Yucaipa Valley Water District

Notice and Agenda of a Board Workshop

Tuesday, March 27, 2012 at 4:00 p.m.

MEETING LOCATION:	District Administration Building 12770 Second Street, Yucaipa
MEMBERS OF THE BOARD:	Director Ian Cuthbertson, Division 1 Director Bruce Granlund, Division 2 Director Jay Bogh, Division 3 Director Lonni Granlund, Division 4 Director Hank Wochholz, Division 5

I. Call to Order

II. Public Comments At this time, members of the public may address the Board of Directors on matters within its jurisdiction; however, no action or significant discussion may take place on any item not on the meeting agenda.

III. Staff Report

IV. Presentations

A. Yucaipa Valley Regional Brineline Economic Opportunity Analysis [Workshop Memorandum No. 12-062 - Page 3 of 104]

B. 2011 Water Rate Survey Prepared by Raftelis Financial Consultants for the California-Nevada Section of the American Water Works Association [Workshop Memorandum No. 12-063 - Page 13 of 104]

V. Capital Improvement Projects

A. Status Report on the Construction of the Yucaipa Valley Regional Brineline [Workshop Memorandum No. 12-064 - Page 36 of 104]

B. Status Report on the Construction of the R-10 Recycled Water Reservoir and Booster Complex [Workshop Memorandum No. 12-065 - Page 40 of 104]

C. Status Report on the Construction of the Crow Street Pipeline Facilities [Workshop Memorandum No. 12-066 - Page 42 of 104]

D. Status Report on the Construction of the Recycled Water Booster Facility at the Reservoir R-12.1 Complex [Workshop Memorandum No. 12-067 - Page 43 of 104]

E. Status Report on the Construction of the Wochholz Improved Salinity Effluent (WISE) Project [Workshop Memorandum No. 12-068 - Page 44 of 104]

VI. Administrative Issues

A. Review of Draft Resolution Related to the Implementation of Maximum Benefit Commitments for the Beaumont Management Zone [Workshop Memorandum No. 12-069 - Page 46 of 104]

B. Modification No. 5 to the Bureau of Reclamation Cooperative Agreement for Funding of the Regional Brineline Project [Workshop Memorandum No. 12-070 - Page 104 of 104]

VII. Director Comments

VIII. Closed Session

A. Conference with Real Property negotiator(s) (Government Code 54956.8)
Property: Assessor's Parcel Number: 301-201-29
Agency Negotiator: Joseph Zoba, General Manager
Negotiating Parties: Palmer General Corporation
Under Negotiation: Terms of Payment and Price

B. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: IBEW Local Union 14356 - YVWD Employees Association

C. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: Supervisor Bargaining Unit

D. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: Confidential Employee Bargaining Unit

E. Conference with Labor Negotiator (Government Code 54957.6)
District Negotiator: Joseph Zoba, General Manager
Employee Organization: Exempt Employee Bargaining Unit

IX. Adjournment

Yucaipa Valley Water District

Workshop Memorandum 12-062

Date: **March 27, 2012**

Subject: **Yucaipa Valley Regional Brineline Economic Opportunity Analysis**

The Yucaipa Valley Water District is planning to complete the construction of the Yucaipa Valley Regional Brineline and the reverse osmosis equipment at the Wochholz Regional Water Recycling Facility within the next year. Upon completion of these facilities, the District will have a unique opportunity to provide businesses with the ability to increase salinity loading to the sewer system throughout our service area. At that time, it would be advantageous to have marketing information available for businesses to understand the benefits of locating in the City of Calimesa or the City of Yucaipa.

The Santa Ana Watershed Project Authority (SAWPA) has embarked on a similar effort with the preparation of information that explains the benefits of the Inland Empire Brineline. Overall, SAWPA has the best information available about brine disposal in the Inland Empire. A few of the documents prepared by SAWPA are attached.

The purpose of this workshop agenda item is to provide an overview of the salinity management opportunities available for the businesses that locate in the District's service area.

SAWPA

"A Cost Effective Way to Dispose of Salty Liquid Waste from Your Facility"

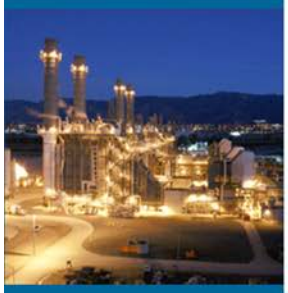
Inland Empire Brine Line

WHAT IS IT?

The **Inland Empire Brine Line** is an effective and economical means for customers to dispose of salty wastewater. Like much of the Inland Empire, Publicly Owned Treatment Works (POTW) in inland areas have TDS* restrictions which may prevent your industry from discharging its waste to the sanitary sewer. The Inland Empire Brine Line transport this salty wastewater to a treatment plant operated by the Orange County Sanitation District. After treatment, the water is discharged to the Pacific Ocean. With the Inland Empire Brine Line you can now dispose of this waste locally without trucking it outside of the region.

USEFUL DEFINITIONS:

* **Biochemical Oxygen Demand (BOD)** is a measure of biological activity (bacteria) in the water.
* **Total Suspended Solids (TSS)** is a measure of the amount of suspended solids in a water.
* **Total Dissolved Solids (TDS)** is a measure of the combined content of all inorganic and organic dissolved substances contained in a liquid.



DETAILS

Industries that typically benefit from disposal of salty waste water to the Brine Line include:

- Biotech Manufacturing
- Power Plants/Co-Generation Plants
- Medical Supply Manufacturing
- Water Purification Plants (bottled water and ion exchange facilities)
- Computer Chip Manufacturers
- Commercial Laundries
- Food/Beverage Processing

Industries that use the following also may benefit:

- Large Water Softeners (the regeneration waste is high in TDS*)
- Large Cooling Towers (the process wastewater is typically high in TDS*)
- Large Boilers (the process wastewater is typically high in TDS*)
- Ultra-pure water (the processes used to make the ultra-pure water generate high TDS* wastewater)

The cost of wastewater disposal is based on three components:

- The discharge volume
- Concentration of BOD*
- Concentration of TSS*

There are two ways to dispose of waste water to the Brine Line:

- **Direct Disposal**
- **Hauled Liquid Waste**

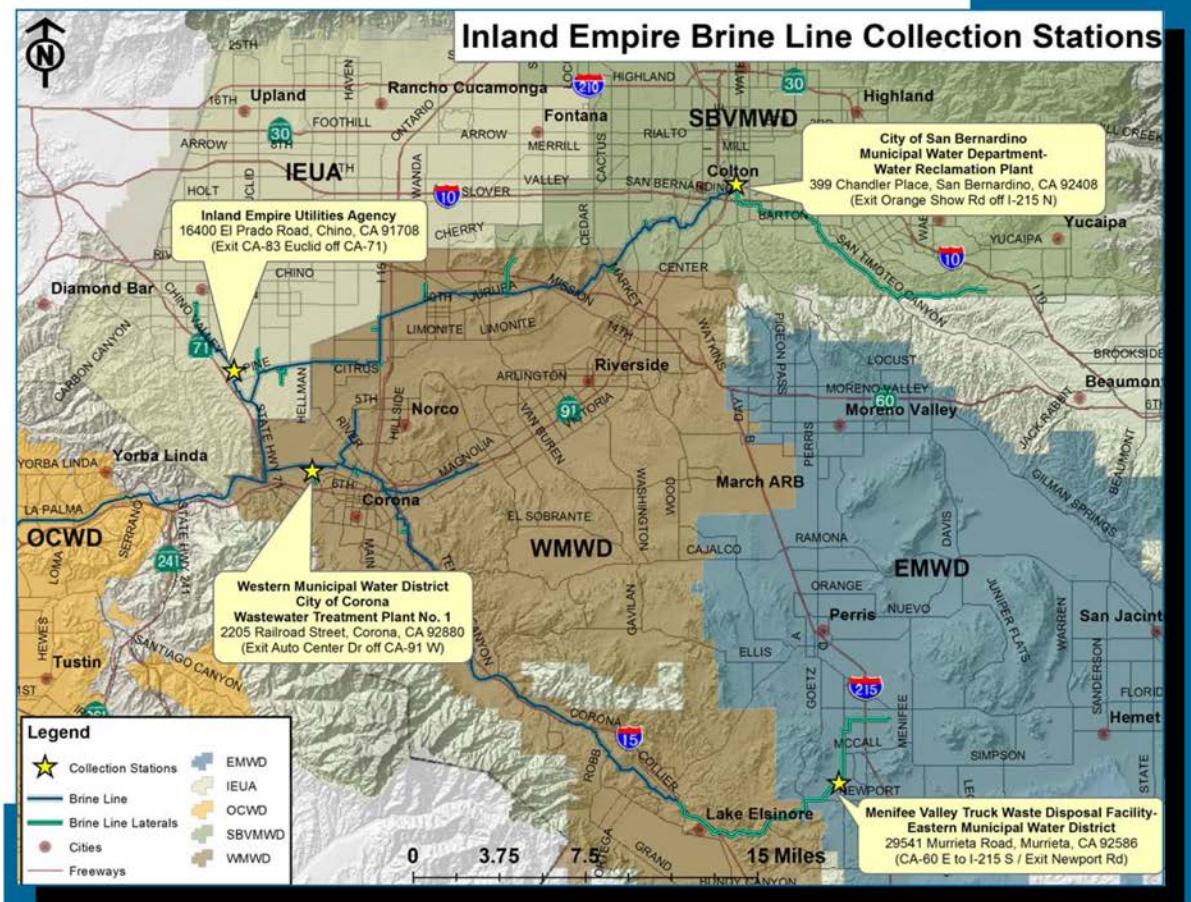
"SAWPA can provide assistance in determining whether the Brine Line is appropriate for your industry"

DIRECT DISPOSAL

- These customers are close enough to construct a direct-connection and produce enough waste to economically justify the connection cost.

HAULED LIQUID WASTE

- These customers typically generate a small amount of high TDS waste or are not located close enough to the Brine Line to make a direct connection.
- Liquid waste is disposed of at one of the four Brine Line Collection Stations using a permitted commercial Waste Hauler (refer to map below for location of the Stations).
- Everyone within the SAWPA service area is within 20 miles of a Brine Line Collection Station.



BRINE LINE DISPOSAL LIMITS

- To dispose of your waste using the Brine Line, your waste must meet established limits for constituents such as heavy metals, total petroleum hydrocarbons, pH, total toxic organics, and pesticides.

Constituent	Limit (mg/L – except pH)	Constituent	Limit (mg/L – except pH)
pH	6.0-12.0	Zinc	10.0
Arsenic	2.0	Cyanide (Total)	5.0
Cadmium	1.0	Cyanide (Amenable)	1.0
Chromium (Total)	2.0	Polychlorinated Biphenyls	0.01
Copper	3.0	Pesticides	0.01
Lead	2.0	Total Toxic Organics	0.58
Mercury	0.03	Sulfide (Total)	5.0
Nickel	10.0	Sulfide (Dissolved)	0.5
Silver	5.0	Oil and Grease (Petroleum)	100
Fat, Oils, & Grease	500		

BENEFITS TO OUR WATERSHED

- Allows use of groundwater resources from aquifers having too much salt or other contaminant.
- Protects and improves groundwater quality through salt and contaminant removal.
- The highest and best use of the Inland Empire Brine Line is the removal of salts from the Watershed to keep them from degrading water quality within the Watershed, thereby allowing better use of groundwater resources and expanding the ability to reclaim water.

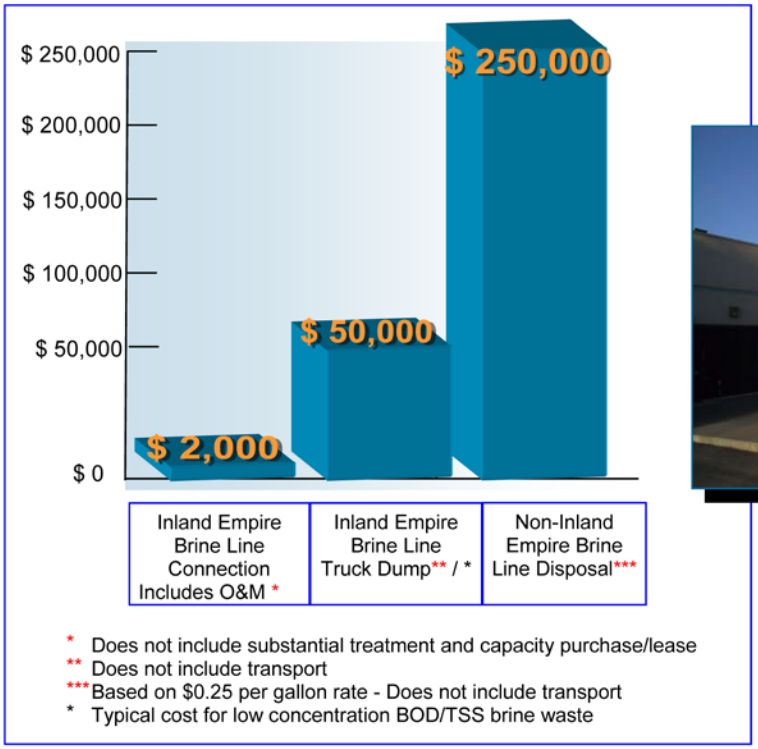
SALT REMOVAL
500,000 lbs of salt removed per day

“ The Inland Empire Brine Line lets you take advantage of the lower business operating costs in the Inland Empire!”

INLAND EMPIRE BRINE LINE COSTS

- Brine Line disposal costs are approximately $0.05/gallon for low concentration BOD/TSS brine wastewater compared to $0.25/gallon for brine waste disposal elsewhere in the LA basin.

APPROXIMATE DISPOSAL COST FOR ONE MILLION GALLONS OF BRINE WATER



"Customers in the Inland Empire may have a cost advantage over those in the rest of the Los Angeles Basin"

PROCESS TO BECOME A DIRECT DISPOSAL CUSTOMER

- Negotiate for capacity to dispose and treat the waste.
- Complete and submit a permit application
  http://www.sawpa.org/documents/DIRECTDISCHARGERAPPLICATION.pdf
- Submit construction plans for approval to the appropriate City/ Agency.
- Once the contracts are in place, the permit is approved/issued and the lateral line constructed, the tie-in can be made and operation can begin.
- The permit will include monitoring requirements and a requirement for a contingency plan for your liquid wastes in case the Brine Line is temporarily not available.

PROCESS TO BECOME A HAULED LIQUID WASTE CUSTOMER - Fastest way to connect

- Complete and submit a Hauled Liquid Waste Generator Permit Application
  http://www.sawpa.org/documents/WasteHaulerApp10_12_2010Final.pdf
- Contract with a permitted waste hauler for disposal of the waste at one of the four Brine Line Collection Stations.
- Your permit application will be reviewed and a representative will visit your business to complete the permitting process.
- Once approved, a permit for waste disposal will be issued. The permit will include monitoring requirements and contingency plan in the event that the Brine Line Collection Station is not temporarily available.

"We Are the Solution to Your Salt Disposal Problem"

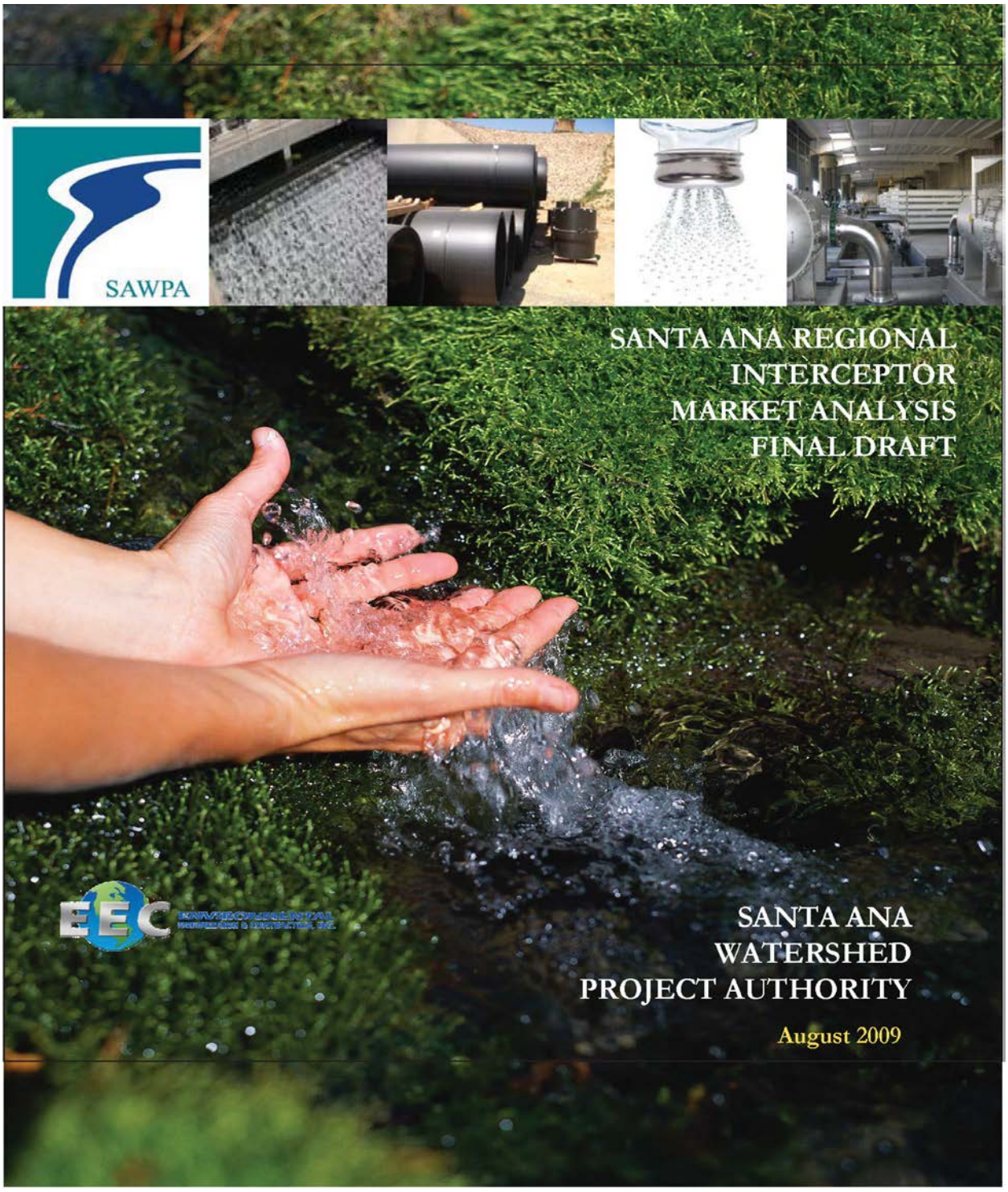
SAWPA

For more information about the Inland Empire Brine Line contact:

Santa Ana Watershed Project Authority
11615 Sterling Avenue
Riverside CA 92503
Phone: (951) 354-4220
Fax: (951) 352-3422
Email: **IEBrineline@sawpa.org**
Website: www.sawpa.org

Look for the Inland Empire Brine Line Icon on our website

Inland Empire Brine Line


SAWPA
SANTA ANA REGIONAL
INTERCEPTOR
MARKET ANALYSIS
FINAL DRAFT
SANTA ANA
WATERSHED
PROJECT AUTHORITY
August 2009

Yucaipa Valley Water District

Workshop Memorandum 12-063

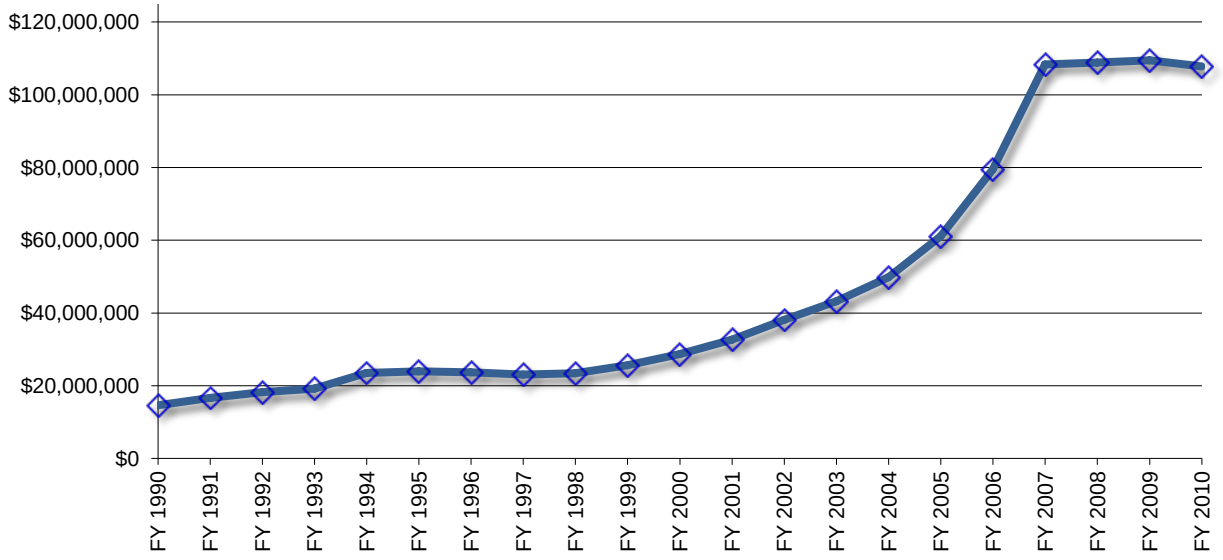
Date: **March 27, 2012**

Subject: **2011 Water Rate Survey Prepared by Raftelis Financial Consultants for the California-Nevada Section of the American Water Works Association**

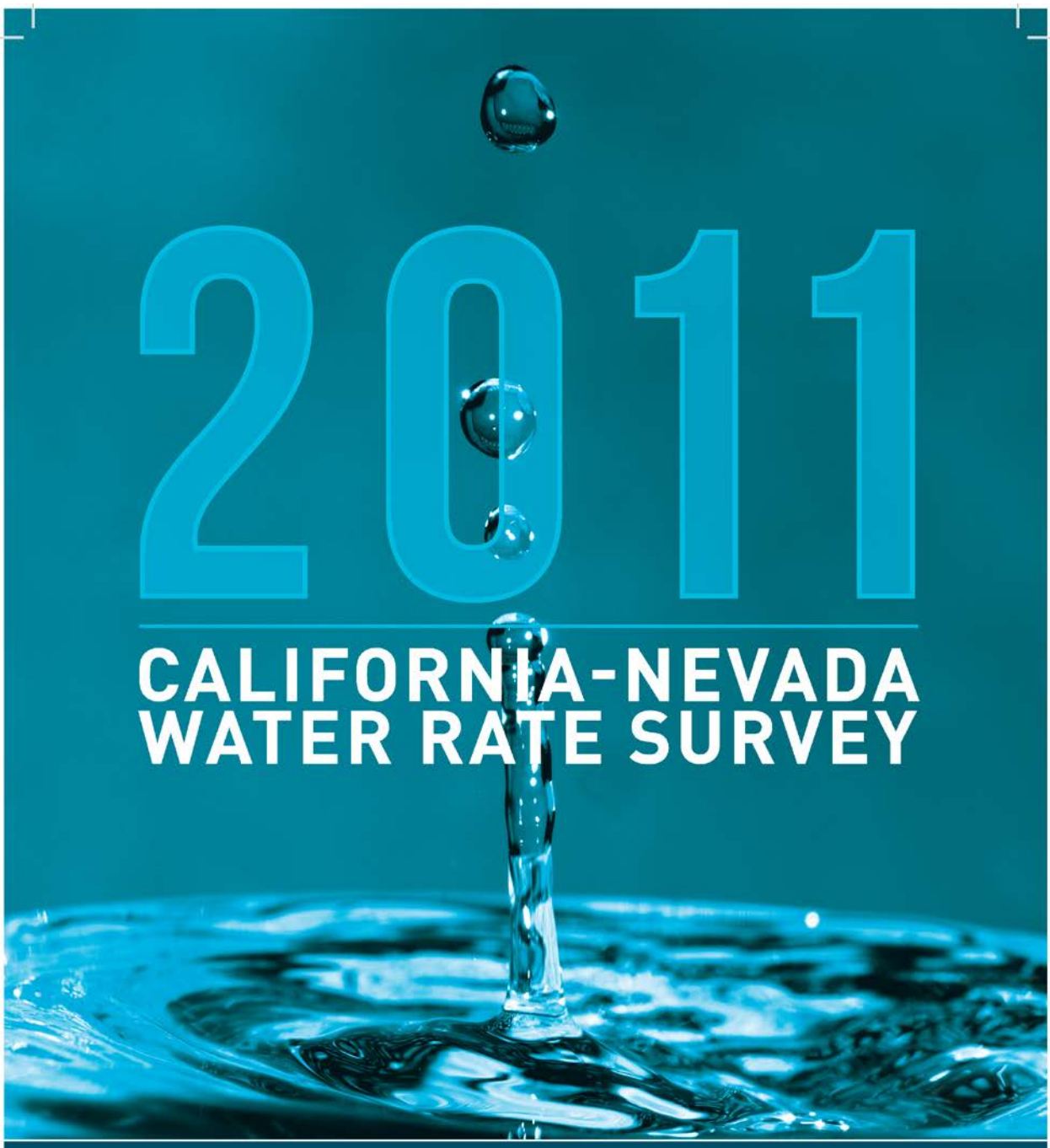
The Yucaipa Valley Water District has received a copy of the *2011 California-Nevada Water Rate Survey* prepared jointly by the California-Nevada Section of the American Water Works Association and Raftelis Financial Consultants. Participation in the survey included 216 California water agencies and 7 Nevada water agencies.

As discussed within the report, drawing specific conclusions from the rate comparisons is difficult and usually does not provide an accurate measure of efficiency or effectiveness. For example, over the past twenty years, the Yucaipa Valley Water District has raised rates to provide for system wide, water improvements throughout our service area. As shown below, the capital net assets for the water division increased from $15 million to $110 million, for a change of $95 million. Other water agencies rates may not reflect such an aggressive investment in water system infrastructure.

Capital Net Assets for the Water Enterprise Division



For comparative purposes, the *2011 California-Nevada Water Rate Survey* uses a monthly water demand of 15 hundred cubic feet, or about 11,000 per month. For 11,000 gallons of water, the Yucaipa Valley Water District charged $31.44 per month ($10.00 fixed charge plus $21.44 commodity charge) in 2011.



RFC
RAFTELIS FINANCIAL
CONSULTANTS, INC.

CALIFORNIA-NEVADA SECTION
American Water Works Association

RAFTELIS FINANCIAL CONSULTANTS, INC. / CALIFORNIA-NEVADA SECTION, AMERICAN WATER WORKS ASSOCIATION

FOREWORD

The *2011 California-Nevada Water Rate Survey* is a joint effort between the California-Nevada Section of the American Water Works Association (CA-NV AWWA) and Raftelis Financial Consultants, Inc. (RFC). CA-NV AWWA is a nonprofit professional association dedicated to providing high-quality technical information to its water utility members and general public. RFC is a nationally recognized water and wastewater finance and pricing consulting firm.

This survey was first conducted by RFC in 2005 to provide in-depth analysis of water rates and charges in the state of California. In 2007, CA-NV AWWA and RFC formed a partnership to produce the next edition rate survey including California and Nevada.

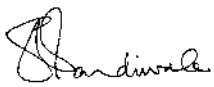
The 2011 survey provides valuable insights to pricing practices embraced by utilities across California and Nevada. Specifically included in this year's survey:

- Participation by water systems with diverse ownership and operating characteristics serving a total of 216 California agencies and 7 Nevada agencies.
- Rate calculations and other pertinent data grouped by county and sorted by city.

The report is also a powerful tool for comparative benchmarking. Drawing conclusions from rate comparisons, however, should be done only after evaluating several community characteristics (such as geography, climate, and service area, as well as the use of taxes, subsidies and grants). The determinants of utility rates are varied and complex and do not necessarily reflect the true cost of service. A low rate or a high rate does not necessarily mean that a utility is more or less efficient, respectively. As a result, the survey findings alone should not be used to judge the performance of any individual utility or to generalize about all water-sector utilities. Also, our rate survey uses a sample that is not statistically random. Even with these constraints, the information contained in the survey should be beneficial to utilities throughout California. At a minimum, it can be used to identify utilities that have similar characteristics to include in a more in-depth benchmarking effort.

We recognize the valuable contribution made by the numerous water utility professionals who donated their time and energy to this effort. Their participation in this survey is greatly appreciated.

Timothy Worley, Ph.D.
Executive Director
California Nevada Section of AWWA



Sudhir Pardiwala
Vice-President
Raftelis Financial Consultants, Inc.

Factors Affecting Rates

Because water rates are of immense public interest, legislative bodies entrusted with reviewing and approving rates are very sensitive to adjusting rates. From our work with many water utilities, we have identified seven factors that can affect water rates and charges. Four of these factors are driving water rates higher, while the other three have a lowering effect on rates. Because the factors that are increasing rates have had a much greater impact in recent years, water rates have increased faster than the overall rate of inflation. The following describes each factor, how it influences rates, and its expected impact over the next five to ten years. It should be noted that they are not the *only* factors affecting rates, but those that we believe are particularly relevant to water utilities.

Growing Infrastructure Needs

Much of the original water infrastructure in the Western United States is going to need replacement in the near future. In many cases, this will be the first time that utilities will face significant capital needs that is not funded by growth in the customer base. In addition, this existing infrastructure repair and replacement will likely be more costly than placing comparable new infrastructure in service in undeveloped areas. This factor is going to significantly impact utilities in coming years and will likely be a major driver of rate increases.

Water Shortage

Parts of California and Nevada experience a continuing threat of water shortages. Highly populous areas which are dependent on the Colorado River (such as southern Nevada and Southern California) have been particularly impacted by water shortages and use restrictions. Many cities in California face some kind of water use restriction, brought about by regulatory restrictions on accessing water or moving water supplies through an aqueduct system. There is also a mounting concern that climate change will reduce the snow pack in the local mountains, which serves as a natural storage system. Water shortages, whatever the source, typically have an adverse effect on the financial health of a utility, leading to increased pressure to raise rates.

Increasing Regulatory Stringency

While it is unclear how water regulation will be promulgated in the future, it is our expectation that standards will continue to become more stringent. As the ability to measure water quality improves and technology for producing "cleaner" potable water and effluent advances, regulations will inevitably follow and utilities will need to spend resources to acquire the new technology and/or reconfigure existing treatment processes. We believe that increasing regulatory stringency driven by these advances in technology will drive rates higher.

Decreasing per Capita Consumption

We have noticed that more and more of the utilities that we serve are facing declining per capita consumption. We believe there are two primary reasons for this trend. The first reason is that each generation of new home appliances is more and more water efficient. During the 1960s and 1970s, growth in consumption was fueled by the addition of water using devices to homes. With the replacement of each device, water efficiency is gained. The second reason is that the conservation message has been internalized by much of the population. Many of us don't let the water run while brushing our teeth or shaving our face like we once did. We believe this has been accomplished through public service efforts and often reinforced by the pricing structure. In addition, many utilities have faced droughts or capacity issues due to growth, which has forced additional efforts to reduce per capita consumption. We believe that this factor will continue to impact rates in the

future. The impact will diminish over time, however, as there is a level below which per capita consumption will not drop.

Technological Improvements
As mentioned earlier, water treatment technology is constantly improving. Certain technological improvements have a lowering impact on rates. Supervisory control and data acquisition (SCADA) systems allow for operations with fewer employees and help to minimize power loads. As a result, the cost of producing potable water is decreasing with all other variables remaining the same. We believe technology will continue to improve any benefit customers.

Effective Utility Management
Municipal utilities no longer see themselves as governmental monopolies. Elected officials and governing boards increasingly require utilities to operate as efficiently as possible. The growth of contractor operations has also caused utilities to become more efficient. In fact, many utilities have gone through some sort of formal optimization process. We believe that these efforts will continue to have lowering effect on water rates.

Political Actions
The strongest force in limiting rate increases has been the political process. Whereas optimization efforts are beneficial to the utility, politically limited rate increases may not be. It would be unfair to say that the political influence does not have some positive effects, as it does often force utilities to be as efficient as possible. However, when a rate increase is obviously needed and that increase is not allowed due to political issues, there can be severe future ramifications. We believe this will continue to have a significant impact on limiting rate increases.

Overview of the Survey

The survey provides data on 223 water service providers (216 in California and 7 in Nevada). Because water usage varies widely by cities and regions, a benchmark water usage amount is needed to provide a basis to compare water rates. This survey relies on 15 ccf (hundred cubic feet) or 11,220 gallons of consumption per month as that benchmark.

The California survey results are sorted first alphabetically by county and then by city. Additionally, several analyses are done on the four regions of California: Northern, San Joaquin Valley, Central Coast, and Southern. The regions are comprised of the following counties.

Northern: Alameda, Butte, Calaveras, Colusa, El Dorado, Humboldt, Lake, Lassen, Marin, Mariposa, Mendocino, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Shasta, Solano, Sonoma, Stanislaus, Sutter, Tehama, Tuolumne, and Yolo.

San Joaquin Valley: Fresno, Kern, Kings, Madera, Merced, Mono, San Joaquin, and Tulare

Central Coast: Monterey, San Luis Obispo, and Santa Barbara

Southern: Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura

This year's Nevada survey includes data from the following counties: Clark, Douglas, and Washoe.

This is our fourth survey in California/Nevada (Previous surveys include 2005, 2007, and 2009, though as the inaugural survey, 2005 data was limited to California). In the survey, we have made

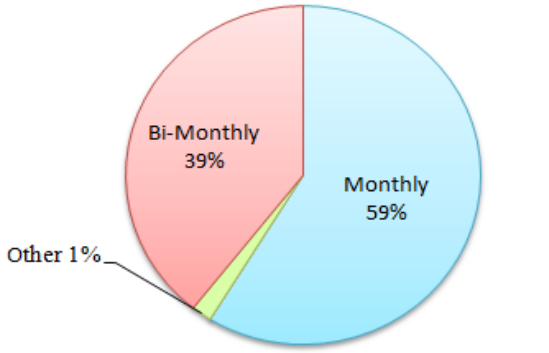
some comparisons regarding the bill frequency, rate structure and user charges between 2009 and 2011. The comparisons are made when applicable, and include only the 175 agencies that participated in both the 2009 and 2011 surveys. Characteristics of billing frequency, rate structures, and water charges are also included.

CALIFORNIA

BILLING FREQUENCY

As shown in Figure 1a, 59% of the agencies in our sample bill monthly. Roughly 40% have a bi-monthly rate structure.

Figure 1a: 2011 Billing Frequency



We have also examined the billing frequency trend, shown in Figure 1b. Over the last two years, our analysis shows that the bi-monthly billing has increased from 34% in 2009 to 39% in 2011. This increase corresponds with a decrease in monthly billing, which was 64% in 2009 and is currently 60% in 2011. This behavior is contrary to the overall industry trend, and that seen in the 2009 survey. Monthly billing is predominantly becoming more popular, as monthly billing helps convey information on consumption and pricing to an agency's customer base faster. Also, as rates increase and bills get larger, customers may find it easier to pay smaller monthly bills than larger bi-monthly bills.

Figure 1b. –2009 v. 2011 Billing Frequency

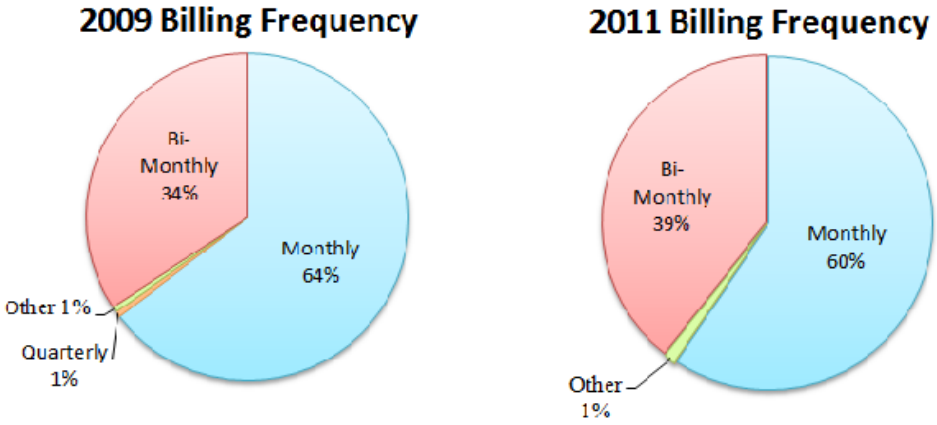


Figure 1b compares the billing frequency between 2009 and 2011. Only agencies participating in both years (175 agencies) will be counted; therefore, the percentage shown in 2011 will be different from the percentage shown in Figure 1a since there are 216 agencies counted in the 2011 survey.

RATE STRUCTURES

Figure 2a demonstrates that inclining and uniform rate structures combine to constitute approximately 90% of the rate structures among utilities in this year's survey.

Figure 2a: 2011 Rate Structure

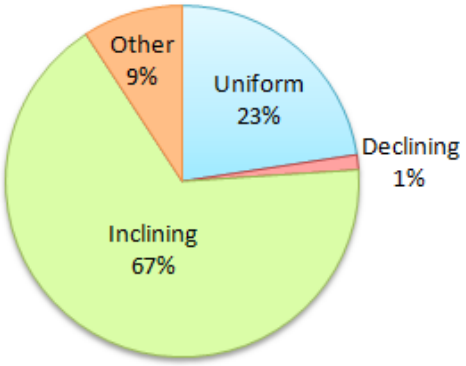
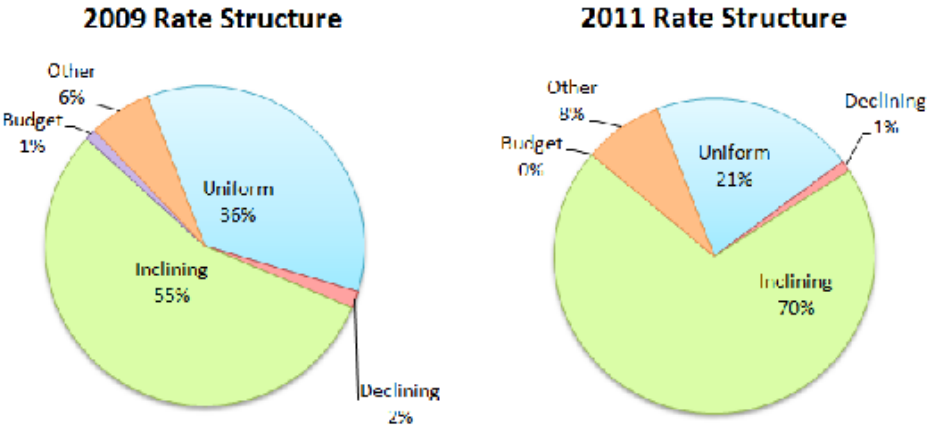


Figure 2b shows the trend of rate structures from 2009 through 2011, with an increase in inclining blocks, from 55% of survey respondents to 70%. The 2009 survey has captured instances of water budget rates, an increasingly popular rate structure designed to ensure efficient use of water; however the 2011 survey failed to capture this trend. This is inconsistent with RFC's experience, and is likely due to the fact that survey respondents are not entirely consistent year-to-year, as opposed to a decline in agencies using this structure.

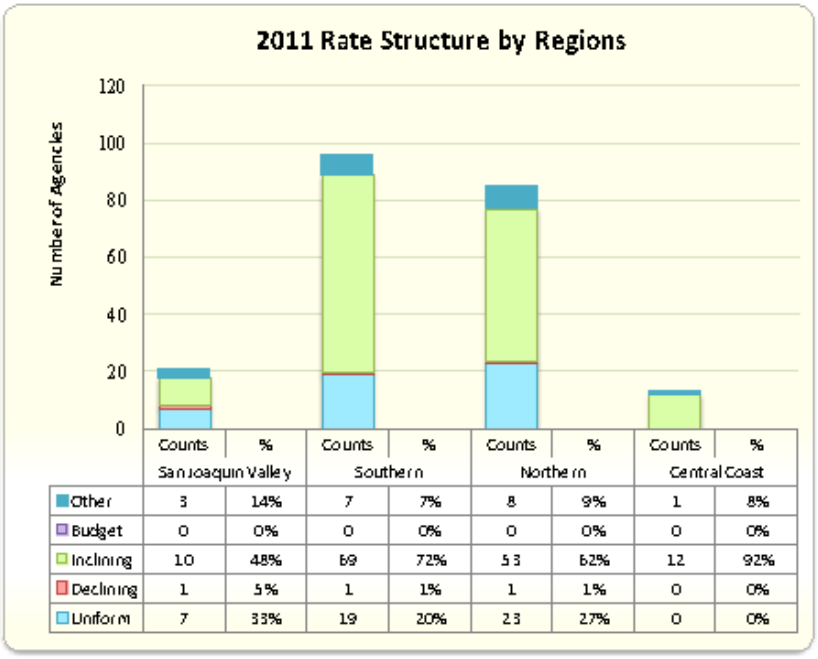
Figure 2b. –2009 v. 2011 Rate Structures



Similarly, figure 2b compares the billing frequency between 2009 and 2011, with only agencies participating in both years (175 agencies) included.

Figure 2c. – Rate Structures by Region

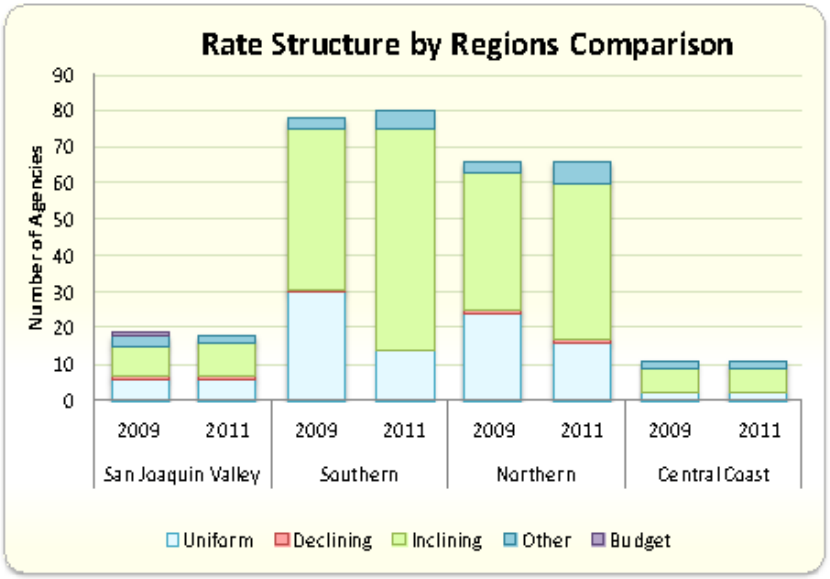
The regional variation of rate structures in Figure 2c shows that Central California has the highest percentage of agencies with inclining tiered rate structures (92%) that would tend to promote conservation. In Southern California, 72% of the surveyed agencies reported inclining rate structures compared to 62% in Northern California. Southern and Northern California have 69 and 53 agencies reporting inclining rates, respectively.



	Counts	%	Counts	%	Counts	%	Counts	%
	San Joaquin Valley		Southern		Northern		Central Coast	
Other	3	14%	7	7%	8	9%	1	8%
Budget	0	0%	0	0%	0	0%	0	0%
Inclining	10	48%	69	72%	53	62%	12	92%
Declining	1	5%	1	1%	1	1%	0	0%
Uniform	7	33%	19	20%	23	27%	0	0%

Figure 2d. – 2009 v. 2011 Rate Structures by Region

Figure 2d compares the changes by regions and shows the Southern California agencies getting more aggressive with inclining rate structures and Southern agencies are moving away from the uniform rate structures. Figure 2d compares only agencies participating in both 2009 and 2011 surveys (175 agencies).



CHARGES

As mentioned previously, all charges in this survey are based on the assumption that the utility customer uses 15 ccf (11,220 gal) per month. For utilities that do not bill monthly, the charge was calculated on the assumption of 15 ccf per month usage. It should be noted that the average usage can vary significantly from agency to agency. For example the average usage in San Francisco is 6 ccf per month and the rate structure is designed for that level of usage so the charge at 15 ccf per month will be high with a tiered rate structure.

Figure 3a shows the average fixed charge and variable charge in the four regions in 2011. The Central Coast Region has the highest average rate in our survey, which is almost $75 per month. San Joaquin Region has the lowest average monthly bill, which is about $32 per month.

Figure 3a – 2011 Water Charges by Region

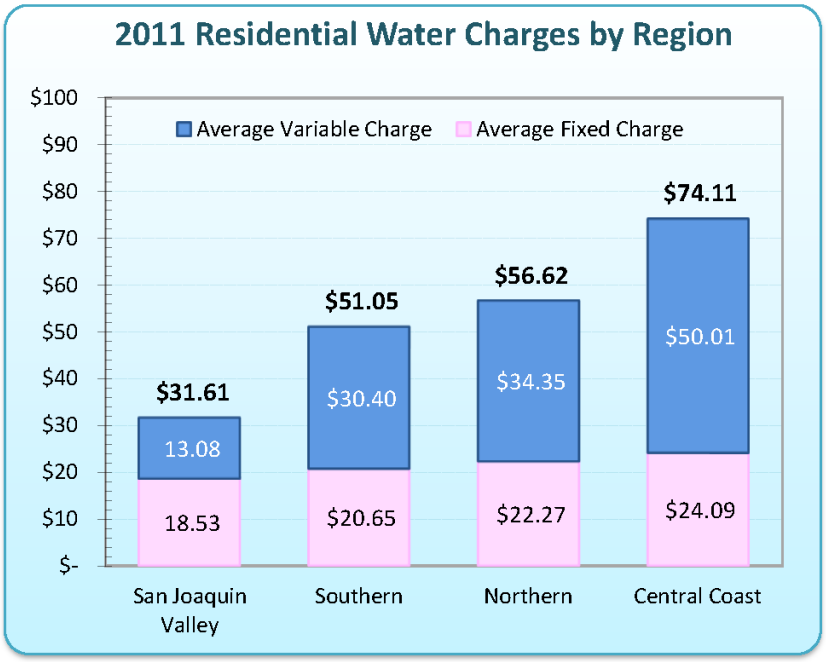
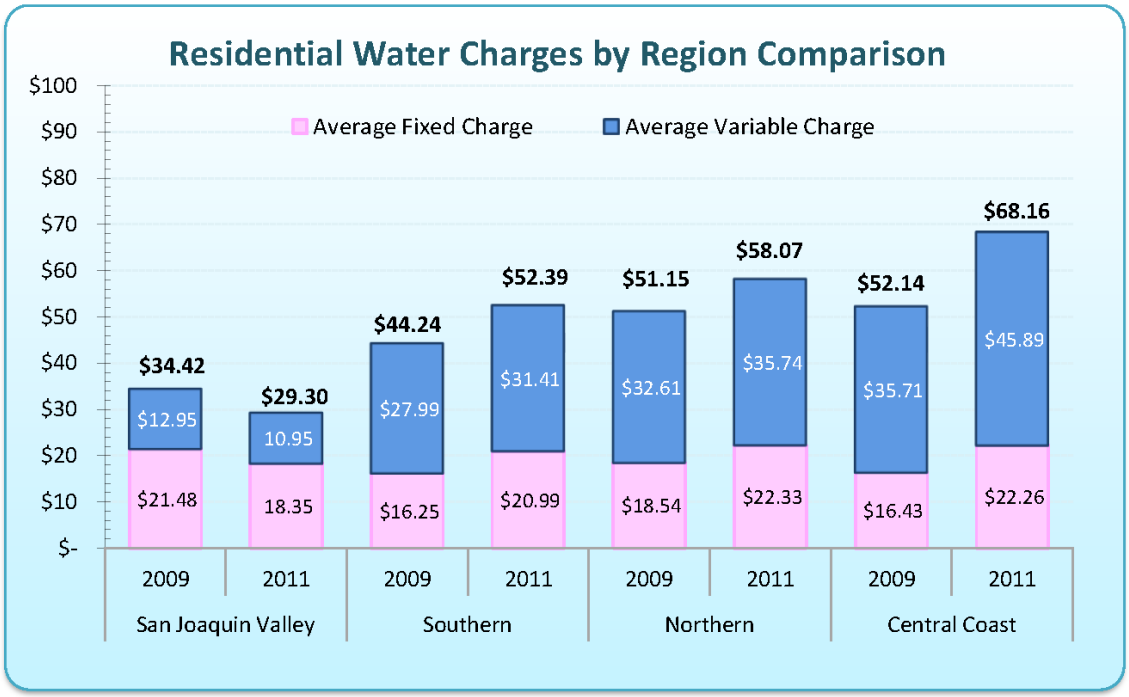


Figure 3b shows the average water charges (separated by fixed and variable) by region for the 2009 and 2011 California surveys. On average, agencies in the San Joaquin Valley have the lowest water charges while Central Coast water is the most expensive. Figure 3b compares only agencies participating in both 2009 and 2011 surveys (175 agencies).

Figure 3b –Water Charges by Region Comparison

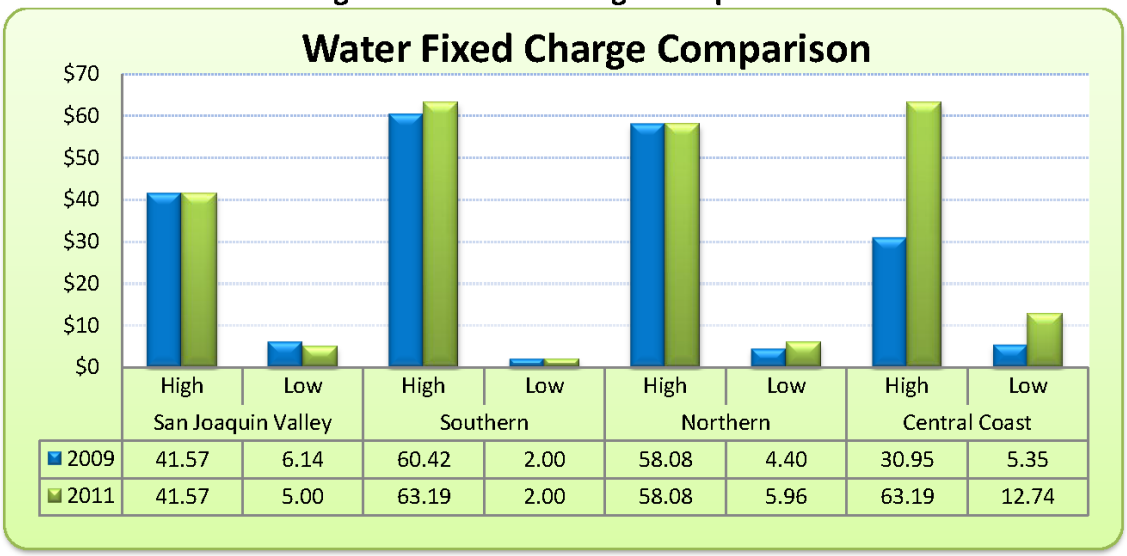


Over the past few years, water rates increased due to the California drought situation and the increasing water costs. The following table summarizes the data in Figure 3b and shows the annual percentage increases for each survey period. The data indicates that the increases in water charges are much higher than the Consumer Price Index (CPI), which rose 1.5% in 2010 and 3% in 2011, as provided by the Bureau of Labor Statistics. The highest percentage increase in the average monthly rates is in the Central Coast Region, followed by the Southern and Northern regions. The San Joaquin Valley actually showed a decrease in water rates from 2009. This is likely due to a significant number of utilizes in that region installing meters over the last couple of years. Traditionally these areas have had flat charges that assumed a lot of usage. By switching to a variable rate, it's likely that customers using 15 hcf per month would receive a reduced bill.

	San Joaquin Valley	Southern	Northern	Central Coast
2009	$ 34.42	$ 44.24	$ 51.15	$ 52.14
2011	$ 29.30	$ 52.39	$ 58.07	$ 68.16
% increase 2009-2011	-15%	18%	14%	31%

Figure 3c shows the high and low monthly residential fixed water charge comparisons in four regions for the 2009 and 2011 California surveys. Although water rates on whole are trending higher, the fixed charges often do not increase as much, except for those at the Central Coast. A lower fixed charge means a higher variable charge for water consumption, which sends a stronger pricing signal for conservation.

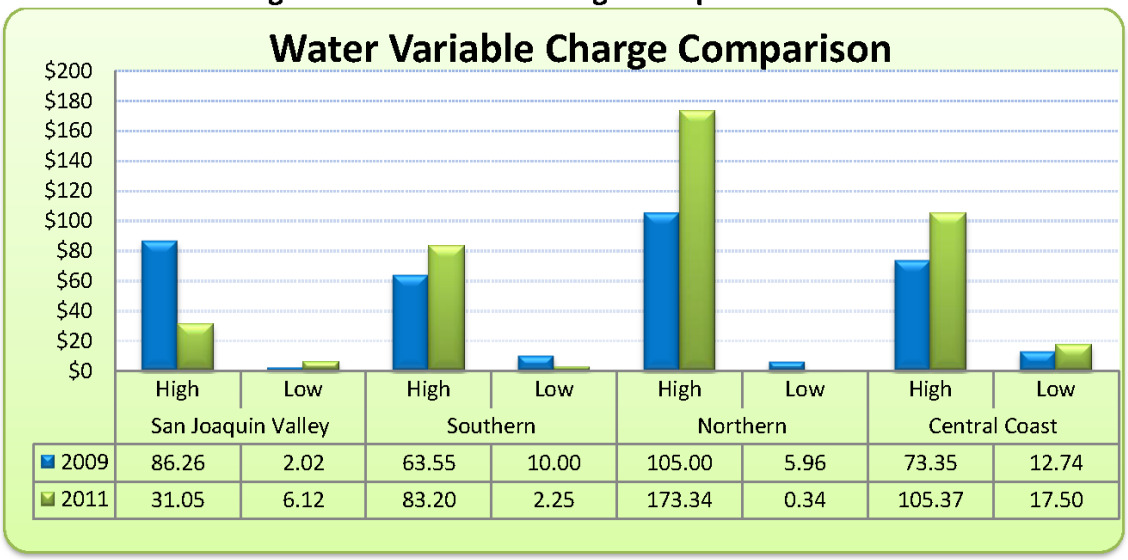
Figure 3c – Fixed Charge Comparison



	San Joaquin Valley		Southern		Northern		Central Coast	
	High	Low	High	Low	High	Low	High	Low
2009	41.57	6.14	60.42	2.00	58.08	4.40	30.95	5.35
2011	41.57	5.00	63.19	2.00	58.08	5.96	63.19	12.74

Figure 3d shows the high and low monthly residential variable water charge for 15 ccf, which is compared by the four regions for the 2009 and 2011 California surveys. Some of the highest and lowest variable rates are reported in the Northern and Southern Regions. Figure 3c and 3d compares only agencies participating in both 2009 and 2011 surveys.

Figure 3d – Variable Charge Comparison Table



	San Joaquin Valley		Southern		Northern		Central Coast	
	High	Low	High	Low	High	Low	High	Low
2009	86.26	2.02	63.55	10.00	105.00	5.96	73.35	12.74
2011	31.05	6.12	83.20	2.25	173.34	0.34	105.37	17.50

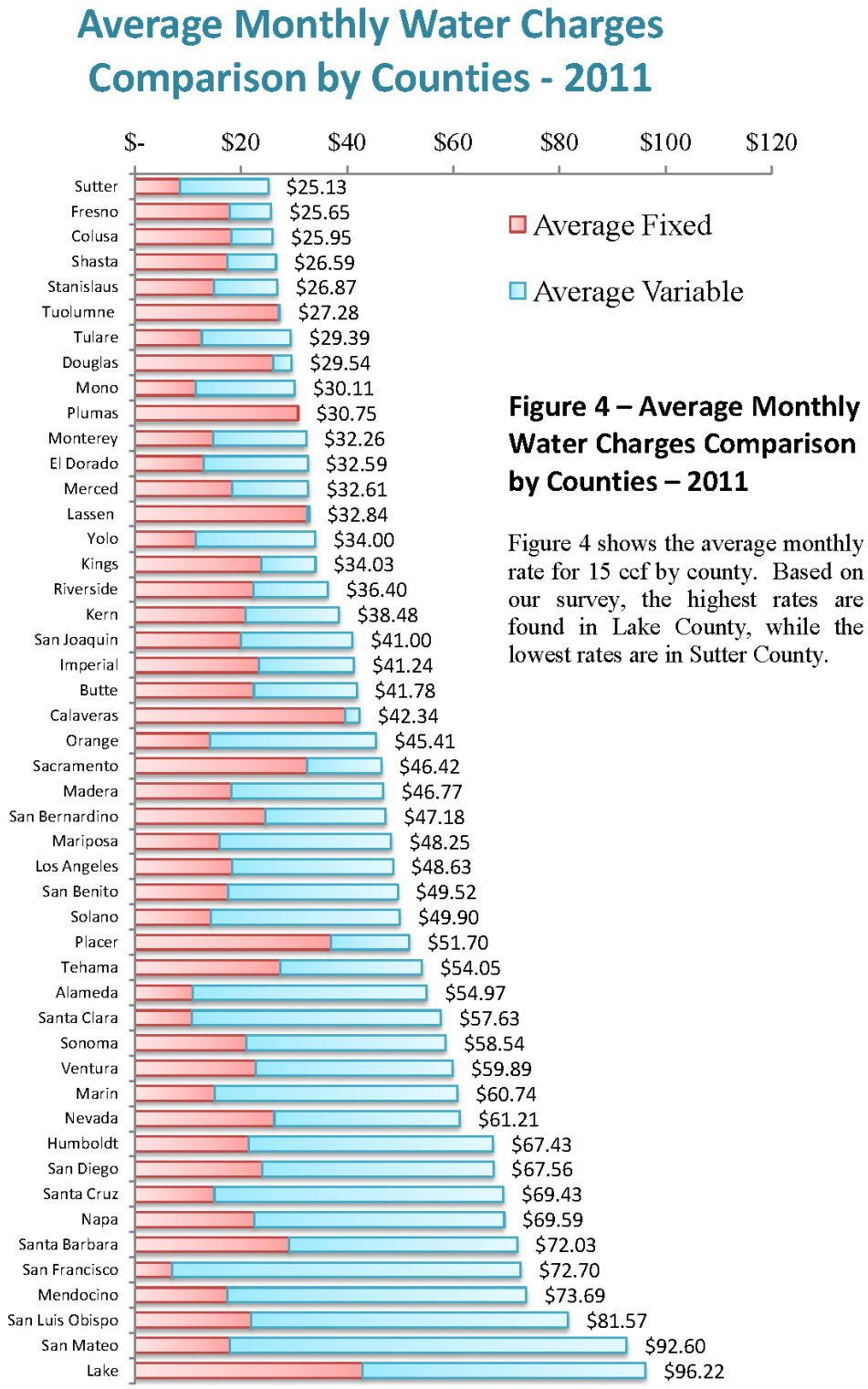


Figure 4 – Average Monthly Water Charges Comparison by Counties – 2011

Figure 4 shows the average monthly rate for 15 ccf by county. Based on our survey, the highest rates are found in Lake County, while the lowest rates are in Sutter County.

Figure 5 displays the year in which the survey's utilities have most recently updated their rates. A clear majority of respondents (64%) have updated their rates within the past two years (2010 & 2011).

The 2009 survey reported that 70% of utilities had updated their rates within the previous (2008 & 2009) two years.

Figure 5 - Rate Frequency Update

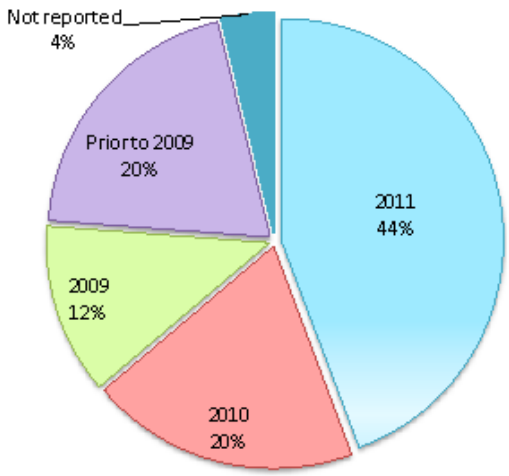


Figure 6 summarizes the comparison of connection charge (system development fee) data for 2009 and 2011 surveys where data is available. This comparison indicates that the average connection charge has increased by 46 percent in two years.

Figure 6 – Connection Fee Charge Comparison

Connection Fee	2009	2011
Highest	$ 19,600	$ 34,732
Lowest	$ 450	$ 650
Average	$ 2,279	$ 3,330
	% Change	46%

County	City	Water Service Provider	Effective Date	Billing Frequency	Fixed Charge	Commodity Charge	Total Charge	Rate Format	Service Population	Current Avg. Res. Usage	Res. Connection Fee
Alameda	Alameda	East Bay Municipal Utilities District	07/01/2011	Bi-monthly	13.70	38.60	52.30	Inclining	1,400,000	11.00	13,920
	Fremont	Alameda County Water District	3/1/2011	Bi-monthly	12.55	43.74	56.29	Uniform	337,500	11.50	6,347
	Hayward	City of Hayward	10/1/2010	Bi-Monthly	9.00	47.00	56.00	Inclining	145,000		11,470
	Dublin	Dublin/San Ramon Services District	07/01/2009	Bi-monthly	8.33	46.95	55.28	Inclining	130,855	11.83	34,732
Butte	Gridley	City of Gridley	7/1/2010	Monthly	24.99	10.67	35.66	Uniform	6,438	250.00	2,702
	Paradise	Paradise Irrigation District	01/01/2008	Monthly	27.26	37.81	65.07	Inclining	26,000	21.00	4,625
	Butte	South Feather Water and Power Authority	3/1/1993	Monthly	15.00	9.60	24.60	Declining	20,000	13.42	3,807
Calaveras	Angels (Angels Camp)	City of Angels	2/5/2010	Monthly	39.75	5.42	45.17	Other	3,500	11.81	8,782
	San Andreas	Calaveras County Water District	7/1/2011	Bi-Monthly	39.50	-	39.50	Other	31,750	15.10	9,500
Colusa	Colusa	City of Colusa	5/1/2011	Monthly	18.14	7.81	25.95	Inclining	5,892		
	Brentwood	City of Brentwood	11/26/2002	Monthly	27.79	32.45	60.24	Inclining	51,500	9.87	
	Martinez	City of Martinez	Not Reported	Bi-monthly	23.80	49.80	73.60	Uniform	37,000		
	Pittsburg	City of Pittsburg	11/1/2010	Monthly	19.58	42.81	62.39	Inclining	64,148		
	Pittsburg	Golden State Water Company	11/25/2008	Monthly	13.75	53.31	67.06	Inclining	450,000	13.00	-
Douglas	Gardnerville	Gardnerville Water Company	4/19/2009	Bi-Monthly	26.00	3.54	29.54	Inclining	5,000	21.39	6,235
El Dorado	Placerville	El Dorado Irrigation District	4/1/2009	Bi-monthly	12.95	19.64	32.59	Inclining	182,019		17,093
Fresno	Fowler	City of Fowler	05/01/2009	Monthly	16.24	17.86	34.10	Other	5,764	40.10	2,093
	Kerman	City of Kerman	7/1/2011	Monthly	13.14	8.58	21.72	Uniform	12,737		
	Kingsburg	City of Kingsburg	4/1/2010	Monthly	19.50	-	19.50	Other	11,064		
	Reedley	City of Reedley	7/1/2007	Monthly	28.55	6.12	34.67	Uniform	23,500		
	Sanger	City of Sanger	7/1/2007	Monthly	11.79	6.48	18.27	Inclining	25,447		
Humboldt	Arcata	City of Arcata	07/01/2011	Monthly	6.77	47.24	54.01	Inclining	17,044		
	Eureka	City of Eureka	07/01/2011	Monthly	29.11	1.56	30.67	Uniform	28,000		
	Winnemucca	City of Winnemucca	1/1/2010	Monthly	2.10	13.75	15.85	Uniform	12,000	3.74	2,300
	McKinleyville	Humboldt Community Services District	7/1/2011	Monthly	13.85	29.25	43.10	Uniform	19,000	7.00	2,000
	Trinidad	Westhaven Community Services District	07/01/2011	Monthly	43.57	140.67	184.24	Inclining	500	4.00	8,700
	Willow Creek	Willow Creek Community Services District	11/20/2008	Monthly	33.00	43.73	76.73	Inclining	1,753		3,500
Imperial	Calexico	City of Calexico	8/1/2008	Monthly	43.89	-	43.89	Other	39,337	30.00	
	El Centro	City of El Centro	7/1/2009	Monthly	3.01	35.57	38.58	Uniform	42,000		
Kern	Bear Valley Springs	Bear Valley Community Services Dist	7/1/1995	Monthly	25.33	31.05	56.38	Inclining	5,200	12.00	7,555
	Bakersfield	Greenfield County water District	6/1/2011	Monthly	20.09		20.09	Inclining	8,500		4,000
	Ridgecrest	Indian Wells Valley Water District	02/01/2011	Monthly	26.24	14.30	40.54	Inclining	30,000	18.00	4,818
	Pine Mountain Club	Mil Potrero Mutual Water Co	7/1/2011	Other	14.25	10.00	24.25	Inclining	3,000	4.16	-
	Oildale	North of the River Municipal Water District	7/1/2010	Monthly	18.37	15.15	33.52	Inclining	7,000	30.00	17,513
Kings	Corcoran	City of Corcoran	09/07/2005	Monthly	41.57	9.99	51.56	Other	25,692		
	Hanford	City of Hanford	9/1/2007	Monthly	6.14	10.35	16.49	Uniform	54,367	24.00	1,290
Lake	Clearlake Oaks	Clearlake Oaks County Water District	12/25/2008	Monthly	27.36	36.79	64.15	Uniform	2,458	7.00	5,500
	Kelseyville	Buckingham Park Water District	2/1/2010	Monthly	46.44	62.80	109.24	Uniform	450	1.40	
	Middletown	Callayomi County Water District	10/1/2010	Monthly	35.00	23.49	58.49	Other	1,126		4,900
	Clearlake Park	Golden State Water Company	10/2/2010	Monthly	49.80	70.88	120.68	Uniform	2,129	6.00	
	Lower Lake	Lower Lake County Waterworks District 1	8/25/2010	Monthly	56.03	72.53	128.56	Inclining	2,125	5.00	2,500
Lassen	Westwood	Westwood Community Services District	06/01/2011	Monthly	32.50	0.34	32.84	Inclining	2,000	37.60	740
Los Angeles	Bellflower	Bellflower Home Garden Water Company	01/01/2011	Other	24.00	-	24.00	Other	1,200		
	Montebello	California Water Service Company	4/1/2001	Monthly	14.04	44.97	59.01	Inclining	27,000		
	Beverly Hills	City of Beverly Hills	7/1/2011	Bi-monthly	35.17	52.30	87.47	Inclining	34,445		
	Brentwood	City of Brentwood	7/1/2011	Monthly	18.53	33.21	51.74	Inclining	49,480		
	Burbank	City of Burbank	7/1/2011	Monthly	10.32	37.53	47.85	Inclining	103,340	16.90	960
	Covina	City of Covina Municipal Water District	7/1/2010	Monthly	28.48	2.25	30.73	Inclining	46,000	28.00	
	Downey	City of Downey	7/1/1995	Bi-monthly	3.90	13.54	17.44	Inclining	111,000	25.38	-
	La Verne	City of La Verne	10/1/2009	Bi-monthly	13.00	29.59	42.59	Uniform	32,500	23.00	2,500
	Lakewood	City of Lakewood	9/1/2010	Bi-Monthly	6.75	24.95	31.70	Inclining	59,660	12.50	-
	Merced	City of Merced	7/1/2006	Monthly	35.14	35.14	70.28	Inclining	81,500		
	Pomona	City of Pomona	1/1/2011	Bi-monthly	22.38	18.75	41.13	Inclining	149,058	18.00	-
	Santa Monica	City of Santa Monica	07/01/2011	Bi-monthly	-	34.24	34.24	Inclining	84,084	17.00	743
	Sierra Madre	City of Sierra Madre	07/01/2011	Bi-monthly	21.51	28.80	50.31	Inclining	10,800	24.00	-
	Torrance	City of Torrance	3/1/2011	Bi-Monthly	10.50	83.20	93.70	Inclining	140,820	14.00	
	Whittier	City of Whittier	8/1/2010	Bi-monthly	2.00	32.25	34.25	Inclining	82,000		
	Covina	Covina Municipal Water District	7/1/2010	Bi-monthly	28.48	33.75	62.23	Inclining	35,000	24.00	
	La Crescenta	Crescenta Valley Water District	01/01/2012	Bi-monthly	15.70	43.90	59.60	Inclining	32,000	16.08	3,205
	Glendale	Glendale Water and Power	Not Reported	Monthly	15.66	40.53	56.19	Inclining	207,157	22.00	
	Pasadena	Kinneloa Irrigation District	1/1/2011	Monthly	49.00	2.95	51.95	Uniform	1,500	38.00	3,000
	La Habra	La Habra Heights County Water District	07/01/2011	Monthly	35.81	20.70	56.51	Uniform	6,000	46.00	6,952
	Los Angeles	Los Angeles Department of Water and Power	7/1/1993	Bi-Monthly	-	46.60	46.60	Other	3,840,700	12.00	-
	Calabasas	Las Virgenes Municipal Water District	01/01/2012	Bi-monthly	26.35	29.29	55.64	Inclining	65,000	27.00	
	Long Beach	Long Beach Water Department	10/1/2010	Monthly	12.72	30.49	43.21	Inclining	463,789		
	Maywood	Maywood Mutual Water Company #1	1/1/2009	Bi-Monthly	22.00	34.50	56.50	Uniform	7,500	25.00	2,200
	Newhall	Newhall County Water District	1/1/2005	Bi-monthly	17.04	12.56	29.60	Inclining	31,000		
	Downey	Park Water Company	1/1/2011	Bi-monthly	16.47	51.10	67.57	Inclining	128,190	13.00	-
	Santa Clartia	Santa Clarita Water Division	01/01/2010	Monthly	20.53	22.13	42.66	Inclining	124,200	29.00	2,047
	Covina	Suburban Water Systems	1/1/2011	Monthly	14.45	24.00	38.45	Inclining	293,500	20.00	-
	Valencia	Valencia Water Company	02/01/2011	Monthly	13.72	18.47	32.19	Other	113,000	20.00	-
	Walnut	Walnut Valley Water District	4/1/2010	Monthly	16.03	27.57	43.60	Inclining	99,716		
Madera	Madera	City of Madera	07/01/2011	Monthly	9.18	11.91	21.09	Uniform	61,000	15.00	845
	Oakhurst	Hillview Water Company	10/25/2010	Monthly	27.11	45.33	72.44	Uniform	3,300	12.49	
Marin	Corte Madera	Marin Municipal Water District	6/1/2011	Bi-monthly	20.13	52.95	73.08	Inclining	190,000	23.00	
	Novato	North Marin Water District	06/01/2011	Bi-monthly	10.00	38.39	48.39	Inclining	61,000	12.67	28,600
Mariposa	Mariposa	Mariposa Public Utility District	02/22/2002	Monthly	16.00	32.25	48.25	Inclining	1,800		
Mendocino	Fort Bragg	City of Fort Bragg	7/1/2011	Monthly	22.02	94.05	116.07	Uniform	6,604		
	Ukiah	City of Ukiah	7/1/2007	Monthly	14.94	18.00	32.94	Uniform	14,956		
	Fort Bragg	Fort Bragg Water Works	7/1/2011	Monthly	22.64	62.10	84.74	Uniform	7,273	732.55	3,627
	Redwood Valley	Redwood Valley County Water District	01/01/2010	Monthly	10.00	51.00	61.00	Inclining	4,000	17.00	5,000
Merced	Hilmar	Hilmar County Water District	7/1/2011	Monthly	23.25		23.25	Inclining	4,800	21.00	3,945
	Los Banos	City of Los Banos	2/21/2011	Bi-monthly	16.24		16.24	Inclining	34,000	14.00	3,127
	Merced	Meadowbrook Water Company of Merced	08/01/2011	Monthly	15.58	14.25	29.83	Inclining	5,500	20.00	700
Mono	Mammoth Lakes	Mammoth Community Water District	04/01/2009	Monthly	11.46	18.65	30.11	Inclining	8,000	8.00	8,270
Monterey	Castroville	Castroville Water District	6/15/2003	Monthly	14.76	17.50	32.26	Inclining	7,000	27.00	-
Napa	American Canyon	City of American Canyon	1/1/2011	Monthly	-	46.79	46.79	Inclining	16,000		

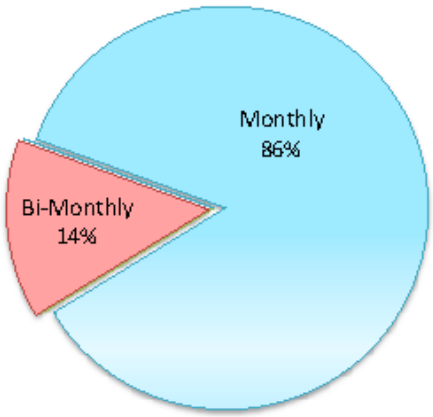
County	City	Water Service Provider	Effective Date	Billing Frequency	Fixed Charge	Commodity Charge	Total Charge	Rate Format	Service Population	Current Avg. Res. Usage	Res. Connection Fee
	Napa	Circle Oaks County Water District	6/12/2008	Monthly	52.15	73.00	125.15	Inclining	500	10.00	-
	Napa	City of Napa	10/1/2011	Bi-monthly	6.63	42.15	48.78	Uniform	87,000	11.20	4,100
	St. Helena	City of St. Helena	1/1/2010	Bi-Monthly	31.40	26.25	57.65	Inclining	5,817		
Nevada	Grass Valley	City of Grass Valley	1/1/2011	Monthly	35.25	45.44	80.69	Uniform	12,200		
	Placer	Nevada Irrigation District	1/1/2011	Bi-monthly	17.32	24.40	41.72	Inclining			7,044
Orange	Anaheim	City of Anaheim	7/1/2010	Bi-monthly	5.00	28.05	33.05	Uniform	364,921	14.00	
	Brea	City of Brea	5/1/2009	Monthly	6.17	39.27	45.44	Inclining	12,000	16.00	2,435
	Buena Park	City of Buena Park	7/12/2011	Bi-monthly	30.36	22.20	52.56	Inclining	79,379		
	Garden Grove`	City of Garden Grove Water Services	7/1/2011	Bi-monthly	13.33	39.60	52.93	Inclining	180,000		
	Huntington Beach	City of Huntington Beach	10/1/2010	Monthly	10.90	26.22	37.12	Uniform	203,000	11.00	2,400
	La Palma	City of La Palma	6/1/2010	Bi-monthly	39.00	18.70	57.70	Inclining	15,603		
	Orange	City of Orange	6/30/2006	Bi-monthly	10.07	15.14	25.21	Inclining	143,000	20.00	
	San Clemente	City of San Clemente	9/1/2010	Monthly	10.92	34.07	44.99	Inclining	65,000	16.00	
	Santa Ana	City of Santa Ana	7/1/2010	Bi-monthly	7.00	38.18	45.18	Inclining	339,130		
	Westminster	City of Westminster	9/17/2010	Bi-monthly	7.32	33.75	41.07	Inclining	88,407		
	Orange	East Orange County Water District	6/15/2011	Bi-monthly	16.64	33.45	50.09	Uniform	5,000	40.00	2,500
	Irvine	Irvine Ranch Water District	7/26/2011	Bi-monthly	8.75	24.06	32.81	Inclining	320,000		
	South Coast	South Coast Water District	7/1/2011	Monthly	21.47	46.64	68.11	Inclining	302,000		
	Yorba Linda	Yorba Linda Water District	8/1/2010	Monthly	11.73	37.80	49.53	Uniform	75,000	25.00	2,275
Placer	Alpine Meadows	Alpine Springs County Water District	7/1/2008	Other	58.08	29.36	87.44	Inclining	1,625	7.08	12,607
	Roseville	City of Roseville	8/1/2011	Monthly	18.05	7.02	25.07	Inclining	112,000	19.00	6,175
	Granite Bay	San Juan Water District	1/1/2001	Bi-monthly	34.50	8.10	42.60	Other	30,600	43.00	13,686
Plumas	Blairsden	Plumas Eureka Community Services District	07/01/2011	Other	30.75	-	30.75	Uniform	500-1500)	-	
Riverside	Coachella	Coachella Valley Water District	8/1/2010	Monthly	7.00	15.70	22.70	Other	372,598	25.50	3,756
	Riverside	Eastern Municipal Water District	Not Reported	Bi-monthly	10.52	23.22	33.74	Other	687,000		
	Hemet	Lake Hemet Municipal Water District	03/01/2009	Monthly	13.02	32.78	45.80	Declining	14,464	30.00	3,130
	Banning	Morongo Band of Mission Indians	10/28/2003	Monthly	45.00	-	45.00	Uniform	2,000	150.00	-
	Idyllwild	Pine Cove Water District	2/1/2011	Bi-monthly	47.00	-	47.00	Inclining	1,093	54.42	-
	Temecula	Rancho California Water District	7/1/2010	Monthly	16.63	12.05	28.68	Other	141,500	35.00	1,397
	Rubidoux	Rubidoux Community Services District	Not Reported	Monthly	17.25	14.60	31.85	Inclining	26,000		
Sacramento	Carmichael	Carmichael Water District	7/1/2011	Bi-monthly	45.16	16.35	61.51	Uniform	12,000	30.00	1,040
	Citrus Heights	Citrus Heights Water District	01/01/2011	Bi-monthly	25.02	10.12	35.14	Inclining	62,000	52.00	5,894
	Galt	City of Galt	3/1/2011	Bi-monthly	26.30		26.30	Uniform	24,264		2,780
	Elk Grove	Elk Grove Water Service	6/24/2009	Monthly	56.53	21.90	78.43	Inclining	40,000	27.00	3,895
	Fair Oaks	Fair Oaks water District	Not Reported	Bi-monthly	32.55	6.75	39.30	Uniform	40,000	25.00	4,400
	Rancho Murieta	Rancho Murieta Community Services District	7/1/2011	Monthly	31.92	19.35	51.27	Inclining	6,000		
	Rio Linda	Rio Linda County Water District	5/1/2011	Bi-monthly	29.00	4.86	33.86	Inclining	14,500	3.00	3,500
	Sacramento	Sacramento Suburban Water District	01/01/2009	Monthly	33.95	13.00	46.95	Inclining	171,229	21.00	4,982
	Sacramento	Sacramento County Water Agency	07/01/2009	Bi-monthly	12.02	19.05	31.07	Other	150,000	20.00	
San Benito	Hollister	Sunnyslope County Water District	12/21/2010	Monthly	17.57	31.95	49.52	Inclining	18,500		
San Bernardino	Apple Valley	Mariana Ranchos County Water District	7/1/2010	Monthly	43.00	11.00	54.00	Inclining	1,350		2,200
	Beaumont	Beaumont Cherry Valley Water District	1/1/2011	Bi-monthly	8.52	13.65	22.17	Inclining	40,000		10,122
	Big Bear City	Big Bear City Community Services District	7/1/2007	Bi-monthly	20.02	22.20	42.22	Inclining	7,000	16.00	-
	Bighorn-Desert View	Bighorn-Desert View Water Agency	01/01/2008	Bi-monthly	27.50	45.00	72.50	Uniform	3,300	4.01	4,098
	Big Bear Lake	City of Big Bear Lake Dept of Water	Not Reported	Bi-monthly	81.32	14.70	96.02	Inclining	15,000	-	6,098
	Chino Hills	City of Chino Hills	7/1/2011	Monthly	20.44	18.45	38.89	Uniform	68,356	21.00	
	Needles	City of Needles	10/1/2010	Monthly	33.77	7.40	41.17	Uniform	4,870	15.60	2,500
	Upland	City of Upland	1/1/2004	Bi-monthly	8.00	17.40	25.40	Inclining	76,000		
	Crestline	Crestline Village Water District	7/1/2004	Monthly	22.00	67.20	89.20	Inclining	7,940	1.30	3,010
	Rancho Cucamonga	Cucamonga County Water District	Not Reported	Bi-monthly	24.51	22.60	47.11	Inclining	172,000	52.00	5,962
	Fontana	Fontana Water Company	7/1/2011	Monthly	19.16	34.35	53.51	Inclining	154,000	23.00	5,000
	Hesperia	Hesperia Water District	9/1/2011	Bi-monthly	39.27	16.75	56.02	Inclining	93,000	45.00	6,175
	Joshua Tree	Joshua Basin Water District	1/1/2011	Monthly	23.82	46.55	70.37	Inclining	9,000	10.00	3,460
	Upland	San Antonio Water Company	5/19/2009	Bi-Monthly	20.00	6.30	26.30	Inclining	3,371	94.00	10,725
	Twentynine Palms	Twentynine Palms Water District	Not Reported	Bi-monthly	11.00	-	11.00	Uniform	18,000	5.10	650
	Victorville	Victorville Water District	11/01/2009	Monthly	16.50	22.05	38.55	Uniform	110,000	26.00	4,908
	Rialto	West Valley Water District	1/1/2011	Monthly	13.27	20.10	33.37	Inclining	60,000		
	Yucaipa	Yucaipa Valley Water District	1/1/2009	Monthly	10.00	21.44	31.44	Inclining	43,818	14.00	14,502
San Diego	Carlsbad	Carlsbad Municipal Water District	1/1/200	Monthly	18.00	42.84	60.84	Inclining	15,000	10.20	3,549
	Escondido	City of Escondido	3/1/2011	Monthly	24.05	57.00	81.05	Inclining	142,000	20.70	4,690
	Oceanside	City of Oceanside	5/1/1996	Monthly	14.13	32.40	46.53	Inclining	183,000	12.00	4,597
	San Diego	City of San Diego	03/01/2011	Bi-monthly	19.33	46.27	65.60	Inclining	1,300,000	13.00	3,047
	San Diego	Helix Water District	1/1/2011	Bi-monthly	40.10	28.76	68.86	Inclining	260,000		
	Julian	Julian Community Services District	7/1/2010	Bi-monthly	30.00	6.50	36.50	Inclining	578	4.50	6,604
	Encinitas	Olivenhain Municipal Water District	4/1/2011	Monthly	25.85	39.87	65.72	Inclining	67,353	13.00	
	Spring Valley	Otay Water District	02/01/2011	Monthly	26.40	66.84	93.24	Inclining	208,000	14.30	8,630
	Pine Valley	Pine Valley Mutual Water Company	1/1/2007	Bi-monthly	28.00	41.91	69.91	Uniform	1,500	50.00	-
	Fallbrook	Rainbow Municipal Water District	07/01/2011	Monthly	41.78	38.70	80.48	Inclining	19,000	36.00	
	Ramona	Ramona Municipal Water District	11/1/2011	Bi-monthly	24.34	57.90	82.24	Inclining	40,000		
	San Diego	San Diego County Water Authority	1/1/2011	Monthly	5.63	29.95	35.58	Uniform	3,100,000	15.40	4,492
	Chula Vista	Sweetwater Authority	09/01/2010	Bi-monthly	7.35	69.52	76.87	Inclining	186,907	11.00	2,300
	San Marcos	Vallecitos Water District	01/01/2011	Monthly	23.12	39.60	62.72	Inclining	94,911	15.00	5,211
	Valley Center	Valley Center Municipal Water District	2/1/2011	Monthly	26.99	50.57	77.56	Uniform	25,378		11,726
	Vista	Vista Irrigation District	9/1/2009	Bi-monthly	29.30	47.95	77.25	Inclining	125,962	19.00	4,000
San Francisco	San Francisco	San Francisco Public Utilities Commission	7/1/2011	Monthly	7.00	65.70	72.70	Inclining	800,000		
San Joaquin	Stockton	City of Stockton Municipal Utilities Department	07/07/2009	Monthly	20.00	21.00	41.00	Uniform	169,963	16.50	6,485
San Luis Obispo	Arroyo Grande	City of Arroyo Grande	07/01/2011	Bi-monthly	32.13	70.60	102.73	Inclining	16,901	15.50	3,825
	Atascadero	Atascadero Mutual Water Co.	1/16/2011	Monthly	18.00	18.00	36.00	Inclining	29,077	24.00	19,600
	San Luis Obispo	City of San Luis Obispo	06/01/1992	Monthly	-	105.37	105.37	Inclining	45,000	8.00	15,919
	Cayucos	County Service Area 10A	02/08/2005	Bi-monthly	40.24	85.20	125.44	Inclining	755	5.00	8,100
	Santa Margarita	County Service Area 23	07/22/2008	Bi-monthly	28.09	60.14	88.23	Inclining	507	18.00	1,500
	Heritage Ranch	Heritage Ranch Community Services District	07/01/2010	Bi-monthly	19.44	53.76	73.20	Inclining	3,500	8.00	5,445
	Nipomo	Nipomo Community Services District	1/1/2009	Bi-monthly	15.42	24.60	40.02	Inclining	10,867	40.00	17,352
San Mateo	Belmont	Mid-Peninsula Water District	7/1/2011	Monthly	14.23	52.50	66.73	Inclining	28,050	12.00	
	San Bruno	City of San Bruno	07/01/2011	Bi-monthly	7.11	173.34	180.45	Inclining	40,000	10.00	1,502

County	City	Water Service Provider	Effective Date	Billing Frequency	Fixed Charge	Commodity Charge	Total Charge	Rate Format	Service Population	Current Avg. Res. Usage	Res. Connection Fee
	Half Moon Bay	Coastside Water District	7/1/2011	Bi-monthly	15.36	39.44	54.80	Inclining	17,000		
	Foster City	Estero Municipal Improvement District	07/01/2011	Bi-monthly	35.10	33.30	68.40	Inclining	30,000	11.00	1,873
Santa Barbara	Carpinteria	Carpinteria Valley Water District	7/1/2008	Monthly	63.19	50.10	113.29	Other	16,050	12.00	9,131
	Santa Barbara	City of Santa Barbara	7/1/2011	Monthly	12.74	67.89	80.63	Inclining	93,000	-	5,691
	Santa Barbara	Mission Hills Community Services District	Not Reported	Monthly	16.60	19.75	36.35	Inclining	5,000		
	Santa Barbara	Montecito Water District	10/1/2008	Monthly	30.95	58.50	89.45	Inclining	13,500	42.72	14,150
	Vandenberg Village	Vandenberg Village Community Services District	7/1/2009	Monthly	21.66	18.75	40.41	Inclining	6,500	16.77	3,407
Santa Clara	Milpitas	City of Milpitas	07/01/2011	Bi-monthly	12.88	54.14	67.02	Inclining	67,000	11.50	1,910
	Morgan Hill	City of Morgan Hill	1/1/2008	Monthly	5.96	23.20	29.16	Inclining	40,000	13.00	3,150
	Palo Alto	City of Palo Alto	10/1/2011	Monthly	10.00	87.66	97.66	Inclining	62,000		
	San Jose	City of San Jose	6/29/2011	Bi-monthly	19.06	32.89	51.95	Inclining	948,279		
	Santa Clara	City of Santa Clara	7/1/2011	Monthly	-	44.85	44.85	Uniform	118,830	3.00	-
	San Jose	San Jose Water Company	7/1/2011	Bi-monthly	16.93	38.23	55.16	Inclining	1,000,000		
Santa Cruz	Santa Cruz	City of Santa Cruz Water Dept.	07/01/2004	Monthly	17.41	59.03	76.44	Inclining	92,000	7.00	6,530
	Watsonville	City of Watsonville	7/1/2010	Monthly	9.13	23.77	32.90	Inclining	60,785	17.00	
	Soquel	Soquel Creek Water District	1/1/2011	Bi-monthly	18.41	80.53	98.94	Inclining	38,000	8.00	11,200
Shasta	Burney	Burney Water District	11/1/2009	Monthly	11.80	9.75	21.55	Other	3,200	14.61	3,488
	Redding	Bella Vista Water District	3/1/2011	Bi-monthly	17.17	6.76	23.93	Inclining	16,000	26.19	7,310
	Redding	City of Redding	07/01/2009	Monthly	10.99	15.15	26.14	Uniform	91,561	18.00	6,896
	Redding	Mountain Gate Community Services District	6/1/2011	Monthly	29.72	5.00	34.72	Inclining	2,500	10.00	6,000
Solano	Vallejo	City of Vallejo- Water Division	7/1/2010	Bi-monthly	14.35	35.55	49.90	Inclining	118,300	11.00	7,810
Sonoma	Santa Rosa	City of Santa Rosa	7/1/2011	Monthly	8.35	48.51	56.86	Other	160,000	11.63	8,403
	Forestville	Russian River County Water Authority	06/22/2010	Monthly	18.50	39.00	57.50	Inclining	2,500	5.00	
	Guerneville	Sweetwater Spring Water District	7/1/2011	Bi-monthly	50.00	25.30	75.30	Inclining	10,000	-	3,763
	Glen Ellen	Valley of the Moon Water District	7/1/2011	Monthly	7.02	37.47	44.49	Inclining	23,000		
Stanislaus	Ceres	City of Ceres	01/01/2011	Monthly	19.67	7.59	27.26	Uniform	45,000	20.45	2,300
	Modesto	City of Modesto	7/1/2011	Monthly	14.25	19.95	34.20	Inclining	270,000		
	Newman	City of Newman	01/01/2008	Monthly	10.90	8.25	19.15	Uniform	10,000	19.32	1,061
Sutter	Sutter	Sutter Community Services District	6/1/2005	Monthly	8.48	16.65	25.13	Uniform	2,904	19.00	7,500
Tehama	Tehama	City of Tehama	07/01/2011	Monthly	27.36	26.69	54.05	Inclining	435	8.50	-
Tulare	Dinuba	City of Dinuba	07/01/2011	Monthly	20.20	22.78	42.98	Declining	21,950	20.00	
	Porterville	City of Porterville	1/1/1995	Monthly	5.00	10.80	15.80	Uniform	54,165	29.00	1,824
Tuolumne	Sonora	Tuolumne Utilities District	7/1/2009	Bi-monthly	27.06	0.22	27.28	Other	54,000		985
Ventura	Camarillo	City of Camarillo	1/1/2011	Monthly	14.38	27.45	41.83	Inclining	65,201	12.00	
	Camrosa	Camrosa Water District	1/1/2011	Monthly	40.00	35.01	75.01	Inclining	31,000		
	Oak View	Casitas Municipal Water District	9/1/2008	Monthly	22.02	14.65	36.67	Inclining	65,000	20.25	18,686
	Oxnard	City of Oxnard	7/14/2011	Monthly	15.18	66.18	81.36	Inclining	189,000		
	Port Hueneme	City of Port Hueneme	07/01/2011	Bi-monthly	42.16	82.80	124.96	Uniform	22,000	11.00	2,235
	San Buenaventura	City of San Buenaventura	7/1/2009	Bi-monthly	15.03	30.30	45.33	Inclining	109,000	140.88	2,505
	Thousand Oaks	City of Thousand Oaks	7/1/2010	Bi-monthly	31.06	40.50	71.56	Inclining	420,000	31.00	4,100
	Ventura	City of Ventura	07/01/2009	Bi-monthly	7.51	34.78	42.29	Inclining	103,000	10.50	
	Camarillo	Crestview Mutual Water Company	12/1/2009	Monthly	17.25	2.75	20.00	Inclining	2,300	188.80	4,000
Yolo	Davis	City of Davis	7/1/2010	Bi-monthly	11.50	22.50	34.00	Inclining	68,000	15.00	8,970

NEVADA

BILLING FREQUENCY

Figure 1a – Billing Frequency

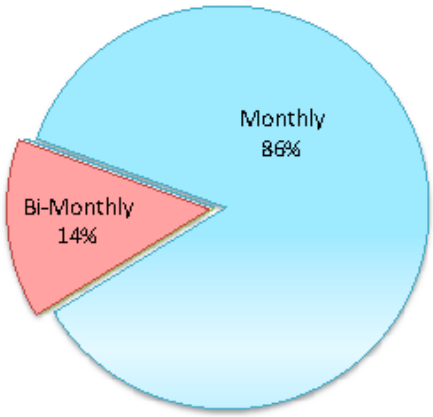


As shown in Figure 1a, a large majority (86%) of the utility survey's respondents has a monthly billing structure.

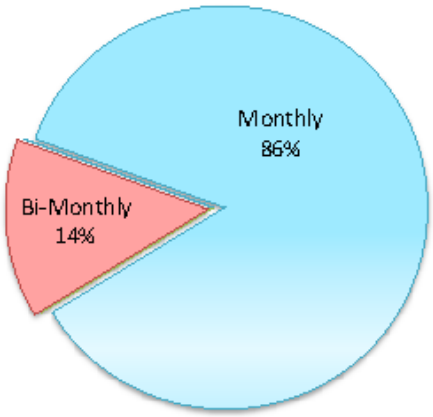
Comparison of the utilities participating in both the 2009 and 2011 survey shows no change in the billing frequency.

Figure 1b. – 2009 v. 2011 Billing Frequency

2009 Bill Frequency



2011 Bill Frequency



RATE STRUCTURES

Figure 2a – Water Rate Structures

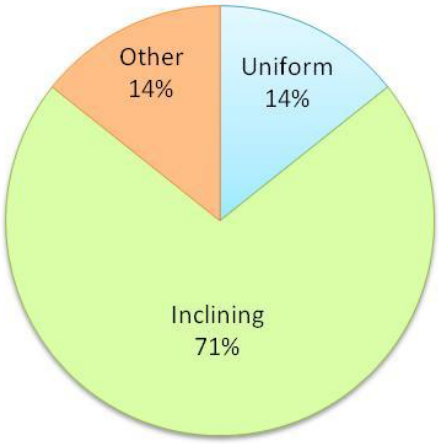


Figure 2a demonstrates that, based on a small sample size of utilities, the inclining rate structure makes up 100% of the rate structures among the utilities surveyed in Nevada.

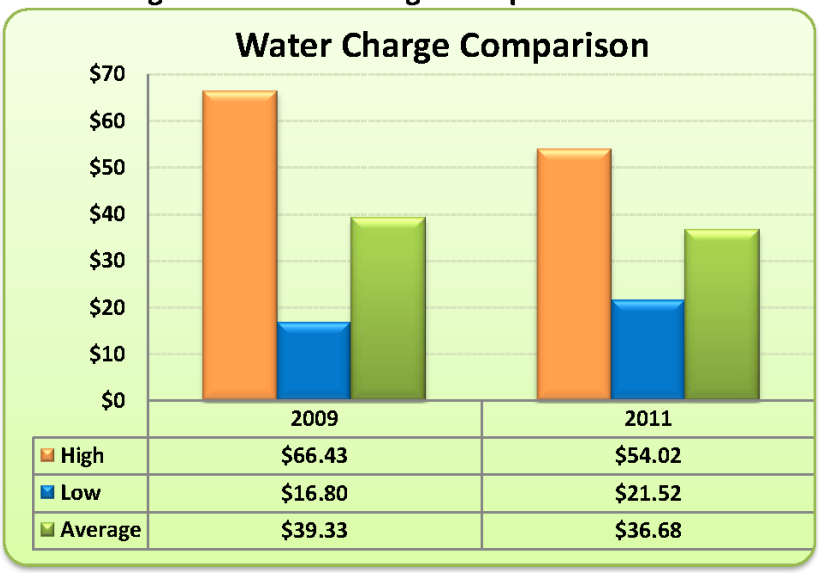
The types of rate structures have remained consistent from 2009 to 2011 for the sample utilities.

CHARGES

As in the California section, all charges below are based on the assumption that the utility customer uses 15 ccf (11,220 gal) per month. For utilities that do not bill monthly, the charge was calculated on the assumption of 15 ccf per month usage.

Figure 3 displays high, low and average monthly residential water charges comparisons throughout the entire state. The average rate has decreased slightly from about $39 in 2009 to $36 in 2011.

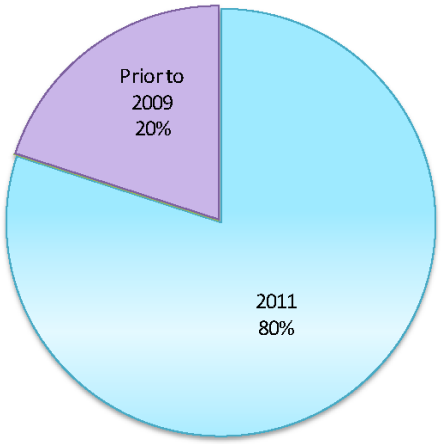
Figure 3 – 2011 Charge Comparison Table



	2009	2011
High	$66.43	$54.02
Low	$16.80	$21.52
Average	$39.33	$36.68

Figure 4 displays the year in which most utilities have most recently updated their rates. A majority of them, 80% have done so within the last year (in 2011).

Figure 4 – Rate Update Frequency



County	City	Water Service Provider	Effective Date	Billing Frequency	Fixed Charge	Commodity Charge	Total Charge	Rate Format	Service Population	Current Avg. Res. Usage	Res. Connection Fee
Clark	Las Vegas	Las Vegas Valley Water District	1/1/2011	Monthly	10.06	19.97	30.03	Inclining			
	Laughlin	Big Bend Water District	7/1/2006	Monthly	7.10	30.29	37.39	Inclining			
	Logandale	Moapa Valley Water District	1/1/2011	Monthly	29.79	24.23	54.02	Inclining	9,000	22.70	3,963
	North Las Vegas	City of North Las Vegas	11/1/2011	Monthly	9.00	20.91	29.91	Inclining			
Douglas	Gardnerville	Gardnerville Town Water Company		Bi-Monthly	13.00	8.52	21.52	Uniform			
	Zephyr Cove	Douglas County Water and Sewer Authority		Monthly	22.00	19.84	41.84	Other			
Washoe	Reno	Washoe County Department of Water Resources	03/01/2011	Monthly	13.43	28.64	42.07	Inclining	42,947	16.89	4,200

BACKGROUND ON CA-NV AWWA and RFC

The California-Nevada Section is the largest regional section of the American Water Works Association, "the authoritative resource on safe water," with about one-tenth of the AWWA membership. Since 1881, AWWA has led the development and dissemination of water industry guidelines, standards, procedures, training and other information.

To fulfill its mission of leading, educating, and serving the drinking water community to ensure public health and to provide safe and sufficient water for all, CA-NV AWWA offers a number of educational opportunities such as conferences, workshops, an educational symposium and expositions, and the Water College. CA-NV also manages six professional certification programs serving over 20,000 individuals, helping to ensure drinking water safety for over 35 million people. The Section publishes a quarterly journal, *Source*, and helps disseminate technical input on drinking water issues to state regulators and legislators.

ADDITIONAL COPIES OF THE SURVEY CAN BE OBTAINED BY CONTACTING CA-NV AWWA AT (909) 481-7200

CA-NV Section AWWA
10574 Acacia St. Suite D6
Rancho Cucamonga, CA 91730

Raftelis Financial Consultants, Inc. (RFC) is a full service water and wastewater financial consulting firm with offices located across the country in Pasadena, CA; Kansas City, MO; Orlando, FL; Raleigh, NC; and Charlotte, NC. RFC specializes in a variety of different services for water, wastewater, and stormwater utilities including:

- Cost of service rate studies;
- Revenue bond feasibility studies;
- Conservation pricing studies;
- Strategic financial planning studies;
- Valuation studies; and
- Utility Management studies.

In addition, RFC provides litigation support, procurement assistance, and management consulting for municipal utilities. RFC personnel have been conducting a comprehensive national water and wastewater rate survey biennially since 1986 and have gained extensive data on utilities across the county. We teamed with AWWA to produce a national 2010 Water and Wastewater Rate Survey that can be obtained from AWWA.

We welcome any suggestions for enhancing the survey as a benchmarking tool for the utilities we serve. You may contact Sudhir Pardiwala or Steve Vuoso or Anthony Lo.

Sudhir Pardiwala	Steve Vuoso	Anthony Lo
626-583-1894	626-583-1895	626-583-1896
spardiwala@raftelis.com	svuoso@raftelis.com	alo@raftelis.com

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For further information please contact:
Raftelis Financial Consultants, Inc.
Sudhir Pardiwala, Vice President
Steve Vuoso, Staff Consultant
phone: 626.583.1894
fax: 626.583.1411

Yucaipa Valley Water District

Workshop Memorandum 12-064

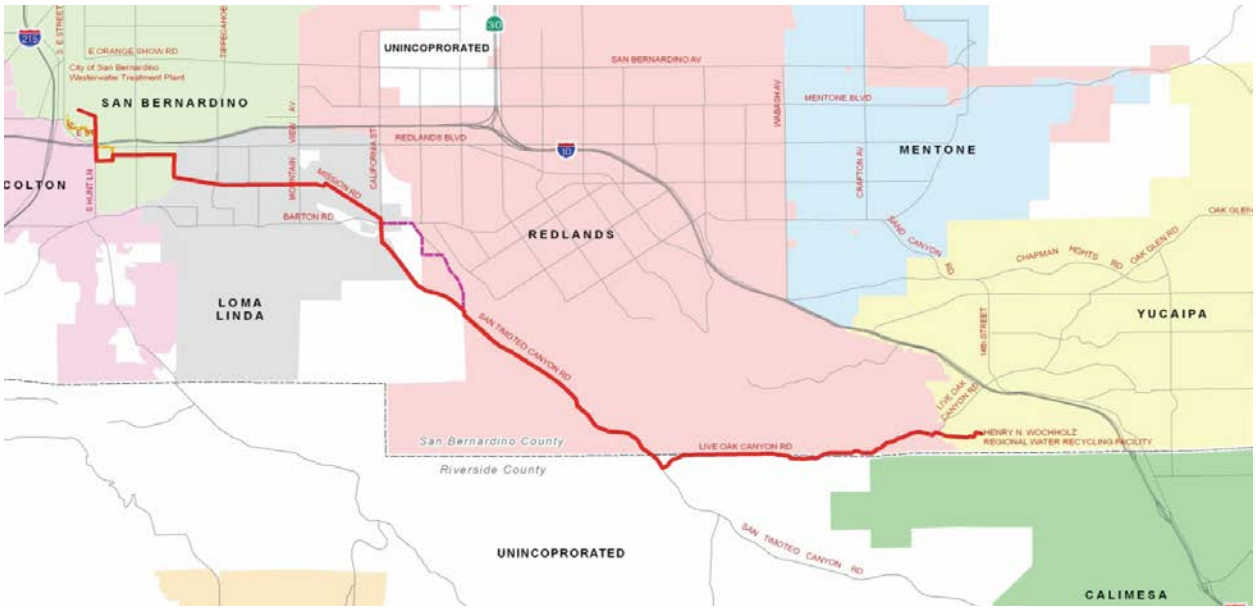
Date: **March 27, 2012**

Subject: **Status Report on the Construction of the Yucaipa Valley Regional Brineline**

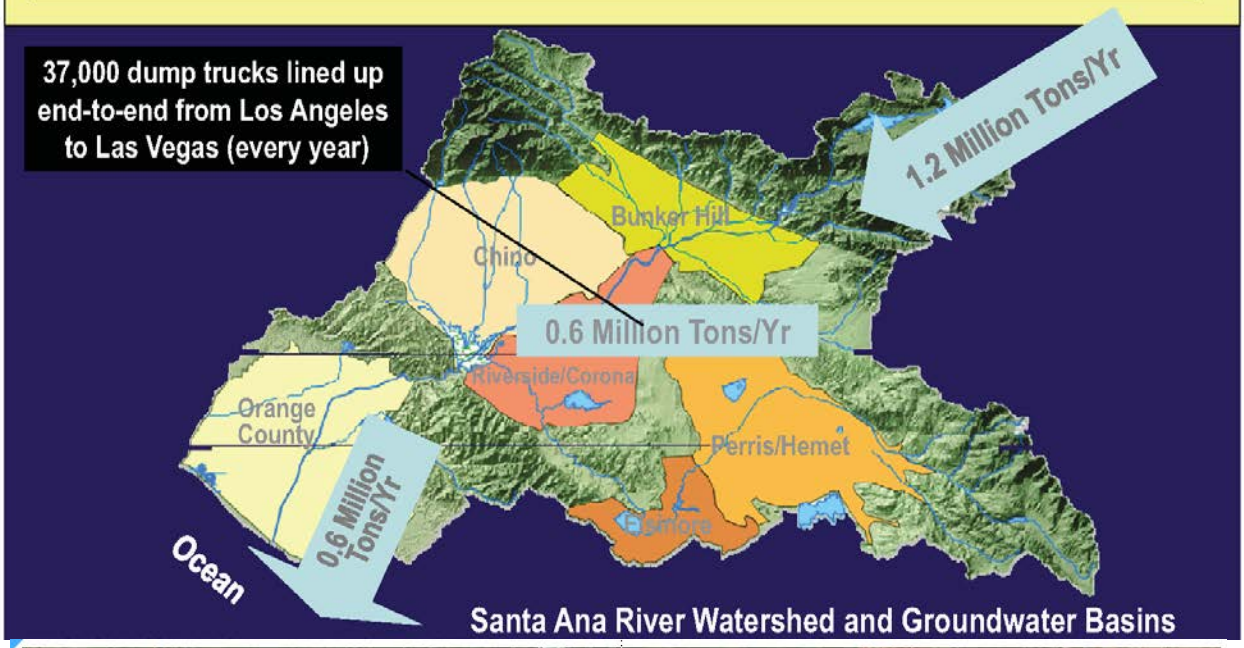
Yucaipa Valley Water District is in the process of constructing the Yucaipa Valley Regional Brineline in order to produce recycled water that complies with groundwater basin objectives as established by the Regional Water Quality Control Board. In order to comply with these limits, the District is required to add a reverse osmosis process to the wastewater treatment plant. This will enable the District to remove salts and minerals from depositing in to the groundwater basin. The proposed reverse osmosis system will produce salt water, referred to as "brine", that must be sent to the Pacific Ocean so it does not impact any fresh water supplies downstream of the Yucaipa Valley.

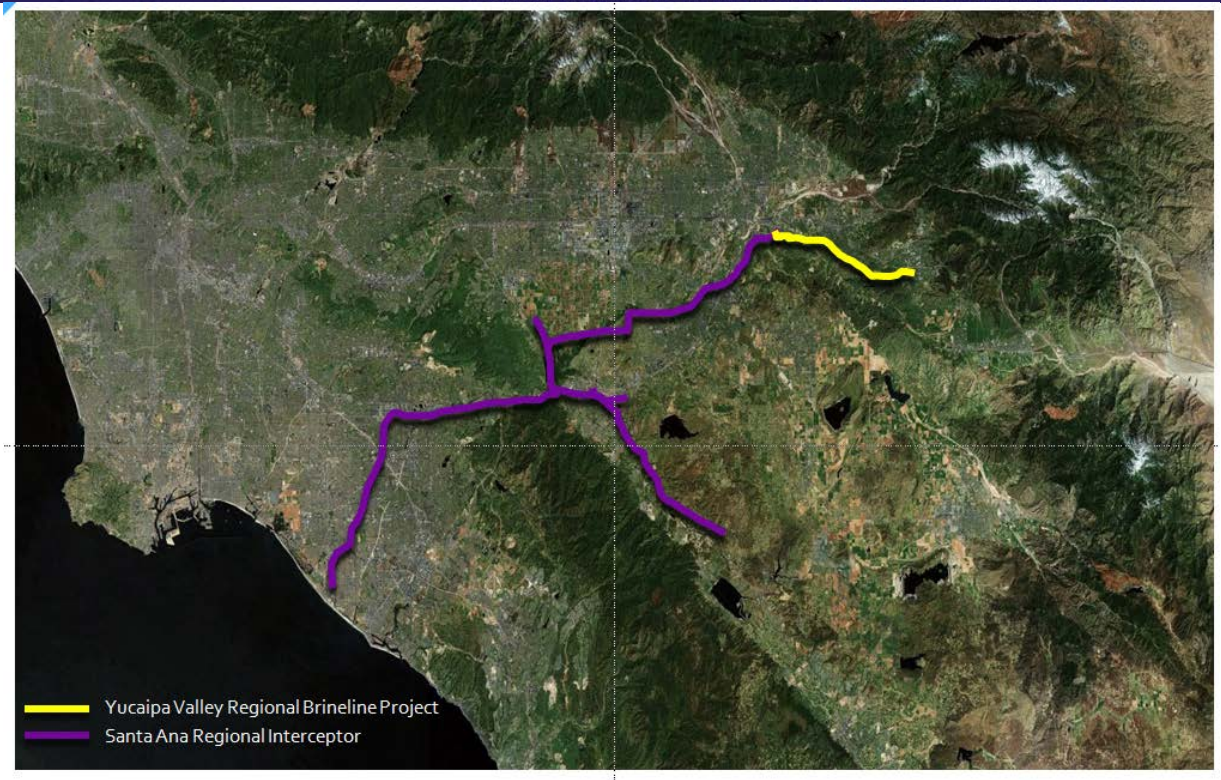
The Yucaipa Valley Regional Brineline Project consists of a 15-mile pipeline through which the District can safely and effectively dispose of the salt water produced. This pipeline will commence at the Wochholz Regional Water Recycling Facility and terminate at an existing brine disposal pipeline near the I-215 and I-10 Interchange. At this point the existing brineline extends another 73 miles traversing San Bernardino, Riverside and Orange counties to Orange County Sanitation District Wastewater Treatment Plant No. 2 in Huntington Beach, where the salt water is treated with domestic sewage and then sent to the ocean or reclaimed by Orange County Water District.

During this agenda item, the District staff will be providing an update of the construction status of the Yucaipa Valley Regional Brineline Project.

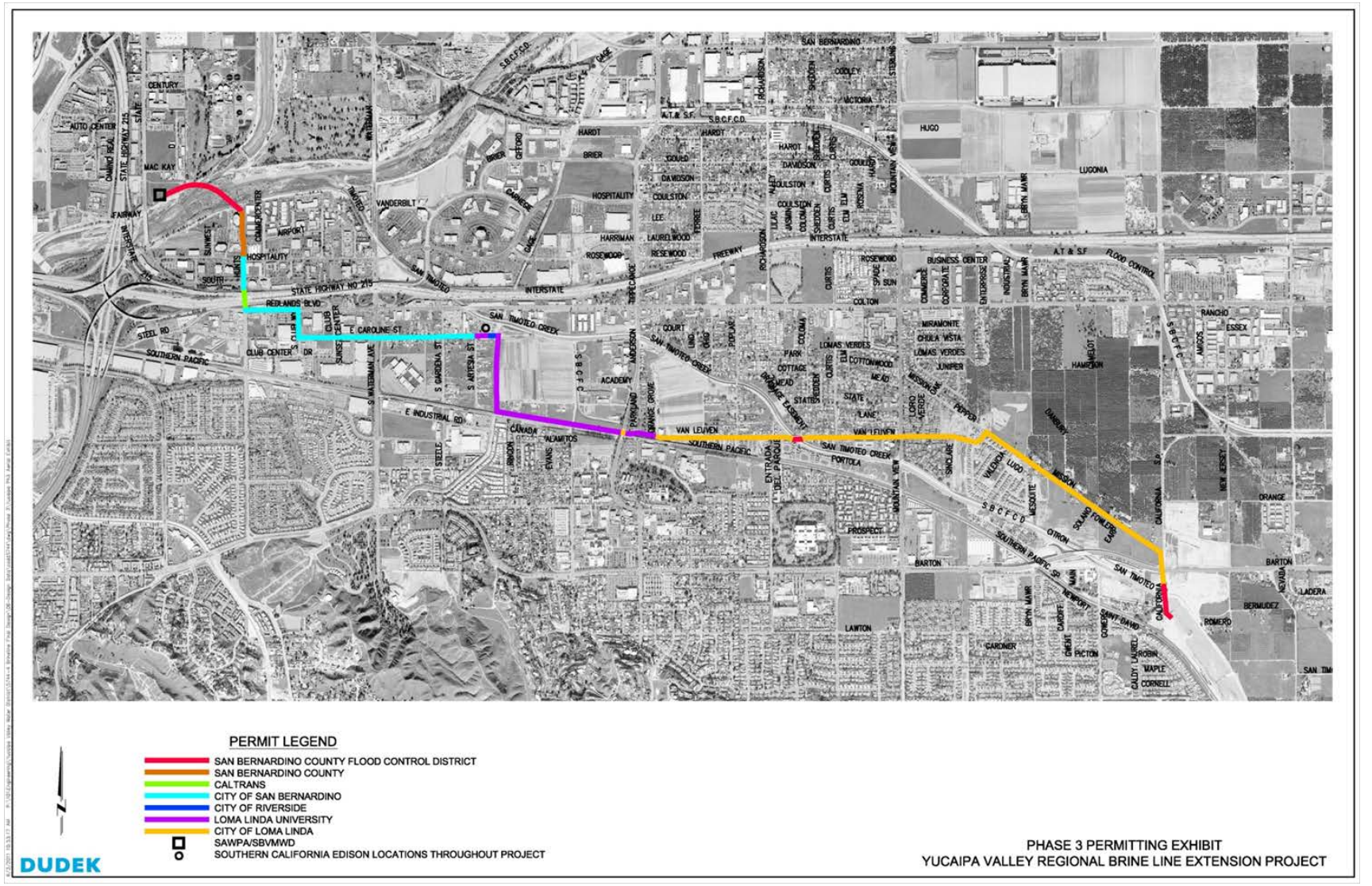


Watershed Salt Accumulation





Yucaipa Valley Regional Water Supply Renewal Project


PERMIT LEGEND
SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
SAN BERNARDINO COUNTY
CALTRANS
CITY OF SAN BERNARDINO
CITY OF RIVERSIDE
LOMA LINDA UNIVERSITY
CITY OF LOMA LINDA
SAWPA/SBVMWD
SOUTHERN CALIFORNIA EDISON LOCATIONS THROUGHOUT PROJECT
DUDEK
PHASE 3 PERMITTING EXHIBIT
YUCAIPA VALLEY REGIONAL BRINE LINE EXTENSION PROJECT


Phase 3: removing rental
shields to replace with the
contractor's
shields at the jacking pit on
Orange Grove and Van Leuven


Phase 3: fusing and installing
pipe in the casing at the
San Timoteo Creek bore.
120

Yucaipa Valley Water District

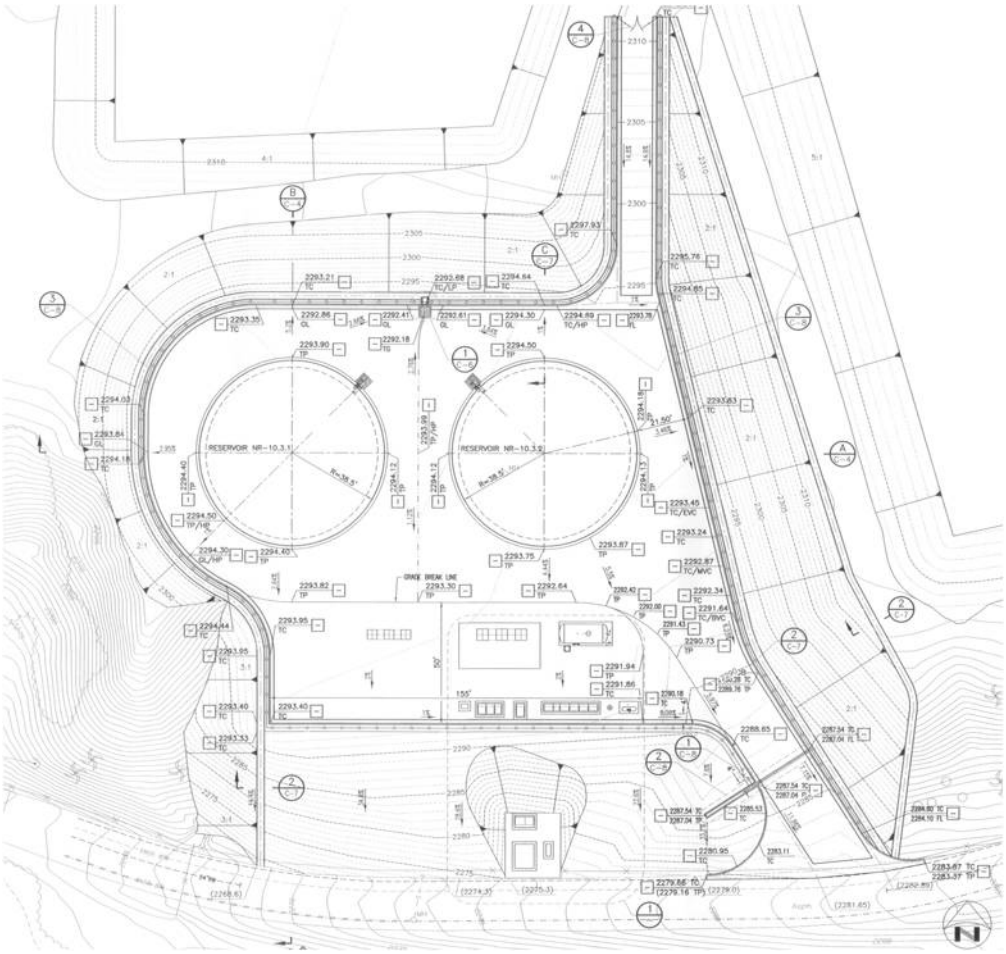
Workshop Memorandum 12-065

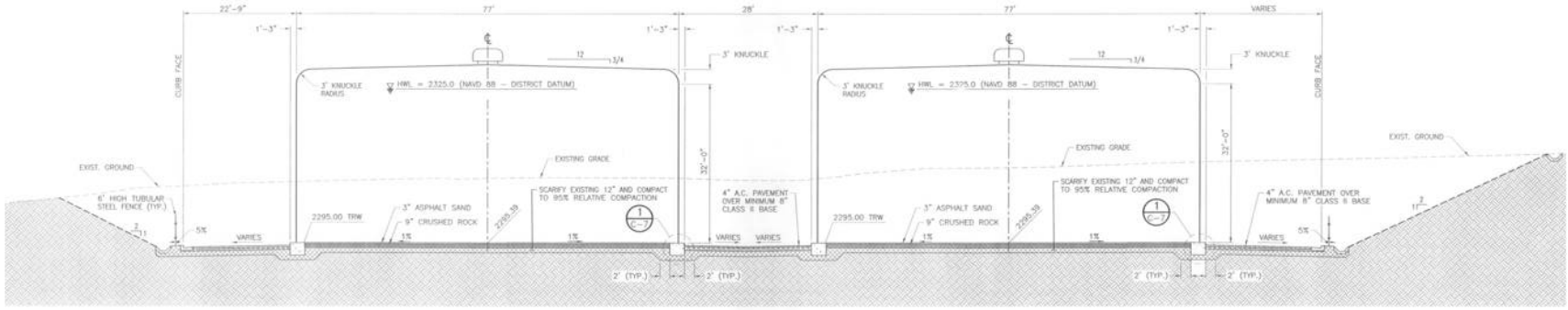
Date: **March 27, 2012**

Subject: **Status Report on the Construction of the R-10 Recycled Water Reservoir and Booster Complex**

Yucaipa Valley Water District is in the process of constructing several recycled water facilities to prepare the community for the next drought cycle. By connecting the available recycled water supply at the Wochholz Regional Water Recycling Facility to the existing recycled water system, the District will be able to immediately reduce our dependency on imported water by more than 1,000 acre feet per year. Overall, the aggressive use of recycled water is an important element in our water resource planning.

One of the projects planned for completion over the next year is the R-10 Reservoir Complex. This facility is located at the western end of County Line Road in the City of Calimesa. During this agenda item, the District staff will be providing an update of the status of this important project.

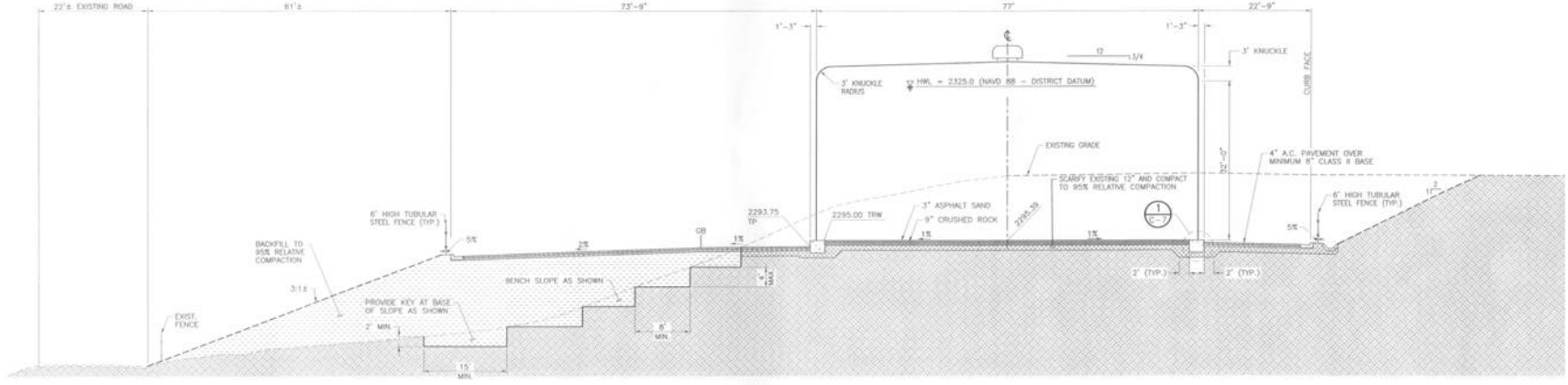




RESERVOIR SECTION

SCALE: 1"=10'

A
C-2



RESERVOIR SECTION

SCALE: 1"=10'

B
C-2

Yucaipa Valley Water District

Workshop Memorandum 12-066

Date: **March 27, 2012**

Subject: **Status Report on the Construction of the Crow Street Pipeline**

The Yucaipa Valley Water District is in the process of constructing several recycled water facilities to prepare the community for the next drought cycle. By connecting the available recycled water supply at the Wochholz Regional Water Recycling Facility to the existing recycled water system, the District will be able to immediately reduce our dependency on imported water by more than 1,000 acre feet per year. Overall, the aggressive use of recycled water is an important element in our water resource planning.

One of the projects planned for completion over the next year is the Crow Street Pipeline. During this agenda item, the District staff will be providing an update of the status of this important project.

Yucaipa Valley Water District

Workshop Memorandum 12-067

Date: **March 27, 2012**

Subject: **Status Report on the Construction of the Recycled Water Booster Facility at the Reservoir R-12.1 Complex**

The Yucaipa Valley Water District is in the process of constructing several recycled water facilities to prepare the community for the next drought cycle. By connecting the available recycled water supply at the Wochholz Regional Water Recycling Facility to the existing recycled water system, the District will be able to immediately reduce our dependency on imported water by more than 1,000 acre feet per year. Overall, the aggressive use of recycled water is an important element in our water resource planning.

One of the projects planned for completion over the next year is the Recycled Water Booster Facility located at the Reservoir R-12.1 Complex. During this agenda item, the District staff will be providing an update of the status of this important project.

Yucaipa Valley Water District

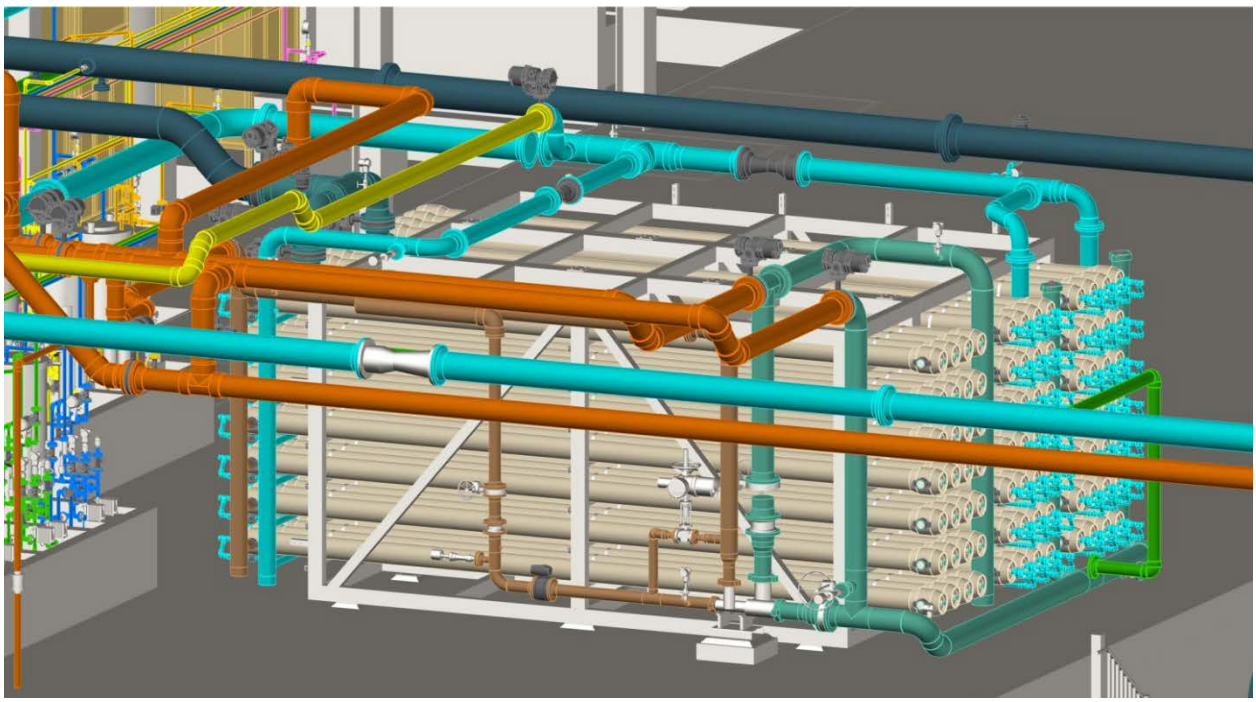
Workshop Memorandum 12-068

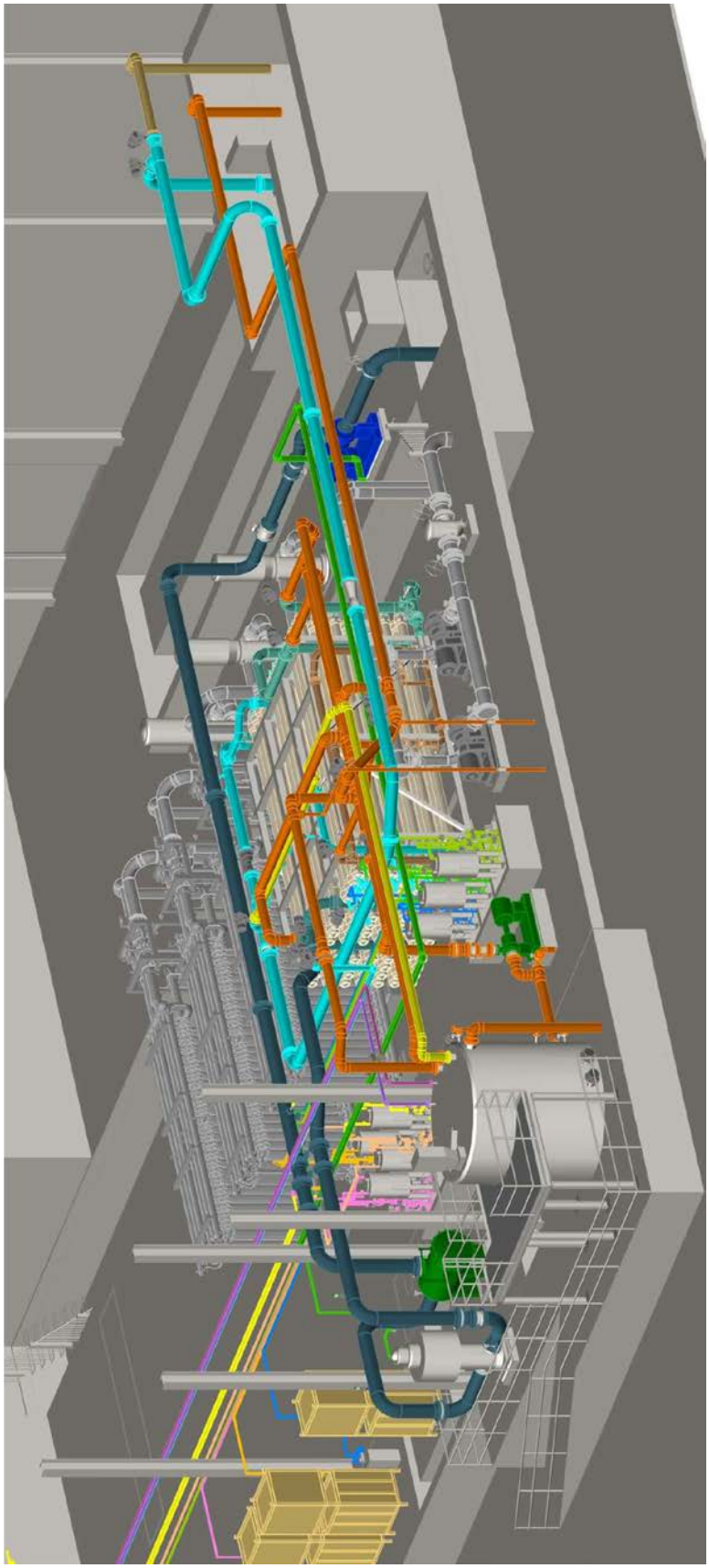
Date: **March 27, 2012**

Subject: **Status Report on the Construction of the Wochholz Improved Salinity Effluent (WISE) Project**

Yucaipa Valley Water District is in the process of constructing the Yucaipa Valley Regional Brineline in order to produce recycled water that complies with groundwater basin objectives as established by the Regional Water Quality Control Board. In order to comply with these limits, the District is required to add a reverse osmosis process to the wastewater treatment plant. This will enable the District to remove salts and minerals from depositing in to the groundwater basin. The proposed reverse osmosis system will produce salt water, referred to as "brine", that must be sent to the Pacific Ocean so it does not impact any fresh water supplies downstream of the Yucaipa Valley.

The first phase of the reverse osmosis equipment is being designed as part of the Wochholz Improved Salinity Effluent (WISE) Project. This project is currently scheduled for the completion of the construction phase by November 2012.





Yucaipa Valley Water District

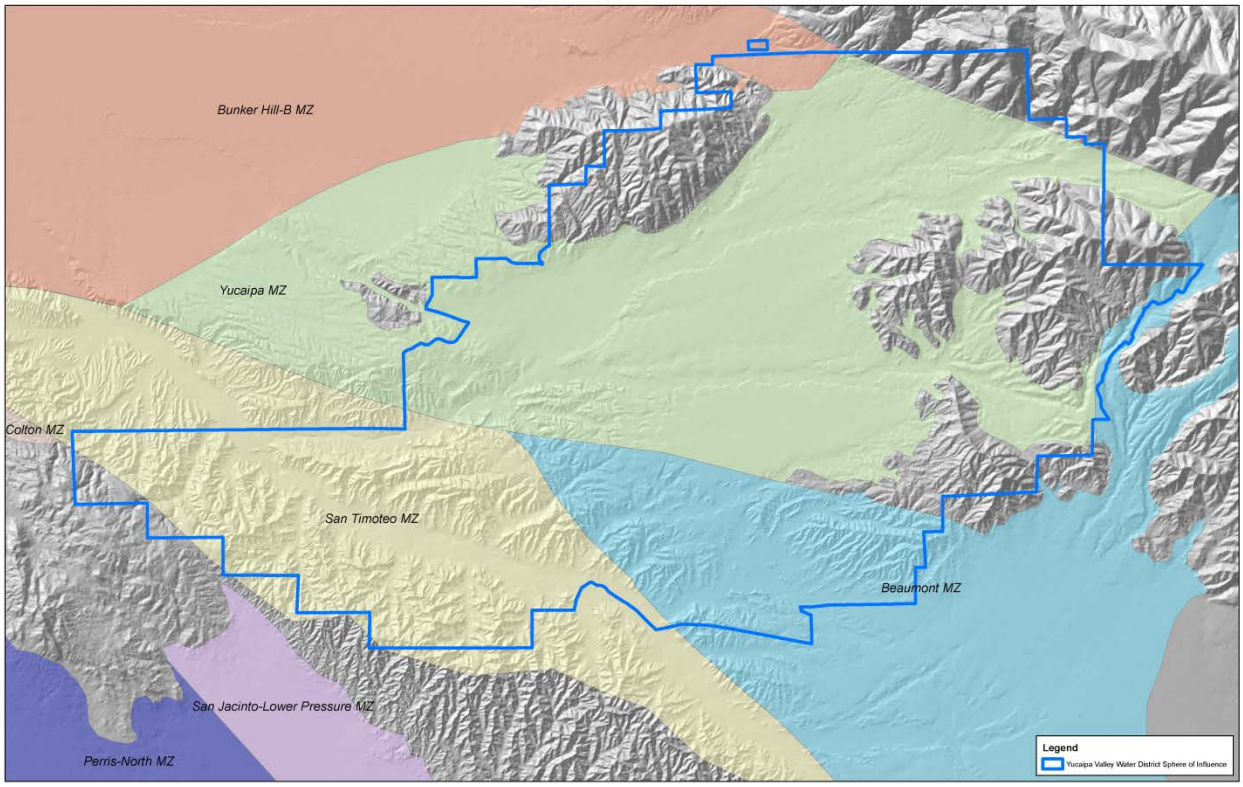
Workshop Memorandum 12-069

Date: **March 27, 2012**

Subject: **Review of Draft Resolution Related to the Implementation of Maximum Benefit Commitments for the Beaumont Management Zone**

On September 15, 2010, the Board of Directors approved a contract with DDB Engineering to assist the District staff with preparing the waste discharge application for the Wochholz Regional Water Recycling Facility. Our current recycled water waste discharge permit (RWQCB Order No. R8-2007-0012) is being updated following its recent expiration of the permit on February 2, 2012.

One of the delays in receiving an updated discharge permit has been related to the issues pertaining to the Beaumont Management Zone. On September 13, 2010, the Regional Water Quality Control Board sent a letter requiring a technical report be produced to support the Salt Management Plan for the Santa Ana Region (see page 3 of 57). After reviewing this correspondence from the Regional Board, it was clear that long-term water management in the region would be significantly enhanced if all agencies actively participated in dialogue and associated studies to ensure each future water supply plan was evaluated for potential water quality impacts.



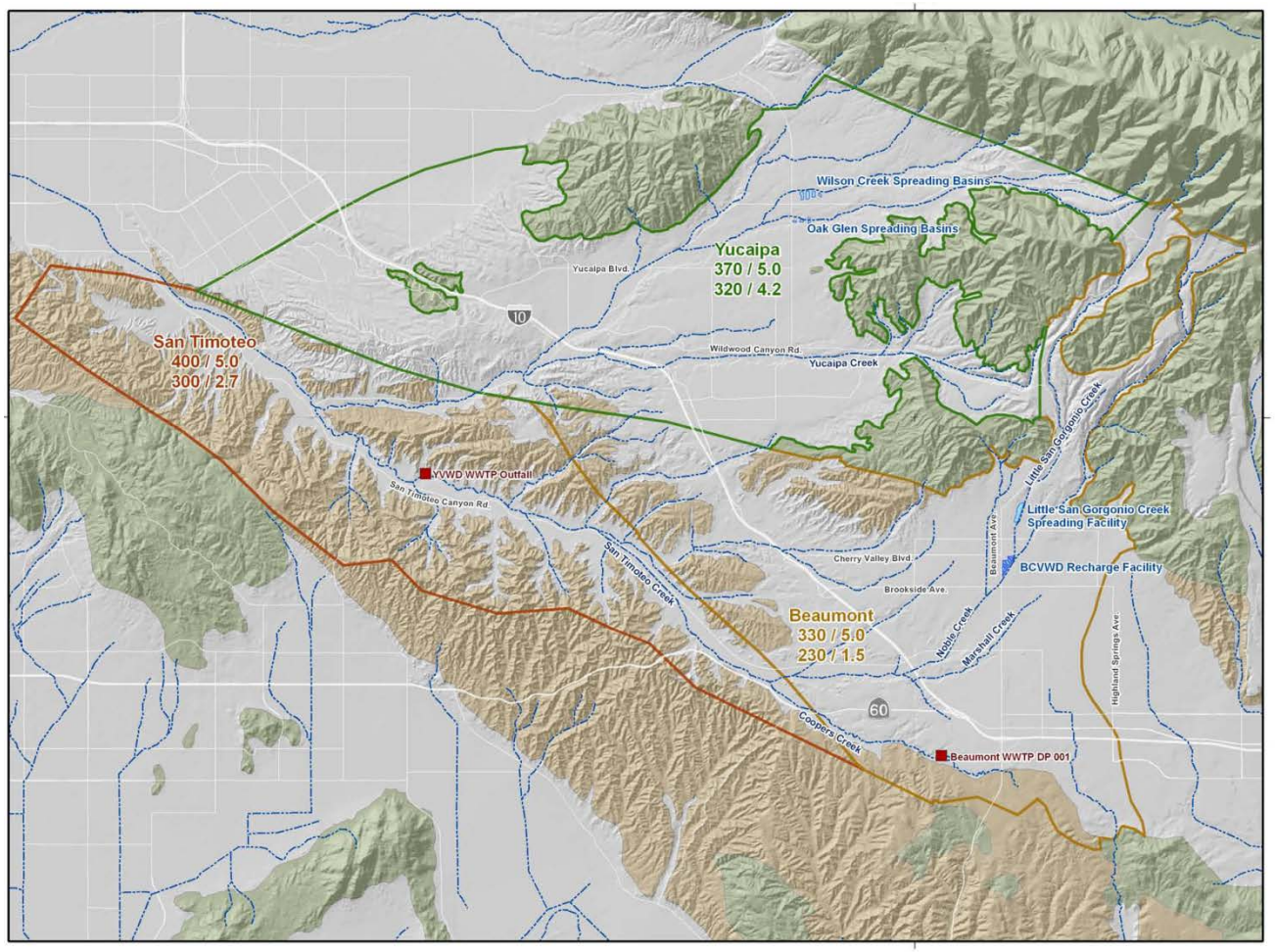
On October 6, 2010, the Board of Directors approved a proposal from Wildermuth Environmental that was designed to satisfy the requirements imposed by the Regional Water Quality Control Board [Director Memorandum 10-077].

On January 25, 2012, the District received confirmation from the Regional Water Quality Control Board accepting the multi-party implementation plan for protecting the maximum benefit commitments for the Beaumont Management Zone.

While maintaining the maximum benefit commitments are a costly endeavor, the benefit to our customers/ratepayers is significant compared to the restrictions, limitations and additional treatment required for the more restrictive antidegradation limitations of the Yucaipa, San Timoteo and Beaumont Management Zones. For example, the maximum benefit objectives for total dissolved solids for the Yucaipa, San Timoteo, and Beaumont Management Zones are 370 mg/l, 400 mg/l, and 330 mg/l respectively. The more restrictive antidegradation objectives would be 320 mg/l, 300 mg/l and 230 mg/l, as shown in the table below and the illustration on the following page.

	Beaumont Management Zone	San Timoteo Management Zone	Yucaipa Management Zone
Objectives for Total Dissolved Solids (mg/l)			
Maximum Benefit Objective	**330**	**400**	**370**
Antidegradation Objective	**230**	**300**	**320**
Objectives for Total Dissolved Solids (mg/l)			
Maximum Benefit Objective	**5.0**	**5.0**	**5.0**
Antidegradation Objective	**1.5**	**2.7**	**4.2**

The purpose of this workshop item is to discuss a draft resolution confirming the commitments made by the Yucaipa Valley Water District for maintaining the maximum benefit objectives in the Beaumont Management Zone.



Management Zone Labeling Key

Beaumont
330 / 5.0
200 / 1.7

- Management Zone Name
- TDS/Nitrate-N Maximum Benefit Objective (mg/L)
- TDS/Nitrate-N Antidegradation Objective (mg/L)
- Management Zone Boundary

Other Features

- Recycled Water Discharge Location
- Rivers and Streams
- Imported Water Recharge Facility

Geology

Water-Bearing Sediments

- Unconsolidated to Semi-consolidated Quaternary Alluvium
- Semi-consolidated San Timoteo Formation

Consolidated Bedrock

- Undifferentiated Pre-Tertiary Igneous and Metamorphic Crystalline Rocks

Produced by:
WILDERMUTH ENVIRONMENTAL INC.
2362 Bitcher Drive
Lake Forest, CA 92630
949.420.3030
www.wildermuthenvironmental.com

Author: SSA
Date: 20100317
File: Figure 1-1.mxd

0 1 2 3 Miles
0 1 2 3 4 5 KM

City of Beaumont & YVWD
Maximum Benefit Monitoring Program
2009 Annual Report

Management Zone Boundaries
Maximum Benefit and Antidegradataion Objectives for TDS and Nitrate-Nitrogen

Figure 1-1

California Regional Water Quality Control Board
Santa Ana Region

3737 Main Street, Suite 500, Riverside, California 92501-3348
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www.waterboards.ca.gov/santaana

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

September 13, 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Beaumont Cherry Valley Water District
Attention: Anthony Lara
Interim General Manager
560 Magnolia Avenue
Beaumont, CA 92223

City of Beaumont
Attention: David Dillon
Director of Economic Development
550 East 6th Street
Beaumont, CA 92223

Yucaipa Valley Water District
Attention: Joe Zoba
General Manager
12770 Second Street
Yucaipa, CA 92399

ORDER PURSUANT TO WATER CODE SECTION 13267 FOR TECHNICAL REPORTS FOR A TECHNICAL REPORT TO SUPPORT THE IMPLEMENTATION OF THE MAXIMUM BENEFIT OBJECTIVES FOR TOTAL DISSOLVED SOLIDS AND NITRATE NITROGEN IN THE BEAUMONT MANAGEMENT ZONE

Gentlemen:

This Order, issued pursuant to California Water Code section 13267, requires that you submit certain plans and schedules (collectively, reports) to evaluate the impact of discharges of total dissolved solids (TDS) and nitrogen on the Beaumont Groundwater Management Zone (Beaumont MZ). This requirement is consistent with the Salt Management Plan for the Santa Ana Region, and in particular the maximum benefit implementation plan for the Beaumont MZ, adopted by the California Regional Water Quality Control Board, Santa Ana Region (Regional Water Board) in 2004 (Resolution No. R8-2004-0001) and approved by the State Water Resources Control Board and the Office of Administrative Law in 2005.

Background of the Maximum Benefit Implementation Plan for the Beaumont MZ

On June 26, 2002, the San Timoteo Watershed Management Authority (STWMA[1]) submitted a proposal to establish maximum benefit objectives for TDS and nitrate-nitrogen for the Beaumont MZ to accommodate water resource management projects, including the recharge of stormwater,

[1] The San Timoteo Watershed Management Authority (STWMA) was formed in January 2001 by the Beaumont-Cherry Valley Water District (BCVWD), the City of Beaumont (Beaumont), the South Mesa Water Company and the Yucaipa Valley Water District (YVWD). The STWMA formed a stakeholder group to develop a watershed scale water resources management program that would provide a safe and reliable water supply for all water users in the watershed. In July 2010, STWMA disbanded.

imported State Project Water (SPW), and recycled water. The maximum benefit objectives and commitments for Beaumont MZ were based on detailed model projections and analyses conducted by Wildermuth Environmental, Inc (WEI). The modeling analysis utilized a Constantly Stirred Reactor Model (CSRM), and simulated TDS groundwater quality through 2100 resulting from the implementation of several planned scenarios, including a no project alternative and the preferred maximum benefit alternative. The preferred maximum benefit alternative assumes that 10,000 acre-ft of replenishment water will be recharged into the Beaumont MZ with a 50/50 mix of recycled water and SPW. The preferred option also assumed that 5,100 acre-ft of non-potable supply of a 50 /50 mix of SPW and recycled water would be used within the Beaumont MZ. The TDS quality of recycled water, to be provided by the City of Beaumont Wastewater Treatment Plant (WWTP), was assumed to have an average TDS concentration of 550 mg/L, and the imported water was assumed to have a TDS concentration of 290 mg/L.

The Regional Board adopted the maximum benefit proposals in 2004 (Resolution No. R8-2004-0001), assigning STWMA and the City of Beaumont the responsibility for implementing the maximum benefit commitments in the Beaumont MZ. The commitments include building desalting facilities when either of the following occurs:

- When the five-year average TDS concentration in recycled water produced by the Beaumont WWTP is 10 mg/L less than its current TDS limit (490 mg/L), or
- When the volume-weighted TDS concentration in the Beaumont MZ rises to within 10 mg/L of the maximum benefit TDS objective of 330 mg/L.

Resolution No. R8-2004-0001 also specifies similar maximum benefit implementation programs for the Yucaipa and San Timoteo MZs. Yucaipa Valley Water District (YVWD) is responsible for implementation of the maximum benefit commitments for the Yucaipa MZ, and is jointly responsible for implementing the maximum benefit commitments for the San Timoteo MZ along with the City of Beaumont and STWMA.

Permitting Issues

Since 2009, the Beaumont Cherry Valley Water District (BCVWD) has been working with Regional Board staff to obtain a recycled water permit to utilize various sources of water for non-potable use and for recharge in the Beaumont MZ. BCVWD is proposing to use recycled water from both the Yucaipa Valley Water District (YVWD) and the City of Beaumont, local groundwater, and imported SWP water. The ranges of anticipated flow and water quality for the YVWD recycled water and local groundwater for the near term (2015) and long term (2035), are described in a June 2, 2010 letter report submitted by BCVWD, which is attached as Exhibit A. These "new" sources of water – the YVWD recycled water and local groundwater – were not considered in the original model projections and analyses conducted by WEI in 2002. Therefore, the water quality impact of these "new" sources on the Beaumont MZ is unknown.

The City of Beaumont is also working with Regional Board staff to renew and update their Waste Discharge Requirements (WDRs) to increase the discharge from 4 MGD (approximately 4,484 acre-ft/year) to 8 MGD (8,968 acre-ft/year). Concurrently, YVWD has requested revisions to their WDRs to correct an error in the TDS limit for recycled water used for irrigation, and to include a provision allowing for the recharge of recycled water into the Beaumont MZ. YVWD's proposed irrigation use and recharge of recycled water in the Beaumont MZ was not considered in the original analysis by WEI, and the impact of these discharges needs to be evaluated.

Basin Plan Amendment Issues

As previously indicated, the Basin Plan specifies that STWMA and the City of Beaumont are responsible for implementing the maximum benefit commitments related to the Beaumont MZ. However, with the dissolution of STWMA, the responsibilities for carrying out the maximum benefit commitments in the Beaumont MZ need to be re-assessed. Some STWMA members, including BCVWD, the City of Beaumont and YVWD, continue to have and/or have expressed new interest in water management activities, including the use/increased use of recycled water, in the Beaumont MZ. Given this, it is necessary to reconsider the assigned responsibilities for implementing maximum benefit commitments for the Beaumont MZ. One STWMA member, South Mesa Water Company, has no interest in the Beaumont MZ, and should not be included in the maximum benefit program. In sum, the Basin Plan needs to be revised to incorporate changes in water resource and salt management, and maximum benefit implementation in the Beaumont MZ. To do so, an updated modeling analysis is necessary. It should be noted that this analysis is necessary in any case to support current permitting requests, described above. The analysis must include an assessment of salt liabilities by these agencies under the different management scenarios so that the responsibilities for maximum benefit implementation can be properly assigned.

Required Submittals

Consistent with the Salt Management Plan, you are hereby required to submit an updated analysis for the Beaumont MZ to the Regional Water Board as soon as possible, but **no later than November 30, 2010**. The analysis must include the following:

1) Updated planning information for the use of all sources of water by each agency in the Beaumont MZ. This updated information shall include flow, quality, and recharge or use location;

2) An update of the CSRM model to create 30-year TDS and nitrogen projections for the Beaumont MZ based on the full range of recycled water planning scenarios that are being considered; and

3) An assessment of the individual and cumulative water quality impact as a result of each agency's water management activities and calculation of the salt liability of all recycled water users in Beaumont MZ

The model analysis that is conducted must be consistent with the model analysis that was performed as part of the 2002 maximum benefit proposal.

We recommend that BCVWD, YVWD and the City of Beaumont conduct a single joint analysis. However, if each agency chooses to submit a separate analysis, it must include an assessment of all planned water uses by all agencies and include all the elements identified above.

Need for Technical Report

The Regional Water Board is charged with the protection of water quality in this Region. Unless properly managed, the discharge of salt or nitrogen as a result of water management activities in Beaumont MZ has the potential to contribute to the degradation of water quality and adversely affect beneficial uses. The technical report required by this Order is needed to determine the contribution of

salt and nitrogen from water use and water resource management activities. The data and information will assist efforts to carry out implementation of the maximum benefit program, as set forth in the Basin Plan, in the Beaumont MZ.

Evidence Supporting the Need for the Technical Reports

Monitoring and modeling conducted to develop the maximum benefit programs demonstrated that water management activities (e.g., irrigation use and recharge of recycled water) discharge salt and nitrogen to the Beaumont MZ. The evidence demonstrating that water management activities are sources of salt and nitrogen discharges is contained in letter report from STWMA "Revised San Timoteo Watershed Management Authority proposal for new total dissolved solids (TDS) and total inorganic nitrogen (TIN) water quality objectives for the Beaumont, San Timoteo, and Yucaipa management zones based on maximum beneficial use", and Exhibit A - TDS Budget Table, June 2002, and a letter report from BCVWD "Estimated Recycled Water and Imported Water Needs to Support Groundwater Quality Evaluation", June 2010. Based on these analyses, the three agencies have discharged, or are planning discharges that do and could potentially contribute salt and nitrogen loads in Beaumont MZ.

Burden and Cost of Technical Reports

The estimated cost of a single joint analysis is $36,000 (as reflected in the proposal to BCVWD and the City of Beaumont by WEI dated August 12, 2010). The three agencies can choose to share the cost of a single analysis and report, or prepare separate analyses and reports on their own. Logically, the cost of three separate analyses and reports will be higher. Since the analysis requires data and information from all three agencies, if the analysis is conducted separately for each agency, Regional Board staff estimates the total cost could potentially be $36,000 per agency for a total of $108,000.

Regardless of whether a single or combined analytical approach is selected, the costs of the technical reports required by this Order are justified. Without this information, we will not be able issue WDRs in a timely fashion. The preparation of the above report is also necessary to provide for continued implementation of the maximum benefit objectives for the Beaumont Management Zone.

Penalties

Though we are confident you will make every effort to comply with this Order in a timely manner, please be advised that pursuant to section 13268 of the California Water Code, failure to submit the required information by the specified compliance date, or falsifying any information provided therein, is a misdemeanor and may result in civil liability. Noncompliance may subject you to administrative civil liability in the amount of up to $1,000 for each day of violation. Compliance with this Order is not a substitute for compliance with other applicable laws and does not preclude action to enforce compliance with such other laws.

Appeal

Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. The State Board's website (http://www.swrcb.ca.gov/wqpetitions/index.html) contains detailed information regarding the petition process. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected

by this Order may request the Regional Water Board to reconsider this Order. To be timely, such a request must be received within 30 days of the date of this Order. Note that even if reconsideration by the Regional Water Board is sought, filing a timely petition with the State Water Board is also necessary to preserve the petitioner's legal rights. If you choose to request reconsideration of this Order or file a petition with the State Water Board, be advised that you must comply with the Order while your request for reconsideration and/or petition is being considered.

If you have any questions regarding the Order, or wish to schedule a meeting to discuss, please contact, Dr. Cindy Li, Engineering Geologist, at (951) 782-4906 or cli@waterboards.ca.gov.

Sincerely,

Joanne E. Schneider
Division Chief

cc: Regional Board
David Rice, Office of Chief Counsel, SWRCB, DavidRice@waterboards.ca.gov

Attachment: Exhibit A - Estimate of Recycled Water and Imported Water Needs in support of Groundwater Quality Evaluation for Cherry Valley Water District Recycled Water Permit

Preliminary Documentation - Subject to Modification

Proposed Regional Implementation of Maximum Benefit Commitments for the Beaumont Management Zone

Preliminary Draft
September 20, 2011

Submitted to the Santa Ana Regional Water Quality Control Board

by

City of Banning
Beaumont Cherry Valley Water District
San Gorgonio Pass Water Agency
Yucaipa Valley Water District

"California highly values its water resources, which are significantly limited in quantity and quality. Recurring periods of drought have demonstrated the magnitude and severity of our water quantity limitations. Improper waste management practices and contaminated sites pose significant threats to the quality of California's useable groundwater and surface water sources."

- Adapted from the State Water Resources Control Board "A Compilation of Water Quality Goals", April 2011

Background

State Water Resources Control Board - Resolution No. 68-16

On October 24, 1968, the State Water Resources Control Board adopted Resolution No. 68-16 setting a policy for maintaining high quality water resources in California. This Resolution acknowledged that the "…California Legislature has declared that it is the policy of the State that the granting of permits and licenses for unappropriated water and the disposal of wastes into the water of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State…".

This policy set the stage for protecting the high quality waters in the State of California by resolving that,

> "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 the maximum benefit to the people of the State will be maintained."

Santa Ana Regional Water Quality Control Board - Resolution No. R8-2004-0001

On January 22, 2004, the California Regional Water Quality Control Board, Santa Ana Region adopted Resolution No. R8-2004-0001, amending the Water Quality Control Plan for the Santa Ana River Basin incorporating an updated Total Dissolved Solids (TDS) and Nitrogen Management Plan for the Santa Ana Region, updated groundwater subbasins, revised TDS and nitrogen wasteload allocations.

During the preparation of the updated Basin Plan, stakeholders and the Regional Water Quality Control Board staff recognized that the reuse of recycled water is critical to many agencies' plans to meet the increasing water demands in the region. In some areas of the watershed, there exists assimilative capacity for the addition of TDS and/or nitrogen where wastewaters

with higher TDS/nitrogen concentrations than the receiving waters are diluted by natural rainfall or recharge so the TDS and nitrogen objectives of the receiving waters are met. In an area like the Beaumont Management Zone, assimilative capacity did not exist for the use of recycled water use or recharge until a "maximum benefit" objective was approved. The application of a "maximum benefit" objective is contingent on the implementation of certain projects and programs by specific dischargers as part of their maximum benefit demonstration.

Groundwater Management Zone	"Maximum Benefit" Water Quality Objective	Antidegradation Water Quality Objective
Beaumont Management Zone	330 mg/l	230 mg/l
Yucaipa Management Zone	370 mg/l	320 mg/l
San Timoteo Management Zone	400 mg/l	300 mg/l

Source: California Regional Water Quality Control Board Santa Ana Region, Resolution R8-2004-0001, Table 4-1.

State of California - Recycled Water Policy

On February 3, 2009, the California State Water Resources Control Board (SWRCB) adopted a Recycled Water Policy (the "Policy") formally declaring their mission to "preserve, enhance and restore the quality of California's water resources to the benefit of present and future generations."

To achieve this mission, the SWRCB encourages every region in California to develop a salt/nutrient management plan by 2014 to serve as a foundation to provide California with clean, abundant and sustainable water supplies. This goal is only accomplished by properly implementing a water resource strategy that maximizes the use of recycled water, water conservation, and the use of storm water (including dry-weather urban runoff). These water resources are viewed as drought-proof and reliable, and will generally minimize carbon footprints over the long-term.

The Recycled Water Policy formally sets forth the following goals for the State of California:

- Increase the use of recycled water over 2002 levels by at least one million acre-feet per year by 2020 and by at least two million acre-feet per year by 2030.
- Increase the use of storm water over use in 2007 by at least 500,000 acre-feet per year by 2020 and by at least one million acre-feet per year by 2030.
- Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20 percent by 2020.
- Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The SWRCB recognizes that some groundwater basins have salts and nutrients that exceed or threaten to exceed water quality objectives established in the applicable Water Quality Control Plans (Basin Plans). Therefore, it has been determined that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses.

The representatives from the Beaumont Cherry Valley Water District, the City of Banning, the San Gorgonio Pass Water Agency, and the Yucaipa Valley Water District support the principles established in the Recycled Water Policy adopted by the State Water Resources Control Board

and have agreed to jointly implement a salt management strategy to protect the water resources of the Beaumont Management Zone. These participating agencies agree with the State Water Board finding that the appropriate way to address salt management issues is through the development of a regional salt management strategy equally applied amongst all recycled water users and waste discharge permits in the Beaumont Management Zone.

San Timoteo Watershed Management Authority "Maximum Benefit" Commitments

On July 2, 1990, the State Water Resources Control Board issued an administrative procedure for antidegradation policy implementation. This policy requires an antidegradation analysis to be completed to "…support all regulatory actions that, in the Regional Board's judgment, will result in a significant increase in pollutant loadings".

When undertaking an antidegradation analysis, the Regional Board would proceed as follows:

1. Compare receiving water quality to the water quality objectives established to protect designated beneficial uses:

    a. If baseline water quality is equal to or less than the quality as defined by the water quality objective, water quality shall be maintained or improved to a level that achieves the objectives.

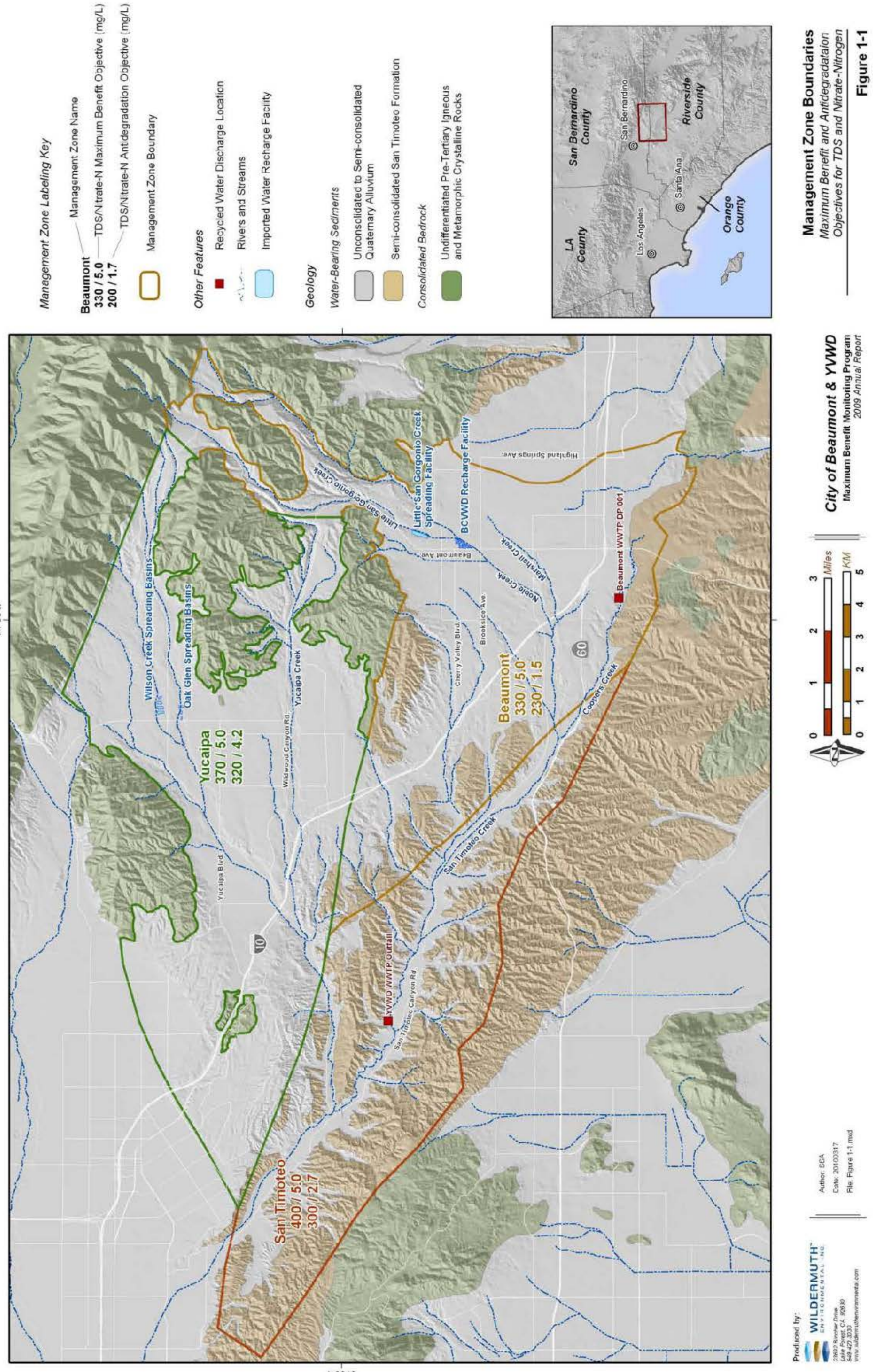
    b. If baseline water quality is better than the water quality as defined by the water quality objective, the baseline water quality shall be maintained unless poorer quality is necessary to accommodate important economic or social development and is considered to be of maximum benefit to the people of the State of California.

As part of the 2004 Basin Plan adopted by the Santa Ana Regional Water Quality Control Board, a number of the agencies participating in the preparation of this Salt Management Strategy were members of the San Timoteo Watershed Management Authority ("STWMA"). The STWMA identified to the Regional Water Quality Control Board in documentation dated October 30, 2002, that California Water Code section 13241 provides for a change of water quality objectives based on 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 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 hereto;
> 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."

Based on this criterion, the STWMA member agencies and the Santa Ana Regional Water Quality Control Board agreed to establish maximum benefit water quality objectives for the Beaumont Management Zone as long as the irrevocable commitments made by the member agencies are fulfilled. These irrevocable commitments are specifically identified in Resolution No. R8-2004-0001 (pages 72-78).

The parties recognize that failure to fully implement the commitments will required mitigation of the adverse water quality effects, both on the immediate and downstream waters that resulted from the recycled water discharges. Furthermore, the "mitigation by groundwater extraction and desalting must be adjusted to address concentrations of salt and nitrogen in the basin, not simply salt load"


Management Zone Labeling Key
Beaumont
330 / 5.0
200 / 1.7
Management Zone Name
TDS/Nitrate-N Maximum Benefit Objective (mg/L)
TDS/Nitrate-N Antidegradation Objective (mg/L)
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Other Features
Recycled Water Discharge Location
Rivers and Streams
Imported Water Recharge Facility
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Water-Bearing Sediments
Unconsolidated to Semi-consolidated Quaternary Alluvium
Semi-consolidated San Timoteo Formation
Consolidated Bedrock
Undifferentiated Pre-Tertiary Igneous and Metamorphic Crystalline Rocks
San Bernardino County
LA County
Riverside County
Orange County
Los Angeles
San Bernardino
Santa Ana
Yucaipa
370 / 5.0
320 / 4.2
Beaumont
330 / 5.0
230 / 1.5
San Timoteo
400 / 5.0
300 / 2.7
Wilson Creek Spreading Basins
Oak Glen Spreading Basins
Yucaipa Creek
Little San Gorgonio Creek Spreading Facility
BCVWD Recharge Facility
Beaumont WWTP DP 001
YVWD WWTP Outfall
San Timoteo Creek
Cooper's Creek
Noble Creek
Marshall Creek
Highland Springs Ave
Beaumont Ave
Brookside Ave
Cherry Valley Blvd
Yucaipa Blvd
San Timoteo Canyon Rd
Wildwood Canyon Rd
Miles
KM
City of Beaumont & YVWD
Maximum Benefit Monitoring Program
2009 Annual Report
Management Zone Boundaries
Maximum Benefit and Antidegradation Objectives for TDS and Nitrate-Nitrogen
Figure 1-1
Produced by:
WILDERMUTH ENVIRONMENTAL, INC.
Author: SGA
File: Figure 1-1.mxd

Regional Salt Management Strategy

On September 13, 2010 the managers of the Beaumont Cherry Valley Water District, City of Beaumont and Yucaipa Valley Water District received an *Order Pursuant to Water Code Section 13267 for Technical Reports for a Technical Report to Support the Implementation of the Maximum Benefit Objectives for Total Dissolved Solids and Nitrate Nitrogen in the Beaumont Management Zone*. The Order required the preparation of a technical report that included the following elements:

1. Updated planning information for the use of all sources of water by each agency in the Beaumont Management Zone. This updated information needed to include flow, quality, and recharge or use location;

2. An update of the CSRM model to create 30-year TDS and nitrogen projections for the Beaumont Management Zone based on the full range of recycled water planning scenarios that are being considered; and

3A. An assessment of the individual and cumulative water quality impact as a result of each agency's water management activities; and

3B. A calculation of the salt liability of all recycled water users in the Beaumont Management Zone.

The required elements identified above as 1., 2., and 3A. have been previously provided to the Santa Ana Regional Water Quality Control Board. This draft document has been prepared in compliance with the required element 3B. above.

Over the past several months, the agencies involved in the preparation of this document have strongly embraced the importance of maintaining high quality water resources in the Beaumont Management Zone. Since the Beaumont Management Zone does not have a large volumes of natural runoff like the Bunker Hill B Management Zone, it is important to protect the local water quality in a manner consistent with the policies of the State of California and the Basin Plan as approved by the Santa Ana Regional Water Quality Control Board.

For illustration purposes, the following graph represents the water quality objectives and 2009 current ambient water quality as water resources proceed downstream from the Beaumont Management Zone to the Orange County Management Zone.

Total Dissolved Solids (mg/l)			
Management Zone	Water Quality Objective	Maximum Benefit Objective	2009 Current Ambient Water Quality
Beaumont	230	330	280
San Timoteo	300	400	420
Bunker Hill B	310	- -	270
Colton	410	- -	430
Riverside A	560	- -	430
Chino - South	680	- -	980
Orange County	580	- -	600

To maintain the high quality water resources of the Beaumont Management Zone, the undersigned agencies recognize the importance of fully implementing the commitments made by the San Timoteo Watershed Management Authority in order to maintain the maximum benefit objectives applied in the Beaumont Management Zone.

City of Banning:

Print Name	Signature	Date

Beaumont Cherry Valley Water District:

Print Name	Signature	Date

San Gorgonio Pass Water Agency:

Print Name	Signature	Date

Yucaipa Valley Water District:

Print Name	Signature	Date

1. **Surface Water Monitoring, Groundwater Monitoring and Ambient Groundwater Quality Determination.** (See Santa Ana Regional Water Quality Control Board Basin Plan, Table 5-10a, page 5-73 and 5-74, Items 1, 2, and 6)

   The Beaumont Cherry Valley Water District, the City of Banning, the San Gorgonio Pass Water Agency, and the Yucaipa Valley Water District are committed to continue our active role in surface water monitoring, groundwater monitoring and the preparation of the ambient groundwater quality determinations.

   To fully satisfy the maximum benefit commitment associated with surface water monitoring, groundwater monitoring and ambient groundwater quality determination, the Parties propose to jointly collect water quality samples and participate in the cost of data compilation and report preparation as provided in Exhibit C. The proposed water quality monitoring locations and tests performed will be reviewed and potential changes to the water quality protocol will be forwarded to the Regional Water Quality Control Board for review and approval every three years as part of the ambient water quality determination.

2. **Desalter and Brineline Facilities.** (See Santa Ana Regional Water Quality Control Board Basin Plan, Table 5-10a, page 5-73, Item 3)

The Yucaipa Valley Water District is in the process of completing an extension of the Santa Ana Regional Interceptor from the San Bernardino Wastewater Treatment Plant to the Wochholz Regional Water Recycling Facility. This brineline extension (the "Yucaipa Valley Regional Brineline") and associated reverse osmosis equipment is scheduled to be completed and operational by the second quarter of 2014.

With the completion of the brineline and reverse osmosis, the "maximum benefit" objectives necessary to protect the water resources of the Beaumont Management Zone is achieved for the Yucaipa Valley Water District and users of the recycled water produced by the Wochholz Regional Water Recycling Facility.

As provided in greater detail below, compliance with this commitment will be demonstrated as follows:

A. Recycled Water for Irrigation Purposes - Upon completion and operation of the Yucaipa Valley Regional Brineline and associated equipment, the Yucaipa Valley Water District will reduce the salinity of recycled water supplies to comply with a 10-year running average total dissolved solids ("TDS") concentration of 330 mg/l in the Beaumont Management Zone.

Compliance of this water quality objective will be measured in the recycled water system as a weighted average of recycled water within the management zone and will be achieved by blending imported water sources or desalting the recycled water supply. The ten-year compliance calculation would begin when recycled water from the Wochholz Regional Water Recycling Facility is first introduced into the recycled water system.

B. Recycled Water Recharge - Recycled water recharge, whether it is direct or incidental, shall comply with the maximum benefit objectives of the Beaumont Management Zone. Upon completion and operation of the Yucaipa Valley Regional Brineline and associated equipment, the Yucaipa Valley Water District will reduce the salinity of our recycled water to comply with a 10-year running average total dissolved solids ("TDS") concentration of 330 mg/l in the Beaumont Management Zone.

Compliance of this water quality objective will be measured at the point of discharge and will be achieved by desalting the recycled water supply and/or blending the recycled water supply with other imported water resources.

3. **Recycled (Non-Potable) Water Supply.** (See Santa Ana Regional Water Quality Control Board Basin Plan, Table 5-10a, page 5-73, Item 4)

The Beaumont Cherry Valley Water District, the City of Banning, the San Gorgonio Pass Water Agency, and the Yucaipa Valley Water District will maintain a 10-year running average total dissolved solids concentration of 330 mg/l in the recycled (non-potable) water supplies used in the Beaumont Management Zone.

Compliance of this water quality objective will be measured in the recycled water system as a weighted annual average concentration of all recycled water sources added to the recycled water system within the management zone. It is anticipated that an agency can comply with this "maximum benefit" commitment by blending the recycled water supply with water resources imported into the Beaumont Management Zone, imported water from the State Water Project, storm water added to the recycled water supply system, or by directly desalting the recycled water source.

4. **Recycled Water Recharge.** (See Santa Ana Regional Water Quality Control Board Basin Plan, Table 5-10a, page 5-73, Item 5)

The Beaumont Cherry Valley Water District, the City of Banning, the San Gorgonio Pass Water Agency, and the Yucaipa Valley Water District recognize the importance of maintaining the pure water resources in the Beaumont Management Zone. Therefore, the Parties will recharge recycled water, whether direct or incidental; in compliance with a 10-year running average of 330 mg/l total dissolved solids for the recharge of waters within the boundary of the Beaumont Management Zone.

Compliance of this water quality objective will be measured at the point of discharge to calculate the representative water quality and quantity recharged within the definitive recharge facility property/parcel boundary. The "maximum benefit" water quality objective at the recharge property/parcel is expected to be achieved by desalting the recycled water supply and/or blending recycled water with water resources added to the recharge facility such as imported water from outside the Beaumont Management Zone, imported water from the State Water Project, or storm water captured at the recharge facility. In all cases the quantity and quality of the water supplies recharged will be monitored and reported.

In cases whereby multiple Parties propose to recharge recycled water in the same recharge facility property/parcel boundary, each individual agency will separately demonstrate independent compliance with the maximum benefit objective. A comprehensive annual report will be compiled by the participating agencies demonstrating compliance with the maximum objective within the recharge facility property/parcel boundary by each agency.

The preparation of this document is based on a concept of consistent implementation of water quality objectives throughout the watershed. The Parties request permit language that provides an opportunity to ensure a consistent and uniform approach is applied to the implementation of waste discharge requirements in the region.

Exhibit A

Santa Ana Regional Water Quality Control Board Basin Plan

The 1995 Water Quality Control Plan for the Santa Ana River Basin (Region 8) was updated in February 2008 with minor, nonsubstantive editorial corrections made to Chapter 4 in June 2011. Attached for reference are pages 5-71 to 5-81.

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

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

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

Table 5-10a identifies the projects and requirements that must be implemented by Beaumont/STWMA to demonstrate that water quality consistent with maximum benefit to the people of the state will be maintained. STWMA, acting for all its member agencies, has committed to conduct the regional planning and monitoring activities necessary to implement these "maximum benefit" commitments, and the San Timoteo Watershed Management Program as a whole. Table 5-10a also specifies an implementation schedule. The Regional Board will revise the City of Beaumont's waste discharge requirements and take other actions as necessary to require that these commitments be met. It is assumed that maximum benefit is demonstrated, and that the "maximum benefit" water quality TDS and nitrate-nitrogen objectives apply to the Beaumont and San Timoteo Management Zones, as long as the schedule is being met[7]. If the Regional Board determines that the maximum benefit program is not being implemented effectively in accordance with the schedule shown in Table 5-10a (and in the case of the San Timoteo Management Zone, the commitments and schedule shown in Table 5-9a (see preceding section)), then maximum benefit is not demonstrated, and the "antidegradation" TDS and nitrate-nitrogen objectives apply. In this situation, the Regional Board will require mitigation for TDS and nitrate-nitrogen discharges

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

affecting these management zones that took place in excess of limits based on the "antidegradation" objectives.

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Exhibit A

Table 5-10a

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

Description of Commitment	**Compliance Date – as soon as possible, but no later than**
1. Surface Water Monitoring Program a. Submit Draft Monitoring Program to Regional Board b. Implement Monitoring Program c. Quarterly data report submittal d. Annual data report submittal	 a. January 23, 2005 b. Within 30 days from Regional Board approval of monitoring plan c. April 15, July 15, October 15, January 15 d. February 15th
2. Groundwater Monitoring Program a. Submit Draft Monitoring Program to Regional Board b. Implement Monitoring Program c. Annual data report submittal	 a. January 23, 2005 b. Within 30 days from Regional Board approval of monitoring plan c. February 15th
3. Desalter(s) and Brine Disposal Facilities Submit plan and schedule for construction of desalter(s) and brine disposal facilities. Facilities are to be operational as soon as possible but no later than 7 years from date of Regional Board approval of plan/schedule. b. Implement the plan and schedule	 a. Within 6 months of either of the following: i. When Beaumont's effluent 5-year running average TDS exceeds 480 mg/L; and/or ii. When volume weighted average concentration in the Yucaipa MZ of TDS exceeds 320 mg/L b. Within 30 days from Regional Board approval of monitoring plan
4. Non-potable water supply Implement non-potable water supply system to serve water for irrigation purposes. The non-potable supply shall comply with a 10-year running average TDS concentration of 330 mg/L or less	 December 23, 2014

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

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

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

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

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

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

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

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

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

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

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

b. The volume-weighted TDS concentration in the Beaumont Management Zone equals or exceeds 320 mg/L.

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

Table 5 – 10b

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Like YVWD, Beaumont has established the goal of eliminating its discharge to the unlined reach of San Timoteo Creek by 2008 to minimize the impacts of these discharges on the San Timoteo Management Zone. The STWMP anticipates that Beaumont's recycled water will be almost completely reused within the Beaumont area for landscape irrigation, habitat enhancement, and potentially for groundwater recharge. Like YVWD, Beaumont and STWMA are also considering the export of a portion of Beaumont's surplus recycled water to the San Jacinto basin, where the

TDS objectives are higher than those for the Beaumont Management Zone and recycled water demands are greater than supplies. Some limited recycled water discharge to Coopers Creek and thence /San Timoteo Creek may need to be continued to support existing riparian habitat.

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

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

B. Implementation by Regional Board

1. Revision of City of Beaumont NPDES Permit

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

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

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

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

The effluent limits for the City of Beaumont, which establish an upper limit on TDS and TIN concentrations of recycled water discharged in the management zones, are

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

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

2. Review of Project Status

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

Furthermore, in the event that the projects and actions specified in Table 5-10a are not implemented, the Regional Board will require that the City of Beaumont and STWMA mitigate the adverse water quality effects, both on the immediate and

downstream waters, that resulted from the recycled water discharges based on the "maximum benefit' objectives. As for CBW/IEUA and YVWD, discharges in excess of the antidegradation objectives that must be considered for mitigation include both recycled water and imported water, at TDS concentrations in excess of the antidegradation objectives. Mitigation by groundwater extraction and desalting must be adjusted to address concentrations of salt and nitrogen in the basin, not simply salt load.

(End of Salt Management Plan Section) (End of Resolution R8-2004-0001)

NONPOINT SOURCE PROGRAM

Considerable improvements in water quality have been achieved in the nation through the control of point source discharges such as those from sewage treatment plants or industrial facilities. It is now recognized that in many areas, nonpoint source inputs, such as urban nuisance flows and stormwater runoff, are the principal sources of contaminant inputs to surface and groundwaters.

In contrast to point sources, which discharge wastewater of predictable quantity and quality at a discrete point (usually at the end of a pipe), nonpoint source inputs are diffuse in origin and variable in quality. Management of nonpoint source inputs is in many ways more difficult to achieve, since it requires an array of control techniques customized to local watershed conditions.

Nonpoint Source Management Plan

Section 319 of the 1987 amendments to the Clean Water Act (33 USC 466 *et seq.*), established the framework for nonpoint source activities. Section 319 requires each state to prepare a Nonpoint Source Management Plan and to conduct an assessment of the impact nonpoint sources have on the state's waterbodies. In response to these requirements, the State Board adopted the Nonpoint Source Management Plan (NPSMP) in 1988 and the Water Quality Assessment in 1990 (see Chapter 6 for a discussion of the Water Quality Assessment). The NPSMP establishes a statewide policy for managing nonpoint source inputs to California's waters and is part of this Basin Plan.

The State Board defined six objectives of the Nonpoint Source Management Plan, four of which apply to activities in the Santa Ana Region:

1. Initiate and institutionalize activities for control of nonpoint source pollution (drainage from urban activities, agriculture, silviculture, abandoned mines construction, grazing, hydrologic modification, and individual disposal systems). These activities include outreach, education, public participation, technical assistance, financial assistance, interagency coordination, and demonstration projects.

Exhibit B

Order Pursuant to Water Code Section 13267 for Technical Reports for a Technical Report to Support the Implementation of the Maximum Benefit Objectives for Total Dissolved Solids and Nitrate Nitrogen in the Beaumont Management Zone

Exhibit B

California Regional Water Quality Control Board
Santa Ana Region

3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 • FAX (951) 781-6288 • TDD (951) 782-3221
www.waterboards.ca.gov/santaana

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

September 13, 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Beaumont Cherry Valley Water District
Attention: Anthony Lara
Interim General Manager
560 Magnolia Avenue
Beaumont, CA 92223

City of Beaumont
Attention: David Dillon
Director of Economic Development
550 East 6th Street
Beaumont, CA 92223

Yucaipa Valley Water District
Attention: Joe Zoba
General Manager
12770 Second Street
Yucaipa, CA 92399

ORDER PURSUANT TO WATER CODE SECTION 13267 FOR TECHNICAL REPORTS FOR A TECHNICAL REPORT TO SUPPORT THE IMPLEMENTATION OF THE MAXIMUM BENEFIT OBJECTIVES FOR TOTAL DISSOLVED SOLIDS AND NITRATE NITROGEN IN THE BEAUMONT MANAGEMENT ZONE

Gentlemen:

This Order, issued pursuant to California Water Code section 13267, requires that you submit certain plans and schedules (collectively, reports) to evaluate the impact of discharges of total dissolved solids (TDS) and nitrogen on the Beaumont Groundwater Management Zone (Beaumont MZ). This requirement is consistent with the Salt Management Plan for the Santa Ana Region, and in particular the maximum benefit implementation plan for the Beaumont MZ, adopted by the California Regional Water Quality Control Board, Santa Ana Region (Regional Water Board) in 2004 (Resolution No. R8-2004-0001) and approved by the State Water Resources Control Board and the Office of Administrative Law in 2005.

Background of the Maximum Benefit Implementation Plan for the Beaumont MZ

On June 26, 2002, the San Timoteo Watershed Management Authority (STWMA[1]) submitted a proposal to establish maximum benefit objectives for TDS and nitrate-nitrogen for the Beaumont MZ to accommodate water resource management projects, including the recharge of stormwater,

[1] The San Timoteo Watershed Management Authority (STWMA) was formed in January 2001 by the Beaumont-Cherry Valley Water District (BCVWD), the City of Beaumont (Beaumont), the South Mesa Water Company and the Yucaipa Valley Water District (YVWD). The STWMA formed a stakeholder group to develop a watershed scale water resources management program that would provide a safe and reliable water supply for all water users in the watershed. In July 2010, STWMA disbanded.

imported State Project Water (SPW), and recycled water. The maximum benefit objectives and commitments for Beaumont MZ were based on detailed model projections and analyses conducted by Wildermuth Environmental, Inc (WEI). The modeling analysis utilized a Constantly Stirred Reactor Model (CSRM), and simulated TDS groundwater quality through 2100 resulting from the implementation of several planned scenarios, including a no project alternative and the preferred maximum benefit alternative. The preferred maximum benefit alternative assumes that 10,000 acre-ft of replenishment water will be recharged into the Beaumont MZ with a 50/50 mix of recycled water and SPW. The preferred option also assumed that 5,100 acre-ft of non-potable supply of a 50 /50 mix of SPW and recycled water would be used within the Beaumont MZ. The TDS quality of recycled water, to be provided by the City of Beaumont Wastewater Treatment Plant (WWTP), was assumed to have an average TDS concentration of 550 mg/L, and the imported water was assumed to have a TDS concentration of 290 mg/L.

The Regional Board adopted the maximum benefit proposals in 2004 (Resolution No. R8-2004-0001), assigning STWMA and the City of Beaumont the responsibility for implementing the maximum benefit commitments in the Beaumont MZ. The commitments include building desalting facilities when either of the following occurs:

- When the five-year average TDS concentration in recycled water produced by the Beaumont WWTP is 10 mg/L less than its current TDS limit (490 mg/L), or
- When the volume-weighted TDS concentration in the Beaumont MZ rises to within 10 mg/L of the maximum benefit TDS objective of 330 mg/L.

Resolution No. R8-2004-0001 also specifies similar maximum benefit implementation programs for the Yucaipa and San Timoteo MZs. Yucaipa Valley Water District (YVWD) is responsible for implementation of the maximum benefit commitments for the Yucaipa MZ, and is jointly responsible for implementing the maximum benefit commitments for the San Timoteo MZ along with the City of Beaumont and STWMA.

Permitting Issues

Since 2009, the Beaumont Cherry Valley Water District (BCVWD) has been working with Regional Board staff to obtain a recycled water permit to utilize various sources of water for non-potable use and for recharge in the Beaumont MZ. BCVWD is proposing to use recycled water from both the Yucaipa Valley Water District (YVWD) and the City of Beaumont, local groundwater, and imported SWP water. The ranges of anticipated flow and water quality for the YVWD recycled water and local groundwater for the near term (2015) and long term (2035), are described in a June 2, 2010 letter report submitted by BCVWD, which is attached as Exhibit A. These "new" sources of water – the YVWD recycled water and local groundwater – were not considered in the original model projections and analyses conducted by WEI in 2002. Therefore, the water quality impact of these "new" sources on the Beaumont MZ is unknown.

The City of Beaumont is also working with Regional Board staff to renew and update their Waste Discharge Requirements (WDRs) to increase the discharge from 4 MGD (approximately 4,484 acre-ft/year) to 8 MGD (8,968 acre-ft/year). Concurrently, YVWD has requested revisions to their WDRs to correct an error in the TDS limit for recycled water used for irrigation, and to include a provision allowing for the recharge of recycled water into the Beaumont MZ. YVWD's proposed irrigation use and recharge of recycled water in the Beaumont MZ was not considered in the original analysis by WEI, and the impact of these discharges needs to be evaluated.

Basin Plan Amendment Issues

As previously indicated, the Basin Plan specifies that STWMA and the City of Beaumont are responsible for implementing the maximum benefit commitments related to the Beaumont MZ. However, with the dissolution of STWMA, the responsibilities for carrying out the maximum benefit commitments in the Beaumont MZ need to be re-assessed. Some STWMA members, including BCVWD, the City of Beaumont and YVWD, continue to have and/or have expressed new interest in water management activities, including the use/increased use of recycled water, in the Beaumont MZ. Given this, it is necessary to reconsider the assigned responsibilities for implementing maximum benefit commitments for the Beaumont MZ. One STWMA member, South Mesa Water Company, has no interest in the Beaumont MZ, and should not be included in the maximum benefit program. In sum, the Basin Plan needs to be revised to incorporate changes in water resource and salt management, and maximum benefit implementation in the Beaumont MZ. To do so, an updated modeling analysis is necessary. It should be noted that this analysis is necessary in any case to support current permitting requests, described above. The analysis must include an assessment of salt liabilities by these agencies under the different management scenarios so that the responsibilities for maximum benefit implementation can be properly assigned.

Required Submittals

Consistent with the Salt Management Plan, you are hereby required to submit an updated analysis for the Beaumont MZ to the Regional Water Board as soon as possible, but **no later than November 30, 2010**. The analysis must include the following:

1) Updated planning information for the use of all sources of water by each agency in the Beaumont MZ. This updated information shall include flow, quality, and recharge or use location;

2) An update of the CSRM model to create 30-year TDS and nitrogen projections for the Beaumont MZ based on the full range of recycled water planning scenarios that are being considered; and

3) An assessment of the individual and cumulative water quality impact as a result of each agency's water management activities and calculation of the salt liability of all recycled water users in Beaumont MZ

The model analysis that is conducted must be consistent with the model analysis that was performed as part of the 2002 maximum benefit proposal.

We recommend that BCVWD, YVWD and the City of Beaumont conduct a single joint analysis. However, if each agency chooses to submit a separate analysis, it must include an assessment of all planned water uses by all agencies and include all the elements identified above.

Need for Technical Report

The Regional Water Board is charged with the protection of water quality in this Region. Unless properly managed, the discharge of salt or nitrogen as a result of water management activities in Beaumont MZ has the potential to contribute to the degradation of water quality and adversely affect beneficial uses. The technical report required by this Order is needed to determine the contribution of

salt and nitrogen from water use and water resource management activities. The data and information will assist efforts to carry out implementation of the maximum benefit program, as set forth in the Basin Plan, in the Beaumont MZ.

Evidence Supporting the Need for the Technical Reports

Monitoring and modeling conducted to develop the maximum benefit programs demonstrated that water management activities (e.g., irrigation use and recharge of recycled water) discharge salt and nitrogen to the Beaumont MZ. The evidence demonstrating that water management activities are sources of salt and nitrogen discharges is contained in letter report from STWMA "Revised San Timoteo Watershed Management Authority proposal for new total dissolved solids (TDS) and total inorganic nitrogen (TIN) water quality objectives for the Beaumont, San Timoteo, and Yucaipa management zones based on maximum beneficial use", and Exhibit A - TDS Budget Table, June 2002, and a letter report from BCVWD "Estimated Recycled Water and Imported Water Needs to Support Groundwater Quality Evaluation", June 2010. Based on these analyses, the three agencies have discharged, or are planning discharges that do and could potentially contribute salt and nitrogen loads in Beaumont MZ.

Burden and Cost of Technical Reports

The estimated cost of a single joint analysis is $36,000 (as reflected in the proposal to BCVWD and the City of Beaumont by WEI dated August 12, 2010). The three agencies can choose to share the cost of a single analysis and report, or prepare separate analyses and reports on their own. Logically, the cost of three separate analyses and reports will be higher. Since the analysis requires data and information from all three agencies, if the analysis is conducted separately for each agency, Regional Board staff estimates the total cost could potentially be $36,000 per agency for a total of $108,000.

Regardless of whether a single or combined analytical approach is selected, the costs of the technical reports required by this Order are justified. Without this information, we will not be able issue WDRs in a timely fashion. The preparation of the above report is also necessary to provide for continued implementation of the maximum benefit objectives for the Beaumont Management Zone.

Penalties

Though we are confident you will make every effort to comply with this Order in a timely manner, please be advised that pursuant to section 13268 of the California Water Code, failure to submit the required information by the specified compliance date, or falsifying any information provided therein, is a misdemeanor and may result in civil liability. Noncompliance may subject you to administrative civil liability in the amount of up to $1,000 for each day of violation. Compliance with this Order is not a substitute for compliance with other applicable laws and does not preclude action to enforce compliance with such other laws.

Appeal

Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. The State Board's website (http://www.swrcb.ca.gov/wqpetitions/index.html) contains detailed information regarding the petition process. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected

Exhibit B

by this Order may request the Regional Water Board to reconsider this Order. To be timely, such a request must be received within 30 days of the date of this Order. Note that even if reconsideration by the Regional Water Board is sought, filing a timely petition with the State Water Board is also necessary to preserve the petitioner's legal rights. If you choose to request reconsideration of this Order or file a petition with the State Water Board, be advised that you must comply with the Order while your request for reconsideration and/or petition is being considered.

If you have any questions regarding the Order, or wish to schedule a meeting to discuss, please contact, Dr. Cindy Li, Engineering Geologist, at (951) 782-4906 or cli@waterboards.ca.gov.

Sincerely,

Joanne E. Schneider
Division Chief

cc: Regional Board
David Rice, Office of Chief Counsel, SWRCB, DavidRice@waterboards.ca.gov

Attachment: Exhibit A - Estimate of Recycled Water and Imported Water Needs in support of Groundwater Quality Evaluation for Cherry Valley Water District Recycled Water Permit

Exhibit C

Proposed Regional Groundwater and Surface Water Monitoring Program for the Beaumont Management Zone, the San Timoteo Management Zone and the Yucaipa Management Zone

The attached monitoring plan is currently being reviewed by the participating agencies. The document will be enhanced to include additional monitoring to demonstrate full compliance with the "maximum benefit" objectives based on the results of the meeting conducted on September 13, 2011.

Exhibit C

DRAFT MONITORING PROGRAM - SUBJECT TO MODIFICATION

Maximum Benefit Surface and Groundwater Monitoring Program for the Yucaipa, Beaumont and San Timoteo Management Zones

On January 22, 2004, the Santa Ana Regional Water Quality Control Board amended the Basin Plan with regard to TDS/Nitrogen Management in the Santa Ana River Watershed. In the Basin Plan amendment the Regional Water Quality Control Board found that appropriate beneficial use protection/maximum benefit demonstrations were made by the Yucaipa Valley Water District and the San Timoteo Watershed Management Authority to justify establishing alternative "maximum benefit" objectives for the Beaumont, San Timoteo and Yucaipa Groundwater Management Zones.

As part of the maximum benefit commitments, the Yucaipa Valley Water District, the members of the San Timoteo Watershed Management Authority, and the City of Beaumont have agreed to administer extensive and ongoing surface and groundwater monitoring programs in the Beaumont, San Timoteo, and Yucaipa Management Zones. With the dissolution of the San Timoteo Watershed Management Authority, it has become necessary to fully reevaluate the groundwater and surface water monitoring program and directly assign monitoring responsibilities to the City of Banning, City of Beaumont, Beaumont Cherry Valley Water District, the San Gorgonio Pass Water Agency, and the Yucaipa Valley Water District.

The following monitoring program has been developed to provide a common sense approach to ongoing water resource monitoring currently performed by each agency.

Beaumont, San Timoteo and Yucaipa Management Zone Surface Water Monitoring and Sampling Program

Surface water in the Yucaipa Management Zone is monitored for ground water recharge. Recharge by Yucaipa Valley Water District consists of State Project Water disbursement into either the Wilson Creek or Oak Glen spreading basins. Total recharge is determined by the amount of Imported State Water purchased and water quality samples are collected monthly for the duration of the discharge. The parameters for water quality are listed in Table 2. Storm water is monitored in a similar manner.

Pre-established surface water monitoring sites in the Beaumont, Yucaipa and San Timoteo Watershed are monitored bi-weekly for total discharge and field measurements (Table 2) consisting of temperature, pH, electrical conductivity, and dissolved oxygen content. Water quality samples are collected and analyzed for total inorganic nitrogen using ammonia, nitrate and nitrite as the dominant nitrogen species. Samples are also analyzed for total dissolved solids and turbidity. Additional alterations to current sites are provided in footnotes to Table 1.

Surface water monitoring in the San Timoteo Management Zone is performed on a bi-weekly schedule. Discharge and field measurements are taken at each location and a water quality sample is collected for analysis of the parameters listed in Table 2.

Table 1: Surface Water Monitoring Sites in Beaumont, San Timoteo, and Yucaipa Management Zones			
Site ID	Site Name	Discharge Description	Monitoring Agency
San Timoteo Management Zone			
YVWD-A	Above YVWD Recycled Water Discharge	San Timoteo Creek	YVWD
YVWD WWTP	YVWD Wastewater Treatment Facility	Recycled Water Effluent	YVWD
YVWD-B	Above confluence with Yucaipa Creek	San Timoteo Creek	YVWD
YVWD-C	Above levy system and concrete channel	San Timoteo Creek	YVWD
YVWD-D†	Concrete Channel at Barton Road	San Timoteo Creek	YVWD
YVWD-E	11055700 Gage	San Timoteo Creek	YVWD
YVWD-F	Santa Ana River above confluence	Santa Ana River	YVWD
YVWD-G	11059300 Gage, below confluence	Santa Ana River	YVWD
STWMA-2	San Timoteo Canyon Rd's 1st crossing w/ San Timoteo Creek	San Timoteo Creek & Ground water	Beaumont
Beaumont Management Zone			
BWWTP	Beaumont Wastewater TP #1	Recycled Water Effluent	Beaumont
STWMA-1*	Confluence of Noble and Marshal creeks	San Timoteo Creek	BCVWD
STWMA-3	Coopers Creek below BWWTP outfall	Coopers Creek	Beaumont
STWMA-4*	Above confluence w/ Noble Creek	Little San Gorgonio Creek	BCVWD
STWMA-5*	Above confluence w/ Marshal Creek at BCVWD recharge site	Noble Creek	BCVWD
STWMA-6/8	At Devil's Canyon	State Project Water	SGPWA
BMZ-5	Un-named creek behind Lowe's Distribution Center w/ mountain front runoff into BCVWD recharge facility	Un-named creek/stormwater runoff	BCVWD
STWMA-7	Oak Glen Road above entrance to BCVWD recharge facility	Stormwater/recharge	Beaumont
BMZ-6	At SGPWA recharge facility for State Project Water on Noble Creek	Noble Creek	BCVWD
BMZ-1	At Brookside Ave.	Mountain View Channel	BCVWD
BMZ-2	Stormwater detention pond @ Highland Springs & Eighth St	Stormwater/recharge	Beaumont
BMZ-3	Stormwater detention pond on Eighth St E/o Cherry Ave	Stormwater/recharge	Beaumont
BMZ-4	Where Smith Creek crosses Wilson St.	Smith Creek	Banning
Yucaipa Management Zone			
YMZ-1	Wilson and/or Oak Glen spreading basins	State Project Water for Groundwater recharge	YVWD
YMZ-2	Wilson and/or Oak Glen spreading basins	Stormwater runoff for Groundwater recharge	YVWD

*Previously monitored by City of Beaumont- BCVWD will assume responsibility pending approval by the Regional Board.

†Site has proven problematic for monitoring. Currently surface water entrance into concrete channel is covered with sediment. San Bernardino County Flood Control District estimates channel will be cleared by April 2012. Not recommending site for monitoring.

Table 2: Surface Water Monitoring Program Parameters		
Field Measurements	Bi-weekly water quality samples	Groundwater recharge
Temperature	Total Dissolved Solids (TDS)	Total Dissolved Solids (TDS)
Conductivity	Turbidity	Nitrate-Nitrogen
pH	Ammonia-Nitrogen	
Dissolved Oxygen	Nitrate-Nitrogen	
	Nitrite-Nitrogen	
	Total Inorganic Nitrogen (TIN)	

In addition to these surface sites, results from YVWD's Wochholz Regional Water Recycling Facility (WRWRF) and the City of Beaumont's WWTP no. 1 final effluent monitoring for monthly NPDES reporting and daily discharge are reported (Table 3).

Table 3: Wochholz Regional Water Recycling Facility and Beaumont Wastewater Treatment Plant parameters reported for surface water monitoring program			
Monthly WWTP reporting	Quarterly WWTP reporting		
Ammonia-Nitrogen	Arsenic	Barium	Boron
Nitrate-Nitrogen	Cadmium	Calcium	Cobalt
Nitrite-Nitrogen	Copper	Carbonate	Bicarbonate
Total Inorganic Nitrogen (TIN)	Lead	Chloride	Fluoride
12-month Average TIN	Iron	Mercury	Magnesium
Total Dissolved Solids (TDS)	Nickel	Manganese	Selenium
12-month Average TDS	Sodium	Silver	Sulfate
Total Hardness	Aluminum	Total Chromium	
Free Cyanide	Total Organic Carbon, TOC		Zinc
Total Suspended Solids (TSS)	Benzene	Dibromochloromethane	
Bis(2-ethylhexyl)phthalate	Bromodichloromethane		Chloroform

Groundwater Monitoring and Sampling in the Beaumont, San Timoteo and Yucaipa Management Zones

Ground water level measurements are taken monthly for all monitored wells in Beaumont, San Timoteo and Yucaipa Management Zones with one exception. It is not possible to measure ground water level at San Timoteo Management Zone GW-3, a privately owned well. Ground water levels are assumed to be similar to Yucaipa Valley Water District owned well, MW-3, located approximately 50 feet from GW-3. Yucaipa Valley Water District gathers data on ground water level and quality for those wells located within YMZ but not under its direct jurisdiction on an annual basis for inclusion in the annual RWQCB report.

Table 4: Groundwater Monitoring Sites in the San Timoteo Management Zone

Well ID	Description	Data type	Monitoring Agency
MW-1 (1221779)	San Timoteo Canyon Rd.	Level only	YVWD
MW-2 (1221780)	Alessandro St.	Level & Quality	YVWD
MW-3 (1221781)	Live Oak/San Timoteo Canyon	Level & Quality	YVWD
MW-4 (1221782)	above WWTP outfall pipe	Level & Quality	YVWD
MW-5A (1222103)	San Timoteo Canyon Rd.	Level & Quality	YVWD
MW-5B (1222104)	San Timoteo Canyon Rd.	Level & Quality	YVWD
MW-5C (1222105)	San Timoteo Canyon Rd.	Level & Quality	YVWD
GW-3 (1222106)	Live Oak/San Timoteo- Private well	Quality Only	YVWD
GL-8 (1201605)	San Timoteo Canyon Rd-orchard	Level only	YVWD
GL-6 (1003044)	O. Hudson property on Live Oak Canyon Rd	Level & Quality	YVWD
BH-9 (1220051)	1.25" pvc pipe-Live Oak Canyon	Level & Quality	YVWD
Heartland well (1208660)	Owned by City of Beaumont	Level & Quality	Beaumont
San Tim-1 (1222061)	Owned by City of Beaumont	Level & Quality	Beaumont
San Tim-2B/1 (1222079)	Owned by City of Beaumont	Level & Quality	Beaumont
San Tim-2B/2 (1222080)	Owned by City of Beaumont	Level & Quality	Beaumont
1207756	East Valley Golf Club: 335645117024201	Level only	Beaumont
Well 2 (1201582)	Fisherman's Retreat	Level & Quality	Beaumont
Well 1 (1003079)	Fisherman's Retreat	Quality Only	Beaumont
ONE (1003049)	El Casco Lake Ranch	Level & Quality	Beaumont
1003049 (1003048)	Chester Hildebrand property	Level only	Beaumont
BH-19 (1220052)	Metropolitan Water District well	Level & Quality	Beaumont
Well 1 (1201539)	MCM poultry	Level & Quality	Beaumont

Table 5: Ground Water Monitoring Program Sites in the Yucaipa Management Zone			
Site ID	Monitoring Entity	Site ID	Monitoring Entity
Pendleton	YVWD	WHWC 02A	Western Heights WC
Wilson B	YVWD	WHWC 03	Western Heights WC
YVWD 02	YVWD	WHWC 06B	Western Heights WC
YVWD 05	YVWD	WHWC 09	Western Heights WC
YVWD 06	YVWD	WHWC 10	Western Heights WC
YVWD 07	YVWD	WHWC 11	Western Heights WC
YVWD 10	YVWD	WHWC 12	Western Heights WC
YVWD 12	YVWD	WHWC 14	Western Heights WC
YVWD 13	YVWD	5th Ave 1	City of Redlands
YVWD 14	YVWD	CHICKNH4	City of Redlands
YVWD 16	YVWD	HOG CYN 2	City of Redlands
YVWD 18	YVWD	Redlands 10	City of Redlands
YVWD 24	YVWD	Redlands 11	City of Redlands
YVWD 25	YVWD	Redlands 12	City of Redlands
YVWD 26	YVWD	Redlands 13	City of Redlands
YVWD 27	YVWD	Redlands 14	City of Redlands
YVWD 27A	YVWD	Redlands 16	City of Redlands
YVWD 28	YVWD	Redlands 17	City of Redlands
YVWD 37	YVWD	Redlands 36	City of Redlands
YVWD 43	YVWD	Redland Hts	City of Redlands
YVWD 44	YVWD	Yucaipa Well	City of Redlands
YVWD 46	YVWD	Y-02	County of San Bernardino
YVWD 49	YVWD	Y-03	County of San Bernardino
YVWD 50	YVWD	Y-04	County of San Bernardino
YVWD 53	YVWD	Y-05	County of San Bernardino
YVWD 54	YVWD	Y-08	County of San Bernardino
YVWD 55	YVWD	Y-09A	County of San Bernardino
YVWD 56	YVWD	Y-09B	County of San Bernardino
GL-1	YVWD	Y-10A	County of San Bernardino
GL-2	YVWD	Y-10B	County of San Bernardino
GL-3	YVWD	Y-11A	County of San Bernardino
GL-4	YVWD	Y-11B	County of San Bernardino
GL-5	YVWD	Y-12	County of San Bernardino
		Y-13	County of San Bernardino
SMWC 01	South Mesa WC	Y-14	County of San Bernardino
SMWC 03	South Mesa WC	Y-15	County of San Bernardino
SMWC 05	South Mesa WC	Y-16	County of San Bernardino
SMWC 07	South Mesa WC	Y-17	County of San Bernardino
SMWC 09	South Mesa WC	Y-18	County of San Bernardino
SMWC 11	South Mesa WC	Y-19	County of San Bernardino
SMWC 12	South Mesa WC	Y-21	County of San Bernardino
SMWC 16	South Mesa WC	Y-22	County of San Bernardino

Table 6: Beaumont Management Zone Ground Water Monitoring Sites.		
Well ID	Description	Monitoring Entity
1	Beaumont Basin Well	BCVWD
3	Beaumont Basin Well	BCVWD
16	Beaumont Basin Well	BCVWD
21	Beaumont Basin Well	BCVWD
22	Beaumont Basin Well	BCVWD
23	Beaumont Basin Well	BCVWD
24	Beaumont Basin Well	BCVWD
25	Beaumont Basin Well	BCVWD
26	Beaumont Basin Well	BCVWD
29	Beaumont Basin Well	BCVWD
4A	Edgar Canyon Well	BCVWD
5	Edgar Canyon Well	BCVWD
6	Edgar Canyon Well	BCVWD
12	Edgar Canyon Well	BCVWD
19	Edgar Canyon Well	BCVWD
MW-1	BMZ Monitoring Well	BCVWD
MW-2	BMZ Monitoring Well	BCVWD
MW-3 Deep	BMZ Monitoring Well	BCVWD
MW-3 Shallow	BMZ Monitoring Well	BCVWD
MW-4 Deep	BMZ Monitoring Well	BCVWD
MW-4 Shallow	BMZ Monitoring Well	BCVWD
MW-5 Deep	BMZ Monitoring Well	BCVWD
MW-5 Shallow	BMZ Monitoring Well	BCVWD
Well 48	YVWD Production Well	YVWD
C2A	City of Banning Source Well	City of Banning
C3	City of Banning Source Well	City of Banning
M3	City of Banning Source Well	City of Banning

Ground water quality (Table 7) is measured annually in San Timoteo Management Zone and according to Title 22 of the California Code of Regulations cycle sampling schedule for production wells in the Yucaipa Management Zone.

Wells are sampled annually until 3 consecutive years of qualifying data are gathered. At which point water quality samples need only be collected on a triennial basis for participation in the recalculation of ambient ground water quality stipulated by the Santa Ana River Basin Plan (2004).

Recharge to Yucaipa Management Zone is either storm water or State Project water and is monitored for total recharge (volume), nitrate and total dissolved solids.

Table 7: Ground Water Monitoring Parameters in Beaumont, San Timoteo and Yucaipa Management Zones		
Field Measurements	Water Quality Parameters	
Temperature	Total Dissolved Solids (TDS)	Chloride
Conductivity	Nitrate-Nitrogen or Nitrate as nitrate	Fluoride
pH	Total Alkalinity (as $CaCO_3$)	Potassium
	Carbonate and Bicarbonate	Sodium
	Silica (as SiO_3)	Sulfate
	Total Hardness (includes Ca and Mg)	

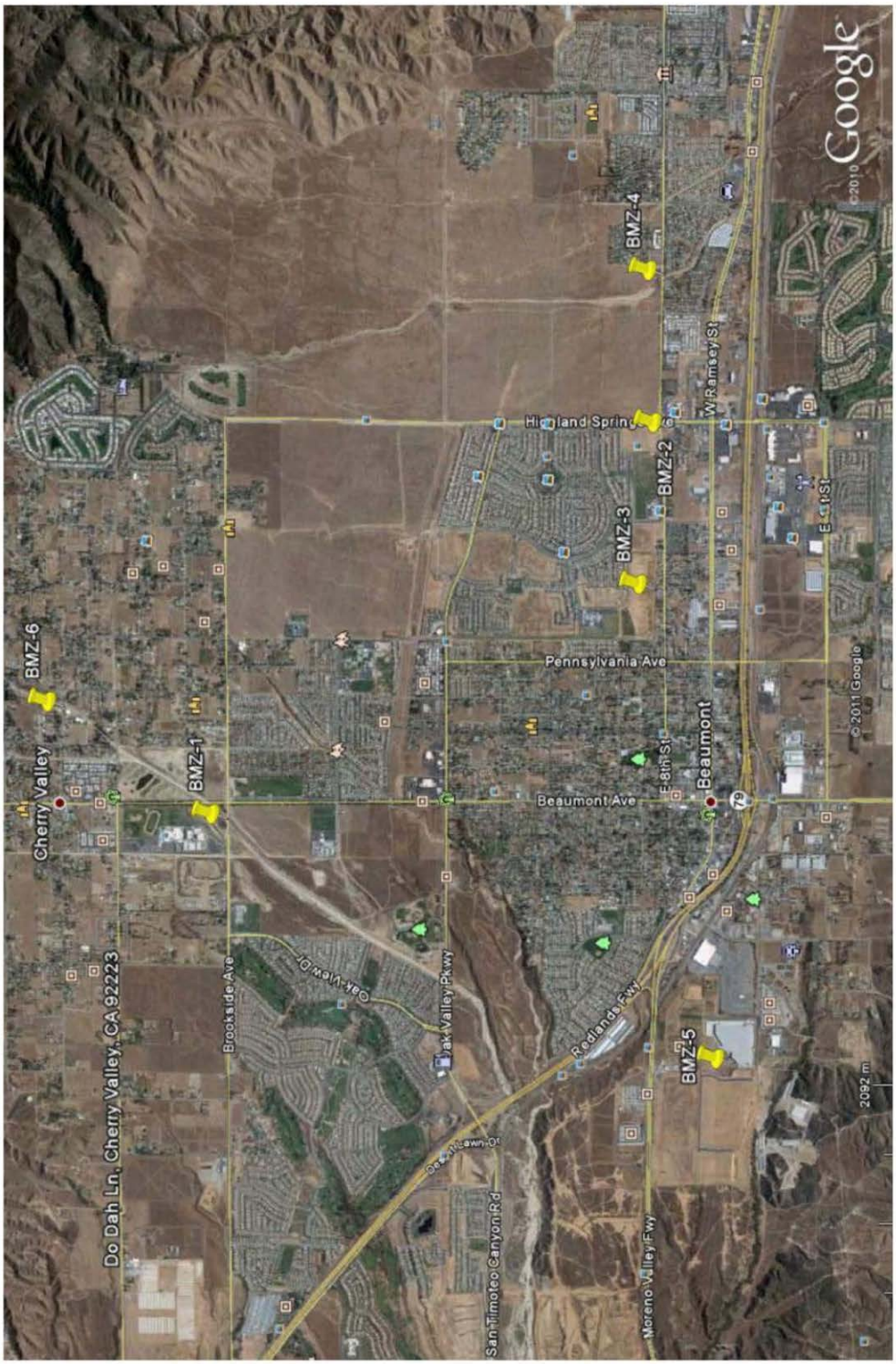
Reporting Requirements

A summary of surface water monitoring activities within the San Timoteo Management Zone is provided to the Santa Ana Regional Water Quality Control Board quarterly. Ground water levels are measured on a monthly basis and reported annually along with ground water quality results.

A complete report of all San Timoteo and Yucaipa Management Zones is combined with the City of Beaumont's similar compilation of their efforts within the Beaumont Management Zone and STMZ; the results are interpreted and presented to RWQCB annually on or before April 15 of each year.

Exhibit C

DRAFT MONITORING PROGRAM - SUBJECT TO MODIFICATION



Maximum Benefit Surface and Groundwater Monitoring Program for the Yucaipa, Beaumont and San Timoteo Management Zones

On January 22, 2004, the Santa Ana Regional Water Quality Control Board amended the Basin Plan with regard to TDS/Nitrogen Management in the Santa Ana River Watershed. In the Basin Plan amendment the Regional Water Quality Control Board found that appropriate beneficial use protection/maximum benefit demonstrations were made by the Yucaipa Valley Water District and the San Timoteo Watershed Management Authority to justify establishing alternative "maximum benefit" objectives for the Beaumont, San Timoteo and Yucaipa Groundwater Management Zones.

As part of the maximum benefit commitments, the Yucaipa Valley Water District, the members of the San Timoteo Watershed Management Authority, and the City of Beaumont have agreed to administer extensive and ongoing surface and groundwater monitoring programs in the Beaumont, San Timoteo, and Yucaipa Management Zones. With the dissolution of the San Timoteo Watershed Management Authority, it has become necessary to fully reevaluate the groundwater and surface water monitoring program and directly assign monitoring responsibilities to the City of Banning, City of Beaumont, Beaumont Cherry Valley Water District, the San Gorgonio Pass Water Agency, and the Yucaipa Valley Water District.

The following monitoring program has been developed to provide a common sense approach to ongoing water resource monitoring currently performed by each agency.

Beaumont, San Timoteo and Yucaipa Management Zone Surface Water Monitoring and Sampling Program

Surface water in the Yucaipa Management Zone is monitored for ground water recharge. Recharge by Yucaipa Valley Water District consists of State Project Water disbursement into either the Wilson Creek or Oak Glen spreading basins. Total recharge is determined by the amount of Imported State Water purchased and water quality samples are collected monthly for the duration of the discharge. The parameters for water quality are listed in Table 2. Storm water is monitored in a similar manner.

Pre-established surface water monitoring sites in the Beaumont, Yucaipa and San Timoteo Watershed are monitored bi-weekly for total discharge and field measurements (Table 2) consisting of temperature, pH, electrical conductivity, and dissolved oxygen content. Water quality samples are collected and analyzed for total inorganic nitrogen using ammonia, nitrate and nitrite as the dominant nitrogen species. Samples are also analyzed for total dissolved solids and turbidity. Additional alterations to current sites are provided in footnotes to Table 1.

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Table 1: Surface Water Monitoring Sites in Beaumont, San Timoteo, and Yucaipa Management Zones			
Site ID	Site Name	Discharge Description	Monitoring Agency
San Timoteo Management Zone			
YVWD-A	Above YVWD Recycled Water Discharge	San Timoteo Creek	YVWD
YVWD WWTP	YVWD Wastewater Treatment Facility	Recycled Water Effluent	YVWD
YVWD-B	Above confluence with Yucaipa Creek	San Timoteo Creek	YVWD
YVWD-C	Above levy system and concrete channel	San Timoteo Creek	YVWD
YVWD-D†	Concrete Channel at Barton Road	San Timoteo Creek	YVWD
YVWD-E	11055700 Gage	San Timoteo Creek	YVWD
YVWD-F	Santa Ana River above confluence	Santa Ana River	YVWD
YVWD-G	11059300 Gage, below confluence	Santa Ana River	YVWD
STWMA-2	San Timoteo Canyon Rd's 1st crossing w/ San Timoteo Creek	San Timoteo Creek & Ground water	Beaumont
Beaumont Management Zone			
BWWTP	Beaumont Wastewater TP #1	Recycled Water Effluent	Beaumont
STWMA-1*	Confluence of Noble and Marshal creeks	San Timoteo Creek	BCVWD
STWMA-3	Coopers Creek below BWWTP outfall	Coopers Creek	Beaumont
STWMA-4*	Above confluence w/ Noble Creek	Little San Gorgonio Creek	BCVWD
STWMA-5*	Above confluence w/ Marshal Creek at BCVWD recharge site	Noble Creek	BCVWD
STWMA-6/8	At Devil's Canyon	State Project Water	SGPWA
BMZ-5	Un-named creek behind Lowe's Distribution Center w/ mountain front runoff into BCVWD recharge facility	Un-named creek/stormwater runoff	BCVWD
STWMA-7	Oak Glen Road above entrance to BCVWD recharge facility	Stormwater/recharge	Beaumont
BMZ-6	At SGPWA recharge facility for State Project Water on Noble Creek	Noble Creek	BCVWD
BMZ-1	At Brookside Ave.	Mountain View Channel	BCVWD
BMZ-2	Stormwater detention pond @ Highland Springs & Eighth St	Stormwater/recharge	Beaumont
BMZ-3	Stormwater detention pond on Eighth St E/o Cherry Ave	Stormwater/recharge	Beaumont
BMZ-4	Where Smith Creek crosses Wilson St.	Smith Creek	Banning
Yucaipa Management Zone			
YMZ-1	Wilson and/or Oak Glen spreading basins	State Project Water for Groundwater recharge	YVWD
YMZ-2	Wilson and/or Oak Glen spreading basins	Stormwater runoff for Groundwater recharge	YVWD

*Previously monitored by City of Beaumont- BCVWD will assume responsibility pending approval by the Regional Board.

†Site has proven problematic for monitoring. Currently surface water entrance into concrete channel is covered with sediment. San Bernardino County Flood Control District estimates channel will be cleared by April 2012. Not recommending site for monitoring.

Table 2: Surface Water Monitoring Program Parameters		
Field Measurements	Bi-weekly water quality samples	Groundwater recharge
Temperature	Total Dissolved Solids (TDS)	Total Dissolved Solids (TDS)
Conductivity	Turbidity	Nitrate-Nitrogen
pH	Ammonia-Nitrogen	
Dissolved Oxygen	Nitrate-Nitrogen	
	Nitrite-Nitrogen	
	Total Inorganic Nitrogen (TIN)	

In addition to these surface sites, results from YVWD's Wochholz Regional Water Recycling Facility (WRWRF) and the City of Beaumont's WWTP no. 1 final effluent monitoring for monthly NPDES reporting and daily discharge are reported (Table 3).

Table 3: Wochholz Regional Water Recycling Facility and Beaumont Wastewater Treatment Plant parameters reported for surface water monitoring program			
Monthly WWTP reporting	Quarterly WWTP reporting		
Ammonia-Nitrogen	Arsenic	Barium	Boron
Nitrate-Nitrogen	Cadmium	Calcium	Cobalt
Nitrite-Nitrogen	Copper	Carbonate	Bicarbonate
Total Inorganic Nitrogen (TIN)	Lead	Chloride	Fluoride
12-month Average TIN	Iron	Mercury	Magnesium
Total Dissolved Solids (TDS)	Nickel	Manganese	Selenium
12-month Average TDS	Sodium	Silver	Sulfate
Total Hardness	Aluminum	Total Chromium	
Free Cyanide	Total Organic Carbon, TOC		Zinc
Total Suspended Solids (TSS)	Benzene	Dibromochloromethane	
Bis(2-ethylhexyl)phthalate	Bromodichloromethane		Chloroform

Groundwater Monitoring and Sampling in the Beaumont, San Timoteo and Yucaipa Management Zones

Ground water level measurements are taken monthly for all monitored wells in Beaumont, San Timoteo and Yucaipa Management Zones with one exception. It is not possible to measure ground water level at San Timoteo Management Zone GW-3, a privately owned well. Ground water levels are assumed to be similar to Yucaipa Valley Water District owned well, MW-3, located approximately 50 feet from GW-3. Yucaipa Valley Water District gathers data on ground water level and quality for those wells located within YMZ but not under its direct jurisdiction on an annual basis for inclusion in the annual RWQCB report.

Table 4: Groundwater Monitoring Sites in the San Timoteo Management Zone

Well ID	Description	Data type	Monitoring Agency
MW-1 (1221779)	San Timoteo Canyon Rd.	Level only	YVWD
MW-2 (1221780)	Alessandro St.	Level & Quality	YVWD
MW-3 (1221781)	Live Oak/San Timoteo Canyon	Level & Quality	YVWD
MW-4 (1221782)	above WWTP outfall pipe	Level & Quality	YVWD
MW-5A (1222103)	San Timoteo Canyon Rd.	Level & Quality	YVWD
MW-5B (1222104)	San Timoteo Canyon Rd.	Level & Quality	YVWD
MW-5C (1222105)	San Timoteo Canyon Rd.	Level & Quality	YVWD
GW-3 (1222106)	Live Oak/San Timoteo- Private well	Quality Only	YVWD
GL-8 (1201605)	San Timoteo Canyon Rd-orchard	Level only	YVWD
GL-6 (1003044)	O. Hudson property on Live Oak Canyon Rd	Level & Quality	YVWD
BH-9 (1220051)	1.25" pvc pipe-Live Oak Canyon	Level & Quality	YVWD
Heartland well (1208660)	Owned by City of Beaumont	Level & Quality	Beaumont
San Tim-1 (1222061)	Owned by City of Beaumont	Level & Quality	Beaumont
San Tim-2B/1 (1222079)	Owned by City of Beaumont	Level & Quality	Beaumont
San Tim-2B/2 (1222080)	Owned by City of Beaumont	Level & Quality	Beaumont
1207756	East Valley Golf Club: 335645117024201	Level only	Beaumont
Well 2 (1201582)	Fisherman's Retreat	Level & Quality	Beaumont
Well 1 (1003079)	Fisherman's Retreat	Quality Only	Beaumont
ONE (1003049)	El Casco Lake Ranch	Level & Quality	Beaumont
1003049 (1003048)	Chester Hildebrand property	Level only	Beaumont
BH-19 (1220052)	Metropolitan Water District well	Level & Quality	Beaumont
Well 1 (1201539)	MCM poultry	Level & Quality	Beaumont

Table 5: Ground Water Monitoring Program Sites in the Yucaipa Management Zone			
Site ID	Monitoring Entity	Site ID	Monitoring Entity
Pendleton	YVWD	WHWC 02A	Western Heights WC
Wilson B	YVWD	WHWC 03	Western Heights WC
YVWD 02	YVWD	WHWC 06B	Western Heights WC
YVWD 05	YVWD	WHWC 09	Western Heights WC
YVWD 06	YVWD	WHWC 10	Western Heights WC
YVWD 07	YVWD	WHWC 11	Western Heights WC
YVWD 10	YVWD	WHWC 12	Western Heights WC
YVWD 12	YVWD	WHWC 14	Western Heights WC
YVWD 13	YVWD	5th Ave 1	City of Redlands
YVWD 14	YVWD	CHICKNH4	City of Redlands
YVWD 16	YVWD	HOG CYN 2	City of Redlands
YVWD 18	YVWD	Redlands 10	City of Redlands
YVWD 24	YVWD	Redlands 11	City of Redlands
YVWD 25	YVWD	Redlands 12	City of Redlands
YVWD 26	YVWD	Redlands 13	City of Redlands
YVWD 27	YVWD	Redlands 14	City of Redlands
YVWD 27A	YVWD	Redlands 16	City of Redlands
YVWD 28	YVWD	Redlands 17	City of Redlands
YVWD 37	YVWD	Redlands 36	City of Redlands
YVWD 43	YVWD	Redland Hts	City of Redlands
YVWD 44	YVWD	Yucaipa Well	City of Redlands
YVWD 46	YVWD	Y-02	County of San Bernardino
YVWD 49	YVWD	Y-03	County of San Bernardino
YVWD 50	YVWD	Y-04	County of San Bernardino
YVWD 53	YVWD	Y-05	County of San Bernardino
YVWD 54	YVWD	Y-08	County of San Bernardino
YVWD 55	YVWD	Y-09A	County of San Bernardino
YVWD 56	YVWD	Y-09B	County of San Bernardino
GL-1	YVWD	Y-10A	County of San Bernardino
GL-2	YVWD	Y-10B	County of San Bernardino
GL-3	YVWD	Y-11A	County of San Bernardino
GL-4	YVWD	Y-11B	County of San Bernardino
GL-5	YVWD	Y-12	County of San Bernardino
		Y-13	County of San Bernardino
SMWC 01	South Mesa WC	Y-14	County of San Bernardino
SMWC 03	South Mesa WC	Y-15	County of San Bernardino
SMWC 05	South Mesa WC	Y-16	County of San Bernardino
SMWC 07	South Mesa WC	Y-17	County of San Bernardino
SMWC 09	South Mesa WC	Y-18	County of San Bernardino
SMWC 11	South Mesa WC	Y-19	County of San Bernardino
SMWC 12	South Mesa WC	Y-21	County of San Bernardino
SMWC 16	South Mesa WC	Y-22	County of San Bernardino

Table 6: Beaumont Management Zone Ground Water Monitoring Sites.		
Well ID	Description	Monitoring Entity
1	Beaumont Basin Well	BCVWD
3	Beaumont Basin Well	BCVWD
16	Beaumont Basin Well	BCVWD
21	Beaumont Basin Well	BCVWD
22	Beaumont Basin Well	BCVWD
23	Beaumont Basin Well	BCVWD
24	Beaumont Basin Well	BCVWD
25	Beaumont Basin Well	BCVWD
26	Beaumont Basin Well	BCVWD
29	Beaumont Basin Well	BCVWD
4A	Edgar Canyon Well	BCVWD
5	Edgar Canyon Well	BCVWD
6	Edgar Canyon Well	BCVWD
12	Edgar Canyon Well	BCVWD
19	Edgar Canyon Well	BCVWD
MW-1	BMZ Monitoring Well	BCVWD
MW-2	BMZ Monitoring Well	BCVWD
MW-3 Deep	BMZ Monitoring Well	BCVWD
MW-3 Shallow	BMZ Monitoring Well	BCVWD
MW-4 Deep	BMZ Monitoring Well	BCVWD
MW-4 Shallow	BMZ Monitoring Well	BCVWD
MW-5 Deep	BMZ Monitoring Well	BCVWD
MW-5 Shallow	BMZ Monitoring Well	BCVWD
Well 48	YVWD Production Well	YVWD
C2A	City of Banning Source Well	City of Banning
C3	City of Banning Source Well	City of Banning
M3	City of Banning Source Well	City of Banning

Ground water quality (Table 7) is measured annually in San Timoteo Management Zone and according to Title 22 of the California Code of Regulations cycle sampling schedule for production wells in the Yucaipa Management Zone.

Wells are sampled annually until 3 consecutive years of qualifying data are gathered. At which point water quality samples need only be collected on a triennial basis for participation in the recalculation of ambient ground water quality stipulated by the Santa Ana River Basin Plan (2004).

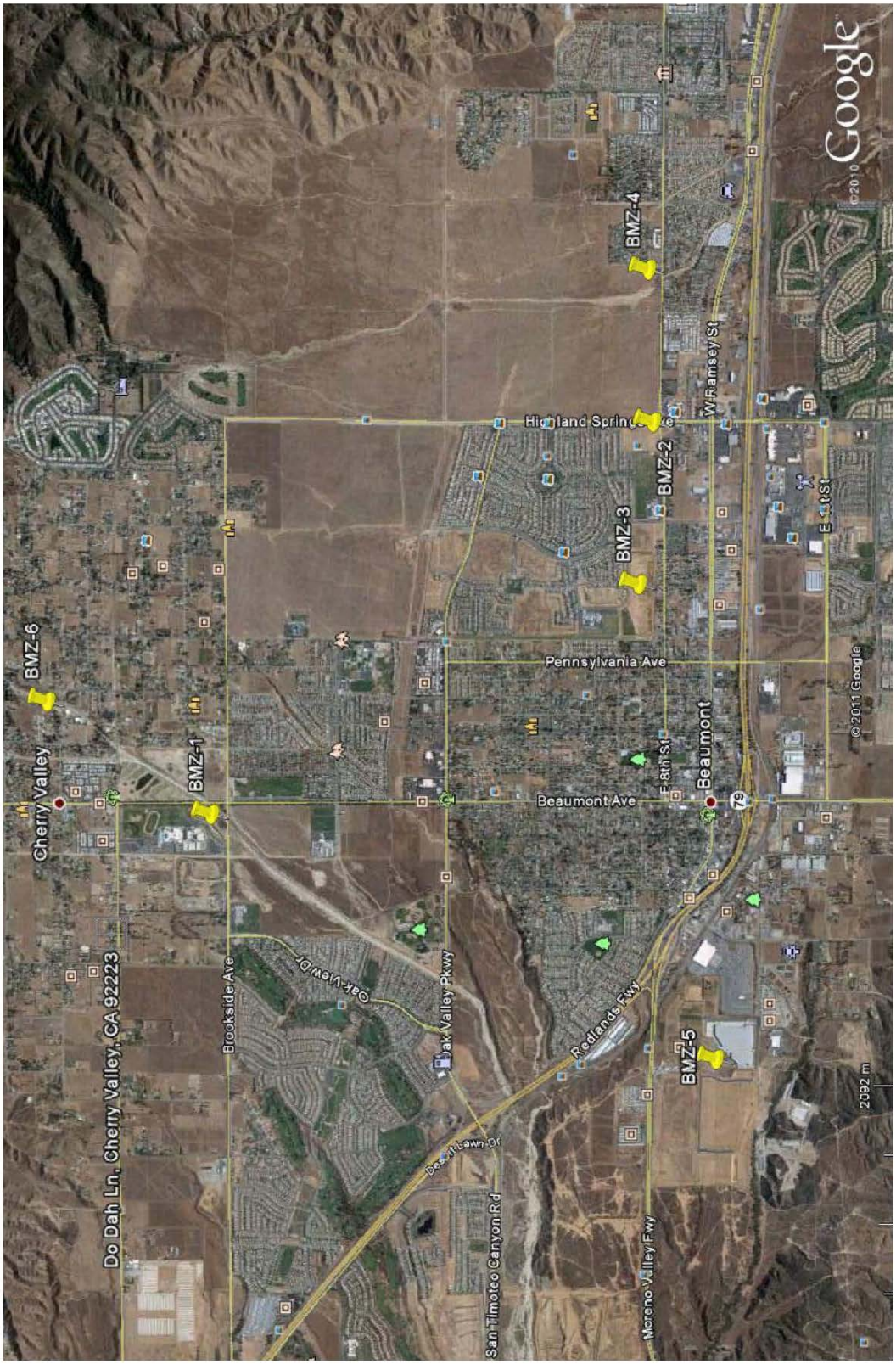
Recharge to Yucaipa Management Zone is either storm water or State Project water and is monitored for total recharge (volume), nitrate and total dissolved solids.

Table 7: Ground Water Monitoring Parameters in Beaumont, San Timoteo and Yucaipa Management Zones		
Field Measurements	Water Quality Parameters	
Temperature	Total Dissolved Solids (TDS)	Chloride
Conductivity	Nitrate-Nitrogen or Nitrate as nitrate	Fluoride
pH	Total Alkalinity (as $CaCO_3$)	Potassium
	Carbonate and Bicarbonate	Sodium
	Silica (as SiO_3)	Sulfate
	Total Hardness (includes Ca and Mg)	

Reporting Requirements

A summary of surface water monitoring activities within the San Timoteo Management Zone is provided to the Santa Ana Regional Water Quality Control Board quarterly. Ground water levels are measured on a monthly basis and reported annually along with ground water quality results.

A complete report of all San Timoteo and Yucaipa Management Zones is combined with the City of Beaumont's similar compilation of their efforts within the Beaumont Management Zone and STMZ; the results are interpreted and presented to RWQCB annually on or before April 15 of each year.


BMZ-4
BMZ-2
BMZ-3
BMZ-6
BMZ-1
BMZ-5
Cherry Valley
Beaumont
Beaumont Ave
Pennsylvania Ave
W Ramsey St
Highland Spring
E 8th St
Brookside Ave
Oak Valley Pkwy
Oak View Dr
Redlands Fwy
Do Dah Ln, Cherry Valley, CA 92223
San Timoteo Canyon Rd
Moreno Valley Fwy
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Secretary for
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Edmund G. Brown Jr.
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January 23, 2012

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COMMENTS ON THE PROPOSALS TO IMPLEMENT MAXIMUM BENEFIT COMMITMENTS FOR THE BEAUMONT GROUNDWATER MANAGEMENT ZONE

Gentlemen:

We have reviewed the *Proposed Regional Implementation of Maximum Benefit Commitments for the Beaumont Management Zone (Preliminary Draft)* submitted by the City of Banning, Beaumont Cherry Valley Water District, San Gorgonio Pass Water Agency and Yucaipa Valley Water District (hereinafter, the YVWD *et al* proposal) dated September 20, 2011, and the City of Beaumont's comment letter and proposal for a maximum benefit program (hereinafter, the Beaumont proposal) dated November 23, 2011. Both the YVWD *et al* and Beaumont proposals were prepared as a final element in compliance with the California Water Code Section 13267 Order issued in September 2010, to support permit application and revision for new discharge and recharge

projects in the Beaumont groundwater management zone (GMZ), and to address changes in stakeholder responsibilities for carrying out the maximum benefit commitments that were identified in the 2004 Basin Plan Amendment. Both the YVWD *et al* and Beaumont proposals were submitted after the completion of a modeling analysis conducted by Wildermuth Environmental Inc. on behalf of all the agencies named in this letter (May 2011). The model considered the new water planning data provided by the agencies to generate 30-year projections of the ambient total dissolved solids (TDS) and nitrate-nitrogen concentrations for the Beaumont GMZ under 6 scenarios and 8 sub-scenarios. The projections show that the ambient TDS concentration for the Beaumont GMZ will increase over time, with the worst-case scenario (when all agencies use recycled water without compliance with Basin Plan objectives or compliance with the recycled water recharge regulations by the California Department of Public Health) resulting in the TDS concentration exceeding the maximum benefit objective of 330 mg/L in approximately 2027. Under the best case scenario, *i.e.*, when recycled water is desalted to the maximum benefit TDS objective of 330 mg/L beginning in 2020, the ambient TDS concentration of the Beaumont GMZ is projected to exceed the objective in 2032.

We have the following comments on the submitted proposals:

The YVWD *et al* Proposal

The YVWD *et al* proposal consists of a regional approach with multi-agency participation. Specifically, the proposal recommends that the 10-year running average TDS quality of recycled water, used for irrigation, surface discharge or recharge (planned or incidental), be better than or at the maximum benefit objectives of the particular GMZ where the recycled water is used or applied, *i.e.,*

- 370 mg/L for Yucaipa GMZ,
- 400 mg/L for San Timoteo GMZ,
- 330 mg/L for Beaumont GMZ.

This proposal relies on the fact that the reverse osmosis system at the Wochholz Regional Water Recycling Facility will be operational in **January 2014**. Compliance would be measured in the recycled water system for irrigation use and/or at the point of discharge for discharge and recharge activities. The proposal proponents expect to achieve compliance by blending or desalting the recycled water supply.

All agencies that have signed onto the YVWD *et al* proposal (City of Banning, Beaumont Cherry Valley Water District, San Gorgonio Pass Water Agency and Yucaipa Valley Water District) have agreed to continue implementing the commitments made by the now dissolved San Timoteo Watershed Management Authority in order to maintain the maximum benefit objectives in the Beaumont GMZ. The commitments include surface and groundwater monitoring and reporting, building a desalter and brineline facility, providing recycled water for non-potable water supply, recharging recycled water and determining ambient groundwater quality. These commitments are the same as those

specified in the Basin Plan Table 5-10a; however, the YVWD *et al* proposal does not address the commitments specific to the City of Beaumont's recycled water as specified in Table 5-10a.

We believe the YVWD *et al* proposal is viable and provides reasonable assurance for protection of the water quality and beneficial uses of the Beaumont GMZ for a reasonable time period (*e.g.*, 20 years). We encourage all agencies that have signed on to this proposal to formalize the agreement and to submit a signed agreement to the Regional Board by June 30, 2012, demonstrating how these agencies intend to share the responsibility and financial burden to implement these commitments.

The Beaumont Proposal

As indicated in the Beaumont proposal, the City of Beaumont has complied with some of the maximum benefit commitments, such as surface and groundwater monitoring and reporting, ambient groundwater quality determination, denitrification facilities upgrade, and reducing the discharge of effluent to the unlined portion of San Timoteo Creek. However, the City of Beaumont has not made progress toward compliance with other commitments, such as providing water for non-potable water supply, increasing recycled water recharge and planning for recycled water quality improvement, nor does the Beaumont proposal include these commitments. The Beaumont proposal also includes a plan by the City to address the discharge of recycled water in San Timoteo Creek that impacts the underlying San Timoteo GMZ (which has no assimilative capacity) by pumping water from San Timoteo GMZ and discharging/recharging that water into the Beaumont GMZ without obtaining authorization from the Regional Board and the California Department of Public Health. The pumped water would have a TDS concentration that exceeds the maximum benefit objective of the Beaumont GMZ and the proposal thus relies on Beaumont's use of assimilative capacity in this GMZ based, evidently, on its implementation of maximum benefit commitments to date. However, the Regional Board has not made a decision regarding allocation of the available assimilative capacity in the Beaumont GMZ to this operation, and, as discussed below, Regional Board staff will not recommend it.

Significant opportunities have been provided over the past year for meaningful participation by the City in modeling work and discussions with the other parties regarding the development of a new maximum benefit program for the Beaumont GMZ. Board staff believes that the City has failed to avail itself of these opportunities. For example, the City did not provide meaningful comments on the modeling effort until the model report was finalized. Further, the City's representatives were not authorized to make decisions necessary to forward progress and resolution of this matter. The Beaumont proposal seems mainly to benefit the City of Beaumont, *i.e.*, to accommodate its discharge of effluent from the wastewater treatment plant, without other affirmative actions needed to address GMZ/water supply quality and reliability in the San Gorgonio Pass region. These actions include providing a source of non-potable supply and enhancing stormwater capture, neither of which is incorporated in the Beaumont proposal. (We realize that the proposal incorporates a plan for recycled water use that

relies on past agreements with other parties. However, we understand that the other parties contend that the terms of these agreements have not been satisfied.) On behalf of the City, Mark Wildermuth indicated at one of the multi-agency meetings that the City's discharge of water pumped from the San Timoteo GMZ into the Beaumont GMZ would reduce the City's obligation to import State Water Project water to address over-pumping in the Beaumont GMZ, and that this should be considered to provide maximum benefit to the people of the state. Once again, however, this proposal relies on the use of assimilative capacity which has not been allocated to the City. Furthermore, it ignores the model projections that show that even with recycled water at maximum benefit objective quality, the TDS quality of the GMZ is expected to exceed the objectives. In light of this evidence, we believe that the YVWD *et al* proposal, which employs desalting and blending, is a more prudent approach to the long-term protection of groundwater quality and supply reliability. In contrast, the City's proposal merely authorizes continued wastewater disposal and reduces the City's obligations related to over-pumping, but postpones any meaningful action to improve quality and reliability.

Regional Board staff believes that the Beaumont proposal does not satisfy the goals of a maximum benefit program and, absent substantive improvement, will recommend that the antidegradation objectives be applied to regulation of the City's discharges. In light of the City's participation in implementing some of the maximum benefit commitments to date, Board staff will not recommend that the City be required to mitigate past discharges in excess of limitations based on the antidegradation objectives. We strongly encourage the City of Beaumont to join with the other water resource management agencies to implement a truly regional water and salt management plan that recognizes recent water supply planning activities.

Comments on the Wasteload Allocation in the Beaumont GMZ

Table 5-5 of the Basin Plan specifies the TDS and nitrate-nitrogen wasteload allocation for all POTWs that discharge to the Santa Ana River and its tributaries in order to assure the protection of the municipal supply beneficial use for the Santa Ana River and underlying GMZs and to assure that the water quality objectives for these receiving waterbodies are met. Currently, the City of Beaumont is authorized to discharge to surface waters (Noble Creek (Discharge Point #008), unnamed tributary to Marsh Creek (Discharge Point #007) and Cooper's Creek (Discharge Point #001)) with effluent limits equal to the wasteload allocation (Orders No. R8-2009-0002 and No. R8-2006-0003). Cooper's Creek flows into San Timoteo Creek while the other tributaries are dry, and during most of the year, the effluent flows never reach San Timoteo Creek or leave the Beaumont GMZ. Instead, the recycled water discharged at Discharge Points #007 and #008 recharges the Beaumont GMZ and rarely reaches San Timoteo Creek or the Santa Ana River. Therefore, the available evidence indicates that for the discharges from the City of Beaumont, the TDS and TIN limits associated with the wasteload allocation should not apply, and the effluent limits for Discharge Points #007 and #008 should be revised to be the same as the TDS objective of the Beaumont GMZ. As noted above, because the City of Beaumont has not proposed an acceptable maximum benefit program nor chosen to be an active participant in the YVWD *et* al proposal,

Board staff will recommend to the Regional Board that the City's discharges be regulated pursuant to antidegradation objectives. Further, Regional Board staff is in the process of finalizing the wasteload allocation Basin Plan Amendment. Board staff proposes that Beaumont (as well as YVWD) be removed from the wasteload allocation and that instead, compliance and permit limits be based strictly on the underlying groundwater objectives and assimilative capacity findings.

To summarize, Board staff intends to prepare a Basin Plan amendment to implement the findings of the modeling studies and updated Maximum Benefit proposal as submitted by YVWD and cooperating agencies (the YVWD *et al* proposal). Revised waste discharge requirements for YVWD and the City of Banning will be developed that are consistent with the proposal. The recommended, revised wasteload allocation will also be updated to reflect these findings. Unless and until the City of Beaumont elects to implement or participate in an acceptable maximum benefit program, the proposed Basin Plan amendment will reflect the City's discharge obligations pursuant to antidegradation objectives, and Board staff will recommend waste discharge requirements for the City accordingly.

If you have questions on these comments, please feel free to contact me at (951)782-3286 or you may contact Dr. Cindy Li of my staff at (951) 782-4906.

Sincerely,

Kurt V. Berchtold
Executive Officer

cc: Regional Board
David Rice, Office of Chief Counsel, SWRCB

Yucaipa Valley Water District

Workshop Memorandum 12-070

Date: **March 27, 2012**

Subject: **Modification No. 5 to the Bureau of Reclamation Cooperative Agreement for Funding of the Regional Brineline Project**

In March 2010, the District received a funding grant in the amount of $2.286 million from the Bureau of Reclamation for Phases 1 and 2 of the Yucaipa Valley Regional Brineline Project [Director Memorandum No. 10-021]. This federal grant is in addition to the grant funding received from Proposition 50 for the three phases of the project (Phases 1, 2 and 3).

On September 8, 2010, the Yucaipa Valley Water District received notification from the Department of the Interior, Bureau of Reclamation of an additional $2 million grant from the American Recovery and Reinvestment Act for Phase 3 of the Yucaipa Valley Regional Brineline. This additional funding was documented as Modification No. 1 to the Agreement with the Bureau of Reclamation.

Since this time, the District has received additional modification requests to the grant Agreement to provide for administrative costs for the Bureau of Reclamation. Modification No. 2 was unilaterally executed by the Bureau of Reclamation on September 21, 2010. Modification No. 3 was approved by the Board on March 2, 2011 and Modification No. 4 was approved on May 18, 2011.

On March 19, 2012, the District received Modification No. 5 for the deobligation of an additional $20,000.

In order to maintain proper documentation for this project and financial audits, the District staff recommends that the Board approves Agreement Modification No. 5.

Summary of Administrative Funds for the U.S. Bureau of Reclamation

Original U.S. Bureau of Reclamation Grant	$ 2,137,000
Second U.S. Bureau of Reclamation Grant – Modification No. 1	$ 2,000,000
Administrative Fund Obligation – Modification No. 2	$ 75,000
Administrative Fund Deobligation - Modification No. 3	($ 16,000)
Administrative Fund Deobligation - Modification No. 4	($ 30,000)
Administrative Fund Deobligation - Modification No. 5	($ 20,000)