California Regional Water Quality Control Board
Santa Ana Region

October 29, 2010

ITEM: **8**

SUBJECT: **Resolution No. R8-2010- 0039**
Basin Plan Amendment - Revised total dissolved solids (TDS) and Nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone based on the demonstration of maximum benefit to the people of California.

EXECUTIVE SUMMARY

Federal law requires states to establish water quality standards (beneficial uses, water quality criteria, and an antidegradation policy) for all water bodies within the state's jurisdiction, and to review those standards at least once every three years. The Porter - Cologne Water Quality Control Act (Division 7, "Water Quality", of the California Water Code) establishes similar requirements in state law. For the Santa Ana Region, these standards were established in the 1975, 1984 and 1995 Water Quality Control Plans, Santa Ana River Basin (Basin Plans)[1].

On January 22, 2004, the Santa Ana Regional Water Quality Control Board adopted Resolution No. R8-2004-0001 to amend the Basin Plan for the Santa Ana River Basin. The Amendment included revised boundaries for groundwater subbasins, now termed "groundwater management zones", revised total dissolved solids (TDS) and nitrate-nitrogen objectives for those zones, revised TDS and nitrogen wasteload allocations for discharges of recycled water to the Santa Ana River and its tributaries, and revised reach designations for certain surface waterbodies. To accommodate reclamation projects in the Region, alternative water quality objectives ("Maximum Benefit" objectives) were established for certain groundwater management zones. The approval of these objectives was contingent on a specific set of commitments by the proponents of the maximum benefit objectives to implement basin-wide water supply and water quality management programs, including salt removal projects, monitoring programs and conjunctive use programs – all developed to ensure that the beneficial uses of the groundwater management zones will be protected and that water quality consistent with maximum benefit to the people of the state will be maintained. The State Water Resources Control Board (State Water Board) and Office of Administrative Law (OAL) approved the Amendment on September 30, 2004 and December 23, 2004, respectively. The surface water standards provisions of the Amendment were approved by the U.S. Environmental Protection Agency on January 20, 2007.

Since the adoption of Resolution No. R8-2004-0001, Eastern Municipal Water District (EMWD) has developed a comprehensive "maximum benefit proposal" for the San Jacinto Upper Pressure Management Zone (SJUPMZ). The proposal is to revise the TDS and nitrate-nitrogen objectives for the San Jacinto Upper Pressure Management Zone to accommodate the implementation of the Hemet/San Jacinto Water Management Plan (Management Plan), which is intended to guide and support responsible water management in that area into the future. This Management Plan includes use of recycled water in the SJUPMZ and other water management activities and was developed through a coordinated effort among Eastern Municipal Water District (EMWD), Lake Hemet Municipal Water District (LHMWD), the city of Hemet, the city of San Jacinto, and two of the area's largest farming operations. The primary

[1] The Basin Plan was updated in 2008. This update did not include any substantive changes to the Plan. The purpose of the update was to incorporate in the text the separate amendments that had been approved subsequent to the re-publication of the Basin Plan in 1995.

benefits of the Management Plan are to reduce local groundwater overdraft and increase the sustainability and reliability of the local groundwater resources, to maximize use of recycled water produced from local water reclamation plants, and to maximize the reasonable and beneficial use of all waters available to the area. All of these activities will be managed by a local Watermaster.

The revision of water quality objectives as proposed would allow a lowering of water quality and therefore, compliance with the state's antidegradation policy (Resolution No.68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California") is required. Lowering of water quality is allowable provided that beneficial uses are protected, that there is best practicable treatment or control of waste discharges, and that the change is consistent with maximum benefit to the people of California. Board staff believes that the proposed revised TDS and nitrate-nitrogen objectives, coupled with water resource management commitments, meet these tests. Therefore, Board staff recommends amendment of the Basin Plan to add "maximum benefit" objectives for total dissolved solids (TDS) and the nitrate-nitrogen water quality for the San Jacinto Upper Pressure Management Zone (SJUPMZ) based on maximum benefit to the people of the state. The maximum benefit commitments that must be satisfied are also delineated in the amendment. The "maximum benefit" objectives would apply unless the Regional Board finds, after a duly noticed public hearing, that the maximum benefit commitments have not been met. In that case, the existing "antidegradation" objectives would apply.

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1.0 Introduction

Federal law and implementing regulations[2] require states to establish water quality standards for all water bodies within the state's jurisdiction. A water quality standard is composed of three parts: 1) the beneficial uses that apply to the waterbody; 2) the water quality criteria (or "objectives", in California terminology) needed to protect those uses; and 3) an antidegradation policy to protect water quality that is already better than the applicable criteria. The Porter-Cologne Water Quality Control Act (Division 7, "Water Quality", of the California Water Code, aka "Porter- Cologne Act") establishes similar requirements in state law.

In California, Regional Water Quality Control Boards enact water quality standards through a formal basin planning process. Each Regional Board publishes a Basin Plan that identifies individual water bodies within its jurisdiction, designates the beneficial uses that apply to each waterbody and specifies the water quality objectives for those water bodies. Although the federal Clean Water Act applies only to surface waters, the Porter-Cologne Act applies to both the ground and surface waters of California.

The San Jacinto River watershed, shown in Figure 1, is located in southwestern Riverside County. One of the major features of this watershed is the extensive groundwater resources that serve as a vital source of water supply in the area. The hydrogeology of the area is characterized by alluvium fills in the valley that serve as excellent permeable aquifers for groundwater storage. The depth of some of the older alluvium is up to 1000 feet. Groundwater replenishment occurs throughout the valley, with natural recharge of storm water and storm flows occurring primarily where the foothills meet the valley floor. The best quality water is within these areas that receive foothill recharge.

Water quality in many of the groundwater management zones in the San Jacinto River Watershed has been degraded over time by agricultural activities and natural conditions. The San Jacinto River Basin is an enclosed basin with high evapotranspiration rates. Rain or other waters that are applied in the San Jacinto basin are not as likely to reach the underlying groundwater because these waters are lost due to the high evaporation rates (hot, dry conditions) and transpiration by plants within this area). Salts in waters applied to land in the area remain in the vadose zone and are eventually transported to the underlying groundwater. Salt levels in most of the groundwater management zones in the San Jacinto River Watershed, as expressed by the concentration of total dissolved solids (TDS), exceed the secondary drinking water standard of 500 mg/L. As shown in Table 2, several of the management zones in the San Jacinto River watershed have water quality objectives, established based on historical ambient TDS concentrations, which exceed 500 mg/L. By comparison, water quality in the Canyon and San Jacinto Upper Pressure management zones is under 500 mg/L TDS. Given this higher quality, water supply entities in this area primarily rely on

[2] 40 Code of Federal Regulations (CFR) 131 Water Quality Standards Regulation

the Upper San Jacinto and/or the Canyon Management Zones as a primary potable supply. As a result, the Canyon and San Jacinto Upper Pressure management zones are threatened by over-pumping and over-draft.

Eastern Municipal Water District (EMWD) is the principal agency responsible for managing the groundwater resources in the San Jacinto River Watershed. EMWD has worked with local cities and farmers to develop two groundwater management plans (one for the western San Jacinto Basin and another for the Eastern San Jacinto Basin). The Eastern San Jacinto Groundwater Management Plan, also known as the Hemet/San Jacinto Water Management Plan, discussed in detail in Section 3.0 and as shown in Figure 2, encompasses the Canyon Management Zone, the Hemet South Management Zone, the San Jacinto Upper Pressure Management Zone and the northern portion of the Lakeview-Hemet North Management Zone. The Hemet/San Jacinto Water Management Plan (Management Plan) was developed to promote responsible water management in the future (Eastern Municipal Water District, 2007).

To support the Hemet/San Jacinto Management Plan (Management Plan), EMWD has developed a comprehensive "maximum benefit" proposal for the San Jacinto Upper Pressure Management Zone that would enable the implementation of water resource management activities pursuant to the Management Plan. This proposal includes recommendations for the adoption of less stringent nitrate-nitrogen and TDS objectives for the San Jacinto Upper Pressure Management Zone. Since the implementation of less stringent water quality objectives would allow the lowering of water quality, the requirements of the state's antidegradation policy, Resolution No. 68-16, must be satisfied before the objectives can be considered for adoption. Specifically, there must be demonstrations that beneficial uses will continue to be protected, that waste discharges will receive best practicable treatment or control, and that water quality consistent with maximum benefit to the people of the state will be maintained. The "maximum benefit" proposal is discussed below.

Figure 1. San Jacinto River Watershed – Management Zones

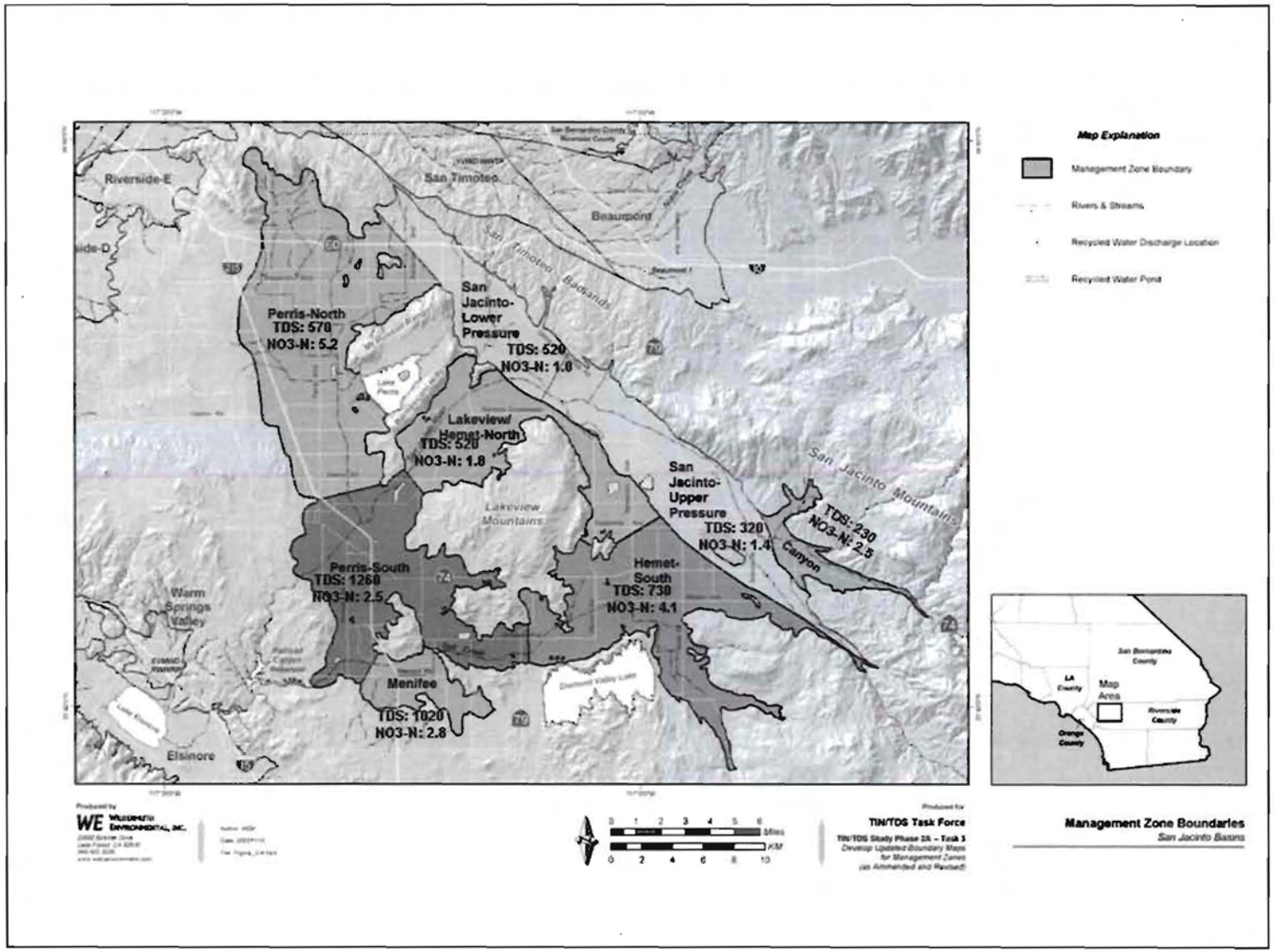
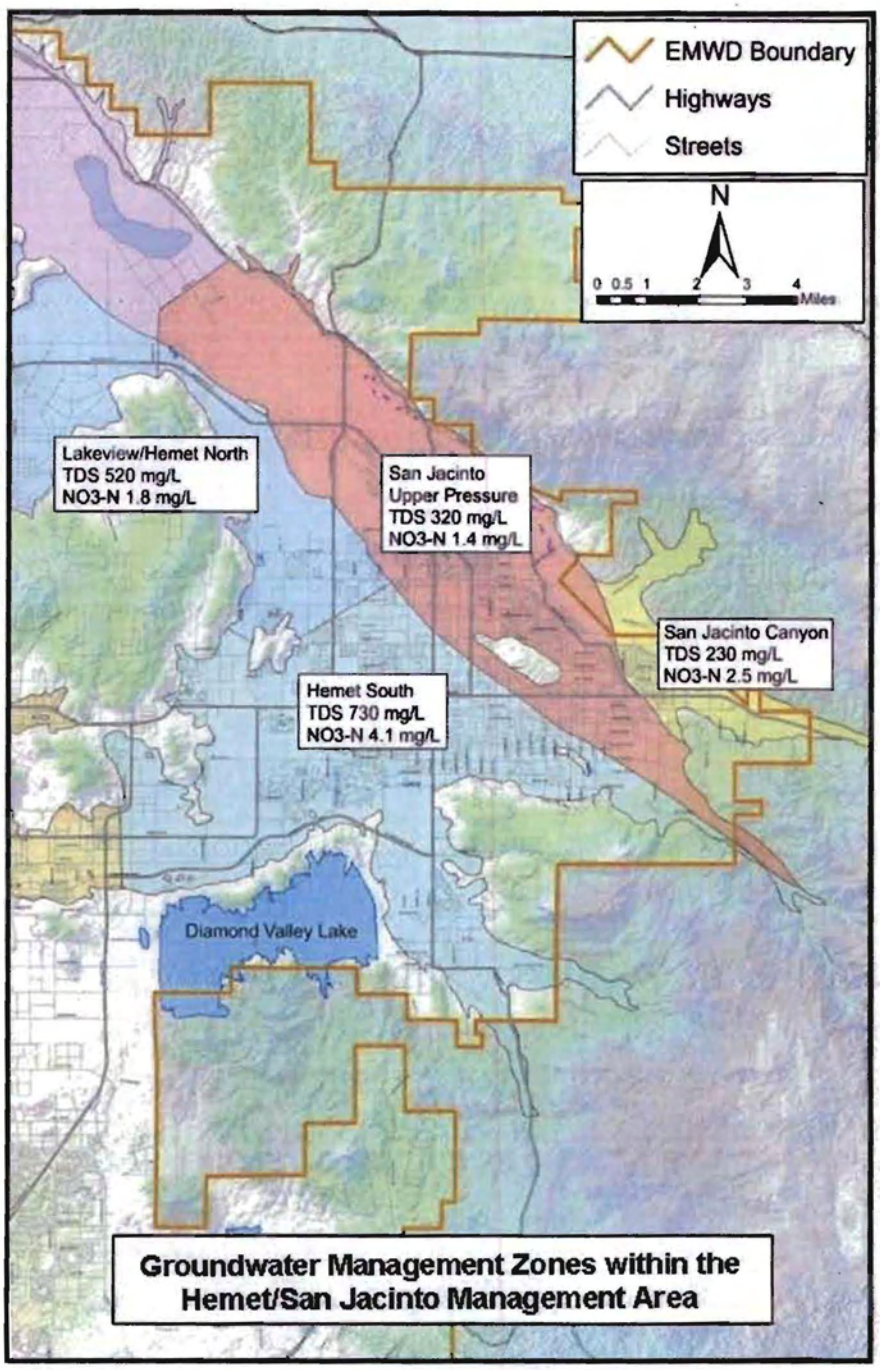


Figure 2. Hemet/ San Jacinto Management Area



2.0 Background

2.1 2004 Basin Plan Amendments: Groundwater Management Zones and "Antidegradation" Objectives

In the mid 1990s, a Santa Ana Region-wide effort was initiated to perform certain investigations on the boundaries and the TDS and nitrate-nitrogen water quality objectives for the groundwater subbasins in the Santa Ana River Watershed. A TIN/TDS Task Force was formed to conduct the necessary studies, which led to the establishment of revised groundwater subbasin boundaries and TDS and nitrate-nitrogen objectives for the revised groundwater subbasins (now termed "management zones"). Regional Board staff, water supply, water-recycling and wastewater agencies, as well as other agencies including the US Geological Survey, participated in the Task Force. Based on the technical investigations and recommendations from the Task Force, the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) was revised in 2004. New TDS and nitrate-nitrogen objectives for the revised groundwater management zones were developed using a statistical analysis of well water quality data for the period of 1954 to 1973, with the resulting well statistics volumetrically averaged to yield a new statistic for each water groundwater management zone (defined as the "historical ambient" water quality). This approach was consistent with the State's antidegradation policy, Resolution No. 68-16. Because these objectives represent historical ambient quality consistent with the antidegradation policy, they are termed "antidegradation" objectives.

The new groundwater management zone boundaries in the San Jacinto River Watershed incorporated into the Basin Plan in 2004 are shown in Figure 1. The beneficial uses identified for each of the management zones are listed in Table 1; TDS and nitrate-nitrogen water quality objectives for each management zone are listed in Table 2 and are also shown in Figure 1. Per the Basin Plan, current ambient quality for all management zones must be determined every three years. This enables the Regional Board and dischargers to determine whether water quality objectives are being achieved, whether findings of assimilative capacity need to be revised, and whether some change in nitrogen and/or TDS management strategy is necessary. The most current determination of ambient quality encompassed the time period of 1987 through 2006 (Wildermuth Environmental Inc., 2008).[3] Current ambient quality for the San Jacinto watershed management zones, as determined for the 20 year time period of 1987-2006, is shown in Table 2. As can be seen in Table 2, there is no TDS or nitrate-nitrogen assimilative capacity in the San Jacinto basins (with the exception of 0.6 mg/L of nitrate-nitrogen assimilative capacity in the Canyon Management Zone). The significance of these assimilative capacity findings is discussed further in Section 3.0.

[3] Current ambient quality has been determined for the following time periods – 1978-1997, 1984-2003 and 1987-2006. Stakeholders are currently in the process of performing a re-calculation of the current ambient quality that will cover the time period of 1990-2009. These results are due to be reported to the Regional Board no later than June 30, 2011.

Table 1. Beneficial Uses of Groundwater Management Zones in the San Jacinto River Watershed

Management Zones	Beneficial Use			
	MUN	AGR	IND	PROC
Canyon	X	X	X	X
Hemet South	X	X	X	X
Lakeview/Hemet North	X	X	X	X
Menifee	X	X		X
Perris North	X	X	X	X
Perris South	X	X		
San Jacinto Lower Pressure	X	X	X	
San Jacinto Upper Pressure	X	X	X	X

MUN - Municipal and domestic water supply
AGR - Agricultural water supply
IND - Industrial service water supply
PROC - Industrial process water supply

Table 2. TDS/Nitrate-nitrogen Objectives and Current (2006)[1] Ambient Quality for Groundwater Management Zones in the San Jacinto River Watershed

Management Zones	TDS			NO_3-N		
	Water Quality Objective (mg/L)	Current Ambient (mg/L)	Assimilative Capacity (mg/L)	Water Quality Objective (mg/L)	Current Ambient (mg/L)	Assimilative Capacity (mg/L)
Canyon	230	370	none	2.5	1.9	0.6
Hemet South	730	920	none	4.1	5.5	none
Lakeview/Hemet N.	520	880	none	1.8	2.7	none
Menifee	1020	2140	none	2.8	4.7	none
Perris North	570	730	none	5.2	6.5	none
Perris South	1260	2600	none	2.5	5.5	none
San Jacinto Lower Pressure	520	810	none	1.0	1.2	none
San Jacinto Upper Pressure	**320**	**350**	**none**	**1.4**	**1.6**	**none**

[1] Current ambient water quality as determined by Wildermuth Environmental, Inc., 2008.

2.2 2004 Basin Plan Amendments: "Maximum Benefit" Objectives

In addition to the antidegradation objectives established in the 2004 Basin Plan Amendment, an alternative set of "maximum benefit" objectives were established for specific groundwater management zones. These "maximum benefit objectives", which are less stringent than the applicable antidegradation objectives, were developed and approved to accommodate water resource management plans formulated by specific agencies and parties. These plans incorporated, in part, the expanded use and recharge of recycled water. Adoption of these less stringent objectives required the demonstration of conformance with the antidegradation policy, *i.e.*, that the beneficial uses of the affected waters would continue to be protected, that waste discharges would be provided best practicable treatment or control, and that water quality consistent with maximum benefit to the people of the state would be maintained. The proponents of the "maximum benefit" objectives made these demonstrations. The "maximum benefit" demonstrations were contingent on the implementation by the proponents of specific programs and projects identified in the Basin Plan. If these programs and projects are not implemented to the Regional Board's satisfaction, then the alternative "antidegradation" objectives apply to the affected waters for regulatory purposes.

In considering approval of the "maximum benefit" objectives and whether the demonstration of maximum benefit to the people of California had been made by the project proponents, the Regional Board gave great weight to the fact that the "maximum benefit" proposals would enhance recycled water use and recharge, displace the use of potable water and contribute to the optimal use of water resources. These results are consistent with the goals and expectations expressed by the California Legislature and the State Water Resources Control Board. The Legislature has declared that:

> *"...the people of the state have a primary interest in the development of facilities to recycle water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state... it is the intention of the legislature that the state undertake all possible steps to encourage development of water recycling facilities..."*
> *(California Water Code (CWC), Sec. 13510 & 13512)*

The California Water Code further specifies that:

> *"...adequately treated recycled water should, where feasible, be made available to supplement existing surface and underground supplies and to assist in meeting future water requirements of the coastal zone." (CWC, Sec. 13142.5 (e)(1))*

Reflecting these legislative commitments, in 1977, the State Water Resources Control Board (State Board) adopted Resolution No. 77-1, "Policy with Respect to Water Reclamation in California", directing the State Board and Regional Boards to encourage

reclamation and reuse and to implement a "Plan of Action for Water Reclamation in California" (December 1976)[4]. It was recognized that Regional Boards would likely need to review water quality objectives in light of the adoption of this plan and policy. More recently (2009), the State Board adopted the "Policy for Water Quality Control for Recycled Water" (Resolution No. 2009-0011). This Policy establishes goals that promote sustainable local water supplies, in part by increasing the acceptance and promoting the use of recycled water. This includes the substitution of as much recycled water for potable water as possible by 2030.

After further analysis of future water resource management programs for the San Jacinto Watershed, EMWD realized that in order to implement the Hemet/San Jacinto Management Plan, revision of the TDS and nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone is needed to allow the use of recycled water. In 2007, EMWD submitted documentation to the Regional Board to request and justify less stringent "maximum benefit" TDS and nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone. Since the implementation of less stringent water quality objectives would allow the lowering of water quality, the requirements of the state's antidegradation policy, Resolution No. 68-16, must be satisfied. EWMD has proposed to implement specific programs and projects designed to assure conformance with the policy, including the demonstration of maximum benefit to the people of the state. The "maximum benefit" proposal is discussed in Section 3.0.

3.0 San Jacinto Upper Pressure Management Zone Proposed Maximum Benefit Water Quality Objectives

Through local community collaboration, EMWD and the Lake Hemet Municipal Water District, along with the cities of Hemet and San Jacinto and private water producers, developed the Hemet/San Jacinto Water Management Plan (Management Plan). As shown in Figure 2, the Management Plan encompasses the Canyon Management Zone, the Hemet South Management Zone, the northern portion of the Lakeview-Hemet North Management Zone and the San Jacinto Upper Pressure Management Zone. The Management Plan provides a foundation for responsible water resource management, now and in the future. Additionally, EMWD and the Lake Hemet Municipal Water District have also worked with the Soboba Band of Luiseño Indians (Soboba Tribe) and the Federal Government (Bureau of Indian Affairs)) to develop a Settlement Agreement that would resolve past issues with respect to tribal water rights and water management practices in the management area. The stakeholders have developed a Stipulated Judgment that calls for the formation of a Watermaster to implement the Management Plan, which describes water supply management activities to maximize the reasonable and beneficial use of all waters available to the area, eliminate overdraft, protect prior rights of the Soboba Tribe, and provide for the substantial enjoyment of all water rights by recognizing their priorities.

[4] The term "reclamation" has since been supplanted by the term "recycling" in some sections of the Water Code.

The Watermaster, through EMWD, is implementing or will implement the following components of the Management Plan in the San Jacinto Upper Pressure Management Zone:

- **Hemet/San Jacinto Integrated Recharge and Recovery Program (IRRP):** This program is designed to recharge imported water in the San Jacinto Upper Pressure Management Zone and extract groundwater at a capacity such that the following goals are met: satisfy prior and paramount Soboba Tribe water rights; offset the estimated 10,000 acre-feet per year (AFY) of overdraft in the San Jacinto Upper Pressure Management Zone; and provide an additional 15,000 AFY to help meet the projected increases in demand. The San Jacinto Upper Pressure Management Zone is expected to receive State Project water with average TDS and total inorganic nitrogen concentrations of 250 mg/L and 0.6 mg/L, respectively. Water demands and maintaining TDS and nitrate-nitrogen quality in the San Jacinto Upper Pressure Management Zone will be addressed by the recharge of State Project water. Although the volume recharged may vary depending on specific requirements, for modeling purposes (see discussion below) approximately 16,000 AFY of State Project water is assumed to be recharged. This recharge is anticipated to occur during wet years when the salinity of State Project water is very low. The recharge of higher-quality State Project water will result in a net benefit to the San Jacinto Upper Pressure Management Zone, which has current (2006) ambient TDS and nitrate-nitrogen concentrations of 350 mg/L and 1.6 mg/L, respectively. The established antidegradation objectives for this Management Zone are 320 mg/L and 1.4 mg/L, respectively. Based on the current ambient concentrations of TDS and nitrate-nitrogen (350 mg/L and 1.6 mg/L, respectively), there is no assimilative capacity for either constituent in the San Jacinto Upper Pressure Management Zone (see Table 2).
- **Recycled Water In-Lieu Project:** This project will supply recycled water from the San Jacinto Valley Regional Water Reclamation Facility for agricultural irrigation in lieu of pumping native groundwater for agricultural operations that overlie the San Jacinto Upper Pressure Management Zone. This project will provide additional recycled water outside of the approximately 5,000 AFY that is currently being served throughout the San Jacinto Upper Pressure Management Zone. One project that is already in the planning stages is expected to deliver up to 8,540 AFY of recycled water to Rancho Casa Loma and the Scott Brothers Dairy, which are located in the San Jacinto Upper Pressure Management Zone. Recycled water would displace potable water for specific uses at these sites. The project costs will be split between EMWD, the Lake Hemet Municipal Water District, and the cities of Hemet and San Jacinto. Agreements that set limits on groundwater production and provide for

payment of a portion of the operation and maintenance costs will be made with Rancho Casa Loma and the Scott Brothers Dairy.

- **Hemet Water Filtration Plant:** EMWD recently constructed and operates the Hemet Water Filtration Plant to treat State Project water for potable supply. This additional supply is used in lieu of native groundwater. The use of treated State Project water will reduce the TDS in the recycled water and result in a net decrease in the TDS concentration in returns from use to groundwater.

As previously stated, these commitments will promote the use of recycled water, provide an alternative water supply for the area, reduce local overdraft of the San Jacinto Upper Pressure Management Zone, increase the sustainability and reliability of not only the San Jacinto Upper Pressure Management Zone but adjacent management zones as well, and will maximize the reasonable and beneficial use of all waters available to the area. This will result in the protection of the beneficial uses of the San Jacinto Upper Pressure Management Zone and adjacent management zones, and demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained.

To implement the Hemet/San Jacinto Water Management Plan (Management Plan), EMWD has requested revisions of the TDS and nitrate-nitrogen water quality objectives currently specified for the San Jacinto Upper Pressure Management Zone (Eastern Municipal Water District, 2007). EMWD requested that the water quality objectives for nitrate-nitrogen and TDS in the San Jacinto Upper Pressure Management Zone be set at levels higher than the current "antidegradation" water quality objectives. These proposed "maximum benefit "objectives are compared to the current water quality objectives ("antidegradation objectives") and the current ambient quality in Table 3. Both the current water quality objectives and the proposed "maximum benefit" water quality objectives would assure the protection of beneficial uses. The proposed "maximum benefit "TDS objective (500 mg/L) is the drinking water secondary maximum contaminant level for TDS, which was established based on aesthetic considerations. The proposed "maximum benefit" nitrate-nitrogen objective (7.0 mg/L) is based on values that can accommodate the direct use of recycled water in the San Jacinto Upper Pressure Management Zone without impairing beneficial uses. Revision of the TDS and nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone will enable the efficient implementation of the Management Plan by creating assimilative capacity, thereby enabling the use of recycled water in place of potable water, reducing groundwater pumping, and allowing for the recharge of imported water.

Table 3. Comparison of Proposed Maximum Benefit TDS and Nitrate-nitrogen Water Quality Objectives with Current (2006) Ambient Quality in the San Jacinto Upper Pressure Management Zone

Management Zone	Existing WQOs		Proposed "Maximum Benefit" WQOs		2006 Ambient Quality[1]	
	TDS mg/L	NO_3-N mg/L	TDS mg/L	NO_3-N mg/L	TDS mg/L	NO_3-N mg/L
San Jacinto Upper Pressure	320	1.4	500	7.0	350	1.6

[1] Current ambient water quality as determined by Wildermuth Environmental, Inc., 2008.

The "maximum benefit" objectives are necessary for the Management Plan to proceed. As shown in Tables 2 and 3, for TDS and nitrate-nitrogen, the ambient water TDS and nitrate-nitrogen concentrations are greater than the existing TDS and nitrate-nitrogen water quality objectives and therefore, there is no assimilative capacity for either constituent. Assimilative capacity findings have significant regulatory repercussions. Water Code Section 13263 requires that waste discharge requirements must implement the Basin Plan. If there is assimilative capacity in the receiving waters for TDS or nitrate-nitrogen, waste discharge requirements may allow a discharge quality in excess of the objectives for those constituents, as long as the discharge does not cause violation of the objectives. However, if there is no assimilative capacity in the receiving waters, the discharge limits generally cannot exceed the receiving water objectives or the degradation process would be accelerated. 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 Mobile home park, located in the Santa Ana Region (Order No. 73-4, the "Rancho Caballero decision").

The success of the Management Plan depends on EMWD's ability to recharge significant amounts of water from all sources, including State Project water, other imported water, storm water, and recycled water. As shown in Table 3, the established TDS and nitrate-nitrogen Basin Plan objectives for the San Jacinto Upper Pressure Management Zone are very low. Again, because there is no assimilative capacity, recycled water recharge and recycled water reuse would have to be limited to the existing water quality objectives. However, the existing Basin Plan water quality objectives could prevent State Project water, other imported water, and recycled water from being recharged or reused unless significant treatment, mitigation or offset is provided. The recycled water proposed to be used in this management zone will come primarily from EMWD's San Jacinto Valley Recycled Water Reclamation Facility (SJVRWRF). The 2009 annual average of TDS and total inorganic nitrogen (TIN) quality of the effluent was 555 mg/L and 19 mg/L, respectively, both of which exceed the current Basin Plan TDS and nitrate-nitrogen water quality objectives and current

(2006) ambient quality. As discussed in Section 3.2, below, by 2014, the SJVRWRF will be expanded and as a result, the resulting total inorganic nitrogen discharge quality discharge will be at a concentration of 10 mg/L or less. Assuming the 60% nitrogen loss coefficient that has been incorporated into the EMWD Master Reclamation Permit (Order No. R8-2008-0008), a discharge quality of 13 mg/L (or less) total inorganic nitrogen will ensure that the 7 mg/L proposed nitrate-nitrogen water quality objective is met.

The creation of assimilative capacity in this management zone allows for the direct use of recycled water and still ensures protection of the beneficial uses in this management zone. Extensive treatment of this recycled water, including reverse osmosis, that exceeds best practicable treatment or control expectations would be necessary to achieve the existing TDS and nitrate-nitrogen objectives, which would severely hinder recycling and reuse opportunities. The "maximum benefit" objectives recommended by EMWD would create both TDS and nitrate-nitrogen assimilative capacity that would accommodate maximum recycled water recharge and reuse, as well as State Project water recharge, and ensure protection of beneficial uses. As described in Section 1.0, this is consistent with the intent expressed by the Legislature and the State Water Resources Control Board to encourage the use of recycled water and the substitution of recycled water for potable water.

3.1 Proposed Total Dissolved Solids "Maximum Benefit" Water Quality Objective

To support their "maximum benefit" proposal, EMWD provided evidence to demonstrate that in the San Jacinto Upper Pressure Management Zone, the TDS concentration is projected to increase indefinitely, even without recycled water use. This is due to the impact of historic, and to a lesser extent, current agricultural practices in the area overlying the San Jacinto Upper Pressure Management Zone. EMWD evaluated the TDS effects of several alternative scenarios of the use of State Project water and recycled water at TDS concentrations of 575 mg/L and 650 mg/L for the replenishment of the San Jacinto Upper Pressure Management Zone and for non-potable supply. The following water resources management cases were analyzed (Eastern Municipal Water District, 2007):

Case 1. No project scenario: the Integrated Recharge and Recovery Program (IRRP) and Recycled Water In-Lieu Project do not occur. Groundwater production in the San Jacinto Upper Pressure Management Zone is reduced according to the Management Plan and remaining water demand is satisfied by treated imported water.

Case 2. The IRRP does not occur and the Recycled Water In-Lieu Project is online starting in 2008[5]. The recycled water TDS concentration is assumed to be 575 mg/L. Groundwater production in the San Jacinto Upper Pressure Management Zone is reduced according to the Management Plan and remaining water demand is satisfied by treated imported water.

Case 3. State Water Project water is used for groundwater replenishment in the San Jacinto Upper Pressure Management Zone and the Recycled Water In-Lieu Project is online starting in 2008[5]. The Hemet Water Filtration Plant is constructed and treated imported water is served in lieu of native groundwater from the San Jacinto Upper Pressure Management Zone starting in 2010. TDS concentration in the recycled water is assumed to be 575 mg/L.

Case 4. Same as Case 3 but TDS concentration in recycled water is assumed to be 650 mg/L.

Each case represents a possible water resources management strategy that could be adopted by EMWD. Case 1 simulates future conditions without the proposed major facility improvements in the Management Plan. In Case 1, groundwater production must be reduced to the safe yield of the San Jacinto Upper Pressure Management Zone. Case 2 is identical to Case 1 except that the Recycled Water In-lieu Project is assumed to come online in 2008. Cases 3 and 4 represent the proposed Management Plan with the IRRP, Recycled Water In-lieu Project, and the Hemet Water Filtration Plant, and differ only in the assumption of the TDS concentration in the recycled water used for irrigation in the Recycled Water In-lieu Project. For modeling purposes, it has been estimated that the volume of State Project water recharge in the San Jacinto Upper Pressure Management Zone is approximately 16,000 AFY and that the Hemet Water Filtration Plant will serve up to 8,000 AFY of treated imported water in lieu of native groundwater pumped from that Zone.

Figure 3 shows the estimated San Jacinto Upper Pressure Management Zone TDS concentration expected through the year 2100 for all four cases. TDS projections for all 4 cases within the next 30 year planning horizon and for long-term (year 2060) are provided in Table 4. It should be noted that the TDS projections presented for the four case studies are conservative estimates of the resulting basin TDS quality since the model does not take into account the travel time through the vadose zone for returns from water applied for irrigation. The model is essentially a continuous stirred tank reactor and does not include the delay that actually occurs for the recycled water to move through the vadose zone. The model assumes that all water applied immediately

[5] The modeling EMWD conducted in 2007 anticipated approval of their "maximum benefit" proposal by 2008 and start-up of the recycled water in lieu project in 2008; however, because of delays in finalizing the Basin Plan amendment, actual initiation of the recycled water in lieu project will be delayed pending approval of the Basin Plan amendment.

enters the groundwater basin. Thus, it is expected that the TDS concentration of the San Jacinto Upper Pressure Management Zone will not increase as rapidly as suggested in the TDS concentration projections shown in Figure 3.

Figure 3. Comparison of TDS Concentration Time Histories for the San Jacinto Upper Pressure Management Zone

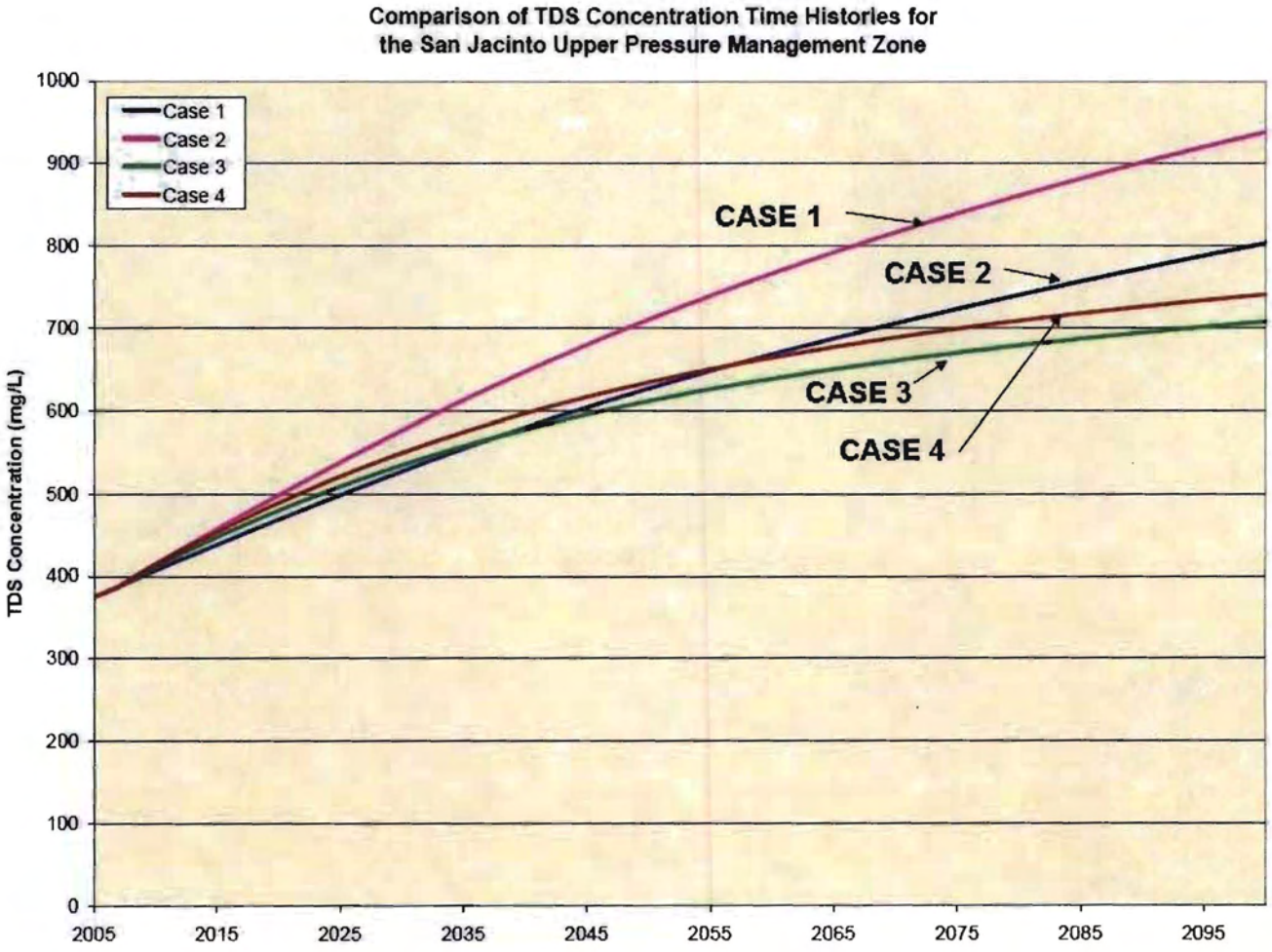


Table 4. Comparison of Resultant Long-term TDS Quality in the San Jacinto Upper Pressure Management Zone under Four (4) Scenarios

	Projected TDS (mg/L)			
	2025	**2030**	**2040**	**2060**
Case 1	499	528	580	668
Case 2	539	577	648	767
Case 3	509	535	578	639
Case 4	521	544	597	664

It is important to note that in Case 1, the no project alternative, if the IRRP and Recycled Water In-Lieu Project were not implemented, the expected TDS concentration by 2025 would be an increase from the current ambient quality of 350 mg/L to 499 mg/L. The increasing TDS concentration is driven largely by historical agricultural activities and returns from water that was applied for irrigation. In Case 2, by 2025, the TDS concentration would increase to 539 mg/L and the estimated TDS concentrations in year 2025 for Cases 3 and 4 are 509 and 521 mg/L, respectively. The long term TDS predictions for Case 3 and Case 4 are lower than the predictions for Case 1 and Case 2. In addition, as shown in Figure 3, TDS concentrations simulated for Cases 3 and 4 degrade at a slower rate than Cases 1 and 2. Cases 3 and 4 both result in better quality groundwater than the baseline condition. Implementation of the EMWD Management Plan will offset the TDS inputs to groundwater from the Recycled Water In-Lieu Project and slow the expected increase of the San Jacinto Upper Pressure Management Zone TDS concentration by implementing the Management Plan for the Hemet/San Jacinto area and recharging imported water. Cases 3 and 4 are the alternatives that must be pursued by EMWD to ensure a reliable supply in its service area. The "maximum benefit" TDS objective of 500 mg/L would enable the implementation of Case 3 and/or Case 4 to occur. The model projections indicate that the proposed TDS objective would be exceeded over the long-term. However, EMWD proposes to implement programs and projects designed to assure that the objective is not violated (see 4.0 Antidegradation Analysis; "Maximum Benefit" Commitments).

The Management Plan, as implemented in Case 3 or Case 4, may result in the management zones surrounding the San Jacinto Upper Pressure Management Zone receiving better quality water than if the Management Plan was not implemented. The most current groundwater flow model for the San Jacinto Watershed assumes that there is no outflow from the San Jacinto Upper Pressure Management Zone (TechLink Environmental, Inc., 2002). However, it is believed that there is some outflow to the Hemet South Management Zone, but that this flow is de minimus. With the

implementation of the Management Plan, groundwater levels will rise in the San Jacinto Upper Pressure Management Zone and there may be outflow to the Hemet South, Lakeview/Hemet North, and San Jacinto Lower Pressure Management Zones. The ambient TDS concentrations and the TDS objectives for these management zones are greater than the proposed objective for the San Jacinto Upper Pressure Management Zone (see Table 2); therefore, any incidental subsurface discharge from the San Jacinto Upper Pressure Management Zone to its adjacent management zones will have a beneficial impact on these downgradient management zones.

3.2 Proposed Nitrate-nitrogen "Maximum Benefit" Water Quality Objective

During the revision of the Salt Management Plan in 2004, as required to address Water Code Section 13241(a) (past, present and probable future beneficial uses), the TIN/TDS Task Force conducted an extensive review of available scientific literature to identify the concentrations of nitrate-nitrogen that are likely to impair beneficial uses. Special emphasis was placed on the water quality criteria and standards for drinking water recommended by the U.S. Environmental Protection Agency (EPA) and the California Department of Public Health Services. This focus was based on the recognition that the MUN beneficial use was the most sensitive use; objectives established to protect the MUN use would assure protection of the other beneficial uses of groundwaters in the Santa Ana Region. Based on this review, the TIN/TDS Task Force determined that the use protection threshold for nitrate-nitrogen in groundwater is concentrations less than 10 mg/L. The Task Force also found that lower concentrations of nitrate-nitrogen provided a useful safety factor (Regional Water Quality Control Board, January 2004).

EMWD proposes that the nitrate-nitrogen objectives for the San Jacinto Upper Pressure Management Zone be set at 7 mg/L. The proposed "maximum benefit" nitrate-nitrogen objective of 7 mg/L and the current ambient nitrate-nitrogen concentration of 1.6 mg/L in this management zone are lower than the 10 mg/L beneficial use threshold and are thus protective of current and future beneficial uses.

Currently, EMWD's San Jacinto Valley Recycled Water Reclamation Facility (SJVRWRF) produces total inorganic nitrogen (TIN) effluent quality of 19 mg/L. By 2014, EMWD will produce recycled water with a 12-month average TIN concentration of 10 mg/L or less. TIN losses in recycled water recharge are assumed to be at least 25 percent in the Basin Plan and a recent study titled Quantification of Nitrogen Removal Under Recycled Water Ponds (Daniel B. Stephens & Associates, Inc., 2007) demonstrated that total nitrogen losses under the Alessandro Ponds in the San Jacinto Upper Pressure Management Zone averaged 64% at a depth of about 29 feet. The 60% nitrogen loss coefficient has been incorporated into the EMWD Master Reclamation Permit – Order No. R8-2008-0008. Assuming a 60% nitrogen loss coefficient, a discharge quality of 13 mg/L (or less) total inorganic nitrogen will ensure that the 7 mg/L nitrate-nitrogen water quality objective is met. The creation of assimilative capacity in this management zone allows for the direct use of recycled water and still ensures protection of the beneficial uses in this management zone.

4.0 Antidegradation Analysis; " Maximum Benefit" Commitments

The implementation of less stringent TDS and nitrate-nitrogen water quality objectives in the San Jacinto Upper Pressure Management Zone would allow the lowering of water quality; therefore, requirements of the state's antidegradation policy, Resolution No. 68-16, must be satisfied before the objectives can be considered for adoption. Specifically, there must be a demonstration that beneficial uses will continue to be protected, that waste discharges will receive best practicable treatment or control, and that water quality consistent with maximum benefit to the people of the state will be maintained.

As discussed below, the proposed change in TDS and nitrate-nitrogen objectives will ensure protection of the most sensitive beneficial use (i.e., municipal water supply) of the San Jacinto Upper Pressure Management Zone. The proposed TDS water quality objective is at the recommended secondary drinking water standard (500 mg/L) and the proposed nitrate-nitrogen water quality objective is below the primary drinking water maximum contamination level (10 mg/L).

In order to assure that water quality consistent with the maximum benefit to the people of the state will be maintained despite the lowering of water quality that could occur by the implementation of the "maximum benefit" objectives, EMWD is committed to implement the projects and requirements summarized below. These projects and requirements, also included as part of the proposed amendments to the implementation chapter of the Basin Plan (Chapter 5) that are presented in the Attachment to tentative Resolution No. R8-2010-0039, are described below.

1. Groundwater Monitoring Program

   EMWD will conduct groundwater monitoring that will enable the determination of ambient TDS and nitrate-nitrogen concentrations in the management zones affected by the implementation of the Management Plan – the Canyon Management Zone, the Hemet South Management Zone, the Lakeview-Hemet Management Zone and the San Jacinto Upper Pressure Management Zone and adjacent management zones, as well as allow for the evaluation of the water quality effects of implementation of the "maximum benefit" proposal, including the "maximum benefit" nitrate-nitrogen and TDS objectives[6]. Annual reports summarizing monitoring activities will be submitted, and every three years a determination of ambient nitrate-nitrogen and TDS quality in the San Jacinto Upper Pressure Management Zone as well as all the management zones with EMWD's service area (within the San Jacinto

[6] EMWD is already a member of the Basin Monitoring Program Task Force, which formed after the N/TDS Task Force had completed its work and the 2004 N/TDS Basin Plan amendments were adopted. The Basin Monitoring Task Force has assumed the responsibility to conduct analyses needed to implement certain Basin Plan requirements, including the triennial determination of ambient groundwater quality and revisions to the TDS and TIN wasteload allocations. Absent action by the Task Force, EMWD will conduct the analyses necessary to determine ambient groundwater quality for all management zones in the San Jacinto watershed and/or recommend revisions of the wasteload allocations, if necessary.

watershed) will be made. Based on these assessments, the demonstration of maximum benefit may be revisited and the need for changes to the TDS and nitrogen management strategy in the area can be identified.

2. Implementation of the Hemet/San Jacinto Water Management Plan (Management Plan)

   EMWD commits to the implementation of the Management Plan pursuant to the schedules articulated in the Management Plan.

3. Development and Implementation of a Salinity Management Program.

   EMWD will develop and implement a program to minimize the TDS concentration in the source and recycled water. The salinity management program will include TDS reduction strategies to protect beneficial uses when the ambient TDS concentration in the San Jacinto Upper Pressure Management Zone approaches the maximum benefit objective and to meet waste discharge requirements when the TDS concentration in the SJVRWRF effluent approaches 650 mg/L. EMWD will always attempt to serve the lowest TDS supply available for its potable supply.

   The Salinity Management Program will include the following elements:

   a. Development of a Source Water TDS Reduction Plan

      EMWD will develop a TDS Reduction Plan designed 1) to minimize the TDS concentration in source water, 2) to supply water with the lowest reasonable TDS concentration for municipal uses, 3) to reduce the TDS waste increment through use (defined herein as the average TDS increase that occurs through indoor uses, which is numerically equal to the average TDS concentration in recycled water minus the average TDS concentration in the source water supply) and salt added through treatment at recycled water facilities. The waste increment includes salt added by water conditioning and self regenerative water softeners, industrial sources, and other sources. The TDS Reduction Plan may include plans and schedules to enact ordinances, incentive programs to reduce water softener use, and development of requirements that minimize the TDS waste increment.

      When the volume-weighted TDS concentration in the San Jacinto Upper Pressure Management Zone equals or exceeds 490 mg/L (i.e., 10 mg/L less than the proposed TDS objective of 500 mg/L), EMWD will develop a plan to reduce the TDS concentration in source water and serve this water to its customers and/or to reduce the TDS concentration in recycled water.

      The proposed amendments specify the date for submittal of the proposed TDS Reduction Plan and require the implementation of that Plan upon Regional Board

approval. The Plan must be operational within seven years of Regional Board approval.

b. Desalters (or equivalent technologies)

EMWD will construct a desalter or equivalent technologies when the 5 year running average TDS in EMWD's effluent reaches 640 mg/L. This requirement would also be triggered when the San Jacinto Upper Pressure Management Zone ambient TDS quality equals or exceeds 490 mg/L.

The proposed Basin Plan amendments require the submittal of a plan and schedule for construction of a desalter(s) and any requisite brine disposal facilities, and the implementation of that plan upon Regional Board approval. Facilities are required to be operational within seven years of Regional Board approval.

c. Recycle Water Use/Recharge

Recycled water from the SJVRWRF will be preferentially served unless the demand for recycled water in the San Jacinto Upper Pressure Zone exceeds the supply produced by the SJVRWRF. The recycled water supply will not exceed an annual volume-weighted average TDS concentration of 650 mg/L and TIN of 10 mg/L.

d. Imported Water Use/Recharge

An average of 7,500 acre-feet/year of State Water Project water will be recharged in the San Jacinto Upper Pressure Management Zone over the next fifteen years. Additional State Project water will be recharged to offset the overdraft of the San Jacinto Upper Pressure Management Zone. Water will be preferentially recharged when the TDS concentration is low and water is abundant to reduce stress on Delta resources.

4. Ambient Groundwater Quality Determination and Wasteload Allocation Update

Every three years, EMWD will either contribute financially to regional efforts to estimate the ambient TDS and nitrate concentrations for the management zones in their service area or will prepare these estimates themselves. If the analyses are done by EMWD, the results will be documented in a report submitted to the Regional Board. The methodology employed will be the same as that used by the Basin Monitoring Task Force[6]. These estimates will be prepared every three years, on a timetable directed by the Regional Board.

5. Ambient TDS projection

   By July 2014 and every six years thereafter, EMWD shall submit a projection of TDS quality in all of the San Jacinto Basin management zones within their service area. This projection shall be developed using methodology developed by the Imported Water Recharge Task Force [7] and approved by the Regional Board. The projections will be compared to prior projections and to estimates of the historical ambient TDS concentrations. This analysis must be submitted in a report submitted to the Regional Board.

6. Wasteload Allocation Update

   During winter months when the demand for recycled water is reduced, EMWD discharges excess recycled water to the Santa Ana River via Temescal Creek. For these discharges, the Basin Plan specifies a TDS and total inorganic nitrogen wasteload allocation to ensure that the water quality objectives of underlying management zones in the Temescal Valley and the Santa Ana River, Reach 3 and Reach 2 are met. The wasteload allocations distribute a share of the total TDS and nitrogen wasteloads to the River system to each Publicly Owned Treatment Works (POTW) that discharges to the River, either directly or indirectly. The Basin Monitoring Task Force has coordinated periodic review and recommended revisions to the wasteload allocations in order to ensure continued compliance with applicable water quality standards[6]. EMWD will continue to participate financially in regional efforts to review and update the TDS and nitrogen wasteload allocations for the Santa Ana River and its tributaries.

5.0 Evaluation of Water Code Section 13241 Factors

Water Code Section 13241 specifies the following:

> *Each Regional Board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of the water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by the Regional Board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:*
>
> *a) Past, present, and probable future beneficial uses of water.*

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[7] The Imported Water Recharge Workgroup was established by water recharging agencies to assure that water quality (TDS and Nitrogen) in groundwater as a result of recharge operations is protected. The Workgroup developed a cooperative agreement to prepare a report at six-year intervals that provides a 20 year projection of ambient water quality in each groundwater management zone.

b) *Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.*

c) *Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.*

d) *Economic considerations.*

e) *The need for developing housing within the region.*

f) *The need to develop and use recycled water.*

The following sections discuss the factors as they relate to the proposed "maximum benefit" TDS and nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone.

5.1 Past, Present, and Probable Future Beneficial Uses Of Water

The beneficial uses designated in the current Basin Plan for the San Jacinto Upper Pressure Management Zone are:

Municipal and Domestic Supply (**MUN**) waters used for community, military, municipal, or individual water systems. These uses include, but are not limited to, drinking water supply.

Agricultural Supply (**AGR**) waters used for farming, horticulture, or ranching. These uses may include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.

Industrial Service Supply (**IND**) waters used for industrial activities that do not depend primarily on water quality. These uses include, but are not limited to, mining, cooling water supply, conveyance, gravel washing, fire protection, and oil well repressurization.

Industrial Process Supply (**PROC**) waters are used for industrial activities that depend primarily on water quality. These uses include, but are not limited to, process water supply and all uses of water related to product manufacturing and food preparation.

The MUN use is the most sensitive use of these waters; use impairment threshold concentrations for TDS and nitrate-nitrogen for MUN beneficial use as listed in the current Basin Plan are shown in Table 5.

Table 5. Use Protection Thresholds for Total Dissolved Solids and Nitrate-Nitrogen[1]

Beneficial Use	TDS Threshold (mg/L)	NO_3- N Threshold (mg/L)
MUN	500	10

[1] Source: Water Quality Control Plan for the Santa Ana Basin, Chapter 4, 1995

The proposed TDS water quality objective of 500 mg/L and the proposed nitrate-nitrogen objective of 7 mg/L are both protective of the most sensitive beneficial use (MUN) and therefore protective of the all San Jacinto Upper Pressure Management Zone beneficial uses.

5.2 Environmental Characteristics of the Hydrographic Unit Under Consideration

As discussed in Section 3, approval of the proposed TDS and nitrate-nitrogen "maximum benefit" objectives in the San Jacinto Upper Pressure Management Zone would allow implementation of the Hemet/San Jacinto Water Management Plan (Management Plan). The Plan was developed specifically to take into account the environmental/hydrological characteristics of the hydrographic unit, including the nature of the aquifers, patterns of recharge, groundwater pumping and replenishment, and interrelationships of the groundwater management zones. The Plan is intended to ensure the quantity and reliability of local water supplies and reduce demand for imported water, particularly during critical low flow periods.

5.3 Water Quality Conditions that Could Reasonably be Achieved

EMWD conducted modeling analyses to evaluate the water quality conditions that could reasonably be achieved in the San Jacinto Upper Pressure Management Zone and other management zones under various scenarios of imported water recharge, recharge and use of recycled water, treatment and use of imported water and changes in groundwater pumping patterns. A Management Plan was developed to integrate these considerations and optimize the quality and reliability of water supplies in the area while protecting beneficial uses into the future. Adoption of the proposed "maximum benefit" objectives would accommodate implementation of this Management Plan.

5.4 Economic Considerations

As shown in Table 2, currently the San Jacinto Upper Pressure Management Zone lacks assimilative capacity for both TDS and nitrate-nitrogen. As a result, any addition of TDS and nitrate-nitrogen at concentrations above the Basin Plan water quality objectives would require treatment, mitigation and/or offsets. The treatment/mitigation/

offset requirement would apply to the recharge and direct reuse of recycled water and, potentially, to the recharge of imported water. From the discussion in Section 3, it is clear that the TDS concentration in the San Jacinto Upper Pressure Management Zone will increase regardless of the TDS objective, with or without recycled water use.

For EMWD to comply with the current "antidegradation" TDS and nitrate-nitrogen water quality objectives for the use of recycled water in the San Jacinto Upper Pressure Management Zone, the recycled water would require additional treatment or desalinization. EMWD has prepared a life cycle cost estimate for the desalination of recycled water to meet the current water quality objectives prior to reuse and/or storage. The infrastructure that provides recycled water to the San Jacinto Upper Pressure Management Zone is comprised of two main lines and each of these main lines would require their own desalter. A regional desalter is not feasible since it would require an additional infrastructure system (e.g. piping and well fields). A thirty-year life cycle cost to construct two desalters, associated piping and brine disposal as well as the operational and maintenance costs (for thirty years) is estimated to be $921,000,000.

Water reuse in the area overlying the San Jacinto Upper Pressure Management Zone currently consists of primarily agricultural uses; there is the potential to convert the agricultural uses to urban uses (landscape irrigation) as population growth occurs. Reduction in TDS concentration is not a significant benefit for this type of use and may result in higher recycled water rates to cover the treatment costs. Further, desalting and the costs associated with desalting are not consistent with Hemet/San Jacinto Groundwater Management Plan (Management Plan). The proposed "maximum benefit" program, in conjunction with the Management Plan, includes plans to treat potable water supplies pumped from the San Jacinto Upper Pressure Management Zone. This is a more reasonable approach with direct benefit to the potable water customers in the area.

It can be concluded that groundwater treatment for potable use is the best solution to manage the future TDS and nitrate-nitrogen degradation of groundwater in the San Jacinto Upper Pressure Management Zone. The TDS and nitrate-nitrogen concentrations in groundwater basins are asymptotically approaching these return flow concentrations in these basins. The model demonstrates that regardless of the recycled water reuse in the San Jacinto Upper Pressure Management Zone, degradation beyond the water quality objective will occur and therefore, at some point desalting of the groundwater would be necessary.

Adopting the proposed "maximum benefit" TDS and nitrate-nitrogen objectives will lower the cost of implementing the Management Plan, maximize the reasonable and beneficial use of all waters available in this area, and optimize SWP supplies at time when those supplies are plentiful, which provides state wide economic and environmental benefits. It should be emphasized that implementation of the "maximum benefit" program, as well as following the Management Plan, commits EMWD and others to spend approximately $626,000,000 over the next 30 years to remove salt and

thereby improve water quality and the reliability of groundwater in the San Jacinto Upper Pressure Management Zone.

5.5 The Need for Housing Within The Region

Riverside County and the cities in the EMWD service area, and in particular the area overlying the San Jacinto Upper Pressure Management Zone, have determined a need for housing and have adopted general and specific plans that show substantial increases in housing in the Management Area as the land is converted from vacant and agricultural uses to urban uses. All of these plans have been approved and have certified environmental documents. The demand for water supply will increase as the population housed increases. Implementation of the Management Plan, which would be accommodated by the adoption of the proposed "maximum benefit" objectives, is intended to address the reliability, and quality, of water supplies in the area needed to meet increases in demand.

5.6 The Need to Develop and Use Recycled Water

As a result of the expected increase in housing demands, the water supply entities in the Management Area have responded to the water supply challenge by developing the Management Plan. The Management Plan relies heavily on recycled water to displace certain potable water uses, decrease groundwater pumping and overdraft conditions, and enhance the reliability of water supplies. The Management Plan addresses current and future demands through the development of large-scale recharge, recycled water in-lieu projects and regional conveyance facilities. The Recycled Water In-Lieu Project will offset the use of 8,540 AFY of native groundwater in the San Jacinto Upper Pressure Management Zone, reducing the overdraft up to 85 percent Adoption and implementation of the "maximum benefit" objectives is necessary to allow implementation of the Management Plan to proceed.

6.0 Proposed Monitoring and Reporting Program

Section 13242 of the California Water Code specifies that Basin Plan implementation plans must contain a description of the monitoring and surveillance programs to be undertaken to determine compliance with water quality objectives. As part of this proposed "maximum benefit" revision to the TDS and nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone, staff proposes changes to the Basin Plan to require the implementation of a specific groundwater monitoring program in the San Jacinto Upper Pressure Management Zone (and adjacent management zones).

In addition to the Water Code requirement, the need to develop and implement a monitoring program specific to the San Jacinto Upper Pressure Management Zone is consistent with the approach for salt management developed by the TIN/TDS Task Force; future decisions regarding TDS and nitrogen management would not be based

solely on model projections, but key future findings regarding assimilative capacity, compliance with TDS and nitrogen water quality objectives, the efficacy of the wasteload allocations, evaluation of recycled water project impacts, etc., would be based on real-time data obtained through a rigorous monitoring program.

The proposed amendment to the Basin Plan includes the requirement that EMWD propose a groundwater monitoring program that would allow evaluation of the effects of the implementation of the "maximum benefit" objectives on the affected management zone and downgradient management zones. This "maximum benefit" proposal supports the water use activities discussed in the Hemet/San Jacinto Water Management Plan (Management Plan). This Management Plan addresses use of the groundwater for potable water services and use of recycled water for agricultural purposes. Comprehensive monitoring and reporting programs are associated with both of these uses. EMWD manages these programs and periodically reports the results to several regulatory agencies for the State as well as US EPA. These monitoring and reporting programs will continue and the data will be analyzed and used to evaluate the water quality in the San Jacinto Upper Pressure Management Zone and downgradient management zones. These monitoring programs are described below.

6.1 Groundwater Monitoring Program

The Hemet/San Jacinto Groundwater Monitoring program entails collection, compilation and analysis of groundwater-related data. The program is a cooperative effort funded by EMWD, Lake Hemet Municipal Water District, and the cities of Hemet and San Jacinto. It provides the information necessary for a comprehensive view of the Management Plan area and contains the following elements: water level monitoring; water quality monitoring; groundwater extraction monitoring; and, inactive well capping/sealing.

To support the "maximum benefit" proposal, continued implementation of the water quality monitoring aspect of this program is essential. EMWD collects samples from available private, inactive and agricultural wells, in addition to wells owned by EMWD. The Lake Hemet Municipal Water District and the cities of Hemet and San Jacinto also collect samples from their drinking water wells and forward the results to EMWD for compilation and analysis. In 2008, 144 wells were sampled in the San Jacinto basin; 73 of the 144 wells were located in the San Jacinto Upper Pressure Management Zone. All samples are analyzed for TDS, nitrate-nitrogen and other constituents.

The data that are collected pursuant to these monitoring programs support the Management Plan and will gauge the timing for desalinization activities described in the proposed EMWD Salinity Management Program for the San Jacinto Upper Pressure Management Zone (see Section 4.0, #3). In addition, these data are used in the determination of the San Jacinto Upper Pressure Management Zone current ambient water quality. This effort is managed by the Basin Monitoring Program Task Force (see Section 4.0). EMWD is committed to continue to participate in this task force in order to

manage the water quality in the San Jacinto Upper Pressure Management Zone and the other entire San Jacinto basin.

6.2 Recycled Water Monitoring and Reporting Program

EMWD owns and operates four regional water reclamation facilities (RWRFs). EMWD is authorized to discharge from these four RWRFs in the San Jacinto River Basin pursuant to the Regional Board Order No. R8-2008-0008. Order No. R8-2008-0008 specifies a comprehensive monitoring and reporting program for the recycled water generated at EMWD's RWRFs that is discharged in the San Jacinto River Watershed, including the San Jacinto Upper Pressure Management Zone. This monitoring and reporting program is described in detail in Attachment E of Order No. R8-2008-0008. In summary, the monitoring and reporting program requires frequent and routine sampling of the recycled water generated at the RWRFs. The frequency of sampling varies by compound analyzed – from daily, weekly, monthly, quarterly to annually. The compounds of concern relative to this maximum benefit proposal are TDS and nitrate-nitrogen. TDS and total inorganic nitrogen are sampled at least monthly. These samples are collected from the discharge point for each RWRFs.

7.0 California Environmental Quality Act

The Regional Board is the Lead Agency responsible for evaluating the potential environmental impacts of the proposed amendment to the Water Quality Control Plan for the Santa Ana River Basin Region (Basin Plan) incorporating the "maximum benefit" TDS and nitrate-nitrogen objectives for the San Jacinto Upper Pressure Management Zone and an implementation plan.

For any Basin Plan amendment, the Regional Board must comply with the provisions of the California Environmental Quality Act (CEQA). The Secretary for Resources has certified that the State and Regional Water Boards' Basin Planning process is exempt from the CEQA requirement to prepare an initial study, negative declaration, and environmental impact report (California Code of Regulations., Title 14, § 15250 and 15251(g)). In lieu of preparing these documents, the Regional Water Board must comply with the State Water Board's regulations[8] applicable to exempt regulatory programs when amending basin plans and must also perform an environmental analysis of the reasonably foreseeable methods of compliance when it approves the Basin Plan amendments in satisfaction of Public Resources Code Section 21159. To comply with these requirements, a Substitute Environmental Document (SED) has been prepared by EMWD, with Regional Board staff guidance (Attachment B; "Substitute Environmental Document for the Basin Plan Amendment for the San Jacinto Upper Pressure Groundwater Management Zone amending the Total Dissolved Solids and Total Inorganic Nitrogen Objectives", November 2009).

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[8] California Code of Regulations, Title 23, Sec. 3775-3782 (Note: the State Water Resources Control Board is currently in the process of revising these regulations.)

Section 3777(a) of the State Water Board's regulations requires a written report that includes a description of the proposed activity, an analysis of reasonable alternatives to the proposed activity, and identification of mitigation measures to minimize any significant adverse environmental impacts. Section 3777(a) also requires the Regional Water Board to complete an environmental checklist as part of its substitute environmental document. This checklist is provided in Attachment B.

On August 10, 2009, the Regional Board held a scoping meeting at EMWD to solicit public comment on this proposed action. Comments were received from the Western Riverside County Agricultural Coalition (WRCAC) and the Bureau of Indian Affairs. The comments received, included in Attachment B, were taken into consideration in the preparation of the proposed Basin Plan amendment and SED.

The SED concludes that implementation of the proposed Basin Plan amendment would not result in any significant or potentially significant impacts to the environment. While reasonable alternatives to the proposed amendment are described below, per the State Water Board's regulations, no alternatives to the Basin Plan amendment are recommended because they are not necessary to avoid or reduce any significant or potentially significant impacts.

A supplement to this staff report will be prepared that includes comments received on the proposed amendment and/or the SED, staff responses to those comments, and a discussion of any changes made to the proposed amendment as the result of the comments or future deliberation by the Board and/or Board staff. This supplemental report will address any additional CEQA considerations, including economics, which might arise as the result of changes to the proposed amendment.

7.1 Alternative Analysis

1. <u>No Project Alternative</u>

   Under the "No Project" Alternative, no action would be taken to amend the Basin Plan to incorporate the "maximum benefit" objectives for the San Jacinto Upper Pressure Management Zone.

   This is not a preferred alternative since it would render infeasible proposals to provide maximum benefit to the people of the state by optimizing recycled water reuse and thereby improving water quantity and water quality in the San Jacinto Upper Pressure Management Zone. Further, this alternative is not consistent with the legislature's intent to promote recycled water use and thereby reduce demands on potable supplies. These strategies are particularly necessary in this Management Zone where implementation of programs to meet the existing ("antidegradation") TDS and nitrate-nitrogen water quality objectives would likely preclude efficient and wise use of water and wastewater, and necessitate

treatment expenditures that would not serve public or environmental interests and are thus considered unreasonable.

2. Other Alternatives

In developing the Hemet/San Jacinto Water Management Plan and the proposed Basin Plan amendment, a variety of water and wastewater management scenarios was evaluated (see Section 3.0 for a description of the main alternatives considered). The TDS and nitrogen water quality objectives needed to be able to implement these scenarios were also considered. The proposed Basin Plan amendment, including the "maximum benefit" objectives and the Salt Management Plan for this Management Zone and Maximum Benefit Commitments by EMWD, incorporates and would enable implementation of the water resource management plan deemed most effective and feasible to implement. Other alternatives evaluated are less effective and/or are less reliable given their dependence on imported water.

3. Recommended Alternative

As shown in the proposed Basin Plan amendment (Attachment to tentative Resolution No. R8-2010-0039) and discussed in this staff report, the TDS and nitrate-nitrogen "maximum benefit" water quality objectives for the San Jacinto Upper Pressure Management Zone and the proposed Salt Management Plan for this Management Zone, including "Maximum Benefit" Commitments by EMWD, are the recommended alternative. The intent of the "maximum benefit" proposal is to optimize wastewater management and water supply strategies in the public interest. The recommended Basin Plan amendment includes safeguards should the "maximum benefit" proposal not be implemented or not prove feasible. Specifically, the established Basin Plan (antidegradation) TDS and nitrate-nitrogen objectives would apply in the event that the Regional Board finds that maximum benefit has not been demonstrated. The Regional Board will require mitigation for TDS and nitrogen objectives in excess of the antidegradation objectives, if maximum benefit is not demonstrated.

8.0 Regulatory Implementation of the "Maximum Benefit" Objectives

Implementation of the "maximum benefit" objectives in the San Jacinto Upper Pressure Management Zone would assure the protection of beneficial uses. Further, provided that the commitments identified above (4.0 Antidegradation; "Maximum Benefit" Commitments) are met, water quality that is consistent with maximum benefit to the people of the state will be maintained. The "maximum benefit" objectives would promote water recycling and reuse, which the California legislature has declared is a primary interest of the people of California (California Water Code (CWC) Sections 13510-13512). Implementation of the proposal would also increase the quantity and

reliability of local water supplies and reduce demand for imported water, particularly during critical low flow periods.

However, if EMWD fails to fulfill these commitments, this maximum benefit finding would be inappropriate and the current Basin Plan "antidegradation" objectives would be applied to San Jacinto Upper Pressure Management Zone. Therefore, the proposed Basin Plan amendments shown in the Attachment to Resolution No. R8-2010-0039 incorporate both scenarios. That is, the current Basin Plan "antidegradation" objectives will remain in the Basin Plan and the "maximum benefit" objectives are proposed to be added to the Basin Plan, with explicit language that governs their application (see Attachment to Resolution No. R8-2010-0039, Chapter 4, "Maximum Benefit Objectives"). The "maximum benefit" objectives apply only provided that there is timely implementation of the EMWD commitments that are described above and in the proposed amendments to Chapter 5, Implementation, of the Basin Plan (see Attachment to Resolution No. R8-2010-0039, "VI. Maximum Benefit Implementation Plans for Salt Management, D. Salt Management – San Jacinto Upper Pressure Management Zone (Eastern Municipal Water District)".) If the Regional Board finds that "maximum benefit" is not being demonstrated, then the "antidegradation" objectives would apply and the Regional Board would require mitigation of the surface and groundwater effects of any discharges of recycled and imported water that took place in excess of those objectives. This mitigation requirement is explicitly identified in the proposed amendments to Chapter 5, "VI. Maximum Benefit Implementation Plans for Salt Management, D. Salt Management – San Jacinto Upper Pressure Management Zone (Eastern Municipal Water District)".

9.0 Staff Recommendation

Board staff recommends the adoption of Resolution No. R8-2010-0039, adopting the amendment to the Water Quality Control Plan (Basin Plan) shown in the attachment to the Resolution to amend Chapter 4 of the Basin Plan (Water Quality Objectives) and Chapter 5 of the Basin Plan (Implementation Plan – Salt Management Plan) to incorporate the "Maximum Benefit Objectives" for the San Jacinto Upper Pressure Management Zone and an associated implementation plan, including "maximum benefit" commitments.

Attachments:

Attachment A	Tentative Resolution No. R8-2010-0039, including the proposed Basin Plan Amendment
Attachment B	California Environmental Quality Act (CEQA) Substitute Environmental Document
B.1	CEQA Scoping Comments Received and Response to Comments

10.0 References

1. California State Water Resources Control Board, "Policy with Respect to Maintaining High Quality Waters, Resolution No. 68-16," October 1968.

2. California Regional Water Quality Control Board, Santa Ana Region, "Staff Report Proposed Basin Plan Amendments Related to Nitrogen and Total Dissolved Solids Management in the Santa Ana Region, Section 4.0", January, 2004

3. California Regional Water Quality Control Board, Santa Ana Region, "Resolution No. R8-2004-0001, Resolution Amending the Water Quality Control Plan for the Santa Ana River Basin to Incorporate an Updated Total Dissolved Solids (TDS) and Nitrogen Management Plan for the Santa Ana Region Including Revised Groundwater Subbasin Boundaries, Revised TDS and Nitrate-Nitrogen Quality Objectives for Groundwater, Revised TDS and Nitrogen Wasteload Allocations, and Revised Reach Designations, TDS and Nitrogen Objectives and Beneficial Uses for Specific Surface Waters, Attachment to Resolution", Pages 15-20, January, 2004

4. California Regional Water Quality Control Board, Santa Ana Region, "Water Quality Control Plan for the Santa Ana River Basin (Basin Plan):, Chapter 4, pages XXX, 2004

5. California Regional Water Quality Control Board, Santa Ana Region, "Oder No. R8-2008-0008, Waste Discharge and Producer/User Reclamation Requirements for Eastern Municipal Water District Regional Water Reclamation Facilities Discharge to Groundwater Management Zones Within San Jacinto River Basin, Attachment E – Monitoring And Reporting Program (MRP)", September 5, 2008

6. Eastern Municipal Water District, "Hemet/San Jacinto Water Management Plan", November 7, 2007

7. Eastern Municipal Water District, Letter to Gerard Thibeault, "Eastern Municipal Water District Proposal for New Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) Water Quality Objectives for the San Jacinto Upper Pressure Management Zone Based on Maximum Beneficial Use," July 3, 2007

8. TechLink Environmental, Inc., "Regional Groundwater Model for the San Jacinto Watershed", December, 2002

9. Daniel P. Stephens and Associates, Inc., "Quantification of Nitrogen Removal Under Recycled Water Ponds", May 2007

Attachment A

Resolution No. R8-2010-0039
with attached Basin Plan Amendment

California Regional Water Quality Control Board
Santa Ana Region

RESOLUTION NO. R8-2010-0039

Resolution Amending the Water Quality Control Plan for the Santa Ana River Basin to Incorporate "Maximum Benefit" Total Dissolved Solids (TDS) and Nitrogen Objectives and a Maximum Benefit Salt Management Plan for the San Jacinto Upper Pressure Management Zone

draft

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

1. An updated Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) was adopted by the Regional Board on March 11, 1994, approved by the State Water Resources Control Board (SWRCB) on July 21, 1994, and approved by the Office of Administrative Law (OAL) on January 24, 1995.

2. Amendments to the Basin Plan to incorporate a revised Total Dissolved Solids and Nitrogen Management Plan into the Basin Plan were approved by the Regional Board on January 22, 2004, by the SWRCB on October 1, 2004 and by OAL on December 23, 2004. The surface water standards provisions of the amendments were approved by the U.S. Environmental Protection Agency on January 20, 2007.

3. The Total Dissolved Solids and Nitrogen Management Plan addresses total dissolved solids (TDS) and nitrogen in both surface waters and groundwaters throughout the Santa Ana River basin.

4. The Basin Plan specifies the following beneficial uses for the San Jacinto Upper Pressure Management Zone: municipal water supply (MUN); agricultural water supply (AGR); industrial process supply (PROC); and industrial service supply (IND).

5. The Basin Plan specifies TDS and nitrate-nitrogen water quality objectives for the San Jacinto Upper Pressure Management Zone. These water quality objectives are based on historical water quality ("antidegradation objectives").[1]

6. The Basin Plan includes Maximum Benefit Implementation Plans for Salt Management in the Chino North, Beaumont, San Timoteo and Yucaipa Management Zones (hereinafter, Maximum Benefit Implementation Plans). The Maximum Benefit Implementation Plans identify the actions necessary to implement "maximum benefit" water quality objectives for TDS and nitrate-nitrogen that apply to these Management Zones. These objectives apply provided that the responsible agencies implement specific plans and projects identified in the Implementation Plans. If these commitments are not met, then the "antidegradation"

[1] TDS and nitrate-nitrogen concentrations in each groundwater management zone for the period 1954-1973 were evaluated to establish historic ambient quality for each zone. This period brackets 1968, when the SWRCB adopted the state's antidegradation policy (Resolution No. 68-16). The antidegradation policy established a benchmark for assessing and considering authorization of future degradation of water quality. The historic ambient TDS and nitrate-nitrogen concentrations for each management zone were established by the Regional Board as the "antidegradation" objectives for each zone (Resolution No. R8-2004-0001).

TDS and nitrate-nitrogen objectives also specified for these Management Zones apply for regulatory purposes[2]

7. Eastern Municipal Water District (EMWD) is the principal agency in the 542-square mile San Jacinto River watershed responsible for managing potable water supplies, including groundwater resources and imported water supplies. EMWD also oversees wastewater collection and treatment at four water reclamation facilities, treating approximately 46 million gallons of wastewater daily. Approximately 80% of the wastewater produced is reused throughout the watershed.

8. EMWD has developed a comprehensive maximum benefit proposal for the San Jacinto Upper Pressure Management Zone, including the addition of TDS and nitrate-nitrogen "maximum benefit" objectives to accommodate the implementation of the Hemet/San Jacinto Water Management Plan. The proposed "maximum benefit" TDS and nitrate-nitrogen objectives are less stringent than the existing "antidegradation" objectives.

9. The Hemet/San Jacinto Water Management Plan (Management Plan), which encompasses the Canyon Management Zone, the Hemet South Management Zone, the San Jacinto Upper Pressure Management Zone and the northern portion of the Lakeview-Hemet North Management Zone, guides and supports responsible water resource management into the future and includes the use of recycled water in the San Jacinto Upper Pressure Management Zone and other water management activities. The Management Plan was developed through a coordinated effort with Eastern Municipal Water District (EMWD), Lake Hemet Municipal Water District, the city of Hemet, the city of San Jacinto, and two of the area's largest farming operations. The primary benefits of this plan are to reduce local overdraft in the San Jacinto Upper Pressure Management Zone and increase the sustainability and reliability of the local groundwater resources, to maximize use of recycled water produced from local water reclamation plants, and to maximize the reasonable and beneficial use of all waters available to the area. All of these activities will be managed by a local Watermaster.

10. In support of the "maximum benefit" TDS and nitrate-nitrogen water quality objectives, EMWD's "maximum benefit" proposal includes commitments by EMWD to implement certain projects and management actions in EMWD's service area. These projects/actions are part of the Hemet/San Jacinto Water Management Plan.

11. Adding less stringent "maximum benefit" TDS and nitrate-nitrogen objectives for the San Jacinto Upper Pressure Management Zone would allow a lowering of water quality. This

[2] For certain management zones (Beaumont, Chino North, San Timoteo and Yucaipa), Resolution No. R8-2004-0001 also established alternative, less stringent TDS and nitrate-nitrogen objectives. These objectives, which would allow a lowering of water quality, were based on consideration of the requirements of the antidegradation policy. Specifically, the Regional Board found that (1) the objectives would protect beneficial uses, (2) that discharges to these management zones were and would be required to meet waste discharge requirements that would result in the best practicable treatment or control of the discharges, and (3) that the highest water quality consistent with maximum benefit to the people of the state would be maintained. These alternative, less stringent objectives are termed "maximum benefit" objectives. As specified in the Basin Plan, the "maximum benefit" objectives established for these management zones apply for regulatory purposes provided that certain, specified water and wastewater management agencies fulfill commitments to implement management activities that are also delineated in the Basin Plan.

lowering of water quality would be consistent with the State's Antidegradation Policy (SWRCB Resolution No. 68-16), as explained in findings 12 -14.

12. In support of the "maximum benefit" TDS and nitrate-nitrogen water quality objectives, EMWD has committed to implement certain projects and management actions in their service area. As a part of this program, waste discharges will be required (as they have been to date) to meet waste discharge requirements that will result in the best practicable treatment or control of the discharges.

13. The proposed "maximum benefit" TDS and nitrate-nitrogen water quality objectives would be protective of beneficial uses in the San Jacinto Upper Pressure Management Zone. Implementation of these objectives would not result in the lowering of water quality or adversely impact the beneficial uses of adjacent management zones or surface waters.

14. Implementation of the projects/management actions proposed by EMWD, as part of EMWD's "maximum benefit" proposal and the Hemet/San Jacinto Water Management Plan, would reduce local overdraft in the San Jacinto Upper Pressure Management Zone and increase the sustainability and reliability of the local groundwater resources, maximize the use of recycled water produced from local water reclamation plants, and maximize the reasonable and beneficial use of all waters available to the area. Therefore, implementation of these projects/management actions in concert with the proposed "maximum benefit" TDS and nitrate-nitrogen objectives would assure that water quality consistent with maximum benefit to the people of the state will be maintained. This finding is contingent upon EMWD's timely and successful implementation of these specific projects/management actions, which are delineated in the proposed Basin Plan amendment set forth in Attachment A to this Resolution.

15. The proposed amendment to the Basin Plan was developed in accordance with the California Water Code, section 13240 *et seq*. This includes consideration of the factors identified in section 13241, summarized as follows:

    a. The proposed "maximum benefit" water quality objectives are protective of the beneficial uses of the San Jacinto Upper Pressure Management Zone beneficial uses and other potentially affected receiving waters.
    b. The proposed "maximum benefit" TDS and nitrate-nitrogen objectives were developed specifically to take into account the environmental/hydrological characteristics of the hydrographic unit, including the nature of the aquifers, patterns of recharge, groundwater pumping and replenishment, and interrelationships of the groundwater management zones.
    c. The "maximum benefit" objectives are proposed as part of the Management Plan, which was developed based on an evaluation of the water quality conditions that could reasonably be achieved in all the San Jacinto Upper Pressure Management Zone and other management zones.
    d. The economic implications of adopting the proposed "maximum benefit" objectives were carefully considered. Adopting the proposed "maximum benefit" TDS and nitrate-nitrogen objectives will lower the cost of implementing the Management Plan, avoid unreasonable expenditures for treatment of waste discharges, maximize the reasonable and beneficial use of all waters available in this area, and optimize the use of State Water Project supplies at a time when those supplies are plentiful, which provides state wide economic and environmental benefits.

e. The adoption of the proposed “maximum benefit” objectives will address the reliability, and quality of water supplies in the area necessary to meet projected increases in population and the associated need for housing in the area.
f. The adoption of the proposed “maximum benefit” objectives will promote the use of recycled water by 8,540 AFY.

16. The Regional Board has considered the costs associated with implementation of this amendment and finds the costs to be reasonable.

17. Revision of the TDS and nitrate-nitrogen water quality objectives is necessary in order to accommodate recycled water reuse in the San Jacinto Upper Pressure Management Zone. The proposed amendment meets the “Necessity” standard of the Administrative Procedure Act, Government Code, section 11349.

18. The modeling procedures that were used to develop the proposed amendment are the same as those used in the 2004 Basin Plan Amendment. These modeling procedures were subjected to external scientific peer review during the development and consideration of the 2004 Basin Plan Amendment.

19. The proposed amendment will result in revisions to Basin Plan Chapter 4 “Water Quality Objectives, and Chapter 5 “Implementation”.

20. The Regional Board prepared and distributed a written report (staff report) regarding adoption of the Basin Plan amendment in accordance with applicable state and federal regulations (California Code of Regulations, Section 3775, Title 23, and 40 CFR Parts 25 and 131).

21. The process of basin planning has been certified by the Secretary for Resources as exempt from the requirement of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) to prepare an Environmental Impact Report (EIR) or Negative Declaration (ND). In lieu of an EIR or ND, the Regional Board must comply with applicable regulations on exempt regulatory programs. These regulations require the preparation of a substitute environmental document (SED) to take the place of an EIR or ND. Consistent with this requirement, the Regional Board prepared an SED dated November 2009. The Regional Board distributed the draft SED for public review in compliance with CEQA though a CEQA scoping meeting on August 10, 2009. The SED complies with applicable CEQA requirements to describe the proposed project, assess the potential adverse environmental effects of implementation of reasonably foreseeable methods of compliance, identify mitigation measures and evaluate alternatives.

22. The SED comprises a First Tier environmental document as called for by Public Resources Code section 21159 and the California Code of Regulations, Title 14, section 15187. When and if specific projects are proposed to implement these proposed “maximum benefit” objectives, these projects shall be reviewed, as required in conformance with applicable CEQA regulations, on a project-specific basis.

23. The adoption of the Basin Plan amendment has no direct effects on the environment and therefore has no potential for direct adverse effects, either individually or cumulatively, on fish and/or wildlife species. The implementation of projects that may be conducted to

implement the Basin Plan Amendment, including “maximum benefit” objectives, is expected to have less than significant environmental impacts.

24. On October 29, 2010, the Regional Board held a Public Hearing to consider the Basin Plan amendment. Notice of the Public Hearing was given to all interested persons and published in accordance with Water Code Section 13244.

25. The Basin Plan amendment must be submitted for review and approval by the SWRCB, and OAL. Once approved by the SWRCB, the amendment is submitted to OAL. The Basin Plan amendment will become effective upon approval by OAL. A Notice of Decision will be filed.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. Pursuant to Sections 13240 *et seq.* of the California Water Code, the Regional Board, after considering the entire record, including oral testimony provided at the public hearing, adopts the amendment to the Water Quality Control Plan for the Santa Ana River Basin as set forth in Attachment A.

2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the SWRCB in accordance with the requirements of section 13245 of the California Water Code.

3. The Regional Board requests that the SWRCB approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward it to the OAL for approval.

4. If during the approval process the Regional Board staff, SWRCB or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Regional Board of any such changes.

5. The Executive Officer is directed, at the time of filing and posting the Notice of Decision, to take steps to ensure prompt payment of $850 to the Department of Fish and Game for its review of the SED or to file a Certificate of Fee Exemption, whichever is appropriate.

I, Kurt V. Berchtold, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 29, 2010.

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Kurt V. Berchtold
Executive Officer

Attachment A to Resolution No. R8-2010-0039

Proposed Basin Plan amendment changes are shown as strikeout for ~~deletions~~ and underline for additions

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Chapter 4, page 4-27, 4-28

"MAXIMUM BENEFIT" WATER QUALITY OBJECTIVES

As part of the 2004 update of the TDS/Nitrogen Management plan in the Basin Plan, several agencies proposed that alternative, less stringent TDS and/or nitrate-nitrogen water quality objectives be adopted for specific groundwater management zones and surface waters. These proposals were based on additional consideration of the factors specified in Water Code Section 13241 and the requirements of the State's antidegradation policy (State Board Resolution No. 68-16). Since the less stringent objectives would allow a lowering of water quality, the agencies were required to demonstrate that their proposed objectives would protect beneficial uses, and that water quality consistent with maximum benefit to the people of the state would be maintained (thus, the use of the term "maximum benefit" water quality objectives). In 2010, the Regional Board considered and approved a proposal by Eastern Municipal Water District to incorporate "maximum benefit" objectives for TDS and nitrate-nitrogen for the San Jacinto Upper Pressure Management Zone.

Appropriate beneficial use protection/maximum benefit demonstrations were made by the Chino Basin Watermaster/Inland Empire Utilities Agency, the Yucaipa Valley Water District, ~~and~~ the City of Beaumont/San Timoteo Watershed Management Authority, and Eastern Municipal Water District to justify alternative "maximum benefit" objectives for the Chino North, Cucamonga, Yucaipa, Beaumont, ~~and~~ San Timoteo, and the San Jacinto Upper Pressure groundwater management zones. These "maximum benefit" proposals, which are described in detail in Chapter 5 – Implementation, entail commitments by the agencies to implement specific projects and programs. While these agencies' efforts to develop these proposals indicate their strong interest to proceed with these commitments, unforeseen circumstances may impede or preclude it. To address this possibility, this Plan includes both the "antidegradation" and "maximum benefit" objectives for the subject waters (See Table 4-1). Chapter 5 specifies the requirements for implementation of these objectives. Provided that these agencies' commitments are met, then the agencies have demonstrated maximum benefit, and the "maximum benefit" objectives included in Table 4-1 for these waters apply for regulatory purposes. However, if the Regional Board finds that these commitments are not being met and that "maximum benefit" is thus not demonstrated, then the "antidegradation" objectives for these waters will apply. Chapter 5 also describes the mitigation requirements that will apply should discharges based on "maximum benefit" objectives occur unsupported by the demonstration of "maximum benefit".

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Chapter 4, Page 4-51

Table 4-1 WATER QUALITY OBJECTIVES - Continued

GROUNDWATER MANAGEMENT ZONES	WATER QUALITY OBJECTIVES (mg/l)						Hydrologic Unit	
	Total Dissolved Solids	**Hardness**	**Sodium**	**Chloride**	**Nitrate as Nitrogen**	**Sulfate**	Primary	Secondary
Menifee	1020	---	---	---	2.8	---	802.13	
Perris North	570	---	---	---	5.2	---	802.11	
Perris South	1260	---	---	---	2.5	---	802.11	802.12, 802.13
San Jacinto – Lower	520	---	---	---	1.0	---	802.21	
San Jacinto – Upper "antidegradation" ++	320	---	---	---	1.4	---	802.21	802.23
San Jacinto – Upper "maximum benefit " ++	500	---	--	--	7.0	--	802.21	802.23
LOWER SANTA ANA RIVER BASIN								
La Habra**	---	---	---	---	---	---	845.62	
Santiago**	---	---	---	---	---	---	801.12	
Orange	580	---	---	---	3.4	---	801.11	801.13, 845.61, 801.14
Irvine	910	---	---	---	5.9	---	801.11	

** Numeric objectives not established; narrative objectives apply

++ "Maximum benefit" objectives apply unless Regional Board determines that lowering of water quality is not of maximum benefit to the people of the state; in that case, "antidegradation" objectives would apply (see discussion in Chapter 5).

Chapter 5 – Implementation

Page 5-80ff:

C. Salt Management - San Jacinto Upper Pressure Management Zone

As shown in Chapter 4, both "antidegradation" and "maximum benefit" objectives for TDS and nitrate-nitrogen are specified for the San Jacinto Upper Pressure Management Zone. The application of the "maximum benefit" objectives for these Management Zones is contingent on the implementation of a specific water and wastewater resources management program by Eastern Municipal Water District (EMWD) [Ref. XX]. This program is an integral part of the Hemet/San Jacinto Water Management Plan (Management Plan). The "maximum benefit" objectives would allow the Management Plan to be implemented. The Management Plan guides and supports responsible water management into the future. It includes recharge of high quality imported water, use of recycled water for agricultural purposes, and import of high quality water into EMWD's water filtration plant to provide water for potable use in the San Jacinto Upper Pressure Management Zone. Recycled water from the San Jacinto Valley Regional Water Reclamation Facility will be provided for agricultural irrigation in lieu of pumping native groundwater for agricultural operations that overlie the San Jacinto Upper Pressure Management Zone. The Management Plan was developed through a coordinated effort among EMWD, Lake Hemet Municipal Water District, the cities of Hemet and San Jacinto, and two of the areas largest farming operations. The primary benefits of the Management Plan are to reduce local overdraft and increase the sustainability and reliability of the local groundwater resources, to maximize use of recycled water produced from local water reclamation plants, and to maximize the reasonable and beneficial use of all waters available in the area. All of these activities will be managed by a local Watermaster.

In addition to its water supply responsibilities, EMWD also provides sewage collection and treatment services within its service area. EMWD operates four (4) wastewater treatment facilities. For the most part, EMWD provides the recycled water to local agencies and farmers for irrigation purposes. During winter months, when the demand for recycled water is reduced, EMWD discharges excess recycled water to the Santa Ana River via Temescal Creek.

Table 5-11 identifies the actions and requirements that must be implemented to demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained. An implementation schedule is also specified. It is assumed that the maximum benefit demonstration is made, and that the "maximum benefit" TDS and nitrate-nitrogen objectives apply to the San Jacinto Upper Pressure Management Zone, as long as the schedule and commitments are being met. If the Regional Board determines that the maximum benefit program is not being implemented effectively in accordance with the schedule shown in Table 5-11, then the maximum benefit demonstration is not made, and the "antidegradation" TDS and nitrate-nitrogen objectives would apply for the San Jacinto Upper Pressure Management Zone. In this situation, the Regional Board will require mitigation for TDS and nitrate-nitrogen discharges to these management zones that took place in excess of limits based on the "antidegradation" objectives.

Table 5-11

Eastern Municipal Water District Maximum Benefit Commitments and Schedule for the San Jacinto Upper Pressure Management Zone

Description of Commitment	**Compliance Date – as soon as possible, but no later than**
1. Groundwater Monitoring Program a. Submit Draft Monitoring Program to Regional Board b. Implement Monitoring Program c. Annual data report submittal	 a. *(*30 days from approval date by OAL of this Basin Plan amendment*)* b. Within 30 days from Regional Board approval of monitoring plan c. August 15th
2. Ambient Groundwater Quality Determination For all the groundwater management zones within EMWD's service area in the San Jacinto watershed, EMWD shall develop: a. Estimates of ambient TDS and nitrate b. Ambient TDS projection	 a. July 1, 2012 and every 3 years thereafter b. July 18, 2014 and every 6 years thereafter
3. TDS and Nitrogen Wasteload Allocation (WLA) Submit necessary studies and/or modeling to support update of the TDS and Nitrogen WLA for the Upper Santa Ana River watershed.	Within 1 year after notification from Regional Board that WLA needs to be reviewed/revised
4. Salinity Management Plan a. Submit Draft Salinity Management Plan for control of TDS in source water and in recycled water. b. Implement the Plan and schedule c. Triennial Report submittal	 a. (*12 months *from effective date of this Basin Plan amendment*)* b. Within 30 days of Regional Board approval c. August 15, 2012 and every 3 years thereafter

Table 5-11

Eastern Municipal Water District Maximum Benefit Commitments and Schedule for the San Jacinto Upper Pressure Management Zone

Description of Commitment	**Compliance Date – as soon as possible, but no later than**
5. Desalter(s) and Brine Disposal Facilities (or Equivalent Technologies) a. Submit plan and schedule for construction of desalter(s) and brine disposal facilities. b. Implement the plan and schedule c. Desalter(s)/Brine Disposal Facilities operational	a. Within 6 months of either of the following: i. When the 5-year running average TDS of the San Jacinto Valley Regional Water Reclamation Facility effluent exceeds 640 mg/L; and/or ii. When the volume weighted, ambient, average concentration in the San Jacinto Upper Pressure MZ of TDS exceeds 490 mg/L b. Within 30 days from Regional Board approval of plan/schedule c. Within 7 years from date of Regional Board approval of plan/schedule.
6. Recycled water reuse The use of recycled water in the San Jacinto Upper Pressure Management Zone shall be limited to agricultural and landscape irrigation uses only. Recycled water shall not be used for direct, intentional recharge of the San Jacinto Upper Pressure Management Zone, unless authorization has been provided by the Regional Board and Department of Public Health. Submit documentation of amount, TDS and nitrogen quality of recycled water provided to agricultural operations and/or landscape irrigation, the amount of groundwater pumped for agricultural and all other uses and amount of State Project Water recharged in the San Jacinto Upper Pressure Management Zone.	Annually, by April 15th, after initiation of construction of facilities/implementation of programs to support recycled water reuse program.
7. EMWD recycled water quality improvement plan and schedule a. Submit plan and schedule b. Implement plan and schedule	a. 60 days after the TDS 5-year running average effluent quality at the San Jacinto Valley Regional Water Reclamation Facility equals or exceeds 640 mg/L b. Upon approval by Regional Board

Description of Eastern Municipal Water District's (EMWD's) Commitments

1. Groundwater Monitoring Program (Table 5-11, No. 1)

For the Canyon Management Zone, the Hemet South Management Zone, the San Jacinto Upper Pressure Management Zone and Lakeview-Hemet North Management Zone, EMWD shall conduct and/or fund monitoring activities to determine ambient TDS and nitrate concentrations. EMWD already implements comprehensive monitoring and reporting programs associated with the use of the groundwater for potable water supply and the use of recycled water for agricultural and landscape irrigation purposes. EMWD periodically reports the data to several regulatory agencies for the State and US EPA and will provide these data as needed to the Regional Board. These monitoring and reporting programs will continue and the data will be analyzed and used to evaluate water quality in the area. For purposes of this maximum benefit program, the groundwater monitoring program data will be used to assess the water quality of the San Jacinto Upper Pressure Management Zone and the management zones addressed in the Management Plan.

By (**within 30 days from date of approval of this amendment by OAL**) and prior to the discharge of recycled water to the San Jacinto Upper Pressure Management Zone, EMWD shall submit to the Regional Board for approval a proposed groundwater monitoring program to determine ambient water quality and to evaluate the water quality effects of implementation of the maximum benefit program, including the "maximum benefit" nitrate-nitrogen and TDS objectives. The proposed monitoring program shall include an appropriate quality control/quality assurance component. Within 30 days of Regional Board approval of the monitoring plan, the groundwater monitoring program must be implemented.

An annual report, including all raw data, quality assurance/quality control data and a summary of the results of the approved groundwater monitoring program, shall be submitted to the Regional Board by August 15th of each year.

2. Ambient Groundwater Quality Determinations (Table 5-11, No. 2)

a. Develop estimates of ambient TDS and nitrate

By July 1, 2012 and every three years thereafter, EMWD shall submit a determination of ambient TDS and nitrate-nitrogen quality in all of the San Jacinto Basin management zones within the EMWD service area. This determination shall be accomplished using methodology consistent with the calculation of ambient quality as conducted by the Basin Monitoring Program Task Force.[3] To conduct the ambient quality determinations, EMWD can either contribute financially to efforts by the Basin Monitoring Program Task Force to estimate the ambient TDS and nitrate concentrations for the management zones in EMWD's service area or assume sole responsibility for the preparation of these estimates.

[3] The Basin Monitoring Program Task Force, was formed after the N/TDS Task Force completed its work and the 2004 N/TDS Basin Plan amendments were adopted. The Basin Monitoring Program Task Force has assumed the responsibility to conduct analyses needed to implement certain Basin Plan requirements, including the triennial determination of ambient groundwater quality and revisions to the TDS and TIN wasteload allocations.

b. Develop ambient TDS projection

By July 18, 2014 and every six years thereafter, EMWD shall submit a projection of TDS quality in all of the San Jacinto Basin management zones. This projection shall be developed using methodology developed by the Imported Water Recharge Workgroup [4] and approved by the Regional Board. The projections will be compared to prior projections and to estimates of the historical ambient TDS concentrations. This analysis must be submitted in a report to the Regional Board. The methodology employed to date provides a 20-year TDS projection. Changes to this time period may be made if justified to the satisfaction of the Executive Officer.

3. TDS and Nitrogen Wasteload Allocations (WLAs) (Table 5-11, No. 3)

Within 1 year after notification from the Regional Board of the need to review/revise the TDS and nitrogen WLAs, EMWD shall submit documents including, but not limited to, modeling analysis, data compilation or data analysis in support of a revised TDS and nitrogen WLA for the Santa Ana River and its tributaries. EMWD may contribute financially in regional efforts, such as those of the Basin Monitoring Program Task Force, to review and recommend updates to the wasteload allocations, or EMWD may conduct the analyses individually.

4. Salinity Management Plan (Table 5-11, No. 4)

Within (*12 months *from effective date of this Basin Plan amendment*),* EMWD shall submit a proposed Salinity Management Plan to minimize the TDS concentration in water supplied in the EMWD service area and in recycled water. The Plan shall include efforts to supply water with the lowest reasonable TDS concentration for municipal uses. The Plan shall also include efforts to reduce the TDS waste increment through use (defined herein as the average TDS increase that occurs through indoor uses, which is numerically equal to the average TDS concentration in recycled water minus the average TDS concentration in the source water supply) and salt added through treatment at recycled water facilities. The waste increment includes salt added by water conditioning and self regenerative water softeners, industrial sources, and other sources. EMWD will use its best efforts to enact ordinances, incentive programs, and development requirements that minimize the TDS waste increment.

Within 30 days of Regional Board approval, the Salinity Management Plan must be implemented.

Beginning August 15, 2012 and every three years thereafter, EMWD shall submit a Salinity Management Report that describes past, current and planned salinity management actions and evaluates the efficacy of these actions.

5. Desalters and Brine Disposal (Table 5-11, No. 5)

EMWD shall submit a plan and schedule for the construction and operation of desalting facilities and brine disposal facilities (or equivalent technologies) when:

a. The 5-year running average TDS concentration in recycled water produced at the San Jacinto Valley Regional Reclamation Facility exceeds 640 mg/L, or

[4] The Imported Water Recharge Workgroup was established by agencies that recharge water to assure that water quality (TDS and Nitrogen) in groundwater as a result of recharge operations is protected. The Workgroup developed a cooperative agreement to prepare a report at six-year intervals that provides a 20-year projection of ambient water quality in each groundwater management zone,

b. The volume-weighted ambient average TDS concentration in the San Jacinto Upper Pressure Management Zone equals or exceeds 490 mg/L.

Within 30 days of Regional Board approval, the Plan/schedule must be implemented.

The construction of these facilities will be in accordance with a plan and schedule submitted by EMWD 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.

6. Recycled Water Use (Table 5-11, No. 6)

The use of recycled water for agricultural and landscape irrigation in-lieu of potable water within the San Jacinto Upper Pressure Management Zone is a critical component of the implementation of the Hemet/San Jacinto Water Management Plan and is necessary to maximize the use of the water resources of the area. Recycled water use in the San Jacinto Upper Pressure Management Zone is contingent upon EMWD providing recycled water quality of 5-year annual average (running average) concentrations of 640 mg/L or less TDS, and 13 mg/L or less nitrate-nitrogen. The use of recycled water in the San Jacinto Upper Pressure Management Zone shall be limited to agricultural and landscape uses. Recycled water shall not be directly recharged in the San Jacinto Upper Pressure Management Zone, unless prior authorization has been provided by the Regional Board and California Department of Public Health.

An annual report shall be submitted to the Regional Board by April 15th of each year that documents (1) the TDS and nitrogen quality and amount of recycled water provided to agricultural operations, including the in-lieu program, and/or used for landscape irrigation and (2) the amount of groundwater pumped for agricultural and all other uses.

7. Recycled Water Quality Improvement (Table 5-11, No. 7)

Within 60 days after the TDS 5 year running average effluent quality at the San Jacinto Valley Regional Water Reclamation Facility equals or exceeds 640 mg/L, EMWD shall submit a plan and schedule for the improvement of recycled water quality

Upon Regional Board approval, the recycled water quality plan and schedule must be implemented.

Implementation by Regional Board

No later than January 2014, and every three years thereafter, the Regional Board intends to review the status of the activities planned and executed by the EMWD to demonstrate maximum benefit and justify continued implementation of the “maximum benefit” water quality objectives. This review is intended to determine whether the commitments described above and summarized in Table 5-11 are being or have been met. As indicated above, if, as a result of this review, the Regional Board finds that the EMWD commitments are not being met, then the lowering of water quality that would be allowed by the “maximum benefit” objectives is not of maximum benefit to the people of the state. Under these circumstances, the “antidegradation” objectives for the San Jacinto Upper Pressure Management Zone (320 mg/L TDS and 1.4 mg/L

nitrate-nitrogen; see Chapter 4) would apply for regulatory purposes. Further, the Regional Board will require that the EMWD mitigate TDS and nitrogen discharges that occurred in excess of those allowed pursuant to the "antidegradation" objectives. Consistent with the requirements for the other agencies implementing maximum benefit programs, discharges in excess of the "antidegradation" objectives that must be considered for mitigation include both recycled water and imported water at TDS and/or nitrogen 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.

Add to Chapter 5 References

1. Eastern Municipal Water District, Letter to Gerard Thibeault, "Eastern Municipal Water District Proposal for New Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) Water Quality Objectives for the San Jacinto Upper Pressure Management Zone Based on Maximum Beneficial Use," July 3, 2007

Attachment B

Supplemental Environmental Document

EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950

Executive Summary
Substitute Environmental Document
Basin Plan Amendment
San Jacinto - Upper Pressure Groundwater Management Zone
Total Dissolved Solids and Total Inorganic Nitrogen Objectives

Prepared for:

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November 2009

K.S. DUNBAR & ASSOCIATES

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Executive Summary

Introduction

Eastern Municipal Water District (EMWD) has applied to the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) for a Basin Plan Amendment (BPA) for the San Jacinto – Upper Pressure Groundwater Management Zone (Figure 1).

EMWD is requesting that the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) consider changing the water quality objectives of the San Jacinto - Upper Pressure Groundwater Management Zone to enable the efficient implementation of the Hemet/San Jacinto Water Management Plan. Changing the objectives will create assimilative capacity in the San Jacinto - Upper Pressure Groundwater Management Zone and thereby enable the use of recycled water and allow for the recharge of imported water. Without this change, the Management Plan cannot proceed.

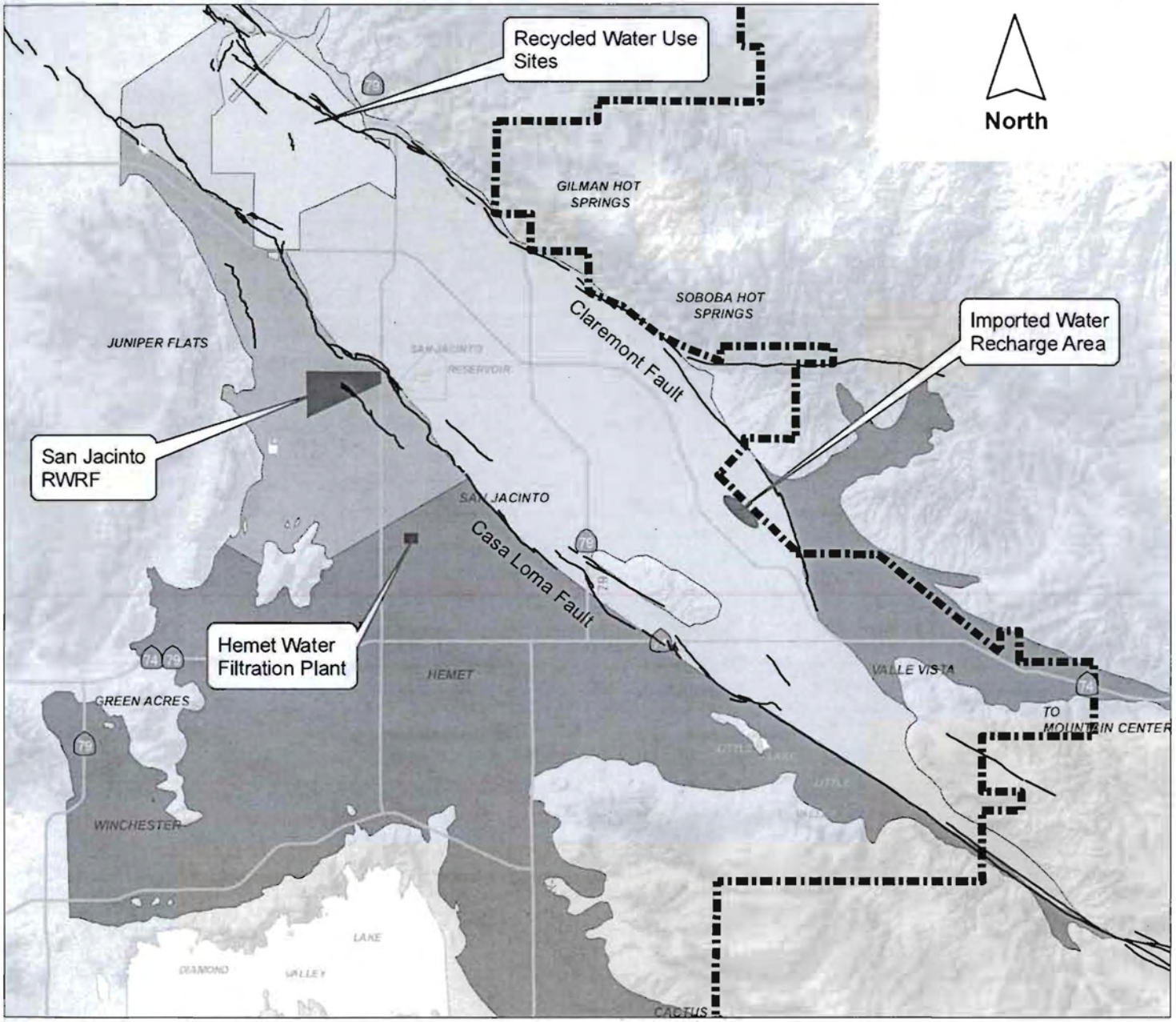
Basin Plan Update

The last Basin Plan update was in February 2008. The nature of that update was to:

- Update the formatting of the Plan from a two column width to a full page width format.
- Include the text, tables and exhibits of all Basin Plan amendments.
- As called for by the adopted Basin Plan amendments, remove text and tables from the Plan that have been replaced or deleted.
- Revise page numbers accordingly.

The February 2008 Basin Plan update did not include any other changes, non-substantive or otherwise, beyond incorporating into the text of the Plan amendments that had been previously adopted and approved. Because all changes to the Plan included in the update had been previously approved by the Regional Board as Basin Plan amendments, no administrative process was required or necessary to accomplish that update.

A TIN/TDS Task Force was formed in the mid 1990s to perform certain investigations that would lead to the establishment of new TIN and TDS objectives for groundwater basins in the Santa Ana River Watershed. The Regional Board, water recycling agencies, and many other entities participated in the Task Force. The TIN/TDS Task Force published a report entitled *TIN/TDS Study – Phase 2A, Final Technical Memorandum* (Wildermuth Environmental, 2000). The Regional Board revised the Basin Plan in 2004 based on that study. The new TDS and TIN objectives were based on a statistical analysis of well



Legend

- Fault Line
- Ag In-Lieu
- San Jacinto RWRF
- Water Filtration Plant
- Highways
- Freeways
- Lakes

Management Zones

- Hemet North
- Hemet South
- San Jacinto Canyon
- San Jacinto Upper Pressure
- EMWD Boundary
- Imported Water Recharge Area

Plot Date: 07-09-2009
C. Reber EMWD

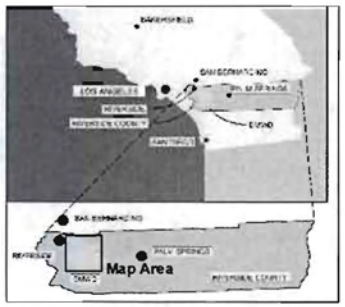


Figure 1. San Jacinto Upper Pressure Management Zone Site Map

water quality data for the period of 1954 to 1973 with the resulting well statistics volumetrically averaged to yield a new statistic for each water body. The first part of the State Water Board's Executive Order 68-16 (Antidegradation Policy) is the basis for this approach. Executive Order 68-16 states:

1) *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water and will not result in water quality less than that prescribed in the policies.*

2) *Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*

3) *In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.*

The operating concept from Executive Order 68-16 for establishing antidegradation objectives is:

1) *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained . . .*

The new objectives and associated water bodies in the San Jacinto Basin are:

Groundwater Management Zone	TDS Objective (mg/l)	TIN Objective (mg/l)
Canyon	230	2.5
Hemet South	730	4.1
Lakeview – Hemet North	520	1.8
Menifee	1020	2.8
Perris North	570	5.2
Perris South	1260	2.5
San Jacinto – Lower Pressure	520	1.0
San Jacinto – Upper Pressure	320	1.4

These new management zones and their respective TDS and TIN objectives were approved by the Regional Board in January 2004 (Order No. R8-2004-0001) and became effective in December 2004.

These management zones are identical to the management zones adopted by the Hemet/San Jacinto Groundwater Area Management stakeholders in the Hemet/San Jacinto Water Management Plan and are shown in Figure 3-8 of the TIN/TDS Study and Figure 1 in this report. The TIN/TDS Task Force Report also demonstrated that there was no assimilative capacity in the San Jacinto – Upper Pressure Groundwater Management Zone for either TDS or TIN.

EMWD's Proposed TDS and TIN Objectives

EMWD's proposal is based on California Water Code §13241 and other criteria to establish TDS and TIN objectives in the San Jacinto – Upper Pressure Groundwater Management Zone consistent with Executive Order 68-16. As previously stated, the operating concept from Executive Order 68-16 for establishing maximum benefit-based objectives is:

> *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been* ***demonstrated*** *to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.* Emphasis added.

§13241 states the criteria that need to be considered in establishing water quality objectives other than the minimum requirement stated in Executive Order 68-16. The discussion that follows and the commitments made are structured to demonstrate that implementing the proposed water management strategy along with changing the objectives will promote the maximum beneficial use of the waters of the State. §13241 states:

> *Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of the water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:*
>
> *a) Past, present, and probable future beneficial uses of water.*
>
> *b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.*
>
> *c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.*
>
> *d) Economic considerations.*

e) The need for developing housing within the region.

f) The need to develop and use recycled water.

EMWD requests that the TDS and TIN objectives for the San Jacinto – Upper Pressure Groundwater Management Zone be amended as follows:

TDS (mg/l)		TIN (mg/l)	
Existing	Proposed	Existing	Proposed
370	500	1.7	7.0

The "Existing" objectives are estimates of the volume-weighted quality in 2003, the last year in which estimates of ambient TDS and TIN concentrations were available (WEI, 2005). The proposed TDS objective is the drinking water secondary maximum contaminant level for TDS that was established based on aesthetic considerations. The proposed TIN objective is based on values that can accommodate the direct use of recycled water in the San Jacinto – Upper Pressure Groundwater Management Zone without impairing beneficial uses.

Substitute Environmental Document

1 Introduction

Eastern Municipal Water District (EMWD) applied to the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) for a Basin Plan Amendment (BPA) for the San Jacinto – Upper Pressure Groundwater Management Zone (Figure 1). Before the Regional Board can act on the request for the BPA, it must comply with the provisions of the California Environmental Quality Act (CEQA).

2 CEQA Requirements

Section 21080.5 of the Public Resources Code authorizes the Secretary for Resources to certify State regulatory programs, designed to meet the goals of CEQA, as exempt from its requirements to prepare an Environmental Impact Report, Negative Declaration, or Initial Study. The State Water Resources Control Board's (State Water Board) and the Regional Board's BPA process is a Certified Regulatory Program and is therefore exempt from CEQA's requirements to prepare such documents [14 CCR 15251(g)][1].

The State Water Board's CEQA Implementation regulations (23 CCR 3720 et seq.) describe the environmental documents required for BPA actions. Section 3777 states:

a) *Any standard, rule, regulation, or plan proposed for board approval or adoption must be accompanied by a completed Environmental Checklist contained in Appendix A to this subchapter or such other completed checklist as may be prescribed by the board, and a written report prepared for the board, containing the following:*

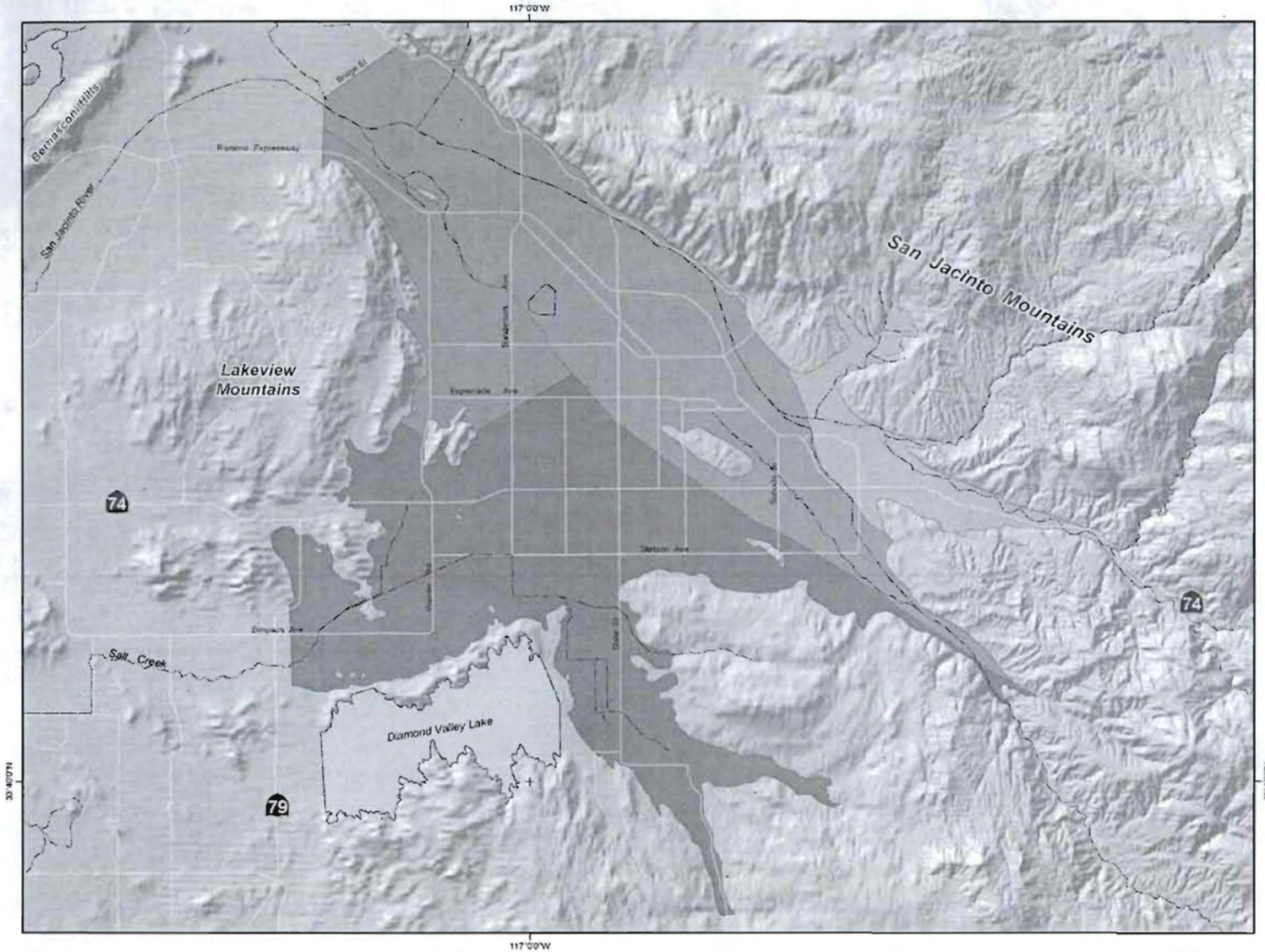
   1) *A brief description of the proposed activity;*

   2) *Reasonable alternatives to the proposed activity; and*

   3) *Mitigation measures to minimize any significant adverse environmental impacts of the proposed activity.*

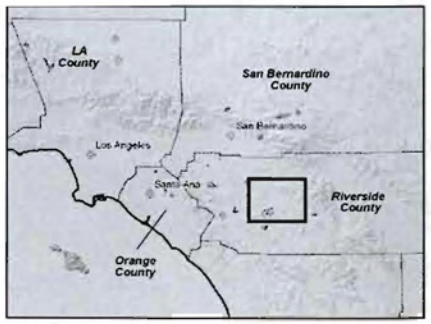
b) *Upon completion of the written report, the board shall provide a Notice of Filing of the report to the public and to any person who requests, in writing, such notification.*

[1] 14 CCR 15251(g) means Title 14 California Code of Regulations, Section 15251(g).



Management Area

- Canyon Management Zone
- Hemet-South Management Zone
- Hemet-North Portion of Lakeview - Hemet North Management Zone
- San Jacinto-Upper Pressure Management Zone



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Author: KD
Date: 20061207
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EASTERN MUNICIPAL WATER DISTRICT

Maximum Benefit Proposal

Hemet/San Jacinto Groundwater Management Area

Management Zone Boundary

Figure 1

The board shall not take action on the proposed activity until 45 days after the Notice of Filing contained in Appendix C to this subchapter has been provided.

3 Scope of the Environmental Analysis

CEQA has special provisions that establish the scope of the environmental analysis required for the adoption of this Basin Plan Amendment. CEQA limits the scope of an environmental analysis of the reasonably foreseeable methods of compliance with the amendment. As previously stated, the State Water Board's CEQA Implementation Regulations for Certified Regulatory Programs (23 CCR 3777) require the environmental analysis to include at least the following:

1. A brief description of the proposed activity. In this case, the proposed activity is the Basin Plan Amendment. The amendment is described under "4. Description of the Proposed Activity".

2. Reasonable alternatives to the proposed activity (discussed under "9 Reasonable Alternatives to the Proposed Activity").

3. Mitigation measures to minimize any significant adverse environmental impacts of the proposed activity (discussed under "8. Discussion of Possible Environmental Impacts of Implementation of the Basin Plan Amendment and Environmental Commitments").

Additionally, CEQA [PRC 21159(a)] and the CEQA Guidelines [14 CFR 15187(c)] require the following components, some of which are repetitive of the list above:

1. An analysis of the reasonable foreseeable environmental impacts of the methods of compliance. These methods may be employed to comply with the Basin Plan amendment. Reasonably foreseeable methods of compliance are described in Section 5. Sections 7 and 8 identify the environmental impacts associated with the methods of compliance.

2. An analysis of the reasonably foreseeable feasible mitigation measures relating to those impacts. This discussion is also in Section 8.

3. An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, which would avoid or eliminate the identified impacts. This discussion is in Section 5.

Additionally, the CEQA Guidelines [14 CCR 15187(d), PRC 21159(c)] require the environmental analysis take into account a reasonable range of:

1. Environmental factors (Sections 7 and 8);

2. Economic factors (Section 4);

3. Technical factors (Section 4);

4. Population (Section 4);

5. Geographic areas (Section 6); and

6. Specific sites (Section 5).

A "reasonable range" does not require an examination of every site, but a reasonably representative sampling of them. The statute [PRC 21159(d)] specifically states that the agency shall not conduct a "project level analysis". Rather, a project level analysis must be performed by the agencies that are required to implement the programs in accordance with the Basin Plan Amendment (PRC 21159.2). Notably, the California Regional Water Quality Control Board, Santa Ana Region is prohibited from specifying the manner of compliance with its regulations (WC 13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the agencies that are required to implement the programs in accordance with the Basin Plan Amendment. In preparing this Basin Plan Amendment, the California Regional Water Quality Control Board, Santa Ana Region has considered the pertinent requirements of State law (PRC 21159 and 14 CCR 15187), and intends this analysis to serve as a tier 1 environmental review.

Any potential environmental impacts associated with the Basin Plan Amendment depend upon the specific compliance projects selected by the agencies that are required to implement the programs in accordance with the Basin Plan Amendment, most of which are public agencies and subject to their own CEQA obligations. If not properly implemented or mitigated at the project level, there could be adverse environmental impacts from implementing projects in accordance with the Basin Plan Amendment. The Substitute CEQA Documents identify broad mitigation approaches that could be considered at the project level. Consistent with CEQA, the substitute documents do not engage in speculation or conjecture, but rather consider the reasonably foreseeable methods of compliance, the reasonably foreseeable mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid, eliminate, or reduce the identified impacts.

4 Description of the Proposed Activity

Background

The 1995 Water Quality Control Plan for the Santa Ana River Basin (Region 8) was amended in 2004. The amended version included the following beneficial uses of groundwater in the San Jacinto - Upper Pressure Groundwater Management Zone:

- MUN (municipal) – waters used for community, military, municipal or individual water systems. These uses include, but are not limited to, drinking water supply.

- AGR (agricultural) – waters used for farming, horticulture or ranching. These uses may include, but are not limited to, irrigation, stock watering and support of vegetation for range grazing.

- IND (industrial supply) – waters used for industrial activities that do not depend primarily upon water quality. These uses include, but are not limited to, mining, cooling water supply, conveyance, gravel washing, fire protection and oil well repressurization.

- PROC (industrial process) – waters used for industrial activities that depend primarily on water quality. These uses include, but are not limited to, process water supply and all uses of water related to product manufacturing and food preparation.

The 2004 amendment also included the following water quality objectives for the San Jacinto - Upper Pressure Groundwater Management Zone:

- TDS (total dissolved solids) 320 mg/l

- NO_3 - N (nitrate as nitrogen) 1.4 mg/l

These objectives resulted in the following assimilative capacities for these two constituents in the San Jacinto - Upper Pressure Groundwater Management Zone:

Constituent	Water Quality Objective (mg/l)	2006 Ambient (mg/l)	Assimilative Capacity (mg/l)
TDS	320	350	-30
NO_3-N	1.4	1.6	-0.2

As shown above, there is no assimilative capacity in the San Jacinto - Upper Pressure Groundwater Management Zone for these minerals.

The stakeholders in the Hemet/San Jacinto Groundwater Management Area (Management Area) developed the Hemet/San Jacinto Water Management Plan to provide a foundation that guides and supports responsible water management in the future. The local stakeholders involved in the Management Plan include EMWD, Lake Hemet Municipal Water District (LHMWD), the Cities of Hemet and San Jacinto, and private water producers. EMWD and LHMWD have also worked with the Soboba Band of Luiseño Indians and the federal government to develop a Settlement Agreement that would resolve past issues with respect to tribal water rights and water management practices in the Management Area.

The stakeholders also developed a Stipulated Judgment that was filed in the Riverside County Superior Court in 2007. The Stipulated Judgment called for the formation of a Watermaster to implement the Management Plan, which describes water supply management to maximize the reasonable and beneficial use of all waters available in the area, eliminate overdraft, protect prior rights of the Soboba Tribe, and provide for the substantial enjoyment of all water rights by recognizing their priorities. As part of the Management Plan, the Watermaster, through EMWD, is implementing the following programs:

- Hemet/San Jacinto Integrated Recharge and Recovery Program
- Recycled Water In-Lieu Project
- Hemet Water Filtration Plant

The location of these three programs is shown on Figure 2 and they are briefly described in the following paragraphs.

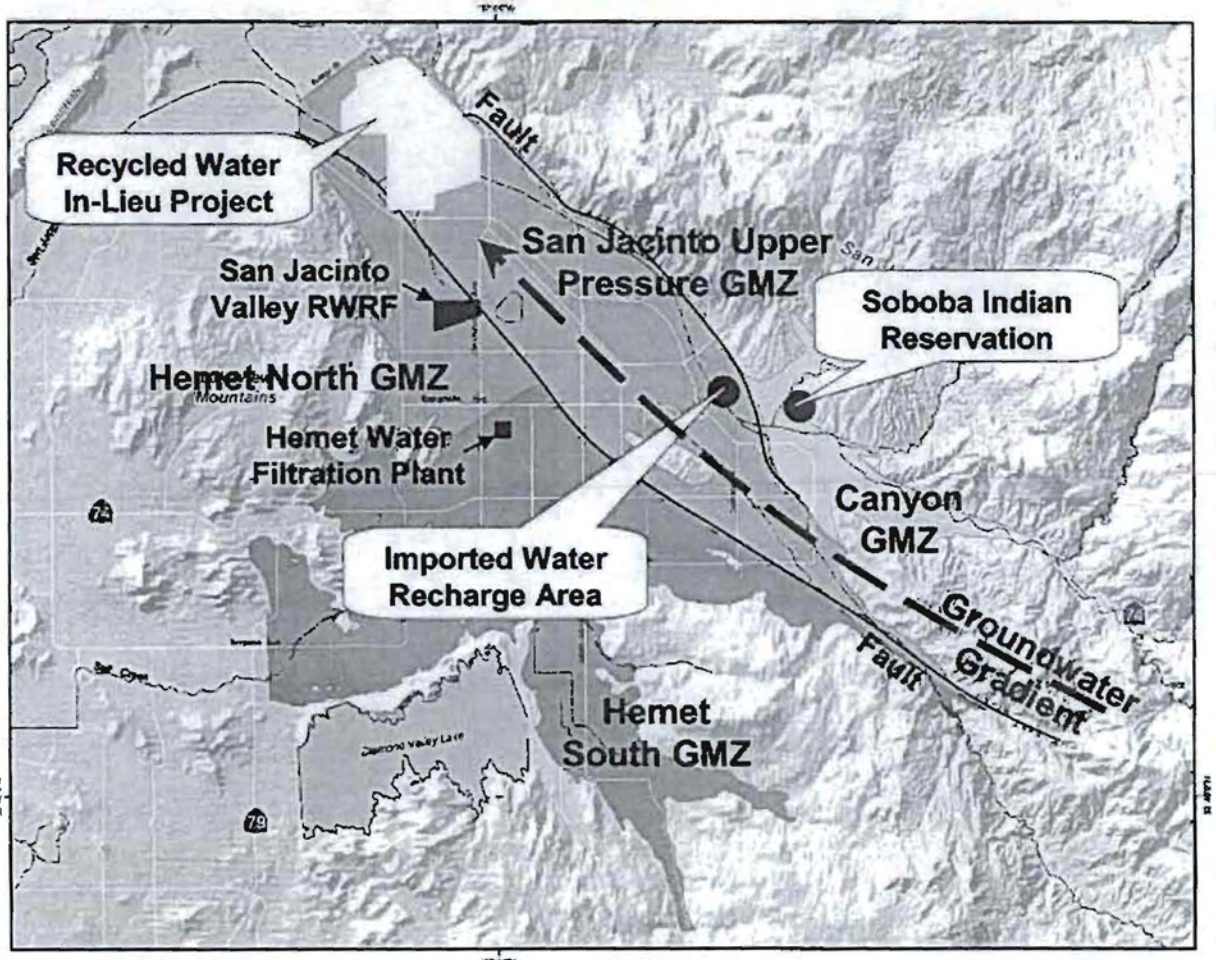
Hemet/San Jacinto Integrated Recharge and Recovery Program

The Hemet/San Jacinto Integrated Recharge and Recovery Program (IRRP) is designed to recharge imported water and extract groundwater at a capacity such that the following goals are met:

- satisfy prior and paramount Soboba Tribe water rights;
- offset the estimated 10,000 acre-feet per annum (afa) of overdraft in the Management Area; and
- provide an additional 15,000 afa to help meet the demand increases.

San Jacinto Upper Pressure

Groundwater Management Zone (GMZ)

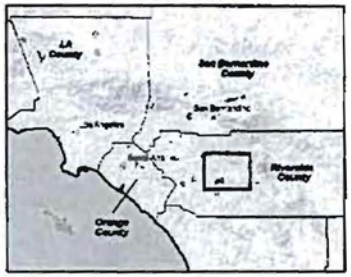


EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950

Management Area

- Canyon Management Zone
- Hemet-South Management Zone
- Hemet-North Portion of Lakeview - Hemet North Management Zone
- San Jacinto-Upper Pressure Management Zone

SAN JACINTO UPPER PRESSURE GMZ	
	Maximum Benefit Objectives
TDS	500 mg/L
TIN	7.0 mg/L



Hemet/San Jacinto Groundwater Management Area

Management Zone Boundary

Prepared by WILDERMUTH ENVIRONMENTAL INC

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Maximum Benefit Proposal

Figure 2

Phase I of the IRRP has been designed and funded and the necessary environmental permits are being acquired. Phase II is in the planning stages. Phase I will consist of six recharge ponds within the San Jacinto Riverbed and will provide up to 42 cubic feet per second (cfs) of recharge capacity. Phase I will be completed in December 2009. The completion of Phase II has the potential to double the recharge capacity.

The San Jacinto - Upper Pressure Groundwater Management Zone is expected to receive a long-term average recharge of about 16,000 afa of State Water Project (SWP) water with average TDS and TIN values of 250 and 0.6 mg/l, respectively. This recharge of higher quality SWP water will result in a net benefit to the San Jacinto – Upper Pressure Groundwater Management Zone, which currently (2006) has ambient TDS and TIN concentrations of 350 and 1.6 mg/l, respectively.

At present, the water quality objectives for TDS and TIN are 320 and 1.4 mg/l, respectively. Therefore, based on the current ambient concentrations of TDS and TIN, there is no assimilative capacity for either constituent.

Recycled Water In-Lieu Project

The Recycled Water In-Lieu Project will supply recycled water from the San Jacinto Valley Regional Water Reclamation Facility for agricultural irrigation in-lieu of pumping native groundwater. This project will provide additional recycled water to the approximately 5,000 afa that is currently being served throughout the Management Area.

One project that is already in the planning stages could deliver up to 8,540 afa of recycled water to Rancho Casa Loma and the Scott Brothers Dairy, which are located in the lower portion of the San Jacinto – Upper Pressure Groundwater Management Zone.[2] A Mitigated Negative Declaration (State Clearinghouse No. 2007011020) was approved for this Project by EMWD's Board of Directors on March 7, 2007.

The project costs will be split between EMWD, LHMWD and the Cities of Hemet and San Jacinto. Agreements that set limits on groundwater production and provide for payment of a portion of the operation and maintenance costs will be made with Rancho Casa Loma and the Scotts Brothers Dairy

Hemet Water Filtration Plant

EMWD has constructed the 11,000 afa Hemet Water Filtration Plant to treat SWP water for potable supply. This additional supply will be used in-lieu of native groundwater. The use of treated imported

[2] The groundwater gradient in the San Jacinto – Upper Pressure Management Zone is from southeast to northwest as shown on Figure 2.

water will reduce the TDS in the recycled water and result in a net decrease in the TDS concentration in returns from use to groundwater.

Requested Basin Plan Amendment

Introduction

EMWD is requesting that the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) consider changing the water quality objectives of the San Jacinto - Upper Pressure Groundwater Management Zone to enable the efficient implementation of the Hemet/San Jacinto Water Management Plan. Changing the objectives will create assimilative capacity in the San Jacinto - Upper Pressure Groundwater Management Zone and thereby enable the use of recycled water and allow for the recharge of imported water. Without this change, the Management Plan cannot proceed.

Basin Plan Update

The last Basin Plan update was in February 2008. The nature of that update was to:

- Update the formatting of the Plan from a two column width to a full page width format.
- Include the text, tables and exhibits of all Basin Plan amendments.
- As called for by the adopted Basin Plan amendments, remove text and tables from the Plan that have been replaced or deleted.
- Revise page numbers accordingly.

The February 2008 Basin Plan update did not include any other changes, non-substantive or otherwise, beyond incorporating into the text of the Plan amendments that had been previously adopted and approved. Because all changes to the Plan included in the update had been previously approved by the Regional Board as Basin Plan amendments, no administrative process was required or necessary to accomplish that update.

A TIN/TDS Task Force was formed in the mid 1990s to perform certain investigations that would lead to the establishment of new TIN and TDS objectives for groundwater basins in the Santa Ana River Watershed. The Regional Board, water recycling agencies, and many other entities participated in the Task Force. The TIN/TDS Task Force published a report entitled *TIN/TDS Study – Phase 2A, Final Technical Memorandum* (Wildermuth Environmental, 2000). The Regional Board revised the Basin Plan in 2004 based on that study. The new TDS and TIN objectives were based on a statistical analysis of well water quality data for the period of 1954 to 1973 with the resulting well statistics volumetrically averaged to yield a new statistic for each water body. The first part of the State Water Board's Executive Order 68-16 (Antidegradation Policy) is the basis for this approach. Executive Order 68-16 states:

1) *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water and will not result in water quality less than that prescribed in the policies.*

2) *Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*

3) *In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.*

The operating concept from Executive Order 68-16 for establishing antidegradation objectives is:

1) *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained . . .*

The new objectives and associated water bodies in the San Jacinto Basin are:

Groundwater Management Zone	TDS Objective (mg/l)	TIN Objective (mg/l)
Canyon	230	2.5
Hemet South	730	4.1
Lakeview – Hemet North	520	1.8
Menifee	1020	2.8
Perris North	570	5.2
Perris South	1260	2.5
San Jacinto – Lower Pressure	520	1.0
San Jacinto – Upper Pressure	320	1.4

These new management zones and their respective TDS and TIN objectives were approved by the Regional Board in January 2004 (Order No. R8-2004-0001) and became effective in December 2004. These management zones are identical to the management zones adopted by the Hemet/San Jacinto Groundwater Area Management stakeholders in the Hemet/San Jacinto Water Management Plan and are shown on Figure 3-8 of the TIN/TDS Study and Figure 1 in this report. The TIN/TDS Task Force Report

also demonstrated that there was no assimilative capacity in the San Jacinto – Upper Pressure Groundwater Management Zone for either TDS or TIN.

EMWD's Proposed TDS and TIN Objectives

EMWD's proposal is based on California Water Code §13241 and other criteria to establish TDS and TIN objectives in the San Jacinto – Upper Pressure Groundwater Management Zone consistent with Executive Order 68-16. As previously stated, the operating concept from Executive Order 68-16 for establishing maximum benefit-based objectives is:

> *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been* ***demonstrated*** *to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.* Emphasis added.

§13241 states the criteria that need to be considered in establishing water quality objectives other than the minimum requirement stated in Executive Order 68-16. The discussion that follows and the commitments made are structured to demonstrate that implementing the proposed water management strategy along with changing the objectives will promote the maximum beneficial use of the waters of the State. §13241 states:

> *Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of the water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:*
>
> *a) Past, present, and probable future beneficial uses of water.*
>
> *b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.*
>
> *c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.*
>
> *d) Economic considerations.*
>
> *e) The need for developing housing within the region.*

f) The need to develop and use recycled water.

EMWD requests that the TDS and TIN objectives for the San Jacinto – Upper Pressure Groundwater Management Zone be amended as follows:

TDS (mg/l)		TIN (mg/l)	
Existing	Proposed	Existing	Proposed
370	500	1.7	7.0

The "Existing" objectives are estimates of the volume-weighted quality in 2003, the last year in which estimates of ambient TDS and TIN concentrations were available at that time (WEI, 2005). The proposed TDS objective is the drinking water secondary maximum contaminant level for TDS that was established based on aesthetic considerations. The proposed TIN objective is based on values that can accommodate the direct use of recycled water in the San Jacinto – Upper Pressure Groundwater Management Zone without impairing beneficial uses.

The above proposed objectives are evaluated based on Water Code §13241 in the following paragraphs.

§13241(a) Past, Present and Probable Future Beneficial Uses of Water

As previously stated, the beneficial uses in the current Basin Plan for the San Jacinto – Upper Pressure Groundwater Management Zone are:

- MUN (municipal)
- AGR (agriculture)
- IND (industrial)
- PROC (industrial process water)

The use impairment threshold concentrations for TDS and TIN for these beneficial uses as listed or inferred from the current Basin Plan are:

Beneficial Use	TDS Threshold (mg/l)	TIN Threshold (mg/l)
MUN	500	10
AGR	700	>10
IND	nl	nl
PROC	nl	nl

The "nl" listed above means that the Basin Plan is silent as to the impairment threshold concentrations for these uses. For the AGR use, the Basin Plan states that 700 mg/l is the beneficial use threshold for irrigation. The Basin Plan is silent regarding the TIN impairment threshold for the AGR use. However, it is reasonable to assume that this impairment threshold is significantly greater than 10 mg/l; thus, it is shown above as > 10 mg/l. The proposed TDS and TIN objectives are protective of all of these beneficial uses.

§13241(b) Environmental Characteristic of the Hydrologic Unit under Consideration, Including the Quality of Water Available thereto.

Total Dissolved Solids

EMWD has conducted studies to estimate future TDS concentrations in the San Jacinto – Upper Pressure Groundwater Management Zone. The following water resources management cases were analyzed:

Case 1 No project scenario: the IRRP and Recycled Water In-Lieu Project do not occur. Groundwater production is reduced according to the Management Plan and remaining water demand is satisfied by treated imported water.

Case 2 The IRRP does not occur and the Recycled Water In-Lieu Project is online. The recycled water TDS concentration is 575 mg/l. Groundwater production is reduced according to the Management Plan and remaining water demand is satisfied by treated imported water.

Case 3 SWP water is used for groundwater replenishment and the Recycled In-Lieu Project is online. The Hemet Water Filtration Plant is constructed and treated imported water is served in lieu of native groundwater.

Case 4 Same as Case 3; however, the TDS concentration of the recycled water is 650 mg/l.

Each case represents a possible water resources management strategy that could be adopted by EMWD. Case 1 represents future conditions without the proposed major facility improvements in the Management Plan. In Case 1, groundwater production must be reduced to the safe yield of the basin. Case 2 is identical to Case 1 except that the Recycled Water In-Lieu Project is assumed to be online in 2008. Cases 3 and 4 represent the proposed Management Plan with the IRRP, Recycled Water In-Lieu Project, Hemet Water Filtration Plant, and differ only in the assumption of TDS concentration in the recycled water used for irrigation in the Recycled Water In-Lieu Project. Recall that the Management Plan includes the recharge of up to about 16,000 afa of SWP water and the Hemet Water Filtration Plant produces up to 8,000 afa of treated imported water in-lieu of native groundwater.

Figure 3 shows the estimated San Jacinto – Upper Pressure Groundwater Management Zone TDS concentrations expected through the year 2100 for all four cases. Case 1 results in an ambient TDS concentration of about 800 mg/l in 2100. The increasing TDS concentration is driven by returns from water applied for irrigation. In Case 2, the TDS concentration increases by about 135 mg/l over Case 1 in

2100. The estimated TDS concentration in year 2100 for Cases 3 and 4 are about 710 and 740 mg/l respectively. EMWD will offset the TDS inputs to groundwater from the Recycled Water In-Lieu Project and slow the expected increase of the San Jacinto – Upper Pressure Groundwater Management Zone TDS concentrations by implementing the Hemet/San Jacinto Water Management Plan and recharging imported water. Cases 3 and 4 are the alternatives that must be pursued by EMWD to ensure a reliable supply in its service area.

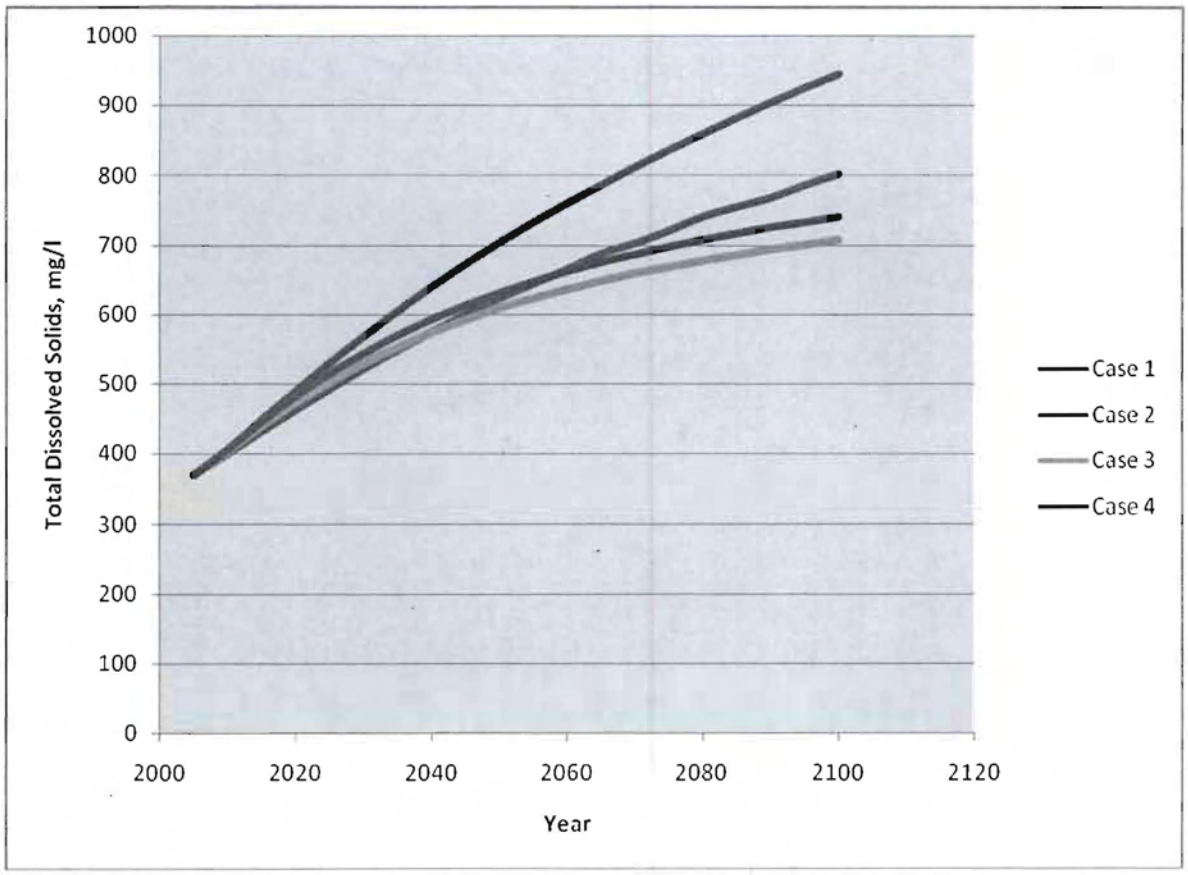

Figure 3 Comparison of Total Dissolved Solids Concentration Time Histories for the San Jacinto – Upper Pressure Groundwater Management Zone

EMWD's proposal is to implement Case 4 and to set the TDS objective at 500 mg/l. This proposal will allow EMWD to make the maximum beneficial use of waters available to the region. The 500 mg/l value corresponds to the drinking water secondary maximum contaminant level for TDS. The TDS projections shown on Figure 3 do not take into account the travel time through the vadose zone for returns from water applied for irrigation. Therefore, TDS concentration projections for the San Jacinto – Upper Pressure Groundwater Management Zone will not increase as rapidly as suggested on Figure 3.

The Management Plan, as implemented by Case 4, may result in the management zones surrounding the San Jacinto – Upper Pressure Groundwater Management Zone receiving better quality water than if the Management Plan were not implemented. The most current groundwater flow model for the San Jacinto Watershed assumes that there is no outflow from the San Jacinto – Upper Pressure Groundwater Management Zone (TechLink Environmental, Inc. 2002). It is believed that there is some outflow to the Hemet South Groundwater Management Zone, but that this flow is de minimus. With the implementation of the Management Plan, groundwater levels will rise in the San Jacinto – Upper Pressure Groundwater Management Zone and there may be outflow to the Hemet South, Lakeview/Hemet North, and San Jacinto – Lower Pressure Groundwater Management Zones. The ambient TDS concentrations for these management zones are greater than the proposed objective for the San Jacinto – Upper Pressure Groundwater Management Zone; therefore, any incidental subsurface discharge from the San Jacinto – Upper Pressure Groundwater Management Zone to the adjacent management zones would have a beneficial impact on said management zones.

Total Inorganic Nitrogen

The TIN/TDS Task Force determined that the use protection threshold for TIN in groundwater was 8 mg/l. The proposed objective and ambient TIN concentrations in the San Jacinto – Upper Pressure Groundwater Management Zone are lower than 8 mg/l and are thus protective of current and future beneficial uses. EMWD produces recycled water with a 12-month average TIN concentration of 10 mg/l. TIN losses in recycled water recharge are assumed to be at least 25 percent in the Basin Plan and a recent study titled *Quantification of Nitrogen Removal Under Recycled Water Ponds* (Daniel B. Stephens & Associates, Inc., 2007) demonstrated that total nitrogen losses under the Alessandro Ponds in the San Jacinto – Upper Pressure Groundwater Management Zone averaged 64 percent at a depth of about 29 feet. Based on the results of this study, EMWD received approval from the Regional Board to use a nitrogen uptake rate of 60 percent.

The addition of TIN to the San Jacinto – Upper Pressure Groundwater Management Zone from the use of recycled water by participants in the Recycled Water In-Lieu Project, Rancho Casa Loma and the Scott Brothers Dairy, will be addressed by compliance with the requirements of Regional Board Order No. R8-2007-0001 – General Waste Discharge Requirements for Concentrated Animal Feeding Operations (Dairies and Related Facilities) within the Santa Ana Region (NPDES No. CAG018001). It should also be pointed out that the recycled water irrigation project is located in the furthest downstream location of the basin. The recycled water is applied at the surface level in an area of known natural clay layers that will minimize the vertical migration of the irrigated recycled water.

EMWD proposes that the TIN objective for the San Jacinto – Upper Pressure Groundwater Management Zone be set at 7 mg/l. This will create assimilative capacity in this management zone, allowing for the direct use of recycled water without mitigation and still protect the beneficial uses in this management zone.

§13241(c) Water Quality Conditions that could Reasonably be Achieved through the Coordinated Control of all Factors which Affect Water Quality in the Area

The controllable factors that affect TDS and TIN in the San Jacinto – Upper Pressure Groundwater Management Zone include the recharge of imported water and the use of recycled water. With the implementation of the Management Plan, up to about 16,000 afa of imported water (TDS – 250 mg/l and TIN < 1mg/l) will be recharged to replenish lower quality groundwater and its physical recharge capacity for the recharge of supplemental water will increase by at least 30,000 afa. With the implementation of the Management Plan, EMWD is committed to serve the recycled water with the lowest TDS available. The recharge of imported water will partially mitigate the effects of recycled water use in the San Jacinto – Upper Pressure Groundwater Management Zone. EMWD, in implementing the Plan, is taking extraordinary steps to optimize the management of the Management Area by improving supply reliability and water quality. Setting the TDS and TIN objectives per the EMWD proposal will reduce the cost of replenishment, which is necessary to ensure that the Management Plan is economically viable.

§13241(d) Economic Considerations

With the current TDS and TIN objectives in the Basin Plan, there is no assimilative capacity for either of these constituents. As a result, there will be TDS and TIN mitigation requirements for the recharge and direct reuse of recycled water and potentially the recharge of potable water. From the discussion in §13241(b) above, it is clear that the TDS concentration in the San Jacinto – Upper Pressure Groundwater Management Zone will increase regardless of the TDS objective and with or without recycled water use. The Santa Ana Watershed Project Authority Basin Plan Update Task Force (SAWPA BPUTF) retained Bill Dendy and Associates to analyze the economic benefits of various management programs, including:

- Managing groundwater basins to achieve Basin Plan objectives for TDS and TIN.
- Managing groundwater basins to maintain current TDS and TIN concentrations.
- Constructing groundwater treatment systems to ensure that groundwater can be put to potable uses.

The results of Dendy's work are contained in the final report *Nitrogen and TDS Studies, Upper Santa Ana Watershed* (James M. Montgomery, 1991). In summary, the SAWPA BPUTF report concluded that the cost of managing groundwater quality to achieve Basin Plan objectives or stop degradation were $6.5 billion and $3.2 billion (present worth, 1991 dollars), respectively. The cost of producing potable water through the construction of groundwater treatment plants is more reasonable at $1.9 billion. The SAWPA BPUTF report concluded that groundwater treatment for potable use was the best solution to manage the future TDS and TIN degradation of groundwater. This is because the TDS and TIN levels in agriculture and urban return flows to groundwater are not regulated and the TDS and TIN

concentrations in groundwater basins are asymptotically approaching the levels in the recharge to these basins.

Simply put, the TIN/TDS Task Force proposed management zones and associated TDS and TIN objectives will cause the mitigation expense to occur without tangible benefits to anyone in the watershed. This needless economic burden will inhibit the maximum use of recycled water and the recharge of imported water planned in the San Jacinto – Upper Pressure Groundwater Management Zone.

Adopting the EMWD proposed TDS and TIN objectives will lower the cost of implementing the Plan and increase the amount of SWP water available throughout the State; a Statewide economic and environmental benefit. That said, the Plan commits EMWD and others to spend about $600 million over the next 30 years to improve water quality and the reliability of groundwater in the San Jacinto – Upper Pressure Groundwater Management Zone.

§13241(e) The Need for Developing Housing Units within the Region and §13241(f) The Need to Develop and Use Recycled Water

The County of Riverside and the cities in the Management Area have determined a need for housing and have adopted general and specific plans that show substantial increases in housing in the Management Area as the land is converted from agricultural uses to urban uses. All of these plans have been approved and have certified environmental documents. The water supply entities in the Management Area have responded to the water supply challenge posed by these plans by developing water supply plans that depend heavily on local and supplemental supplies. The Management Plan addresses current and future demands through the development of large-scale recharge, recycled water in-lieu projects, regional conveyances and conjunctive use programs. The Kuell (SB221) and Costa (SB610) legislations require extensive documentation and demonstration of water supply reliability prior to allowing new housing to occur. The Recycled Water In-Lieu Project will offset the use of 8,540 afa of native groundwater in the San Jacinto – Upper Pressure Groundwater Management Zone or reduce the overdraft in the Management Area up to 85 percent. Recycled water use in the Management Area is necessary for growth and is necessary to implement the Management Plan. Setting the TDS and TIN objectives as proposed by EMWD will maximize the use of recycled water and, thereby, improve the reliability of water supplies for future growth in the region.

5 EMWD Environmental Commitments

EMWD is a forward thinking water resources management organization and takes its environmental stewardship responsibilities very seriously. Therefore, EMWD is prepared to enter into an agreement with the Regional Board to institutionalize the following environmental commitments along with EMWD's proposed TDS and TIN objectives. EMWD's environmental commitments are described below.

Implement the Hemet/San Jacinto Water Management Plan

EMWD will commit to the implementation of the Hemet/San Jacinto Water Management Plan pursuant to the schedules articulated in the Plan. The Management Plan has been adopted by the governing bodies of the Management Plan participants. It has the following eight primary goals:

- Address pumping overdraft and declining groundwater levels.
- Provide for Soboba Band of Luiseño Indians prior and paramount water rights.
- Ensure reliable water supply.
- Provide for planned urban growth.
- Protect and enhance water quality.
- Develop cost-effective water supply.
- Provide adequate monitoring for water supply and water quality.
- Supersede the Fruitvale Judgment and Decree.

Develop and Implement a Salinity Management Program

EMWD will develop and implement a program to minimize the TDS concentration in the source water and recycled water. The plan will include efforts to supply water with the lowest reasonable TDS concentrations for municipal purposes and efforts to reduce the TDS waste increment through use (defined herein as the average TDS increase that occurs through indoor uses, which is numerically equal to the average TDS concentration in the recycled water minus the average TDS concentration in the source water supply) and salt added through treatment at recycled water facilities. The waste increment includes salt added by water conditioning and self regenerative water softeners, industrial sources and other sources. EMWD will use its best efforts to enact ordinances, incentive programs, and development requirements that minimize the TDS waste increment.

The salinity management program will include TDS reduction strategies to protect beneficial uses when the ambient TDS concentration in the San Jacinto – Upper Pressure Groundwater Management Zone approaches the maximum benefit based objectives and to meet waste discharge requirements when the TDS concentration in the San Jacinto Valley Regional Water Reclamation Facility's effluent five-year running average exceeds 640 mg/l. When the volume-weighted TDS concentration in the San Jacinto – Upper Pressure Groundwater Management Zone rises to within 10 mg/l of the proposed TDS objective of 500 mg/l, EMWD will develop a plan either to reduce the TDS concentration in the source water and

serve this water to its customers and/or to reduce the TDS concentration in the recycled water. This plan will include the construction of desalting facilities or the use of an equivalent technology to reduce the TDS concentration in the source water supply and/or recycled water.

This plan will be submitted to the Regional Board 12 months after the requested Basin Plan Amendment (TDS objective of 500 mg/l and TIN objective of 7 mg/l) is effective.

Ambient Groundwater Quality and Wasteload Allocation

EMWD will either financially contribute to regional efforts to estimate the ambient TDS and TIN concentrations for the management zones in its service area or will prepare these estimates itself. If done by EMWD, the results will be documented in a report submitted to the Regional Board every three years on a timetable directed by the Regional Board.

EMWD will financially participate in regional efforts to review and update the TDS and TIN wasteload allocation for the Santa Ana River and its tributaries.

EMWD will prepare estimates of the ambient TDS concentration in the San Jacinto – Upper Pressure Groundwater Management Zone every six years on a timetable directed by the Regional Board. This projection will be compared to prior projections and to estimates of the historic ambient TDS concentration. This analysis will be documented in a report submitted to the Regional Board.

Groundwater Monitoring Program

EMWD is committed to conducting and funding monitoring activities that will enable the determination of ambient TDS and TIN concentrations in the groundwater in the San Jacinto – Upper Pressure Groundwater Management Zone and to cooperating with the Regional Board in the sharing of monitoring data as is consistent with EMWD policies.

6 Surrounding Land Uses and Setting

The Santa Ana Region is the smallest of the nine regions in the State (2,800 square miles) and is located roughly between Los Angeles and San Diego. Although small, the region's four million residents (1993) make it one of the most densely populated regions. People come to Southern California over the years for a wide variety of reasons. Once here, many decide to stay. Snow skiing and boarding areas in the mountains are as little as two hours from world-famous broad, sandy ocean beaches.

The climate of the Santa Ana Region is classified as Mediterranean, generally dry in the summer with mild, wet winters. The average annual rainfall in the region is about 15 inches, most of it occurring between November and March. Much of the area would be near-desert were if not for the influence of modern civilization.

In very broad terms, the Santa Ana Region is a group of connected inland basins and open coastal basins drained by surface streams flowing generally southwestward to the Pacific Ocean.

The San Jacinto – Upper Groundwater Management Zone is within the San Jacinto Valley in western Riverside County. The area encompasses the cities of Hemet and San Jacinto as well as unincorporated residential/commercial areas and agricultural lands. Figure 4 shows an aerial photograph of the area and Figure 5 shows the generally flat relief of the San Jacinto Valley in contrast with the high relief of Mt. San Jacinto approximately 20 miles away.

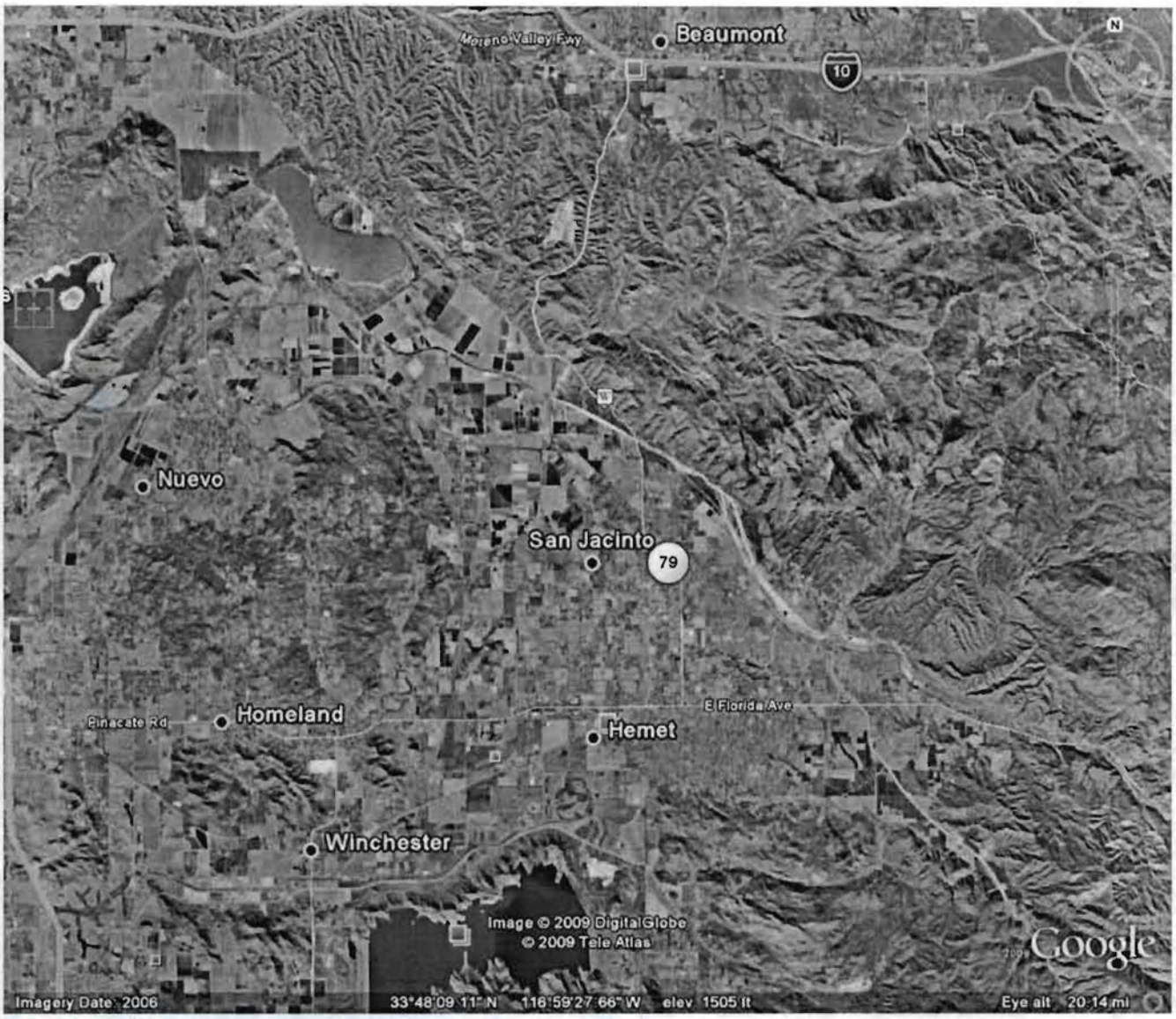

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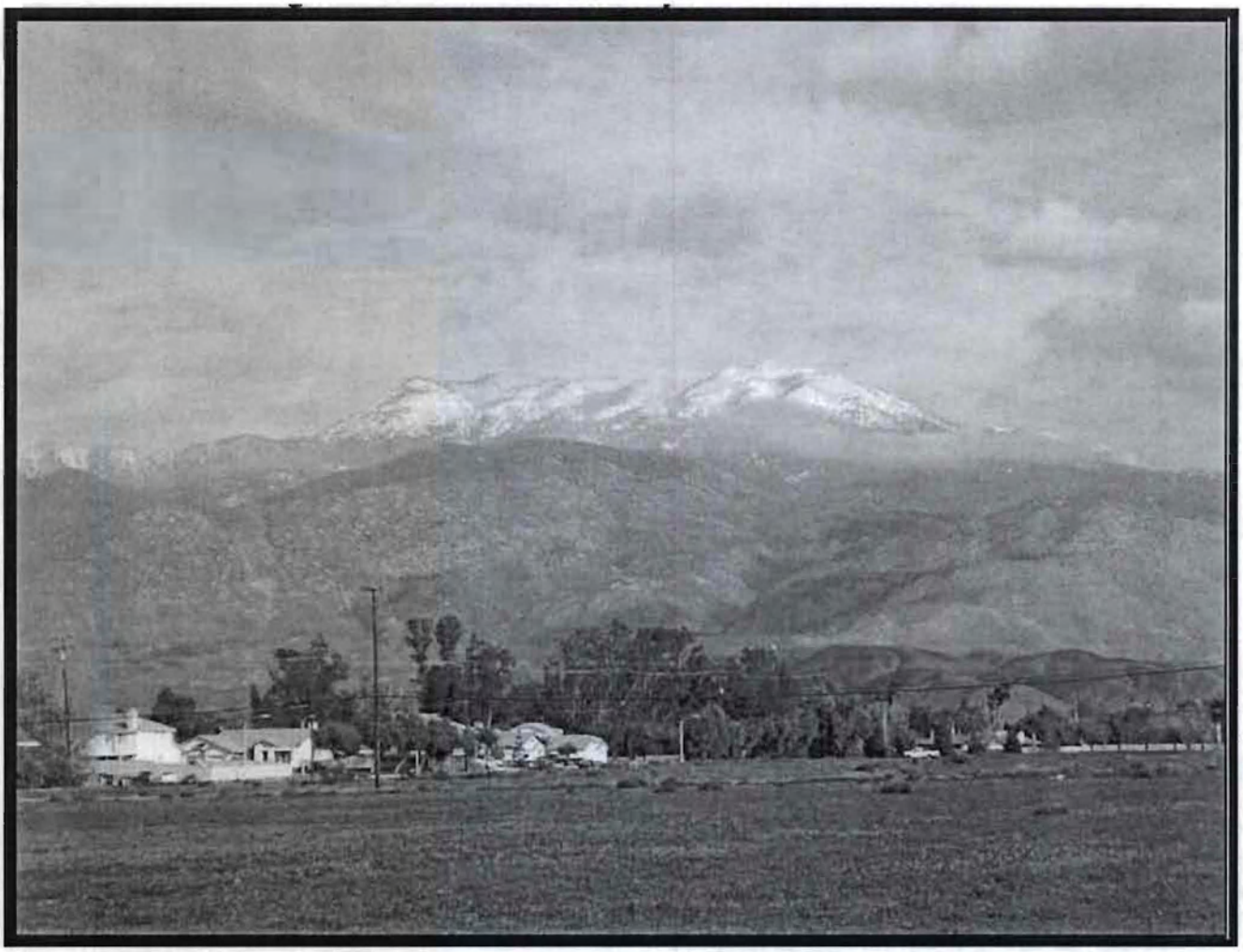
Figure 4
Aerial of Project Area

Basin Plan Amendment
San Jacinto - Upper Pressure Groundwater Management Zone
Eastern Municipal Water District



Source: Hemet/San Jacinto Water Management Area 2007 Annual Report, EMWD.

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Figure 5
San Jacinto Valley and Mt. San Jacinto

Basin Plan Amendment
San Jacinto - Upper Pressure Groundwater Management Zone
Eastern Municipal Water District

7 Environmental Checklist

Evaluation of the Environmental Impacts in the Checklist

1. The board must complete an environmental checklist prior to adoption of plans or policies. The checklist becomes a part of the Substitute Environmental Document (SED).
2. For each environmental category in the checklist, the Board must determine whether the project will cause any adverse impact. If there are potential impacts that are not included in the sample checklist, those impacts should be added to the checklist.
3. If the board determines that a particular adverse impact may occur as a result of the project, then the checklist boxes must indicate whether the impact is "Potentially Significant", "Less than Significant with Mitigation Incorporated", or "Less than Significant". "Potentially Significant Impact" applies if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries on the checklist, the SED must include an "EIR" level analysis. "Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures will reduce an effect from "Potentially Significant Impact" to a "Less than Significant Impact". The board must either require the specific mitigation measures or be certain of their application by another agency. "Less than Significant" applies if the impact will not be significant, and mitigation is not required. If there will be no impact, check the box under "No impact."
4. The board must provide a brief explanation for the checked boxes on the checklist. The explanations may be included in the written report described in the Water Boards' regulations for implementation of CEQA, 23 CCR §3777(a)(1), or in the checklist itself. The explanation of each issue should identify: (a) the significance criteria or threshold, if any, used to evaluate each question and (b) the specific mitigation measure(s) identified, if any, to reduce the impact to less than significance. The board may determine the significance of the impact by considering factual evidence or agency standards or thresholds. If the "No Impact" box is checked, the board should briefly describe the basis for that determination.
5. The board must include mandatory findings of significance if required under CEQA Guidelines §15065.
6. The board should provide references used to identify potential impacts, including a list of information sources and individuals contacted.

Environmental Issues

Aesthetics

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?				X

Agricultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects lead agencies may refer to the California Agricultural Land Evaluation Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. *Would the Project:*				
a. Convert Prime Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. *Would the Project:*				
a. Conflict with or obstruct implementation of the applicable air quality plan?				X
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d. Expose sensitive receptors to substantial pollutant concentrations?				X
e. Create objectionable odors affecting a substantial number of people?				X
f. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?				X
g. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?				X

Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?				X

Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				X
b. Cause a substantial adverse change in the significance of a archeological resource as defined in § 15064.5?				X
c. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?				X
d. Disturb any human remains, including those interred outside of formal cemeteries?				X

Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
2. Strong seismic ground shaking?			X	
3. Seismic-related ground failure, including liquefaction?			X	
4. Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the			X	

environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?				
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and if so, would the project result in a safety hazard for people residing or working in the project area?				X
f. Be located within the vicinity of a private airstrip, and if so, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?			X	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for				X

which permits have been granted)?				
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?			X	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Be inundated by seiche, tsunami, or mudflow?				X

Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program,				X

or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b. Expose persons to or generate excessive groundbourne vibration or groundbourne noise levels?				X
c. Result in a substantial permanent increase in ambient noise levels above levels existing without the project?				X
d. Result in a substantial temporary or periodic increase in noise levels in the project vicinity above levels existing without the project?			X	
e. Be located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport,				X

and if so, would the project expose people residing or working in the project area to excessive noise levels?				
f. Be located within the vicinity of a private airstrip, and if so, would the project expose people residing or working in the project area to excessive noise levels?				X

Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure?			X	
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1. Fire Protection?				X

2. Police Protection?				X
3. Schools?				X
4. Parks?				X
5. Other Public Facilities?				X

Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

Transportation/Traffic

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?			X	
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm				X

equipment)?				
e. Result in inadequate emergency access?				X
f. Result in inadequate parking capacity?				X
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?			X	
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e. Result in a determination by the wastewater treatment provider that serves or may serve the project area that it has adequate capacity to serve the project's projected demand in addition to the provider's existing communities?				X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g. Comply with federal, state, and local statutes and regulations related to solid waste?				X

Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)				X
c. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?				X

8 Discussion of Possible Environmental Impacts of Implementation of the Basin Plan Amendment and Environmental Commitments

The environmental analysis must include an analysis of the reasonably foreseeable environmental impacts of the Basin Plan Amendment and reasonable foreseeable feasible mitigation measures relating to those impacts. This section, consisting of answers to the questions in the checklist, discusses the reasonably foreseeable environmental impacts and reasonable foreseeable feasible mitigation measures.

In answering the checklist questions, this section evaluates the impacts of amending the total dissolved solids and total inorganic nitrogen objectives for the San Jacinto – Upper Pressure Management Zone which allow the use of recycled water on agricultural lands overlying the management zone. It also evaluates, in a general manner, the impacts of the EMWD's proposed environmental commitments associated with its proposed total dissolved solids and total inorganic nitrogen objectives.

Potential reasonably foreseeable impacts were evaluated with respect to aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, traffic and transportation, and utilities and service systems. Additionally, mandatory findings of significance regarding short-term, long-term, cumulative and substantial impacts were evaluated.

A significant effect on the environment is defined in regulations as a "substantial or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." *(14 CCR 15382)*

A significant effect on the environment is defined in statute as "a substantial, or potentially substantial, adverse change in the environment" where "environment" is defined by Public Resources Code §21060.5 as "the physical conditions which exist within the area which will be affected by a proposed project, including air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance."

Aesthetics

Aesthetics. a. Would the project have a substantial adverse effect on a scenic vista?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible aesthetic impacts and associated mitigation measures of the individual projects.

Aesthetics. b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Answer: No Impact.

Discussion: There are no designated State or County scenic highways within the area of the San Jacinto – Upper Pressure Groundwater Management Zone. *(www.dot.ca.gov 7/26/08).* However, the Ramona Expressway is a County Eligible Scenic Highway.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible aesthetic impacts and associated mitigation measures of the individual projects.

Aesthetics. c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible aesthetic impacts and associated mitigation measures of the individual projects.

Aesthetics. d. Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other

facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible light and glare impacts and associated mitigation measures of the individual projects.

Agricultural Resources

Agricultural Resources. a. Would the project convert Prime Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Answer: No Impact.

Discussion: There are hundreds of acres of Farmland within the area of the San Jacinto – Upper Pressure Groundwater Management Zone. Should the Regional Board adopt EMWD's proposed objectives for TDS and TIN it would be possible to utilize recycled water on these acreages which would help insure that they would remain in agricultural production due to availability of a reliable and economic water supply.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible agricultural impacts and associated mitigation measures of the individual projects.

Agricultural Resources. b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or

recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible agricultural impacts and associated mitigation measures of the individual projects.

Agricultural Resources. c. Would the project involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible agricultural impacts and associated mitigation measures of the individual projects.

Air Quality

Air Quality. a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Answer: No Impact.

Discussion: A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds growth estimates included in applicable air quality management plans [i.e., SCAQMD's 2007 Air Quality Management Plan (AQMP)]. The AQMP is based on general plans from local jurisdictions, which includes the City of Hemet, San Jacinto and Riverside County's General Plan. The AQMP accounts for development that would occur as a result of implementation of these local general plans. The proposed Project is consistent with the AQMP in that it would accommodate development approved in these general plans.

Air Quality. b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient

groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible air quality impacts and associated mitigation measures of the individual projects.

In a recent Initial Study and Mitigated Negative Declaration published by EMWD for the Perris II Brackish Groundwater Desalter *(K.S. Dunbar & Associates, Inc., January 2009)* it was stated:

As shown in Table 4-6, the total estimated emissions from the construction of the Perris II Brackish Groundwater Desalter and appurtenances would be less than the SCAQMD threshold criteria for significance. Therefore, based on these threshold criteria, construction of the planned improvements would not result in significant impacts to air quality. Therefore, no further analysis is required.

Table 4-6
Total Estimated Construction Emissions
(pounds per day)

	Pollutant (pounds per day)							
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	CO_2	CH_4
Heavy Equipment	12	48	97	0	5	4	10,237	1
Commuters	1	7	1	0	0	0	986	0
Fugitive Dust	0	0	0	0	26	14	0	0
Totals	13	55	98	0	31	18	10,237	1
Threshold Limits[1]	75	550	100	150	150	55	N/A	N/A
Localized Thresholds[2]	N/A	20,397	855	N/A	186	91	N/A	N/A

[1] *Threshold limits developed by SCAQMD to determine significance.*

[2] *Localized significance thresholds developed by SCAQMD to determine localized significance, based on a work area of 2 acres and a 500 meter distance to the nearest receptor.*

Although this analysis was site specific, it is reasonable to assume that the general conclusions for another desalinization facility would be similar.

Air Quality. c. Would the project result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Answer: No Impact.

Discussion: The California Air Resources Board has designated the South Coast Air Basin as non-attainment for the State ozone standard, the State PM_{10} standard and the State $PM_{2.5}$ standard. In

addition, the Federal Environmental Protection Agency has designated the South Coast Air Basin as non-attainment for the federal ozone standard and the federal PM_{10} standard.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible air quality impacts and associated mitigation measures of the individual projects.

Air Quality. d. Would the project expose sensitive receptors to substantial pollutant concentrations?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible air quality impacts and associated mitigation measures of the individual projects.

Air Quality. e. Would the project create objectionable odors affecting a substantial number of people?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would

prepare a project-level CEQA document discussing the possible air quality impacts and associated mitigation measures of the individual projects.

Air Quality. f. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible air quality impacts and associated mitigation measures of the individual projects.

No agency has established quantitative significance thresholds for greenhouse gases at this time. However, SCAQMD has suggested significance screening levels of 10,000 MT per year CO_2 equivalents for industrial projects and 3,000 MT per year CO_2 equivalents for commercial/residential projects. Based on the information presented in Table 4-6 in the January 2009 Initial Study and Mitigated Negative Declaration referenced above *(K.S. Dunbar & Associates, Inc., January 2009)*, the total CO_2 emissions from construction of the Perris II Brackish Groundwater Desalter Project would be 1,330 MT per year based on 260 working days in a year. Therefore, the greenhouse gas emissions from construction would be considered less than significant.

Air Quality. g. Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible air quality impacts and associated

mitigation measures of the individual projects. None of these projects would conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emission of greenhouse gases.

Biological Resources

Biological Resources. a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Answer: Less Than Significant Impact.

Discussion: During the preparation of the Environmental Assessment/Draft Program Environmental Impact Report for its Recycled Water System Pressurization and Expansion Project *(K.S. Dunbar & Associates, Inc., April 2009)* EMWD searched the California Department of Fish and Game's Natural Diversity Data Base for the Lakeview, Sunnymead, El Casco, Beaumont, Perris and San Jacinto quadrangles to determine the occurrence of special status species in the project area. That project area included the San Jacinto – Upper Pressure Groundwater Management Zone area. A listing of special-status species occurrences in the project area follows:

Special-Status Plants

Common Name	Scientific Name	Status		
		Federal ESA	State CESA	CNPS[1]
smooth tarplant	*Centromadia pungens* spp. *laevis*	None	None	1B.1
Coulter's goldfields	*Lasthenia glabrata* spp. *coulteri*	None	None	1B.1
Payson's jewelflower	*Caulanthus simulans*	None	None	4.2
San Jacinto Valley crownscale	*Atriplex coronata* var. *notatior*	Endangered	None	1B.1
South Coast saltscale	*Atriplex pacifica*	None	None	1B.2
Parish's brittlescale	*Atriplex parishii*	None	None	1B.1
thread-leaved brodiaea	*Brodiaea filifolia*	Threatened	Endangered	1B.1
spreading (Moran's) navarretia	*Navarretia fossalis*	Threatened	None	1B.1
Parry's spinefower	*Chorizonthe parryi* var. *parry*	None	None	3.2

[1] California Native Plant Society
1B.1 = Plants rare, threatened, or endangered in California and elsewhere. Seriously endangered in California.
1B.2 = Plants rare, threatened, or endangered in California and elsewhere. Fairly endangered in California.
3.2 = Plants about which we need more information – a review list. Fairly endangered in California.
4.2 = Plants of limited distribution – Watch list. Fairly endangered in California.

Special-Status Animals

Common Name	Scientific Name	Status		
		Federal ESA	State CESA	CDFG Other
California tiger salamander	*Ambystoma californiense*	Threatened	None	Special Concern
orange-throated whiptail	*Aspidoscelis hyperythrea*	None	None	Special Concern
burrowing owl	*Athene cunicularia*	None	None	Special Concern
southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	None	None	Watch List
Bell's sage sparrow	*Amphispiza belli belli*	None	None	Watch List

coastal California gnatcatcher	*Polioptila californica californica*	Threatened	None	Special Concern
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	None	None	Special Concern
American badger	*Taxidae taxus*	None	None	Special Concern
Stephens' kangaroo rat)	*Dipodomys stephensi*	Endangered	Threatened	---
northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	None	None	Special Concern

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible biological resources impacts and associated mitigation measures of the individual projects to insure protection of these special-status species.

Biological Resources. b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible biological resources impacts and associated mitigation measures of the individual projects to insure protection of riparian habitat and other sensitive natural communities.

Biological Resources. c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water

Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible biological resources impacts and associated mitigation measures of the individual projects to insure protection of these special-status species.

Biological Resources. d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible biological resources impacts and associated mitigation measures of the individual projects.

Biological Resources. e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible biological resources impacts and

associated mitigation measures of the individual projects to insure that the individual project does not conflict with such local policies or ordinances.

Biological Resources. f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible biological resources impacts and associated mitigation measures of the individual projects to insure that they are not in conflict with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Cultural Resources

Cultural Resources. a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible cultural resources impacts and associated mitigation measures of the individual projects to insure that they do not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the CEQA Guidelines.

Cultural Resources. b. Would the project cause a substantial adverse change in the significance of a archeological resource as defined in §15064.5?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible cultural resources impacts and associated mitigation measures of the individual projects to insure that they do not cause a substantial adverse change in the significance of an archeological resource as defined in §15064.5 of the CEQA Guidelines.

Cultural Resources. c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible cultural resources impacts and associated mitigation measures of the individual projects to insure that they do not destroy a unique paleontological resource or site or unique geological feature.

Cultural Resources. d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water

Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible cultural resources impacts and associated mitigation measures of the individual projects to insure that they do not disturb any human remains, including those interred outside of formal cemeteries.

Geology and Soils

Geology and Soils. a. 1. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Answer: Less than Significant.

Discussion: The Alquist-Priolo Earthquake Fault Zoning Act identifies special study zones for areas where existing known faults are located. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act also required the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. The San Jacinto and Casa Loma Fault Zones within the greater project area are delineated on Alquist-Priolo Earthquake Fault Zoning Maps.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible seismic-related impacts and associated mitigation measures of the individual projects to insure that are designed to withstand any seismic hazards. Seismic conditions in the project area can be mitigated by special design using reasonable construction and/or maintenance practices common to the Riverside County area. Therefore, the seismic-related impacts would be less than significant.

Geology and Soils. a. 2. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Answer: Less than Significant.

Discussion: The California Geological Survey has predicted ground motions (10 percent probability of being exceeded in 50 years) for the project area as a fraction of the acceleration due to gravity (g). The predicted ranges of values of ground motion are shown below. Shown are peak ground acceleration (Pga), spectral acceleration (Sa) at short (0.2 second) and moderately long (1.0 second) periods. Ground motion values are also modified by the local site soil conditions. Each ground motion value is shown for three different site conditions: firm rock (conditions on the boundary between site categories B and C as defined by the building code), soft rock (site category C), and alluvium (site category D).

Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.881	0.881	0.881
Sa 0.2 sec	2.095	2.095	2.095
Sa 1.0 sec	0.827	0.935	1.079

Source: California Geological Survey (www.conservation.ca.gov/cgs, 3/29/09)

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible seismic-related impacts and associated mitigation measures of the individual projects to insure that are designed to withstand any seismic hazards. Seismic conditions in the project area can be mitigated by special design using reasonable construction and/or maintenance practices common to the Riverside County area. Therefore, the seismic-related impacts would be less than significant.

Geology and Soils. a. 3. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Answer: Less than Significant.

Discussion: The potential for liquefaction depends upon potential ground movement during seismic events, soil conditions, and depth to groundwater. The area along the San Jacinto River is known to contain soil conditions and groundwater depths conducive to liquefaction.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible seismic-related impacts and associated mitigation measures of the individual projects to insure that are designed to withstand any seismic hazards. Seismic conditions in the project area can be mitigated by special design using reasonable construction and/or maintenance practices common to the Riverside County area. Therefore, the seismic-related impacts would be less than significant.

Geology and Soils. a. 4. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possible risk of landslides and associated mitigation measures of the individual projects. However, due to the fact that these facilities would be constructed on a level pad they would not be subject to landslides.

Geology and Soils. b. Would the project result in substantial soil erosion or the loss of topsoil?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of soil erosion and associated mitigation measures of the individual projects. During construction, there would be times when

bare soil was exposed to both wind and water erosion. Provisions of the appropriate Permit for Discharges of Storm Water Associated with Construction Activity administered by the California Regional Water Quality Control Board, Santa Ana Region would be complied with. Compliance with this permit would reduce the impacts to a level of less than significant as it would require the use of best management practices such as:

- Prohibit clearing and grading activities until a firm construction schedule is known.
- Stabilize all construction site soils with erosion control measures such as silt fences, matting, etc.
- Control dust during construction by frequent watering.
- Compact disturbed areas as soon as possible.

Geology and Soils. c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of causing on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse and associated mitigation measures of the individual projects.

Geology and Soils. d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would

prepare a project-level CEQA document discussing expansive soils and associated mitigation measures of the individual projects.

Geology and Soils. e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. These facilities would not contain onsite wastewater disposal facilities.

Hazards and Hazardous Materials

Hazards and Hazardous Materials. a. Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water.

Implementation of these projects would not create any significant hazards as a result of the routine transport, use, storage, or disposal of hazardous materials. However, construction of the desalinization facilities, or other facilities utilizing an equivalent technology, would include the temporary use and transport of fuels, lubricating fluids, solvents and other hazardous materials. The contractor would be required to adhere to the requirements of a *Health and Safety Plan* that it would develop for the Project thereby reducing the potential impacts to a level of less than significant.

Operation of desalinization facilities would require the use of various chemicals. It is anticipated that the desalinization facility could include a chlorine generator which would produce a solution of hypochlorite for use during pretreatment. Additional chemicals required for the treatment process and for maintenance of reverse osmosis facilities could include sulfuric acid, sodium hydroxide, aqueous ammonia, sodium hydroxide, and an antiscalant.

EMWD has extensive experience in the operation of water and wastewater facilities which utilize chemicals as described above. The use, transport, storage and disposal of all chemicals would be in compliance with all federal, State and local laws. This includes Riverside County Ordinance 651, which has been adopted to implement Chapter 6.95 of the Health and Safety Code (Hazardous Materials Release Response Plans and Inventory Law). Compliance with Ordinance No. 651 would require EMWD to update its Business Emergency Plan to include the additional chemicals associated with any proposed project. This would serve to minimize any impact in case of an accidental release of hazardous materials.

Hazards and Hazardous Materials. b. Would the project create a significant hazard to the public or the environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water.

Construction equipment used to construct any project would have the potential to release oils, grease, solvents and other finishing products through accidental spills. However, strict adherence to the Health and Safety Plan that would be developed for any project would insure that the impacts would be less than significant.

Anticipated chemicals required during the treatment process at the desalinization, or other facility utilizing an equivalent technology, are described above. While chlorine and sulfuric acid are classified as acutely hazardous under federal regulations, concentrations used during the treatment process would fall below the thresholds subject to regulation under the California Accidental Release Prevention Program *(EMWD, 1999).* Further, any project would comply with all federal, State and local laws regulating hazardous materials, including Riverside County Ordinance 651.

Hazards and Hazardous Materials. c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the impacts of handling hazardous substances in proximity to any schools and associated mitigation measures of the individual projects.

Hazards and Hazardous Materials. d. Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Answer: No Impact.

Discussion: Several standard environmental record services are available to determine the potential for recognized environmental conditions in an area. Those databases include:

- National Priorities List (NPL)
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- Resource Conservation and Recovery Act (RCRA)
- Hazardous Materials Response Plans and Inventory
- Envirostor
- Leaking Underground Storage Tank Information System (LUSTIS)
- Site Mitigation Program Property Database (formerly CalSites)

- Hazardous Waste and Substances Sites List (Cortese)
- Solid Waste Information System (SWIS)

These databases were searched for the presence of hazardous materials sites within the San Jacinto – Upper Pressure Groundwater Management Zone. Those lists revealed the presence of several LUSTIS sites within the project area.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the impacts of hazardous materials sites and associated mitigation measures of the individual projects.

Hazards and Hazardous Materials. e. Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and if so, would the project result in a safety hazard for people residing or working in the project area?

Answer: No Impact.

Discussion: The San Jacinto – Upper Pressure Groundwater Management Zone is not within an airport land use plan or within two miles of a public airport or public use airport.

Hazards and Hazardous Materials. f. Would the project be within the vicinity of a private airstrip, and if so, would the project result in a safety hazard for people residing or working in the project area?

Answer: No Impact.

Discussion: The San Jacinto – Upper Pressure Groundwater Management Zone is not within the vicinity of a private airstrip.

Hazards and Hazardous Materials. g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water

Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing any adopted emergency response plan or emergency evacuation plan that might be impacted by implementation of the individual projects and any required associated mitigation measures.

Hazards and Hazardous Materials. h. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of wildland fires and associated mitigation measures. Generally, it is believed that wildland fires will not be a concern as the facilities would undoubtedly be located in an urban setting.

Hydrology and Water Quality

Hydrology and Water Quality. a. Would the project violate any water quality standards or waste discharge requirements?

Answer: Less than Significant.

Discussion: The Basin Plan was amended on January 24, 2004 when the Regional Board adopted Order No. R-8-2004-0001. That order became effective in December 2004 after approval by the State Water Board and U.S. Environmental Protection Agency. That amendment included the following water quality objectives for the San Jacinto – Upper Pressure Groundwater Management Zone:

TDS	340 mg/l	TIN	1.4 mg/l

However, based on groundwater monitoring studies in the San Jacinto – Upper Pressure Groundwater Management Zone the existing quality (2006) is as follows:

TDS	350 mg/l	TIN	1.6 mg/l

As can be seen by the above, there is no assimilative capacity in the San Jacinto – Upper Pressure Groundwater Management Zone for either of these constituents. As shown on Figure 6, it is anticipated that the quality of the San Jacinto – Upper Pressure Groundwater Management Zone will continue to deteriorate in the future under existing conditions (i.e., the IRRP and Recycled Water In-Lieu Project do not occur, groundwater production is reduced according to the management plan, and remaining water demand is satisfied by treating imported water).

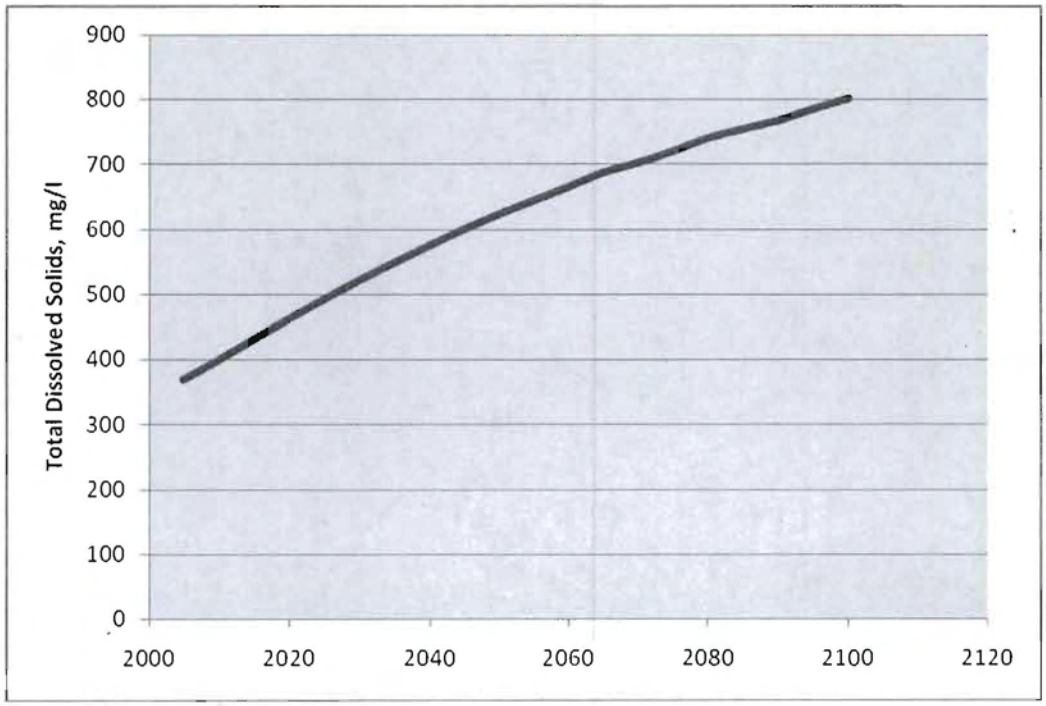

Figure 6 San Jacinto – Upper Pressure Groundwater Management Zone, Predicted TDS Values No Project Alternative

As can be seen on Figure 6, the TDS concentration would be expected to increase from its existing level of 350 mg/l to approximately 500 mg/l by 2026 and to approximately 800 mg/l by 2100.

Should the Regional Board approve EMWD's proposed water quality objectives of 500 mg/l TDS and 7 mg/l TIN for the San Jacinto – Upper Pressure Groundwater Management Zone, and assuming that the IRRP and Recycled Water In-Lieu Project were implemented and the Hemet Water

Filtration Plant is online, it is anticipated that the TDS in the groundwater would increase from its existing 350 mg/l to about 500 mg/l in 2023 and to about 740 mg/l in 2100 (see Figure 7).

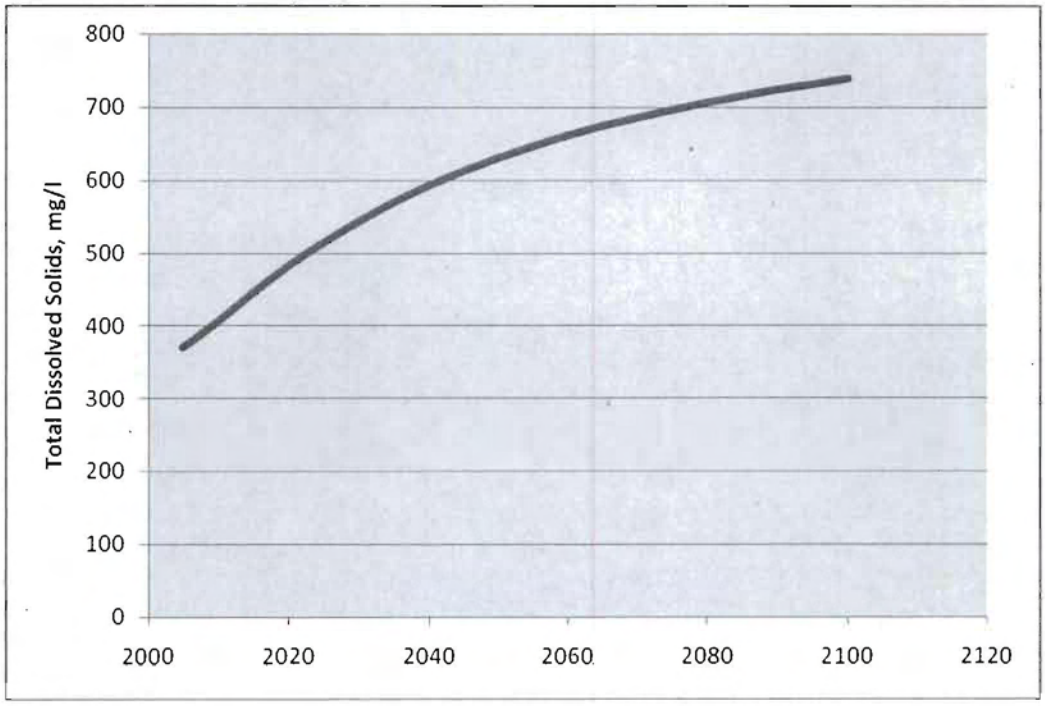

Figure 7 San Jacinto – Upper Pressure Groundwater Management Zone, Predicted TDS Values Selected Project Alternative

A comparison of the predicted TDS values with and without the project is provided on Figure 8.

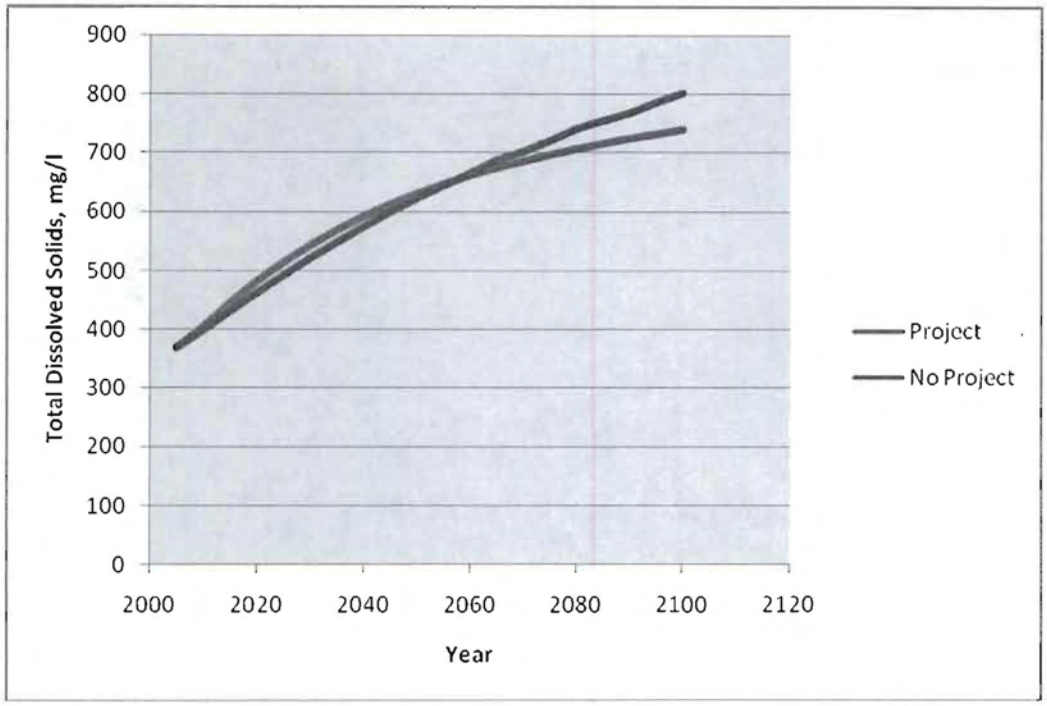

Figure 8 San Jacinto – Upper Pressure Groundwater Management Zone, Predicted TDS Values With and Without the Project

As shown by the above discussion and the information presented on Figures 6 through 8, the TDS in the San Jacinto – Upper Pressure Groundwater Management Zone will degrade in the future whether or the not the project is implemented. However, as previously stated, should the Regional Board adopt EMWD's proposed objectives, EMWD will commit to the following environmental commitments:

- Implement the Hemet/San Jacinto Water Management Plan.
- Develop and Implement a Salinity Management Plan.
- Estimate Ambient Groundwater Quality and Wasteload Allocation.
- Conduct a Groundwater Monitoring Program.

Adoption of the proposed water quality objectives for TDS and TIN in addition to the above environmental commitments will promote the maximum beneficial use of the waters of the State and protect downstream water quality.

EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water.

The desalination process would result in up to 1 mgd of liquid brine produced as a byproduct. Liquid brine is classified as a "designated waste" under Title 23 of the California Code of Regulations. Title 23 defines a designated waste as "... nonhazardous waste which consist of or contains pollutants which, under ambient environmental conditions at the waste management unit could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of surface waters of the State."

The liquid brine would be transported offsite via an extension of the existing brine line connecting to the Sun City RWRF site. The liquid brine would ultimately be conveyed by EMWD's Reach 4 brine line to the Temescal Valley Regional Interceptor which connects to the Santa Ana River Interceptor (SARI) which conveys brines to a wastewater treatment facility in Orange County owned and operated by the Orange County Sanitation District (OCSD).

EMWD has purchased 5.946 mgd of capacity in the SARI and 3.548 mgd capacity in OCSD's treatment and disposal capacity. These capacities are sufficient to cover EMWD's current needs. Although there is some excess capacity purchased, the proposed future desalinization system might require EMWD to purchase additional capacity in this system.

As previously stated, the TIN/TDS Task Force determined that the use protection threshold for TIN in groundwater was 8 mg/l. The proposed objective and ambient concentrations are lower than 8 mg/l and are therefore protective of existing and future beneficial uses. EMWD produces recycled water with a 12-month average TIN concentration of 10 mg/l. A recent study titled *Quantification of Nitrogen Removal Under Recycled Water Ponds (Daniel B. Stephens & Associates, Inc., 2007)* demonstrated that total nitrogen losses under the Alessandro Recycled Water Ponds in the San Jacinto – Upper Pressure Groundwater Management Zone averaged 64 percent at a depth of 29 feet. Based on the results of this study, the Regional Board has approved the use of a TIN uptake rate of 60 percent. Applying this uptake rate as stated in the Basin Plan would result in a TIN discharge limit of 4 mg/l [TIN = 1.6 / 1.0 – 0.6) = 4.0 mg/l]. The TIN concentration of the recycled water of 10 mg/l exceeds this limit; however, the TIN would be effectively mitigated by the recharge of SWP water into the San Jacinto – Upper Pressure Groundwater Management Zone.

Hydrology and Water Quality. b. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the Hemet/San Jacinto Water Management Plan includes the recharge of State Water Project water into the San Jacinto – Upper Pressure Groundwater Management Zone. As shown on Figure 9, this would greatly increase the amount of water in storage in the San Jacinto – Upper Pressure Management Zone.

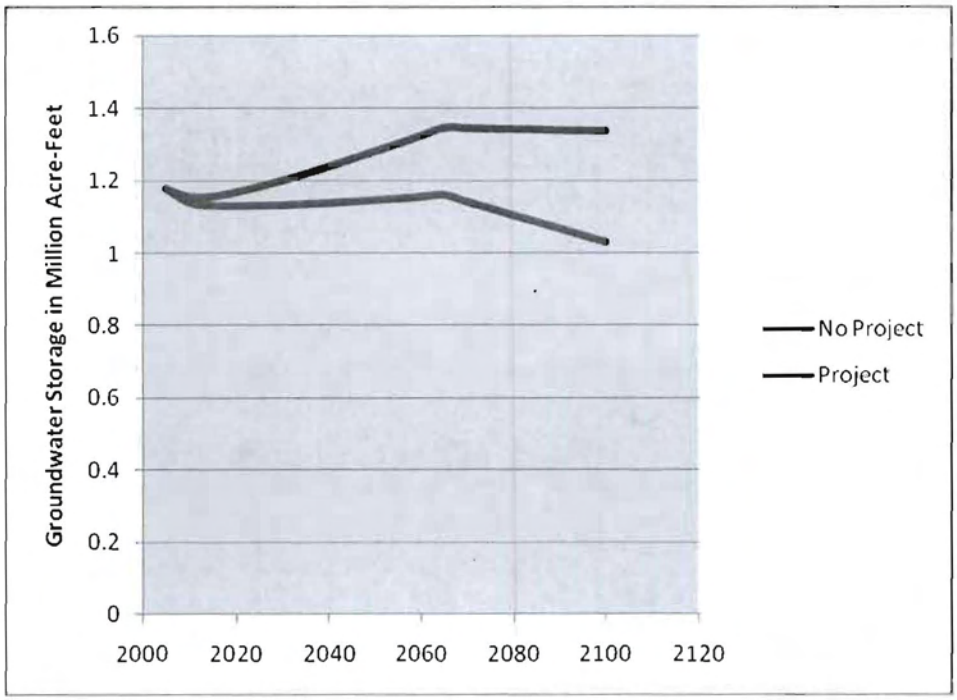

Figure 9 Comparison of Groundwater Storage in the San Jacinto – Upper Pressure Groundwater Management Zone with and without the Project

As shown on Figure 9, without the project, the amount of groundwater storage steadily drops through the year 2060 where it levels out at about 1.15 million acre-feet. However, with the project, the amount of groundwater in storage steadily increases through the year 2060 where it levels out at about 1.35 million acre-feet through the year 2100.

As shown previously on Figure 2, the location of the imported water recharge area is several miles upstream and upgradient of the proposed recycled water in-lieu project. The recycled water irrigation project is located in the furthest downstream location of the basin. The recycled water is applied at the surface level in an area of known natural clay layers that will minimize the vertical migration of the irrigated recycled water. Based on the downstream location of the reuse site and the clay soils in the area, the recycled water used in this area should not impact the imported recharge area nor the local production wells.

Hydrology and Water Quality. c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of altering drainage patterns and associated mitigation measures at the individual project sites.

Hydrology and Water Quality. d. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the

salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of altering the drainage pattern of the individual sites and any required mitigation measures.

Hydrology and Water Quality. e. Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of contributing runoff water which would exceed the capacity of storm water drainage facilities at the individual sites and any required mitigation measures.

Hydrology and Water Quality. f. Would the project otherwise substantially degrade water quality?

Answer: Less than Significant.

Discussion: The purpose of the project is to allow the maximum beneficial use of the waters of the State by allowing the TDS and TIN in the San Jacinto – Upper Pressure Groundwater Management Zone to slightly increase over the existing levels of 350 mg/l of TDS and 1.6 mg/l of TIN. The proposed objectives are 500 mg/l of TDS and 7 mg/l of TIN.

One of EMWD's environmental commitments includes development and implementation of a salinity management program. That program will include TDS reduction strategies to protect beneficial uses when the ambient TDS concentration in the San Jacinto – Upper Pressure Groundwater Management Zone approaches the maximum benefit based objective and to meet waste discharge requirements when the TDS concentration in the San Jacinto Valley Regional Water Reclamation Facility effluent monotonically approaches 650 mg/l. When the volume-weighted TDS concentration in the San Jacinto – Upper Pressure Groundwater Management Zone rises to 490 mg/l, EMWD will develop a plan either to reduce the TDS concentration in the source water and serve this water to its customers and/or reduce the TDS concentration in recycled water. This plan

will include the construction and operation of desalinization facilities or the use of an equivalent technology to reduce the TDS concentration in the source water and/or recycled water. Therefore, this would be considered a less-than-significant impact.

As shown previously on Figure 2, the location of the imported water recharge area is several miles upstream and upgradient of the proposed recycled water in-lieu project. The recycled water irrigation project is located in the furthest downstream location of the basin. The recycled water is applied at the surface level in an area of known natural clay layers that will minimize the vertical migration of the irrigated recycled water. Based on the downstream location of the reuse site and the clay soils in the area, the recycled water used in this area should not impact the water quality in the San Jacinto – Upper Pressure Groundwater Management Zone.

Hydrology and Water Quality. g. Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Answer: No Impact.

Discussion: The project does not include housing.

Hydrology and Water Quality. h. Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of placing structures within a 100-year flood hazard area and any required mitigation measures for the individual projects.

Hydrology and Water Quality. i. Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Answer: No Impact.

Discussion: The project does not include the construction of levees or dams.

Hydrology and Water Quality. j. Would the project be inundated by seiche, tsunami, or mudflow?

Answer: No Impact.

Discussion: There are no water bodies in the project area that would produce seiches, tsunamis or mudflows.

Land Use and Planning

Land Use and Planning. a. Would the project physically divide an established community?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. These facilities usually require a project site of less than 5 acres. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of physically dividing an established community and any required mitigation measures for the individual projects.

Land Use and Planning. b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing applicable land use plans, policies or regulations of agencies having jurisdiction over the project and any required mitigation measures for the

individual projects. Although, as a public agency EMWD is not subject to local planning regulations, it does have a history of complying with them.

Land Use and Planning. c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the applicability of the Western Riverside County Multiple Species Habitat Conservation Plan to the individual project sites and any required mitigation measures.

Mineral Resources

Mineral Resources. a. Would the project result in the loss of availability of a known resource that would be of value to the region and the residents of the state?

Answer: No Impact.

Discussion: There are no known mineral resources in the project area that would be of value to the region and the residents of the State.

Mineral Resources. b. Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Answer: No Impact.

Discussion: There are no locally-important mineral resource recovery sites delineated on the applicable local general plan, specific plan or other land use plan in the project area.

Noise

Noise. a. Would the project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the provisions of the Riverside County's Noise Ordinance applicable to the individual projects and the provisions of the City of San Jacinto's Noise Ordinance applicable to the individual projects and any required mitigation measures.

Noise. b. Would the project expose persons to or generate excessive groundbourne vibration or groundbourne noise levels?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing groundbourne vibration and noise associated with the individual projects and any required mitigation. As a general rule, groundbourne vibration will not be felt by receptors more than 50 feet from the project site.

Noise. c. Would the project result in a substantial permanent increase in ambient noise levels above levels existing without the project?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the possibility of a substantial permanent increase in ambient noise levels and any required mitigation. However, based on the Initial Study for the Perris II Brackish Groundwater Desalter Project *(K.S. Dunbar & Associates, Inc., January 2009)*, the noise levels from these facilities would be approximately 60 dB(A) at a distance of 50 feet from the desalinization facilities. Therefore, there should be no permanent increase in ambient noise levels above levels existing without the project.

Noise. d. Would the project result in a substantial temporary or periodic increase in noise levels in the project vicinity above levels existing without the project?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing temporary and periodic increases in ambient noise levels and any required mitigation. However, based on the Initial Study for the Perris II Brackish Groundwater Desalter Project *(K.S. Dunbar & Associates, Inc., January 2009)*, the noise levels from construction of these facilities would range from approximately 72 to 89 dB(A) at a distance of 50 feet from the equipment being used. These potential impacts can be mitigated to a less-than-significant level.

Noise. e. Would the project be located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, and if so, would the project expose people residing or working in the project area to excessive noise levels?

Answer: No Impact.

Discussion: The San Jacinto – Upper Pressure Groundwater Management Zone is not within an airport land use plan or within two miles of a public airport or public use airport.

Noise. f. Would the project be located within the vicinity of a private airstrip, and if so, would the project expose people residing or working in the project area to excessive noise levels?

Answer: No Impact.

Discussion: The San Jacinto – Upper Pressure Groundwater Management Zone is not within the vicinity of a private airstrip.

Population and Housing

Population and Housing. a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Answer: Less than Significant.

Discussion: As previously stated, Riverside County, City of San Jacinto and City of Hemet have determined a need for housing in their respective areas and have adopted general and specific plans that show substantial increases in population and housing in the San Jacinto – Upper Pressure Groundwater Management Zone as the land is converted from agricultural uses to urban uses. All of these plans have been approved and have certified environmental documents. Implementation of the project would accommodate this growth as it would improve the reliability of water supplies for future growth in the region.

Population and Housing. b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Answer: No Impact.

Discussion: Implementation of the project would not displace substantial numbers of existing housing.

Population and Housing. c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Answer: No Impact.

Discussion: Implementation of the project would not displace substantial numbers of people.

Public Services

Public Services. a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services?

Answer: No Impact.

Discussion: Implementation of the project would not result in the need for additional fire protection services.

Public Services. a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services?

Answer: No Impact.

Discussion: Implementation of the project would not result in the need for additional police protection services.

Public Services. a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

Answer: No Impact.

Discussion: Implementation of the project would not result in a need for additional schools.

Public Services. a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

Answer: No Impact.

Discussion: Implementation of the project would not result in a need for additional park facilities.

Public Services. a.5. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public services?

Answer: No Impact.

Discussion: Implementation of the project would not result in a need for other public services.

Recreation

Recreation. a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Answer: No Impact.

Discussion: Implementation of the project would not increase the use of existing park or recreational facilities.

Recreation. b. Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Answer: No Impact.

Discussion: The project does not include recreational facilities.

Transportation/Traffic

Transportation/Traffic. a. Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would

prepare a project-level CEQA document discussing disruption of traffic flows and increases in traffic congestion and any required mitigation.

Construction of these facilities would not cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. However, construction of the proposed pipelines associated with the desalinization facilities has the potential to cause impacts to traffic circulation and access as a result of decreased road capacity on local streets during the construction period, resulting in temporary disruptions of traffic flows and increases in traffic congestion. As such, a potential for short-term impacts exists. Trenching activities would also temporarily damage roads; however, trenches would be patched or repaved following construction. However, based on the Initial Study for the Perris II Brackish Groundwater Desalter Project *(K.S. Dunbar & Associates, Inc., January 2009)*, these potential impacts can be mitigated to a less-than-significant level.

Transportation/Traffic. b. Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the level of service standards on affected streets. Construction and operation of these facilities would not exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

Transportation/Traffic. c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Answer: No Impact.

Discussion: Implementation of the project would not result in a change in air traffic patterns.

Transportation/Traffic. d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Answer: No Impact.

Discussion: Implementation of the project would not substantially increase hazards due to a design feature or incompatible uses.

Transportation/Traffic. e. Would the project result in inadequate emergency access?

Answer: No Impact.

Discussion: Implementation of the project would not result in inadequate emergency access.

Transportation/Traffic. f. Would the project result in inadequate parking capacity?

Answer: No Impact.

Discussion: Implementation of the project would not result in inadequate parking capacity.

Transportation/Traffic. g. Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Answer: No Impact.

Discussion: Implementation of the project would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Utilities and Service Systems

Utilities and Service Systems. a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Answer: No Impact.

Discussion: Adherence to EMWD's salinity management plan would insure that the effluent from the San Jacinto Valley Regional Water Reclamation Facility met the wastewater treatment requirements of the California Regional Water Quality Control Board, Santa Ana Region.

Utilities and Service Systems. b. Would the project require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?

Answer: Less than Significant.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the potential impacts and required mitigation measures associated with each individual project.

Utilities and Service Systems. c. Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Answer: No Impact.

Discussion: Implementation of the project would not require the construction of new storm water drainage facilities.

Utilities and Service Systems. d. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Answer: No Impact.

Discussion: EMWD has sufficient water supplies to serve the project without the need for new or expanded entitlements.

Utilities and Service Systems. e. Would the project result in a determination by the wastewater treatment provider that serves or may serve the project area that it has adequate capacity to serve the projected demand in addition to the provider's existing communities?

Answer: No Impact.

Discussion: EMWD has agreed to implement the following environmental commitments along with the proposed BPA for TDS and TIN objectives: 1) implement the Hemet/San Jacinto Water Management Plan, 2) develop and implement a salinity management program, 3) estimate ambient groundwater quality and wasteload allocations, and 4) conduct a groundwater monitoring program in the San Jacinto – Upper Pressure Groundwater Management Zone. Implementation of the salinity management program could result in the construction of desalinization facilities or other facilities utilizing an equivalent technology to reduce the TDS concentration in the source water or recycled water. Should it be necessary to construct these facilities in the future, EMWD would prepare a project-level CEQA document discussing the need for additional treatment facilities and

required mitigation measures associated with each individual project. The desalinization facilities would produce liquid brine which would be disposed of via EMWD's Reach 16 brine line which discharges to the Santa Ana Watershed Project Authority's brine line near Lake Elsinore and subsequently to the Santa Ana River Interceptor.

Utilities and Service Systems. f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Answer: No Impact.

Discussion: The project would not generate solid waste.

Utilities and Service Systems. g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Answer: No Impact.

Discussion: The project would not generate solid waste.

Mandatory Findings of Significance

Mandatory Findings of Significance. a. Would the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Answer: No Impact.

Discussion: Implementation of the Basin Plan Amendment and EMWD's environmental commitments does not have the potential to significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Therefore, no impacts are anticipated.

Mandatory Findings of Significance. b. Would the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Answer: No Impact.

Discussion: Implementation of the Basin Plan Amendment and EMWD's environmental commitments does not have impacts that are individually limited, but cumulatively considerable. Therefore, no impacts are anticipated.

Mandatory Findings of Significance. c. Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Answer: No Impact.

Discussion: Implementation of the Basin Plan Amendment and EMWD's environmental commitments does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. Therefore, no impacts are anticipated.

9 Reasonable Alternatives to the Proposed Activity

The Basin Plan Amendment does not result in any significant or potentially significant impacts to the environment. Therefore, no alternatives to the Basin Plan Amendment are proposed because they are not necessary to avoid or reduce any significant or potentially significant impacts. An analysis of alternatives to the project is not required when review of the project shows that the project would not have any significant or potentially significant effects on the environment. *[14 CCR §15252(a)(2)(B)]*

However, as pointed out on page 10 of this document, EMWD did study the following four alternative cases in preparing its proposed water quality objectives for TDS and TIN:

Case 1 No project scenario: the IRRP and Recycled Water In-Lieu Project do not occur. Groundwater production is reduced according to the Management Plan and remaining water demand is satisfied by treated imported water.

Case 2 The IRRP does not occur and the Recycled Water In-Lieu Project is online. The recycled water TDS concentration is 575 mg/l. Groundwater production is reduced according to the Management Plan and remaining water demand is satisfied by treated imported water.

Case 3 SWP water is used for groundwater replenishment and the Recycled In-Lieu Project is online. The Hemet Water Filtration Plant is constructed and treated imported water is served in lieu of native groundwater.

Case 4 Same as Case 3; however, the TDS concentration of the recycled water is 650 mg/l.

A comparison of the TDS concentration time histories for the four cases was provided on Figure 3.

10 Preliminary Staff Determination

x	The proposed project COULD NOT have a significant effect on the environment, and, therefore, no alternatives or mitigation measures are proposed.
	The proposed project MAY have a significant or potentially significant effect on the environment, and therefore alternatives and mitigation measures have been evaluated.

Signature Date

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12 Acronyms and Abbreviations

AAM	annual arithmetic mean
afa	acre-feet per annum
AGM	annual geometric mean
BPA	Basin Plan Amendment
Caltrans	California Department of Transportation

CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
CRWQCB, SAR	California Regional Water Quality Control Board, Santa Ana Region
dB(A)	decibels on the A-scale
DPEIR	Draft Program Environmental Impact Report
DFG	California Department of Fish and Game
EA	Environmental Assessment
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMWD	Eastern Municipal Water District
EPA	U.S. Environmental Protection Agency
KSD&A	K.S. Dunbar & Associates, Inc.
Ldn	day-night average sound level
Leq	noise equivalent
mgd	million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

NO_x	oxides of nitrogen
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SO_x	oxides of sulfur
State Water Board	State Water Resources Control Board
TDS	total dissolved solids
TIN	total inorganic nitrogen

Attachment B.1

Comments Received on Supplemental Environmental Document

And

Response to Comments

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
Southern California Agency
1451 Research Park Drive, Suite 100
Riverside, California 92507-2154
Telephone (951) 276-6624 Telefax (951) 276-6641

IN REPLY REFER TO:
Water Resources

CRWQCB - REGION 8
HAS 9/2

SEP 01 2009

AUG 31 2009

Santa Ana Regional Water Quality Control Board
3737 Main Street,
Suite, 500
Riverside, Ca 92501-1339

Attention: Ms. Hope Smythe

Subject: Substitute Environmental Document, Basin Plan Amendment, San Jacinto- Upper Pressure Groundwater Management Zone, for Total Dissolved Solids and Total Inorganic Nitrogen Objectives, City of San Jacinto, County of Riverside California.

Dear Ms. Smythe,

We are in receipt of your Executive Summary, as a substitute for an Environmental Document, to proceed with a Basin Plan Amendment of the San Jacinto Upper pressure groundwater management zone, to relax the current standards for Total Dissolved Solids, (TDS) and Total Inorganic Nitrogen, (TIN), Objectives. It is our understanding that this is necessary from Eastern Municipal Water Districts, (EMWD), perspective in order to allow replenishment activities to occur for the underlying ground water basin. We understand that the source of replenishment water will be from the use of recycled water. It is also our understanding that this recycled water will allow EMWD to proceed with their water management plan.

The Bureau of Indian Affairs, (BIA), is interested in the effect this relaxation of standards will have on the Soboba Indian Reservation and how the use of recycled water to replenish the basin benefits the Tribe. It is the opinion of the BIA that this Substitute Environmental Document does not address all concerns present in the valley and should be elaborated upon to address all issues both from a federal and state perspective. EMWD should consult directly with agencies responsible for implementing federal environmental laws and regulations prior to adoption of this basin amendment for this action will also not only affect state but federal water rights.

It is our understanding that recycled water will be introduced in the upper northern reach of the San Jacinto Pressure zone. It is requested at this time for EMWD to address ground water flow gradients as to how this water relates to the reservation located near the proposed recharge area. How does the proposed recycled recharge area interact with the state water recharge area

Post-it™ Fax Note 7671	Date 9/2/09	# of pages ▶ 2
To Joyce Joy	From Hope Smythe	
Co./Dept.	Co.	
Phone #	Phone 951-782-4493	
Fax #	Fax #	

downstream? How will this recycled water affect potable water wells located on the reservation? How does this recycled water dilute with State water recharge? Finally does the State Water Recharge area form a natural damming effect protecting EMWD water wells located downstream from enhanced TDS and TIN being introduced by this project?

The BIA believes that the quality of Tribal Trust water is superior to that of recycled water planned for recharge. It has not been demonstrated in this document how this does not impact federal water reserves.

These are a few concerns not clear to the BIA regarding this Substitute Environmental Document. We appreciate receiving this document and attending EMWD's Scoping meeting. We wish to gain a better understanding from EMWD of the ultimate effects this project will have on and beneath tribal trust lands in the San Jacinto area.

If there are any questions or clarification needed regarding the content of this letter, please do not hesitate to contact Ms. Christina Mokhtarzadeh, Hydrologist Southern California Agency at (951) 276-6624 ext. 257 or Mr. James Fletcher, Superintendent at (951) 276-6624.

Sincerely;

James J. Fletcher
Superintendent

Cc Regional Geohydrologist, Pacific Region, Bureau of Indian Affairs
Water Rights Specialist, Pacific Region, Bureau of Indian Affairs
Chairperson, Soboba Band of Mission Indians
Mr. Karl E. Johnson, Attorney at Law, Luebben, Johnson & Barnhouse LLP
Regional Solicitor, U.S. Department of the Interior
U.S. E.P.A., Tribal Water Protection Enforcement Manager

Western Riverside County Agriculture Coalition

September 14, 2009

Ms. Jayne Joy
Director, Environmental and Regulatory Compliance
Eastern Municipal Water District
2270 Trumble Road
Perris, CA 92572-8300

RE: Support for Basin Plan Amendment of the San Jacinto-Upper Pressure Groundwater Management Zone Total Dissolved Solids and Total Inorganic Nitrogen Objectives

Western Riverside County Agriculture Coalition (WRCAC) supports Eastern Municipal Water District's (EMWD) application to the California Regional Water Quality Control Board, Santa Ana Region (RWQCB) to amend the Basin Plan Amendment (BPA) for the San Jacinto-Upper Pressure Groundwater Management Zone. This amendment recognizes that recycled water is an alternative source of water and EMWDs proposed plan offsets the use of groundwater. The agricultural community is supportive of this action and concurs with EMWDs assessment.

This plan also recognizes that a comprehensive plan for groundwater management in the Hemet/San Jacinto area is in existence and supports the objectives of this plan.

The new Water Quality Objectives are protective of the beneficial uses in the area (the basin plan lists the beneficial uses as municipal, agricultural, industrial mining, cooling towers, gravel washing, fire protection) and process (product manufacturing/food preparation). Of these listed municipal has the most stringent standards of 500 mg/L for TDS and 10 mg/L for TIN.

WRCAC supports EMWDs application to amend the Basin Plan Amendment.

Sincerely,

Bruce Scott
WRCAC, Chairman
September 14, 2009

James J. Fletcher
US Department of the Interior
Bureau of Indian Affairs (BIA)
Letter dated August 31, 2009

As a general comment, the BIA letter referred to the recycled water project as a replenishment project for the basin. To clarify this, the recycled water used in the northern portion of the basin is for irrigation purposes only. While this practice has some incidental return flow, it is not a recycled water recharge project into the San Jacinto Upper Pressure Management Zone with the intended purpose for use as drinking water.

As an attempt to answer the series of the questions in the BIA letter, the following is a clear description of the activities in the San Jacinto Upper Pressure Groundwater Management Zone that are part of the Hemet/San Jacinto Groundwater Management Plan. Below are the descriptions of the activities taking place in this basin and the associated activity is shown on the enclosed site map.

- **Imported Water Recharge Area:** In this area, EMWD will recharge imported water and extract groundwater at a capacity to: satisfy prior and paramount Soboba Tribe water rights. This project will consist of several connected ponds covering approximately 35 acres within the San Jacinto Riverbed and provides up to 42 cubic feet per second (cfs) of recharge capacity. The San Jacinto Upper Pressure Management Zone is expected to receive a long-term average recharge of about 7,500 acre feet per year (AFY) of State Water Project (SWP) water with average TDS and TIN values of 250 and 0.6 mg/L, respectively. This recharge is anticipated to occur during wet years when the salinity of SWP water is typically very low. The recharge of higher-quality SWP water will result in a net benefit to the Tribe and the San Jacinto Upper Pressure Management Zone.

- **Recycled Water In-Lieu Project:** This project supplies recycled water from EMWD's San Jacinto Valley Regional Water Reclamation Facility for agricultural irrigation in lieu of pumping native groundwater from the San Jacinto Upper Pressure Groundwater Management Zone. This project is not a replenishment project and is only for agricultural irrigation. The Project provides up to 8,540 AFY of recycled water to Rancho Casa Loma and the Scott Brothers Dairy. Therefore reducing groundwater pumping by these entities by an equivalent amount.

- **Hemet Water Filtration Plant:** EMWD's Hemet Water Filtration Plant treats 11,000 AFY of State Water Project Water for potable supply and has offset the use of the native groundwater. Additionally, this source water reduces the TDS in the recycled water.

The locations of the projects and facilities are shown on the enclosed site map. In addition, this map shows the location of the Soboba Reservation and the general groundwater gradient in the San Jacinto Upper Pressure Groundwater Management Zone. This indicates that the recycled water irrigation project is clearly down gradient from the reservation and imported water recharge area protecting the groundwater wells used in the southern portion of the basin is next to the Tribe's San Jacinto Upper Pressure Groundwater Management Zone wells.

EMWD's Maximum benefit proposal is a request to relax the TDS and TIN objectives to levels that are higher than the 2004 Basin Plan Amendment for TDS and nitrate-nitrogen but lower than the protective levels for municipal sources. This action allows EMWD to provide recycled water into this basin so that the use of the groundwater is reduced. Reducing groundwater

production and managing the groundwater production is a major component of the Soboba Tribe Settlement Agreement. As for the water quality, recycled water irrigation occurs on the surface of the basin in an area with clay soils, and the site is located in the furthest down gradient area of the basin so that this recycled water should not mix with the production well water. Finally, the imported water recharge and use of the State Water Project water at EMWD's Hemet Water Filtration Plant supplies the area with the highest quality water available from the imported water supply to protect the municipal use of this basin for the local communities as well as the Soboba Tribe.

The following are the specific comments from BIA and Staff's responses.

Comment
How does the proposed recycled water recharge area interact with the state water recharge area downstream?

Staff Response
The recycled water irrigation project is located in the furthest downstream location of the basin. The recycled water is applied at the surface level in an area of known natural clay layers that will prohibit some of the vertical migration of the irrigated recycled water. Based on the downstream location of the reuse site and the clay soils in the area, the recycled water used in this area should not impact the imported recharge area nor the local production wells.

Comment
How will this recycled water affect potable water wells located on the reservation?

Staff Response
The recycled water irrigation project is located in the furthest downstream location of the basin. The recycled water is applied at the surface level in an area of known natural clay layers that will prohibit some of the vertical migration of the irrigated recycled water. Based on the downstream location of the reuse site and the clay soils in the area, the recycled water used in this area should not impact the imported recharge area or the local production wells.

Comment
How does this recycled water dilute with State water recharge?

Staff Response
These activities are taking place in two distinct locations and are not expected to be mixed or diluted.

Comment
Finally does the State Water Recharge area form a natural damming effect protecting EMWD water wells located downstream from enhanced TDS and TIN being introduced by this project?

Staff Response
The recycled water irrigation project is located in the furthest downstream location of the basin. The recycled water is applied at the surface level in an area of known natural clay layers that will prohibit some of the vertical migration of the irrigated recycled water. Based on the downstream location of the reuse site and the clay soils in the area, the recycled water used in this area should not impact the imported recharge area or the local municipal production wells.

Bruce Scott, Chairman
Western Riverside County Agricultural Coalition (WRCAC)
September 14, 2009

Comment
Western Riverside County Agricultural Coalition (WRCAC) supports the proposed Basin Plan amendment. The amendment recognizes that recycled water is an alternative source of water and EMWD's proposed plan offsets the use of groundwater. The agricultural community is supportive of this action.

Staff Response
Board staff believes that revising the TDS and nitrate-nitrogen water quality objectives to allow for the use of recycle water for agricultural purposes is in the best interest of the watershed and will ensure protection of groundwater resources in the area.