the BPA**), YVWD shall submit a revised surface water monitoring program to the Regional Board for approval. The monitoring program must be implemented upon Executive Officer approval.*

It is expected that the monitoring program will be reviewed as it is implemented over time, and that further updates may be necessary. YVWD committed to review the surface water monitoring program (and the groundwater monitoring program, see #2, below) as part of the determination of ambient groundwater quality, which occurs every three years pursuant to Basin Plan requirements (see #6, below). Though considered unlikely, it is possible that more frequent review and revision of these monitoring programs may be necessary. Accordingly, the Basin Plan requires review of the surface water monitoring program in coordination with the ambient quality determination and, further, that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring is to be implemented upon Executive Officer approval.

An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by April 15th of each year.

2. Groundwater Monitoring Program (Table 5-9a, #2)

In response to the maximum benefit program requirements established in 2004 (Resolution No. R8- 2004-0001), in 2005, YVWD submitted a proposed groundwater monitoring program. The Regional Board approved a groundwater monitoring program to determine ambient water quality in the Yucaipa Groundwater Management Zone (Resolution No. R8-2005-0065). The purpose of the groundwater monitoring program is to identify the effects of the implementation of the Yucaipa Groundwater Management Zone maximum benefit water quality objectives on water levels and water quality within the Yucaipa Groundwater Management Zone. The groundwater monitoring program has been implemented since 2005 and must continue to be implemented.

The existing groundwater monitoring implemented by YVWD to comply with the Maximum Benefit program authorized by the 2004 amendments to the salt management plan shall be continued into the future until a new monitoring plan is approved by the Executive Officer. Any new monitoring plan developed by YVWD shall preserve the geospatial distribution of groundwater wells and the sampling of those wells utilized in the existing Regional Board-approved maximum benefit monitoring program.

As noted above, the groundwater monitoring program will be reviewed as part of regular ambient groundwater quality determinations and may be revised. Once again, more frequent review and revision may be necessary as the monitoring program is implemented over time.

Accordingly, the Basin Plan requires that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report, including all raw data and summarizing the results of the approved groundwater monitoring program, shall be submitted to the Regional Board by April 15th of each year.

3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9a, #3)

YVWD anticipated that demineralization of groundwater or recycled water would be necessary in the future to protect the Yucaipa Groundwater Management Zone and has constructed desalting and associated brine disposal facilities. YVWD shall ensure that the planned demineralization system is operational by June 30, 2015. The Executive Officer may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9a.

4. Non-potable Water Supply Distribution System (Table 5-9a, # 4)

A key element of YVWD's water resources management plan is the construction of a non-potable supply system to serve a mix of recycled water, diluent from the Wochholz Regional Water Recycling Facility and un-treated imported water, treated backwash water from the Yucaipa Valley Regional Water Filtration Facility and/or storm water for irrigation uses and other direct non-potable reuse. The intent is to minimize the use of potable water for non-potable uses. For use in the Yucaipa Groundwater Management Zone, YVWD will produce a non-potable supply with a running 10-year average TDS concentration equal to or less than 370 mg/L and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the 10-year running average nitrate-nitrogen concentration shall comply with 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). To meet this "maximum benefit" objective, YVWD will blend the recycled water with other water sources or desalt the recycled water.

Compliance with the non-potable water supply TDS and/or nitrate-nitrogen objective shall be measured in the non-potable water system as a weighted 10-year average of all water sources added to that system and used within the Yucaipa Groundwater Management Zone.

As part of the Maximum Benefit Annual Report, YVWD shall report on the TDS and nitrogen quality and quantity of all sources of non-potable water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations utilized in the Yucaipa Groundwater Management Zone.

5. Recycled Water Recharge (Table 5-9a, # 5)

The use and recharge of recycled water within the Yucaipa Groundwater Management Zone are necessary to maximize the use of the water resources in the Yucaipa area. The demonstration of "maximum benefit" and the continued application of the "maximum benefit" objectives are contingent on the recharge of recycled water to the Yucaipa Groundwater Management Zone of a 10-year annual average (running average) TDS concentration of 370 mg/L and nitrate-nitrogen concentration of 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to

assure that the "maximum benefit" objective of 5 mg/L will be met). These concentrations may be achieved by desalting or other treatment of the recycled water, and/or by blending the recycled water with other sources, such as imported water, storm water and reverse osmosis permeate diluent.

Compliance with these concentrations shall be measured at the point of discharge(s) to the recharge facility as a weighted average concentration of the recycled water and other sources, if any, used for blending.

As part of the Maximum Benefit Annual Report, YVWD shall report on the TDS and nitrogen quality and quantity of all sources of recharged water and summarize the annual and 10-year running annual weighted TDS and nitrogen average concentrations recharged to the Yucaipa Groundwater Management Zone.

6. Antidegradation Salt Mitigation Plan (Table 5-9a, #6)

Within (***1 year of approval by OAL of the BPA***), YVWD shall submit a Salt Mitigation Plan to mitigate excess salt loading above the antidegradation water quality objectives. The Salt Mitigation Plan shall provide a conceptual framework for mitigation projects should the Regional Board make a finding that the lowering of water quality associated with the "maximum benefit" TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. The Salt Mitigation Plan must be implemented within 30 days of a Regional Board finding that maximum benefit is no longer being achieved.

7. Ambient Groundwater Quality Determination (Table 5-9a, # 6)

By July 1, 2014, and every three years thereafter, YVWD shall submit a determination of ambient TDS and nitrate-nitrogen quality in the Yucaipa Groundwater Management Zone. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater Management Zones within the region. [Ref. 1].

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the "maximum benefit" objectives, the Regional Board will revise the waste discharge and producer/user reclamation requirements permit for YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For surface water discharges that affect the Yucaipa Groundwater Management Zone discharge limits for TDS and TIN will be specified as an annual volume-weighted average not to exceed 370 mg/L TDS and 6.7 mg/L TIN. These limits are based on the "maximum benefit" objectives of the Yucaipa Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in YVWD's waste discharge requirements, as necessary and appropriate.

YVWD's waste discharge and producer/user reclamation requirements will require that the recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water, imported water or reverse osmosis diluent, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Yucaipa Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use purposes in the Yucaipa Groundwater Management Zone shall be limited to the amount that can be blended with other water sources, such as storm water, imported water or reverse osmosis diluent, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Yucaipa Groundwater Management Zone. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the Yucaipa Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

2. Review of Project Status

The Regional Board intends to review periodically YVWD's implementation of the maximum benefit program commitments described above and summarized in Table 5-9a. This review is intended to determine whether the commitments are met, and whether the application of the "maximum benefit" objectives continues to be justified. As indicated above, if, as a result of this review, the Regional Board finds that the YVWD commitments are not met, then the Regional Board may make the finding that the "maximum benefit" objectives are not consistent with the maintenance of water quality that is of maximum benefit to the people of the state, and that the more stringent "antidegradation" objectives for the Yucaipa Management Zone (320 mg/L for TDS and 4.2 mg/L for nitrate-nitrogen; see Chapter 4) must apply instead for regulatory purposes. In the event that the Regional Board makes these determinations, the Regional Board will require that the YVWD implement the Salt Mitigation Plan (see commitment # 6) and mitigate the adverse water quality effects, both on the immediate and downstream waters, which resulted from recycled water discharges based on the "maximum benefit" objectives.

2. San Timoteo Groundwater Management Zone – Yucaipa Valley Water District and the City of Beaumont

The application of the “maximum benefit” objectives established for the San Timoteo Groundwater Management Zone relies on the implementation by both the Yucaipa Valley Water District (YVWD) and the City of Beaumont of the specific program of projects and requirements shown in Table 5-9b [Ref. 10D]. Since the Salt Management Plan was amended in 2004 to incorporate “maximum benefit” commitments applicable to the San Timoteo Management Zone, both YVWD and the City of Beaumont have been engaged in implementing those commitments.

As discussed above, YVWD operates a wastewater treatment facility that discharges a portion of its treated effluent to San Timoteo Creek, Reach 3, which overlies and recharges the San Timoteo Groundwater Management Zone. Similarly, the City of Beaumont provides sewage collection and treatment services within its service area, and a portion of the treated wastewater discharged to Reach 3 of San Timoteo Creek, also recharges the San Timoteo Groundwater Management Zone. Surface water discharges by both YVWD and the City affect groundwater quality in the San Timoteo Groundwater Management Zone. Consistent with the 2004 “maximum benefit” commitments, both the District and the City must identify and implement an acceptable plan to address the adverse water quality impacts of their wastewater discharges.

Dilution of recycled water with water to meet the 400 mg/L TDS concentration and the 5 mg/L nitrate-N concentration recycled water recharge and direct use requirements will be limited to new recharge such as reverse osmosis permeate (diluent), imported water or new storm water. New storm water recharge is defined as storm water recharged in quantities greater than historical amounts (net increase) over the groundwater management zone since January 1, 2004. January 2004 corresponds to the month and year when the Regional Board authorized the original maximum benefit objectives and compliance commitments by adopting Resolution No. R8-2004-0001.

Table 5-9b

**San Timoteo Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agencies – Yucaipa Valley Water District and the City of Beaumont

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>1. Surface Water Monitoring Program</p> <p>a. Submit Draft Revised Monitoring Program to Regional Board</p> <p>b. Implement Revised Monitoring Program</p> <p>c. Submit Draft Revised Monitoring Program(s) (subsequent to that required in "a", above) to Regional Board</p> <p>d. Implement Revised Monitoring Program(s)</p> <p>e. Annual data report submittal</p>	<p>a. (**30 days from Regional Board approval of BPA)</p> <p>b. Upon Executive Officer approval</p> <p>c. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</p> <p>d. Upon Executive Officer approval</p> <p>e. April 15th</p>
<p>2. Groundwater Monitoring Program</p> <p>a. Submit Draft Revised Monitoring Program(s)</p> <p>b. Implement revised monitoring plan(s)</p> <p>c. Annual data report submittal</p>	<p>a. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</p> <p>b. Upon Executive Officer approval</p> <p>c. April 15th</p>
<p>3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</p> <p>Complete construction of Desalter and Brine Disposal Facilities</p>	<p>June 30, 2015 (or as provided by the Executive Officer - see text below)</p>

Table 5-9b

**San Timoteo Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agencies – Yucaipa Valley Water District and the City of Beaumont

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>4. City of Beaumont, Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</p> <p>a. Submit detailed plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to operational as soon as possible but no later than 5 years from date of Executive Officer approval of plan/schedule or as provided by the Executive Officer (see text below).</p> <p>b. Implement the plan and schedule</p>	<p>a. January 30, 2015</p> <p>b. Upon Executive Officer approval</p>
<p>5. YVWD, City of Beaumont Non-potable water supply</p> <p>Implement non-potable water supply system to serve water for irrigation purposes and direct non-potable reuse. The non-potable supply used in the San Timoteo Groundwater Management Zone shall comply with a 10-year running average TDS concentration of 400 mg/L or less, and in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the nitrate-nitrogen shall be less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</p>	<p>December 31, 2015</p>
<p>6. Recycled water recharge/habitat maintenance discharge</p> <p>The recharge of recycled water in the San Timoteo Groundwater Management Zone or discharge to San Timoteo Creek to maintain the riparian habitat shall be limited to the amount that can be blended with other recharge sources or reverse osmosis diluent to achieve a 10-year running average equal to or less than the 400 mg/L "maximum benefit" TDS objective and less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</p> <p>a. Submit for Executive Officer approval, a proposed methodology for computing baseline and new storm water recharge.</p> <p>The methodology will be posted for public comment for 30 days. If there are significant comments received, the Executive Officer will present the report to the Regional Board for its consideration at a regularly scheduled meeting.</p> <p>b. Submit baseline report of amount, locations, and TDS and</p>	<p>Compliance must be achieved by end of 10th year after initiation of recycled water use/recharge operations.</p> <p>a. 6 months prior to initiation of construction of anybasin/other facility to support enhanced storm water/imported water recharge.</p> <p>b. 1 year from Executive Officer approval of methodology.</p>

Table 5-9b

**San Timoteo Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agencies – Yucaipa Valley Water District and the City of Beaumont

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>nitrogen quality of "new" storm water/imported water recharge per the approved methodology (#6a).</p> <p>c. Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations. For storm water recharge used for blending, submit documentation that the recharge is the result of YVWD and/or City of Beaumont enhanced recharge facilities/programs.</p>	<p>c. Annually, by April 15th, after construction of facilities/implementation of programs to support enhanced recharge.</p>
<p>7. Improve quality of surface water discharges to the San Timoteo Groundwater Management Zone</p> <p>a. Submit plan and schedule to comply with underlying San Timoteo Groundwater Management Zone Maximum Benefit TDS and nitrate-nitrogen water quality objectives</p> <p>b. Implement upon approval</p>	<p>a. (<i>*30 days from Regional Board approval of BPA*</i>)</p> <p>b. Upon Executive Officer approval</p>
<p>8. Antidegradation Objectives Salt Mitigation Plan</p> <p>a. Submit a proposed Salt Mitigation Plan and Implementation Schedule</p> <p>b. Implement Salt Mitigation Plan</p>	<p>a. Within (<i>**1 year from OAL approval of BPA</i>)</p> <p>b. Within 30 days of Regional Board finding that maximum benefit no longer being achieved</p>
<p>9. Ambient groundwater quality determination</p>	<p>July 1, 2014 and every 3 years thereafter</p>

A. Description of Yucaipa Valley Water District (YVWD), City of Beaumont Commitments for the San Timoteo Management Zone

1. Surface Water Monitoring Program (Table 5-9b, # 1)

A surface water monitoring program was developed, approved and implemented in response to the maximum benefit commitments initially incorporated in the Basin Plan in 2004 (Resolution No. R8-2004-0001). The Regional Board approved the Surface Water Monitoring Program in 2005 (Resolutions No. R8-2005-0065 and R8-2005-0066). Subsequently, the need to revise the monitoring program was recognized and appropriate amendments were adopted in 2014 (Resolution No. R8-2014-0005). These include the requirement that *by (**30 days from*

*Regional Board approval of the BPA**), YVWD and the City of Beaumont shall submit a revised surface water monitoring program to the Regional Board for approval. The monitoring program must be implemented upon Executive Officer approval.*

It is expected that the monitoring program will be reviewed as it is implemented over time, and that further updates may be necessary. YVWD and the City of Beaumont committed to review the surface water monitoring program (and the groundwater monitoring program, see #2, below) as part of the determination of ambient groundwater quality, which occurs every three years pursuant to Basin Plan requirements (see #6, below). Though considered unlikely, it is possible that more frequent review and revision of these monitoring programs may be necessary. Accordingly, the Basin Plan requires review of the surface water monitoring program in coordination with the ambient quality determination and, further, that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring is to be implemented upon Executive Officer approval.

An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by April 15th of each year.

2. Groundwater Monitoring Program (Table 5-9a, #2)

In response to the maximum benefit program requirements established in 2004 (Resolution No. R8- 2004-0001), in 2005, YVWD and the City of Beaumont submitted a proposed groundwater monitoring program. The Regional Board approved a groundwater monitoring program to determine ambient water quality in the Yucaipa and San Timoteo Groundwater Management Zones (Resolutions No. R8-2005-0065 and R8-2005-0066). The purpose of the groundwater monitoring program is to identify the effects of the implementation of the San Timoteo Groundwater Management Zone "maximum benefit" water quality objectives on water levels and water quality within the San Timoteo Groundwater Management Zone. The groundwater monitoring program has been implemented since 2005. YVWD and the City of Beaumont have since installed additional wells as part of revised groundwater monitoring workplans to ensure adequate data are collected for ambient quality determination. The workplans were approved in 2009 (Resolution No. R8-2009-0034 for YVWD and R8-2009-0035 for the City of Beaumont).

The existing groundwater monitoring implemented by the City of Beaumont and YVWD to comply with the Maximum Benefit program authorized by the 2004 amendments to the salt management plan shall be continued into the future on a cooperative basis until a new monitoring plan is approved by the Executive Officer. Any new monitoring plan developed by the City of Beaumont and/or YVWD shall preserve the geospatial distribution of groundwater wells and the sampling of those wells utilized in the existing Regional Board-approved maximum benefit monitoring program.

As noted above, the groundwater monitoring program will be reviewed as part of regular ambient groundwater quality determinations and may be revised. Once again, more frequent review and revision may be necessary as the monitoring program is implemented over time. Accordingly, the Basin Plan requires that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report, including all raw data and summarizing the results of the approved

groundwater monitoring program, shall be submitted to the Regional Board by April 15th of each year.

3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9b, #3)

YVWD anticipated that demineralization of groundwater or recycled water would be necessary in the future to protect the San Timoteo Groundwater Management Zone and has planned and designed desalting and associated brine disposal facilities. YVWD shall ensure that the planned desalter system is operational by June 30, 2015. The Executive Officer may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9b.

4. City of Beaumont Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9b, #4)

The City of Beaumont shall construct and operate desalting facilities and brine disposal facilities to improve recycled water quality and/or other sources of non-potable supply. A detailed desalter/brine line plan and schedule shall be submitted by January 30, 2015. The schedule shall assure that these facilities are in place within 5 years of Executive Officer approval. The Executive Officer may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9b.

5. YVWD/City of Beaumont Non-potable Water Supply Distribution System (Table 5-9b, # 5)

Both YVWD and the City of Beaumont are planning for the construction of a non-potable supply system to serve a mix of recycled water, un-treated imported water, reverse osmosis permeate (diluent) and/or storm water for irrigation uses and direct non-potable reuse. The intent is to minimize the use of potable water for non-potable uses. Both YVWD and/or the City of Beaumont will produce a non-potable supply for use within the San Timoteo Groundwater Management Zone with a running ten-year average TDS concentration of 400 mg/L. and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the 10-year running average nitrate-nitrogen concentration shall comply with 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). To meet this "maximum benefit" objective, YVWD/City of Beaumont will blend the recycled water with other water sources or desalt the recycled water.

Compliance with the non-potable water supply TDS and/or nitrate-nitrogen objective shall be measured in the non-potable water system as a weighted 10-year average of all water sources added to that system and used within the San Timoteo Groundwater Management Zone.

As part of the Maximum Benefit Annual Report, YVWD and the City of Beaumont shall report on the TDS and nitrogen quality and quantity of all sources of non-potable water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations utilized in the San Timoteo Groundwater Management Zone.

6. Recycled Water Recharge/ Riparian Habitat Maintenance Discharge (Table 5-9b, #6)

The use and recharge of recycled water within the San Timoteo Groundwater Management Zone or the discharge of recycled water to San Timoteo Creek to maintain the riparian habitat

and the demonstration of “maximum benefit” are contingent on the recharge/discharge of recycled water as a 10-year annual average (running average) TDS concentration of 400 mg/L and nitrate-nitrogen concentration of 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the “maximum benefit” objective of 5 mg/L will be met). These concentrations may be achieved by desalting or other treatment of the recycled water, and/or by blending the recycled water with other sources, such as imported water, reverse osmosis permeate (diluent) and/or storm water.

Compliance with these concentrations shall be measured at the point of discharge(s) to the recharge facility or at the end of pipe for a recycled water discharge as a weighted average concentration of the recycled water and other sources, if any, used for blending.

As part of the Maximum Benefit Annual Report, YVWD and/or the City of Beaumont shall report on the TDS and nitrogen quality and quantity of all sources of recharged water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations recharged to the San Timoteo Groundwater Management Zone.

7. Improve Surface Water Discharge Quality to the San Timoteo Groundwater Management Zone (Table 5-9b, #7)

YVWD and the City of Beaumont wastewater discharges to the unlined reach of San Timoteo Creek impact the quality of the San Timoteo Groundwater Management Zone. In order to protect underlying groundwater Management Zone quality, by (**30 days from Regional Board approval of this Basin Plan amendment*), the City of Beaumont and YVWD shall submit a proposed plan and schedule to improve the quality of wastewater discharged to the portion of San Timoteo Creek overlying the San Timoteo Groundwater Management Zone in order to assure compliance with the Groundwater Management Zone “maximum benefit” objectives. A contingency plan and schedule to meet the “antidegradation” objectives for the Groundwater Management Zone shall also be identified and implemented upon a finding by the Regional Board that “maximum benefit” is not demonstrated and that the “antidegradation” objectives apply. The plan must be implemented upon Executive Officer approval.

8. Antidegradation Objectives Salt Mitigation Plan (Table 5-9b, #8)

Within (***1 year of approval by OAL of the BPA***), YVWD and the City of Beaumont shall submit a Salt Mitigation Plan to mitigate excess salt loading above the antidegradation water quality objectives. The Salt Mitigation Plan shall provide a conceptual framework for mitigation projects should the Regional Board make a finding that the lowering of water quality associated with the “maximum benefit” TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the “antidegradation” objectives) is not of maximum benefit to the people of the state. The Salt Mitigation Plan must be implemented within 30 days of a Regional Board finding that maximum benefit is no longer being achieved.

9. Ambient Groundwater Quality Determination (Table 5-9b, # 8)

By July 1, 2014, and every three years thereafter, YVWD and the City of Beaumont shall submit a determination of ambient TDS and nitrate-nitrogen quality in the San Timoteo Groundwater Management Zone. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen “antidegradation” water quality objectives for groundwater Management Zones within the region. [Ref. 1].

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the "maximum benefit" objectives, the Regional Board will revise the waste discharge requirements and producer/user reclamation requirements for the YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For surface water discharges that affect the San Timoteo Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 400 mg/L TDS and 6.7 mg/L TIN. These limits are based on the "maximum benefit" objectives of the San Timoteo Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the YVWD's waste discharge requirements, as necessary and appropriate.

YVWD's waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water, reverse osmosis permeate (diluent) or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water, reverse osmosis permeate (diluent), or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the San Timoteo Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

2. Revision to the City of Beaumont NPDES Permit

To implement the "maximum benefit" objectives, the Regional Board will revise the waste discharge requirements for the City of Beaumont's wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For discharges to the San Timoteo Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average not to exceed 400 mg/L TDS and 6.7 mg/L TIN to be determined at the end of pipe. These limits are based on the "maximum benefit" objectives of the San Timoteo Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative limits are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the City's waste discharge requirements, as necessary and appropriate.

The City of Beaumont's waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone. The use of recycled water for irrigation and other direct reuse shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Timoteo Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the San Timoteo Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

3. Review of Project Status

The Regional Board intends to review periodically YVWD's and the City of Beaumont's implementation of the maximum benefit program commitments described above and summarized in Table 5-9b. This review is intended to determine whether the commitments are met, and whether the application of the "maximum benefit" objectives continues to be justified. As indicated above, if, as a result of this review, the Regional Board finds that the YVWD and/or the City of Beaumont commitments are not met, then the Regional Board may make the finding that the "maximum benefit" objectives are not consistent with the maintenance of water quality that is of maximum benefit to the people of the state, and that the more stringent "antidegradation" objectives for the San Timoteo Groundwater Management Zone (300 mg/L for TDS and 2.7 mg/L for nitrate-nitrogen; see Chapter 4) must apply instead for regulatory purposes. In the event that the Regional Board makes these determinations, the Regional Board will require that YVWD and/or the City of Beaumont, either individually or collectively, implement the Salt Mitigation Plan (see commitment # 8) and mitigate the adverse water quality effects, both on the immediate and downstream waters, which resulted from recycled water discharges based on the "maximum benefit" objectives.

3. Beaumont Groundwater Management Zone – Yucaipa Valley Water District, the City of Beaumont, the City of Banning, Beaumont Cherry Valley Water District, San Gorgonio Pass Agency

The application of the “maximum benefit” objectives established for the Beaumont Groundwater Management Zone is contingent on the implementation of commitments by the YVWD, the City of Beaumont, the City of Banning, Beaumont Cherry Valley Water District (BCVWD), and the San Gorgonio Pass Water Agency (Pass Agency) to implement a specific water and wastewater resources management program identified in the Regional Strategy [Ref. 10D]. This program is part of a coordinated effort by these agencies to develop and implement projects that will assure reliable water supplies to meet rapidly increasing demands in this area. The Regional Strategy entails enhanced recharge of native and recycled water, maximizing the direct use of recycled water, optimizing the direct use of imported water, recharge and conjunctive use. The maximum benefit commitments identified in the Regional Strategy for the Beaumont Groundwater Management Zone will be implemented by the City of Beaumont, BCVWD, YVWD, the Pass Agency and the City of Banning. The Regional Strategy forms the basis for the Beaumont Groundwater Management Zone maximum benefit program discussed below.

Wastewater collection and treatment services are provided by the City of Beaumont, the City of Banning, as well as YVWD. The City of Beaumont discharges tertiary treated wastewater to Cooper’s Creek, a tributary of San Timoteo Creek, Reach 3. This unlined reach of the Creek overlies and recharges both the Beaumont and San Timoteo Groundwater Management Zones. The City of Banning does not currently utilize recycled water in the Beaumont Management Zone. The City of Banning has selected to participate in the Maximum Benefit program and commitments if it becomes necessary to use recycled water.

Table 5-9c identifies the projects and requirements that must be implemented by the cities of Beaumont and Banning, YVWD, BCVWD, and the Pass Agency to demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained with the applications of the “maximum benefit” objectives. Table 5-9c also specifies an implementation schedule. The Regional Board will revise waste discharge requirements for the City of Beaumont and YVWD, and will work with the Colorado River Water Board to ensure discharges from the City of Banning comply with the maximum benefit requirements. The Regional Board will also consider issuance of waste discharge requirements for BCVWD and take other actions as necessary to require that these commitments be met by the responsible parties.

Dilution of recycled water with water to meet the 330 mg/L TDS concentration and the 5 mg/L nitrate-N concentration recycled water recharge and direct use requirements will be limited to new water recharge such as reverse osmosis permeate (diluent), imported water or new storm water. New storm water recharge is defined as storm water recharged in quantities greater than historical amounts (net increase) over the groundwater management zone since January 1, 2004. January 2004 corresponds to the month and year when the Regional Board authorized the original maximum benefit objectives and compliance commitments by adopting Resolution No. R8-2004-0001.

Table 5-9c
Beaumont Groundwater Management Zone
Maximum Benefit Commitments

Responsible Agencies – Yucaipa Valley Water District, City of Beaumont, City of Banning, San Geronio Pass Water Agency, Beaumont Cherry Valley Water District

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>1. Surface Water Monitoring Program</p> <p>a. Submit Draft Revised Monitoring Program to Regional Board</p> <p>b. Implement Revised Monitoring Program</p> <p>c. Submit Draft Revised Monitoring Program(s) (subsequent to that required in "a", above) to Regional Board</p> <p>d. Implement Revised Monitoring Program (s)</p> <p>e. Annual data report submittal</p>	<p>a. (**30 days from Regional Board approval of BPA)</p> <p>b. Upon Executive Officer approval</p> <p>c. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</p> <p>d. Upon Executive Officer approval</p> <p>e. April 15th</p>
<p>2. Groundwater Monitoring Program</p> <p>a. Submit Draft Revised Monitoring Program(s)</p> <p>b. Implement revised monitoring plan(s)</p> <p>c. Annual data report submittal</p>	<p>a. Every three years, in coordination with ambient water quality determination (#6, below) or more frequently upon notification of the need to do so from the Regional Board Executive Officer and in accordance with the schedule prescribed by the Executive Officer</p> <p>b. Upon Executive Officer approval</p> <p>c. April 15th</p>
<p>3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</p> <p>Complete construction of Desalter and Brine Disposal Facilities</p>	<p>June 30, 2015 (or as provided by the Executive Officer - see text below)</p>
<p>4. City of Beaumont, Wastewater and/or Groundwater Desalter(s) and Brine Disposal Facilities</p> <p>a. Submit detailed plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to operational as soon as possible but no later than 5 years from date of Executive Officer approval of plan/schedule or as</p>	<p>a. January 30, 2015</p>

**Table 5-9c
Beaumont Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agencies – Yucaipa Valley Water District, City of Beaumont, City of Banning, San Geronio Pass Water Agency, Beaumont Cherry Valley Water District

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>provided by the Executive Officer (see text below).</p> <p>b. Implement the plan and schedule</p>	<p>b. Upon Executive Officer approval</p>
<p>5. City of Banning, Wastewater and/or Groundwater Salt Mitigation Plan</p> <p>a. Submit detailed plan and schedule for achieving compliance with the maximum benefit objectives.</p> <p>b. Implement the plan and schedule</p>	<p>a. 6 months prior to initiation of the use recycled water application or recharge</p> <p>b. Upon Executive Officer approval</p>
<p>6. Non-potable recycled water supply</p> <p>YVWD, the City of Beaumont, the City of Banning (at the onset of recycled water use in the Beaumont Basin), BCVWD and the Pass Agency shall implement non-potable water supply systems (utilizing recycled water) to serve water for irrigation purposes and direct non-potable reuse. The non-potable supplies used in the Beaumont Groundwater Management Zone shall comply with a 10-year running average TDS concentration of 330 mg/L or less and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the nitrate-nitrogen shall be less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</p>	<p>December 31, 2015</p>
<p>7. Recycled water recharge</p> <p>The recharge of recycled water in the Beaumont Groundwater Management Zone shall be limited to the amount that can be blended with other recharge sources or reverse osmosis diluent to achieve a 10-year running average equal to or less than the 330 mg/L "maximum benefit" TDS objective and less than or equal to the 5 mg/L nitrate-nitrogen "maximum benefit" objective (taking the nitrogen loss coefficient into consideration).</p> <p>Submit documentation of amount, TDS and nitrogen quality of all sources of recharge and recharge locations.</p> <p>For any discharger proposing to utilize "new" storm water as a blending source, the following steps must be followed:</p> <p>a. Submit for Executive Officer approval, a report that identifies the methodology used in calculating baseline (2004) and "new" storm water (post 2004) recharge. The report shall identify the amount, locations, TDS and nitrogen quality of storm water recharge and any imported water recharge. Further, the report shall identify the manner in which the</p>	<p>Compliance must be achieved by end of 10th year after initiation of recycled water use/recharge operations.</p> <p>Annually, by April 15th, after initiation construction of facilities/implementation of programs to support enhanced recharge.</p> <p>a. 6 months prior to initiation of construction of any basins/other facilities to support enhanced storm water/imported water recharge</p>

**Table 5-9c
Beaumont Groundwater Management Zone
Maximum Benefit Commitments**

Responsible Agencies – Yucaipa Valley Water District, City of Beaumont, City of Banning, San Gorgonio Pass Water Agency, Beaumont Cherry Valley Water District

Description of Commitment	Compliance Date – as soon as possible, but no later than
<p>enhanced storm water/imported water recharge facility will assure, individually or with other facilities, compliance with the 330 mg/L TDS and 5 mg/L nitrate-nitrogen 10-year running average “maximum benefit” objective.</p> <p>The report will be posted for public comment for 30 days. If there are significant adverse comments received on this report, the Executive Officer will present the report to the Regional Board for its consideration at a regularly scheduled meeting.</p> <p>b. Submit 5-year plan for implementation of additional storm water recharge facilities to ensure compliance with the 330 mg/L TDS and the 5 mg/L 10-year running average “maximum benefit” objective.</p>	<p>b. Submit as part of each Report of Waste Discharge (ROWD)</p>
<p>8. Antidegradation Salt Mitigation Plan</p> <p>a. Submit a proposed Salt Mitigation Plan and Implementation Schedule</p> <p>b. Implement Salt Mitigation Plan</p>	<p>a. Within (**1 year from OAL approval of BPA)</p> <p>b. Within 30 days of Regional Board finding that maximum benefit no longer being achieved</p>
<p>9. Ambient groundwater quality determination</p>	<p>July 1, 2014 and every 3 years thereafter</p>

A. Description of Yucaipa Valley Water District (YVWD), City of Beaumont, Beaumont Cherry Valley Water District (BCVWD), City of Banning, San Gorgonio Pass Water Agency (Pass Agency) Commitments for the Beaumont Management Zone

1. Surface Water Monitoring Program (Table 5-9c, # 1)

A surface water monitoring program was developed, approved and implemented in response to the maximum benefit commitments initially incorporated in the Basin Plan in 2004 (Resolution No. R8-2004-0001). The Regional Board approved the Surface Water Monitoring Program in 2005 (Resolution No. R8-2005-0066). Subsequently, the need to revise the monitoring program was recognized and appropriate amendments were adopted in 2014 (Resolution No. R8-2014-0005). These include the requirement that by (**30 days from Regional Board approval of the BPA**), YVWD BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall submit a revised surface water monitoring program to the Regional Board for approval. The monitoring program must be implemented upon Executive Officer approval.

It is expected that the monitoring program will be reviewed as it is implemented over time, and that further updates may be necessary. YVWD, the City of Beaumont, the City of Banning, the Pass Agency and BCVWD committed to review the surface water monitoring program (and the groundwater monitoring program, see #2, below) as part of the determination of ambient groundwater quality, which occurs every three years pursuant to Basin Plan requirements (see #6, below). Though considered unlikely, it is possible that more frequent review and revision of these monitoring programs may be necessary. Accordingly, the Basin Plan requires review of the surface water monitoring program in coordination with the ambient quality determination and, further, that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report summarizing all data collected for the year and evaluating compliance with relevant surface water objectives shall be submitted by April 15th of each year.

2. Groundwater Monitoring Program (Table 5-9c, #2)

In response to the maximum benefit program requirements established in 2004 (Resolution No. R8- 2004-0001), a proposed groundwater monitoring program was submitted in 2005. The Regional Board approved a groundwater monitoring program to determine ambient water quality in the Beaumont Groundwater Management Zone (Resolution No. R8-2005-0066). The purpose of the Groundwater Monitoring Program is to identify the effects of the implementation of the Beaumont Groundwater Management Zone maximum benefit water quality objectives on water levels and water quality within the Beaumont Groundwater Management Zone. The groundwater monitoring program has been implemented since 2005 and YVWD, the City of Beaumont, the City of Banning, the Pass Agency and BCVWD must continue to implement that program.

The existing groundwater monitoring implemented by the City of Beaumont and YVWD to comply with the Maximum Benefit program authorized by the 2004 amendments to the salt management plan shall be continued into the future on a cooperative basis by all of the maximum benefit partners until a new monitoring plan is approved by the Executive Officer. Any new monitoring plan developed shall preserve the geospatial distribution of groundwater wells and the sampling of those wells utilized in the existing Regional Board-approved maximum benefit monitoring program.

As noted above, the groundwater monitoring program will be reviewed as part of regular ambient groundwater quality determinations and may be revised. Once again, more frequent review and revision may be necessary as the monitoring program is implemented over time. Accordingly, the Basin Plan requires that draft revised monitoring programs be submitted upon notification by the Regional Board's Executive Officer of the need to do so. The schedule for the submittal will be prescribed by the Executive Officer. Any such revision to the monitoring program is to be implemented upon Executive Officer approval.

An annual report, including all raw data and summarizing the results of the approved groundwater monitoring program, shall be submitted to the Regional Board by April 15th of each year.

3. YVWD Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9c, #3)

YVWD anticipated that demineralization of groundwater or recycled water would be necessary in the future to protect the Beaumont Groundwater Management Zone and has constructed desalting and associated brine disposal facilities. YVWD shall ensure that the planned desalter system is operational by June 30, 2015. The Regional Board may extend this compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9a.

4. City of Beaumont Wastewater and/or Groundwater Desalter(s) and Brine Disposal (Table 5-9c, #4)

The City of Beaumont shall construct and operate desalting facilities and brine disposal facilities to improve recycled water quality and/or other sources of non-potable supply. A detailed desalter/brine line plan and schedule shall be submitted by January 30, 2015. The schedule shall assure that these facilities are in place within 5 years of Executive Officer approval. The Executive Officer may extend the compliance date upon submittal of compelling evidence that the extension is warranted and would not compromise timely implementation of the other maximum benefit program commitments identified in Table 5-9c.

5. City of Banning Salt Mitigation Plan (Table 5-9c, #5)

The City of Banning shall submit a plan and schedule to improve recycled water quality and/or other sources of non-potable supply. The plan and schedule shall be submitted 6 months prior to the initiation of recycled water application or recharge and must be implemented upon Executive Officer approval.

6. Non-potable Recycled Water Supply Distribution System (Table 5-9c, # 6)

A key element of resources management plan in areas overlying the Beaumont Groundwater Management Zone is the construction of a non-potable supply system to serve a mix of recycled water and un-treated imported water and/or storm water for irrigation uses and direct non-potable reuse. The intent is to minimize the use of potable water for non-potable uses. YVWD, the City of Beaumont and the City of Banning will produce a non-potable supply with a running ten-year average TDS concentration for the Beaumont Groundwater Management Zone of 330 mg/L and, in addition, for any non-irrigation reuse that has the potential to affect groundwater quality, the 10-year running average nitrate-nitrogen concentration shall comply with 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). To meet this "maximum benefit" objective, YVWD, the City of Beaumont and the City of Banning, BCVWD and San Geronio Pass Agency will blend the recycled water with other water sources or desalt the recycled water as needed.

Compliance with the non-potable water supply TDS and nitrate-nitrogen objective shall be measured in the non-potable water system as a weighted 10-year running average of all water sources added to that system and used within the Beaumont Groundwater Management Zone.

As part of the Maximum Benefit Annual Report, YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall report on the TDS and nitrogen quality and quantity of all sources of non-potable water and summarize the annual and 10-year annual weighted TDS

and nitrogen average concentrations utilized in the Beaumont Groundwater Management Zone.

7. Recycled Water Recharge (Table 5-9c, # 7)

The use and recharge of recycled water within the Beaumont Groundwater Management Zone are necessary to maximize the use of the water resources of the Beaumont area. The demonstration of "maximum benefit" and the continued application of the "maximum benefit" objectives are contingent on the recharge of recycled water to the Beaumont Groundwater Management Zone of a 10-year annual average (running average) TDS concentration of 330 mg/L and nitrate-nitrogen concentration of 6.7 mg/L (taking the 25% nitrogen loss coefficient into account to assure that the "maximum benefit" objective of 5 mg/L will be met). These concentrations may be achieved by desalting or other treatment of the recycled water, and/or by blending the recycled water with other sources, such as imported water and/or storm water.

Compliance with these concentrations shall be measured at the point of discharge(s) to the recharge facility as a weighted average concentration of the recycled water and other sources, if any, used for blending.

As part of the Maximum Benefit Annual Report, YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall report on the TDS and nitrogen quality and quantity of all sources of recharged water and summarize the annual and 10-year annual weighted TDS and nitrogen average concentrations recharged to the Beaumont Groundwater Management Zone.

8. Antidegradation Objectives Salt Mitigation Plan (Table 5-9c, #8)

Within (**1 year of approval by OAL of the BPA**), YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall submit a Salt Mitigation Plan to mitigate excess salt loading above the antidegradation water quality objectives. The Salt Mitigation Plan shall provide a conceptual framework for mitigation projects should the Regional Board make a finding that the lowering of water quality associated with the "maximum benefit" TDS and nitrate-nitrogen water quality objectives that are higher than historical water quality (the "antidegradation" objectives) is not of maximum benefit to the people of the state. The Salt Mitigation Plan must be implemented within 30 days of a Regional Board finding that maximum benefit is no longer being achieved.

9. Ambient Groundwater Quality Determination (Table 5-9c, # 8)

By July 1, 2014, and every three years thereafter, YVWD, BCVWD, the Pass Agency, the City of Beaumont and the City of Banning shall submit a determination of ambient TDS and nitrate-nitrogen quality in the Beaumont Groundwater Management Zone. This determination shall be accomplished using methodology consistent with the calculation (20-year running averages) used by the Nitrogen/TDS Task Force to develop the TDS and nitrate-nitrogen "antidegradation" water quality objectives for groundwater Management Zones within the region. [Ref. 1].

B. Implementation by Regional Board

1. Revision to Yucaipa Valley Water District NPDES Permit

To implement the “maximum benefit” objectives, the Regional Board will revise the waste discharge requirements and producer/user reclamation requirements for the YVWD wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For any surface water discharges that affect the Beaumont Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 330 mg/L TDS and 6.7 mg/L TIN. These limits are based on the “maximum benefit” objectives of the Beaumont Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the YVWD’s waste discharge requirements, as necessary and appropriate.

YVWD’s waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as new storm water or imported water, to achieve 10-year running average concentrations equal to or less than the “maximum benefit” TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the “maximum benefit” TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified for recycled water recharge and re-use in the Beaumont Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

2. Revision to the City of Beaumont NPDES Permit

To implement the “maximum benefit” objectives, the Regional Board will revise the waste discharge requirements and producer/user reclamation requirements for the City of Beaumont wastewater discharges to reflect the commitments described above, as appropriate. This includes the following:

For surface water discharges that affect the Beaumont Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 330 mg/L TDS and 6.7 mg/L TIN. These limits are based on the “maximum benefit” objectives of the Beaumont Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the “antidegradation” objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the City of Beaumont’s waste discharge requirements, as necessary and appropriate.

The City of Beaumont's waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the Beaumont Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

3. Revision of City of Banning NPDES Permit

Discharges from the City of Banning are currently regulated by the Colorado River Water Board. To implement the "maximum benefit" objectives, the Santa Ana Water Board will work with the Colorado River Water Board to revise the NPDES permit for the City of Banning's wastewater discharge to reflect the commitments described below, as appropriate.

For any surface water discharges that affect the Beaumont Groundwater Management Zone, discharge limits for TDS and TIN will be specified as an annual volume-weighted average at the end of pipe not to exceed 330 mg/L TDS and 6.7 mg/L TIN. These limits are based on the "maximum benefit" objectives of the Beaumont Groundwater Management Zone shown in Table 4-1 and take the nitrogen loss coefficient into account. Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified and will apply should the Regional Board find that maximum benefit is not demonstrated. These alternative objectives are also specified in Table 4-1. Compliance schedules for these alternative limits will be specified in the City of Banning's waste discharge requirements, as necessary and appropriate.

The City of Banning waste discharge requirements will require that any planned recharge of recycled water shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone. The use of recycled water for irrigation and other direct re-use shall be limited to the amount that can be blended with other water sources, such as storm water or imported water, to achieve 10-year running average concentrations equal to or less than the "maximum benefit" TDS and nitrate-nitrogen objectives for the Beaumont Groundwater Management Zone.

Alternative TDS and nitrate-nitrogen limitations based on the "antidegradation" objectives will also be specified for recycled water recharge and re-use in the Beaumont Groundwater Management Zone and will apply if the Regional Board finds that the maximum benefit commitments are not met.

4. Review of Project Status

The Regional Board intends to review periodically YVWD, the City of Beaumont, the City of

Banning, BCVWD and the Pass Agency's implementation of the maximum benefit program commitments described above and summarized in Table 5-9c. This review is intended to determine whether the commitments are met, and whether the application of the "maximum benefit" objectives continues to be justified. As indicated above, if, as a result of this review, the Regional Board finds that the commitments are not met, then the Regional Board may make the finding that the "maximum benefit" objectives are not consistent with the maintenance of water quality that is of maximum benefit to the people of the state, and that the more stringent "antidegradation" objectives for the Beaumont Groundwater Management Zone (230 mg/L for TDS and 1.5 mg/L for nitrate-nitrogen; see Chapter 4) must apply instead for regulatory purposes. In the event that the Regional Board makes these determinations, the Regional Board will require that YVWD, the City of Beaumont, the City of Banning, BCVWD and the Pass Agency, either individually or collectively, implement the Salt Mitigation Plan (see commitment # 6) and mitigate the adverse water quality effects, both on the immediate and downstream waters, which resulted from recycled water discharges based on the "maximum benefit" objectives.

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Insert the following language

Minimum Lot Size Requirements and Exemption Criteria for New Developments Using On-Site Septic Tank-Subsurface Leaching/Percolation Systems

[These Requirements shall sunset no later than May 13, 2018. If a Local Agency Management Plan (LAMP) developed pursuant to the State Water Resources Control Board's Onsite Wastewater Treatment System Policy is approved prior to that date, the LAMP shall supersede these requirements as of the date of approval.]

Page 5-204ff**REFERENCES:**

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2. Wildermuth Environmental, Inc., “Santa Ana Watershed Data Collection and Management Program, Final Technical Memorandum,” October 2001.
3. Wildermuth Environmental, Inc., “TIN/TDS Study - Phase 2B of the Santa Ana Watershed, Wasteload Allocation Investigation Memorandum,” October 2002.
4. Wildermuth Environmental, Inc., Memo to TIN/TDS Task Force, “Transmittal of Final Tables, Figures and CD in Support of Basin Plan Amendments – TIN/TDS Study,” October 2002.
5. Wildermuth Environmental, Inc., “June 2003 Addendum TIN/TDS Study – Phase 2B of the Santa Ana Watershed Wasteload Allocation Investigation,” July 2003
6. California Regional Water Quality Control Board – Santa Ana Region, “Guidelines for Sewage Disposal from Land Developments,” January 1979.
7. State Water Resources Control Board, “Order No. 73-4, Rancho Caballero Decision,” April 1972.
8. Department of Water Resources, “Mineral Increases from Municipal Use of Water in the Santa Ana River Basin,” Memorandum Report, June 1982.
9. City of Riverside, Memo from Rod Cruze to TIN/TDS Task Force,” Nitrogen Loss Assumptions for Reach 3 of the Santa Ana River,” April 2002.
- 10A. No entry.
- 10B. Chino Basin Watermaster, Letter to Gerard Thibeault, “Chino Basin Watermaster Proposal for New Total Dissolved Solids (TDS) and Nitrogen Water Quality Objectives for the Chino and Cucamonga Basins Based on Maximum Beneficial Use,” December 2002.
- 10C. Chino Basin Watermaster, “Chino Basin Optimum Basin Management Plan,” 1999.
- 10D. City of Banning, Beaumont Cherry Valley Water District, San Gorgonio Pass Water Agency, Yucaipa Valley Water District, (2011), Proposed Regional Implementation of Maximum Benefit Commitments for the Beaumont Management Zone. Preliminary Draft
- 10E. San Timoteo Watershed Management Agency, Letter to Gerard Thibeault, “Revised San Timoteo Watershed Management Agency Proposal for New Total Dissolved Solids (TDS) and Total Inorganic Nitrogen Water Quality Objectives for the Beaumont, San Timoteo and Yucaipa Management Zones Based on Maximum Beneficial Use,” December 2002 (Revised November 11, 2003).

10F. Daniel B. Stephens & Associates. (2007), Quantification of Nitrogen Removal Under Recycled Water Ponds, Prepared for Eastern Municipal Water District.