

## ● **Culmination Report for Water Use Efficiency Compliance for Annexations 1994-2004**

### Summary

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Report on the analysis of compliance with the water use efficiency guidelines for annexation.

### Attachments

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Attachment 1: Culmination Report for Water Use Efficiency Compliance for Annexations 1994-2004

### Detailed Report

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**Attachment 1** is a report on annexations taking place from 1994 to 2004. This report is required as part of the October 2004 board action that revised Administrative Code Section 3107, Water Use Efficiency Guidelines for Annexations. The report assesses the effectiveness of water use efficiency measures required by these past annexations.

This report:

- Summarizes the annexations that occurred from 1994-2004;
- Provides an overview of the water use efficiency requirements placed on the annexed lands by the member agencies; and
- Includes five case studies, one from each of the annexing agencies.

There were 70 annexations during the period covered by the report. The total area annexed to Metropolitan's service area was 23.5 square miles. This was an increase to Metropolitan's service area of less than one half of one percent over the 10-year period.

Through the case studies provided by member agencies, staff concludes that there was substantial compliance with the water use efficiency requirements. Each of the five annexing agencies provided a case study highlighting the efforts made at the annexed land to meet the water use efficiency guidelines. Staff worked in collaboration with the annexing agencies to select the case studies. The following table shows the focus of each case study:

Member Agency	Case Study	Water-Use Efficiency Highlighted
Calleguas Municipal Water District	Port Hueneme and Santa Clara Cemetery	Modification of design of landscape system, turf, and maintenance.
Eastern Municipal Water District	Superior Ready Mix	Recycled water use for industrial process.
San Diego County Water Authority	Olympic Training Center Boathouse	Recycled water for irrigation and computer controlled landscape irrigation.
Upper San Gabriel Valley Municipal Water District	Mountain Cove Development	Use of groundwater and surface water to reduce Metropolitan demands.
Western Municipal Water District	49th Fringe Area Annexation	Installation of dual-distribution system to use recycled water for irrigation.

Based on the case studies and the information provided on the experience of the annexing agencies on the total of 70 annexations, the following conclusions have been made:

- Seventy annexations from 1994 through 2004 increased Metropolitan's service area by 23.5 square miles, which is an increase of 0.45 percent.
- The water use efficiency guidelines effected changes in the water use planning of the annexed areas.
- The five case studies typify the type of compliance with the annexation code requirements by each of the member agencies. This report concludes that there was substantial compliance with the water use efficiency requirements for annexations occurring from 1994 through 2004.

In October 2004, the water use efficiency guidelines for annexation were updated, as a result of an extensive Metropolitan staff effort working jointly with the member agencies. The new water use efficiency guidelines broaden requirements for annexation by requiring water stewardship throughout the annexing agency's service area and reporting on these efforts for six years following their latest annexation.

**CULMINATION REPORT  
FOR WATER USE EFFICIENCY  
COMPLIANCE FOR  
ANNEXATIONS 1994-2004**

The Metropolitan Water District  
of Southern California

700 North Alameda Street

Los Angeles, CA 90012

*January 10, 2006*

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## **Introduction**

In 1992, Metropolitan's Board of Directors adopted water use efficiency guidelines for board-approved annexations (bringing new lands into Metropolitan's water service area). The water use efficiency guidelines reinforced the importance of water use efficiency to our member agencies that are annexing real property. These guidelines were in effect from 1994 through 2004. In October of 2004, the Board adopted changes to the water use efficiency guidelines by revising Section 3107 of the Administrative Code. This report was required as part of that board action. The report assesses the effectiveness of water use efficiency measures of these past annexations. From 1994 through 2004, 70 annexations were submitted from five member agencies for a total of 23.5 square miles.

The water use efficiency guidelines required the member agencies to submit reports on successful implementation of the water use efficiency requirements upon request from Metropolitan. This report:

- Summarizes the annexations that occurred in that timeframe;
- Provides an overview of the water use efficiency requirements placed on the annexed lands by the member agencies; and
- Includes five case studies, one from each of the annexing agencies. The case studies are representative of the implemented water use efficiency guidelines in the annexed lands during this period.

This report further documents the changed water use efficiency guidelines adopted in 2004 and the new reporting requirements for member agencies annexing under the new guidelines.

**Annexation Overview 1994-2004**

The water use efficiency guidelines for 1994-2004 (Exhibit A) required the following actions “when practicable” and for areas being annexed:

- Incorporating water conservation measures into development plans;
- Maximizing use of local groundwater, surface water, and recycled water;
- Using recycled water or other non-potable water on all golf courses, decorative lakes; and other landscaped areas exceeding one acre;
- Using recycled water and other non-potable supplies for industrial processes and other suitable uses;
- Constructing a dual distribution system to accommodate recycled water supplies if such supplies do not presently exist;
- Applying conservation "best management practices" in all new and existing developments within the annexed area;
- Constructing at least one model home in each new development demonstrating a water conserving landscape;
- Being able to sustain a seven-day interruption in service from Metropolitan; and
- Reporting to Metropolitan compliance with these guidelines.

There were 70 annexations completed under these guidelines. Exhibit B is a table showing each individual annexation. A review of the 70 annexations showed that Metropolitan’s service area grew by 23.5 square miles from these annexations.

The process for board approval of water use efficiency plans involved several steps. Agencies submitted a water use efficiency plan to Metropolitan for each annexation. Metropolitan reviewed the water use efficiency plans for compliance with the water use efficiency guidelines. Draft water use efficiency plans submitted by the member agencies were returned an average of two-three times before staff accepted the final water use efficiency plans. Metropolitan’s Board then considered and approved the plans. Metropolitan has retained the water use efficiency plans for past annexations on file.

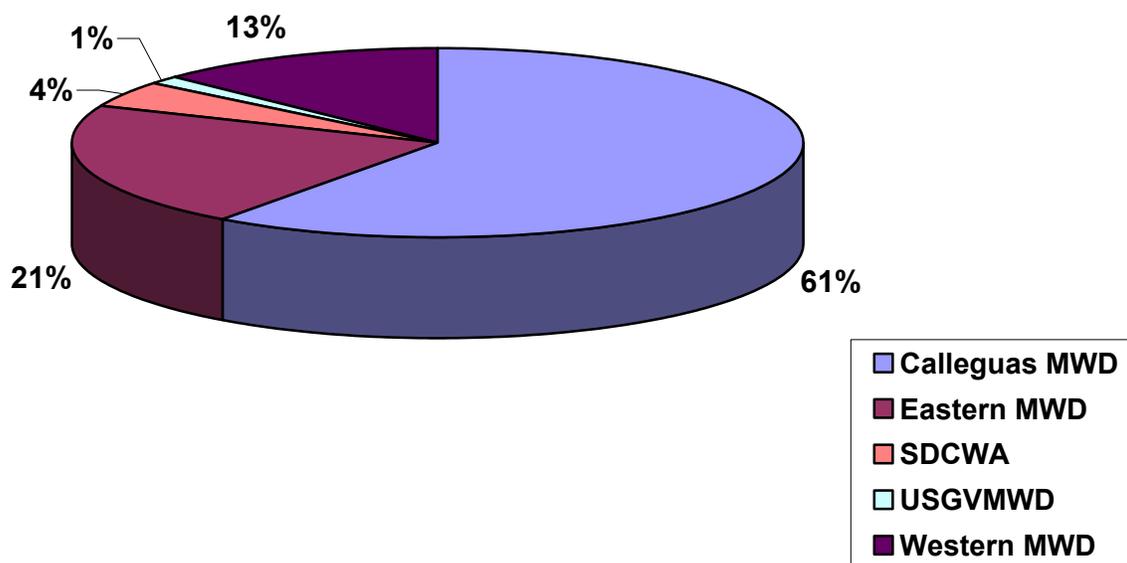
The water use efficiency guidelines required that the agencies report compliance with these guidelines to Metropolitan. However, the nature, duration, and frequency of reporting were not specified. Once the property became annexed into Metropolitan’s service area, typically it was sold to a developer, and through this change in ownership, it became difficult for agencies to implement reporting requirements from the new owners. There is substantial anecdotal evidence that the annexed areas complied and at the same time agencies made great strides in the areas of recycled water and residential conservation.

The 70 annexations breakdown by agency as follows:

Member Agency	Number of Annexations	Total Area Annexed (Sq. miles)	% Increase in Member Agency Area	% Increase in MWD Area	Member Agency % of Total MWD Area
Calleguas MWD	42	16.03	4.39	0.31	7.06
Eastern MWD	15	1.61	0.30	0.03	10.44
San Diego CWA	3	0.03	0.00	0.00	27.43
USGVMWD	1	0.03	0.02	0.00	2.78
Western MWD	9	5.76	1.11	0.11	9.97
<b>Totals</b>	<b>70</b>	<b>23.46</b>		<b>0.45</b>	<b>57.68</b>

As shown, the total annexed area is 23.5 square miles. This is growth of 0.45 percent of Metropolitan’s service area over a 10-year period. The following chart shows the percent of annexations of the total that were in each of the five agencies.

**Percent of Annexations by Member Agency**



## **Case Studies**

The five member agencies proposing annexations from 1994-2004 have provided information on their annexed properties and have each provided a case study highlighting one annexation in their service area. The member agencies indicated that these five case studies are representative of the types of efforts the member agencies have put forward. The full reports are in Exhibit C.

### **Calleguas Municipal Water District**

Calleguas Municipal Water District reported on the status of all 40 annexations that took place from 1994-2004. Calleguas also provided detailed information on the annexation of Port Hueneme and a case study of a cemetery that was annexed. The cemetery annexation shows how the water use efficiency guidelines led to changes in the management of the irrigated areas.

Port Hueneme was Metropolitan's 32nd annexation, which was approved by Metropolitan's Board in 1996. Port Hueneme was fully developed before annexing, so Calleguas could not condition any new development. However, Calleguas has retrofitted the area with ultra-low-flush toilets in both residential and commercial properties. Prior to 1992, individual customers were not metered. Since 1992, all new connections are metered and installation of meters to all customers is underway and expected to be complete by 2009. Once the meters are installed, they plan to convert their billing to conservation rates.

Santa Clara Cemetery was Metropolitan's 84th annexation, which was approved by Metropolitan's Board in 2004. Santa Clara Cemetery was annexed to expand part of an existing cemetery, where the majority of the land had been agricultural. The proposed annexation would convert agricultural land to primarily turf, which would have increased the water needed. Calleguas and Metropolitan wanted to require the use of reclaimed water, but there was no reclaimed water available in the area. Instead, the design of the landscape system, turf, and maintenance were modified. They replaced the existing irrigation system with high-efficiency sprinkler heads, installed moisture sensors and a smart irrigation controller. In addition, all turf areas were planted with a drought-tolerant hybrid variety of grass. A comprehensive turf management program was implemented. These modifications greatly reduced the new water demand from the Calleguas and Metropolitan systems for this annexation.

### **Eastern Municipal Water District**

Eastern Municipal Water District reported on the status of all 15 annexations that took place from 1994-2004. Eastern also provided specific information on an annexation that plans to use recycled water for industrial purposes as a result of the water use efficiency guidelines.

Superior Ready Mix was Metropolitan's 74th fringe area annexation, which was approved by Metropolitan's Board in 2003. Superior Ready Mix will be a concrete production plant. Recycled water will be used when construction is complete. The site will be connecting to an existing recycled water pipeline.

### **San Diego County Water Authority**

San Diego County Water Authority had two annexations that took place from 1994-2004. SDCWA provided a case study for the Olympic Training Center Boathouse (Boathouse), which used recycled water, implemented conservation measures, and incorporated a xeriscape demonstration garden to fulfill the water use efficiency guidelines.

Metropolitan's Board approved the Boathouse annexation in 2004. The Boathouse is a training center for Olympic athletes. Seventy percent of the site is irrigated with recycled water produced by Otay Water District. The Boathouse was equipped with all water conserving fixtures, including ultra-low-flush toilets and low-flow showerheads. The irrigation system is a computer-controlled system to minimize water use. In addition, a xeriscape demonstration garden was installed which educates visitors to the training center.

**Upper San Gabriel Valley Municipal Water District**

Upper San Gabriel Valley Municipal Water District had one annexation that took place from 1994-2004. Upper District provided a case study for that annexation, which is the Mountain Cove Development.

Metropolitan's Board approved the Mountain Cove Development annexation in 2002. The Mountain Cove Development is a residential development. The annexed area was only a portion of the project. The majority of the project site was already within the boundaries of Upper District. The development uses water only from groundwater and local surface water and does not rely on water from Metropolitan or Upper District. This complies with the water use efficiency guideline requirements to minimize annual and peak demand. In addition, all homes were equipped with water conserving plumbing devices.

**Western Municipal Water District**

Western Municipal Water District had 16 annexations that took place from 1994-2004. Western also provided a case study of two single-family home developments where recycled water is being used for all irrigation.

Metropolitan's Board approved the 49th Fringe Area annexation in 2004. The 49th Fringe Area annexation included two single-family home tracts. One tract has been built-out and homeowners are living in the homes. These homes are on parcels that are approximately 2.5 acres each. The homes are five to six thousand square feet. Total water demand for this type of development is usually greater than typical residential development due to the increased home size and larger landscaped area around the home. Metropolitan conditioned this annexing property to utilize recycled water for irrigation purposes other than household use. The developer constructed a separate potable and recycled water system to serve these developments. The individual homeowners use and manage recycled water for irrigation on their property, per their agreements with Rancho California Water District. The common area has two reclaimed water meters for irrigation. The second tract has not been built, but will have the same dual water system as the first tract.

**Summary of Case Studies**

These five case studies and the other data provided in the reports from the member agencies give evidence that the water use efficiency guidelines effected changes in the water use planning of the annexed areas. Each case study demonstrates compliance with at least one of the elements required in the water use efficiency requirements as shown in the following table. Not all elements would apply to every site, since some are dependent on availability of local groundwater or recycled water.

**Demonstration of Compliance of Case Studies by Element**

<b>Water Use Efficiency Requirement</b>	<b>Calleguas</b>	<b>Eastern</b>	<b>SDCWA</b>	<b>Upper District</b>	<b>Western</b>
Conservation measures in development plans	✓	✓	✓	✓	✓
Maximized use of local groundwater, surface water, and recycled water				✓	
Use of recycled water on landscaped areas exceeding one acre			✓		✓
Use of recycled water for industrial processes		✓			
Construction of a dual distribution system					✓
Applied conservation "best management practices"	✓	✓	✓	✓	✓

### **Comparison of Old and New Water Use Efficiency Guidelines**

In October 2004, the water use efficiency guidelines were changed. The most significant changes under the new guidelines require that agencies:

1. Ensure water use efficiency throughout the annexing agency's service area.
2. Be in good standing with the California Urban Water Conservation Council.
3. Independently fund conservation programs targeted at all development within its service area.
4. Require, to the greatest extent allowed by law, the use of recycled water whenever is it available.
5. Submit annual reports on water use efficiency for six years following their latest annexation.
6. Face limitations on their ability to annex additional lands if they fail to report to Metropolitan on an annual basis.

The new water use efficiency guidelines broaden the impact of the requirements by addressing water stewardship throughout the annexing agency's service area. The five agencies included in this report comprise nearly 58 percent of Metropolitan's service area.

### **Conclusions**

Based on the case studies and the information provided on the experience of the annexing agencies on the total of 70 annexations, the following conclusions have been made:

- Seventy annexations from 1994 through 2004 increased Metropolitan's service area by 23.5 square miles, which is an increase of 0.45 percent.
- The water use efficiency guidelines effected changes in the water use planning of the annexed areas.
- The five case studies typify the type of compliance with the annexation code requirements by each of the member agencies. This report concludes that there was substantial compliance with the water use efficiency requirements for annexations occurring from 1994 through 2004.

## **Exhibit A**

# **§. Water Use Efficiency Guidelines**

## Exhibit A

### § 3107. Water Use Efficiency Guidelines

To the extent practicable, local water purveyors and owners of parcels, as appropriate, within an area for which a request for annexation is considered by the Board, shall comply with the following:

(a) Annual water demand shall be minimized by incorporating water conservation measures into the development plans. Use of local groundwater, surface water, and reclaimed wastewater supplies shall be maximized to reduce demands on the District.

(b) Peak demands on the District shall be minimized by construction and operation of local storage and groundwater production facilities. In cases where the annexed area is served by an existing water delivery system, this provision may be satisfied by showing that these facilities will be added to the existing system.

(c) Reclaimed wastewater or other non-potable water shall be used on all golf courses; decorative lakes; and other landscaped areas exceeding one acre, including multi-family complexes, commercial and industrial developments, and similar areas. Reclaimed wastewater and other non-potable supplies shall be used for industrial processes and other suitable uses. If such supplies do not presently exist, a dual distribution system shall be constructed to accommodate such supplies when they become available in the future.

(d) "Best management practices" conservation measures, as identified by the District from time to time, shall be applied in all new and existing developments within the annexed area. At least one model home constructed in each new development within the annexed area shall demonstrate a water conserving landscape.

(e) Local storage, groundwater production capacity, system interconnections, and other measures shall be able to sustain a seven-day interruption in service from the District.

The member public agency within which the annexed area is located shall be responsible for assuring compliance with these provisions and shall report to the District regarding such compliance.

M.I. 38538 – October 9, 1990; amended by M.I. 39787 - August 20, 1992; amended by M.I. 41898 - May 14, 1996.

**Exhibit B**

**List of Annexation Water Plans**

# Water Demand on Recently

## Annexation Water Plans (1994-2004)

## Annexed Area

Annex.	Common Name	Agency	Date Comp	Reso Number	Annex Fees	Gross Area	Net Area	Retail Water Demand	Local Supply	MWD Demand	Status	Growth Trends	
1	39th Annexation	Patterson Park Partners (Laguna Pacific)	Calleguas	2/2/1994	927	\$160,838.08	83.14	47.77	85.36	28.17	57.19	Built out with 214 RES-SFD	
2	40th Annexation	Oxnard Union High School	Calleguas	5/16/1994	8436	\$112,079.24	55.55	52.57	107.6	35.9	71.7	Built out with public high school	
3	45th Annexation	Parcel A - Bank of Montecito (Lopes & Reyna)	Calleguas	8/16/1994	8447	\$7,366.52	1.11	1.11	568 HCF		568 HCF	Remains vacant	
4	41st Annexation	Rancho Victoria Plaza	Calleguas	8/16/1994	8445	\$48,215.64	20.27	20.27	21.2	7.1	14.1	Approximately 20 % built out with retail commercial. Remainder may become residential	Commercial Development
5	43rd Annexation	Summerfield Homes	Calleguas	8/16/1994	8446	\$103,852.96	78.56	54.35	95,280 GPD		95,280 GPD	Built out with 256 RES-SFD and 6 acre public park	
6	46th Annexation	Vista Properties (Parcels A-D)	Calleguas	9/27/1994	8452	\$74,439.24	44.99	32.57	191.6	95.8	95.08		Industrial Use
7	38th Annexation		Calleguas	12/19/1994	8458	\$241,175.54	243.76	97.43	77.46	83	12.5		213 Single Family Homes
8	44th Annexation		Calleguas	12/19/1994	8459	\$55,444.60	42.6	28.96	29,253 HCF		29,253 HCF		
9	47th Annexation	Oxnard Lands	Calleguas	9/19/1995	8477		106.5	91.44	471.72	235.86	235.86	Parcel A= Approx 2/3 built out with multi-family residential; Parcel B= Approx 80% built out with industrial projects; Parcel C= 100% built out with industrial projects; Parcel D=Approx 15% build out with a single industrial project	35.6 Residential 11.5 Business Park 46.6 Industrial
10	48th Annexation	Target, et al.	Calleguas	12/21/1995	8486	\$165,445.78	87.24	68.084	345.63	172.81	172.81	Built out as retail shopping center	A= Elementary School B= Industrial-Planned Development C= Commercial Plan Dev. D= Industry. Plan Dev.
11	32nd Annexation	Port Hueneme	Calleguas	3/5/1996	8487	\$1,206,744.39	7906	7906	1850	0	1850	City annexed as a whole-virtually 100% built out at time of annexation. Only changes are minor redevelopment projects	Built Out
12	49th Fringe	Beazer Homes	Calleguas	12/18/1996	8516	\$11,269.82	2.81	2.49	60.6	30.3	30.3	Built out as residential subdivision	20 Single family homes
13	52nd Parcel A	Seabreeze/UDC Homes	Calleguas	11/4/1997	8556 & 8557	\$75,037.52	31.18	26.59	130	65	65	Built out as a residential subdivision	158 single family residences
14	53rd Annexation	Secret Cove	Calleguas	12/19/1997	8569 & 8570	\$43,573.92	14.14	14.14	28	14	4	Built out as a residential subdivision	56 SFR
15	52nd Parcel B	Murdock	Calleguas	12/23/1997		\$30,598.40	10.3	10.3	5.07	0	5.07	Built out as a single residence estate	Private Residence
16	51st Annexation	Lombard/Oxnard Union High School Reorg.	Calleguas	6/9/1998	8579	\$156,125.92	53.59	50.51	97.5	48.75	48.75	Built out as a public high school	High School
17	54th Annexation	Mc Grath-Standard Pacific	Calleguas	1/26/1999	8620 & 8621	\$218,734.90	73.26	70.1	166	83	83	built out with 350 homes. Reported full compliance with Implementation Plan	330 SFR
18	55th Annexation	Lombard/Levy - Centex Homes	Calleguas	1/27/1999	8622 & 8623	\$254,347.22	81.78	81.78	222.6	111.3	111.3	Project sold. Built out with 467 homes.	467 SFR; Senior Assisted attached homes; elementary school and park
19	61st Annexation	Prime Retail	Calleguas	10/27/1999	8651 & 8652	\$178,305.16	74.484	56.839	85.3	33.94	51.36	No construction activity yet	Commercial Planned Development

# Water Demand on Recently

## Annexation Water Plans (1994-2004)

## Annexed Area

Annex.	Common Name	Agency	Date Comp	Reso Number	Annex Fees	Gross Area	Net Area	Retail Water Demand	Local Supply	MWD Demand	Status	Growth Trends	
20	57th Annexation	Barcus Bard Mooradian	Calleguas	12/29/1999	8656 & 8657	\$56,192.71	17.22	16.79	36.7	3.85	32.85	Parcel A= Sold to KCD LLC reported substantial compliance; Parcel B= Property sold to USA Petroleum unable to contact owner; Parcel C= Sold-early stages of industrial construction- reported compliance.	Industrial
21	58th Annexation	Aldea Del Mar - Shea	Calleguas	12/29/1999	8658 & 8659	\$167,511.70	53.59	53.3	106	53	53	Construction of 350 homes completed. Reported full compliance	238 SFR; 58 duplex units
22	60th Annexations	John Laing Homes	Calleguas	12/29/1999	8660 & 8661	\$162,328.40	51.6	51.6	135	67.5	67.5	Construction of 179 single family homes, 65 detached condominiums, and public park completed.	179 SFR; 65 detached- condominium units; 4-acre park site
23	65th Annexation	Rio del Valle	Calleguas	8/2/2000	8696	\$27,288.32	8.91	6.54	13.23	6.61	6.61	Construction of gymnasium/community clinic complete; reported partial compliance.	Portions of and expansion of existing school site
24	66th Annexation	Oxnard Secured Self Storage	Calleguas	8/2/2000	8700 & 8701	\$27,117.92	6.49	6.49	7	3.5	3.5	Project complete; reported substantial compliance.	Self-storage facility
25	63rd Annexation	Northwest Golf Course Community	Calleguas	12/27/2000	8712	\$862,043.84	257.9	257.9	519.9	424.2	95.7	Sold to Western Pacific Homes -construction of 426 homes nearly complete- reported full compliance. Also includes expansion of municipal golf course.	426 SFR; expansion of existing golf course
26	68th Annexation	Home Depot	Calleguas	4/17/2001	8734 & 8735	\$81,154.60	25.58	22.01	29.85	11.94	17.91	Big Box retail building complete	Retail Commercial
27	69th Annexation	William Lyon Homes	Calleguas	7/20/2001	8750 & 8751	\$159,973.40	47.42	44.79	73.5	36.75	36.75	197 single family homes under construction	197 SFR
28	70th Annexation	Prime Business Center	Calleguas	7/27/2001	8752 & 8753	\$15,310.80	2.98	2.98	3.27	1.64	1.64	Multi-tenant industrial building complete	Industrial
29	72nd Annexation	Daily	Calleguas	11/26/2001	8777 & 8778	\$10,674.40	5.99	1.64	6.6	3.3	3.3	Fast food and gas station complete. Reported substantial compliance	Restaurant and Gas Station
30	74th Annexation	Oxnard Village	Calleguas	12/17/2001	8779 & 8780	\$60,463.80	16.03	16.03	73.5	36.75	36.75	Residential portion complete: 117 homes	Residential & Retail
31	75th Annexation	Spears - Teitelbaum	Calleguas	4/24/2002	8803 & 8804	\$12,430.39	4.832	4.826	5.52	2.76	2.76	Exist/New	Multi-tenant industrial
32	76th Parcel "A"	Concordia	Calleguas	7/2/2002	8809 & 8810	\$66,120.60	13.782	7.272	25.2	12.6	12.6	60 residential units for senior completed;	60 residential
33	76th Parcel "B"	Standard Pacific	Calleguas	7/26/2002	8814 & 8815	\$25,161.12	19.11	19.11	41.6	20.8	20.8	117 detached condominiums completed; reported substantial compliance	80 single family homes
34	80th Annexation	Riverpark	Calleguas	12/9/2002	8829 & 8830	\$1,506,190.20	441.57	433.87	691.874	345.937	345.937	Project Sold; no Construction activity to date.	1,277 Residential units w/school & park 193 acres water basins
35	79th Annexation	Patterson & Fifth LLC (Centex)	Calleguas	5/27/2003	8847 & 8848	\$168,104.40	51.4	47.14	132.09	72.65	59.44	Under Construction as Tract 5340; 200 homes; reported substantial compliance	200 residential units. 14.5 park site
36	81st Annexation	Huff	Calleguas	8/11/2003	8853 & 8854	\$15,207.00	3	2.95	5.8	2.55	3.25	Built out with 10 single family homes; reported substantial compliance.	10 Single Family Units
37	82nd Annexation	Airport Commerce	Calleguas	9/22/2003	8857 & 8858	\$22,161.60	4.96	4.96	7	3.1	3.9	Sold - No construction activity to date.	Parking Lot
38	67th Annexation	North Shore at Mandalay Bay	Calleguas	12/22/2003	8708 & 8709	\$276,583.52	88.96	79.69	129.4	85	85	Undergoing environmental remediation with no construction activity	298 SFH
39	73rd Annexation	North Shore at Mandalay Bay #2	Calleguas	12/22/2003	8769 & 8770	\$25,002.26	5.89	5.78	5.7	2.8	2.8	No construction activity to date	Open space (walking park)

# Water Demand on Recently

## Annexation Water Plans (1994-2004)

## Annexed Area

Annex.	Common Name	Agency	Date Comp	Reso Number	Annex Fees	Gross Area	Net Area	Retail Water Demand	Local Supply	MWD Demand	Status	Growth Trends	
40	78th Annexation	Pfeiler - John Laing	Calleguas	4/13/2004	8893 & 8894	\$166,028.40	46.54	46.54	86.1	43	43	224 single family homes under construction as Tract 5389	231 SFR
41	77th Annexation	Selleck	Calleguas	6/4/2004	8882 and 8883	\$174,505.40	55.02	48.99	150	60	90	No construction activity to date	Light industrial
42	84th Annexation	Santa Clara Cemetery	Calleguas	10/22/2004	8918 and 8919	\$74,096.20	20.25	19.97	1	0	1	Existing	
43	57th Fringe Area	Adobe Springs II	Eastern	12/9/1994	8448		34.99				No Data		
44	62nd Fringe	Pigeon Pass II	Eastern	7/3/1996	8496	\$40,000.20	15.25	13.9	10.25	0	10.25		Existing Single Family Home
45	63rd Fringe	Brouwer	Eastern	10/28/1996	8508	\$50,198.10	21.51	17.95	69.32	41.5	27.82		Industrial Park
46	64th Fringe	Kemmis/ Utah Pacific	Eastern	8/28/1997	8509	\$28,669.20	10.14	9.4	38	22.8	15.2		Two construction offices & supplies
47	65th Annexation	Murrieta County Water District	Eastern	12/28/2000		New - Deal	482						
48	70th Fringe Area	Omdahl, Ferguson, Sears	Eastern	8/29/2001	8748 & 8749	\$32,441.00	9.6	9	24.6		9.84		Business Park
49	68th Fringe Area	Greer Ranch	Eastern	1/15/2002	8760 & 8761	\$563,807.00	162.95	162.95	186	0	186		308 single family homes
50	69th Fringe Area	Pacific Century Homes	Eastern	11/27/2001		\$140,874.20	39.27	39.27	254	152	102		378 multi-family attached
51	66th Annexation		Eastern	11/17/2003	8714 & 8715	\$517,835.84	150.48	150.48	381	0	381		543 SFR ; 5-acres Com
52	74th Fringe Area	Superior Ready Mix	Eastern	11/17/2003	8860 & 8862	\$58,664.60	17.04	15.51	42	0	42		Redi-mix Concrete Plant
53	73rd Fringe Area	Maudelene Dutton Trust	Eastern	11/17/2003	8859 & 8861	\$52,471.20	13.72	13.72	33	0	33		Small Industrial Center
54	76th Fringe Area	Murrieta Mini Storage	Eastern	3/3/2004	8885-8886	\$25,065.00	5.9	5.8	13	0	13		industrial
55	75th Fringe Area	Alesco	Eastern	6/2/2004	8889 & 8890	\$28,943.20	7.12	6.92	19	0	19		Industrial
56	71st Fringe Area	Firestone Omdahl	Eastern	6/20/2002	8781 & 8782	\$117,104.00	34.125	34.125	24.6	0	24.6		Industrial
57	72nd Fringe Area	Fieldstone	Eastern	10/21/2003	8851 & 8851	\$95,029.20	26.53	26.02	83	0	83		137 SFR & 2.28 OS
58	Olympic Training Cntr	Boathouse	SDCWA	9/6/1994	8437	\$14,892.48	4.75	4.64			No Water Demand Data		
59	Guajome Annexation	Existing Public Park	SDCWA	10/23/1998	8580 & 8583	\$33,043.84	10.23		5.25	2.625	2.625		Museum and Adobe Rancho Structure; no development plans
60	Podrasky/Olhlson		SDCWA	3/11/2004	8864 & 8865	\$26,867.20	6.32	6.32	1.43	0	1.43		Existing SF-Home
61	Mountain Cove		USGVMWD	7/17/2002	8787 & 8788	\$75,268.84	21.754	21.754	36	36	0		37 single family homes Reservoir (1-M gall)
62	37th Fringe Area		Western	12/30/1997	8571 & 8572	\$86,594.48	34.08	29.07	132	112.2	19.8		
63	38th Fringe Area		Western	6/29/1999	8635 & 8636	\$241,175.54	97.41	77.46	83	70.55	12.45		213 SFR

# Water Demand on Recently

## Annexation Water Plans (1994-2004)

## Annexed Area

Annex.	Common Name	Agency	Date Comp	Reso Number	Annex Fees	Gross Area	Net Area	Retail Water Demand	Local Supply	MWD Demand	Status	Growth Trends
64	40th Fringe Area	Western	11/22/1999	8649 & 8650	\$166,444.55	53.6		115	0	115		230 SFR
65	39th Fringe Area	Western	10/24/2000	8665 & 8666	\$169,810.88	48.36						
66	41st Annexation	Western	12/28/2000		New - Deal	3,014						
67	45th Fringe Area	Western	6/20/2002	8811 & 8812	\$30,500.20	7.37	7.37	3.64	0	3.64		4 homes
68	46th Fringe Area	Western	11/24/2003	8869 & 8871	\$904,600.00	235.024	235.024	124	0	124		155 SFR and golf course
69	48th Fringe Area	Western	12/15/2003	8870 & 8872	\$158,797.00	48.78	44.45	100	50	50		Small commercial center
70	49th Fringe Area	Western	4/28/2004	8891 & 8892	\$483,085.50	144.49	144.49	285	96	48		57 SFH * using reclaimed
						<b>15,017.17</b>	<b>10,990.09</b>					

**Exhibit C**

**Member Agency Case Studies**

**Calleguas Municipal Water District  
Report on Water Use Efficiency Compliance in Annexed Lands  
1994-2005**

**Introduction**

2005 is a watershed year to look back and assess the efficacy of water use efficiency guidelines used on newly annexing land since 1994. Metropolitan Water District of Southern California requested its member agencies to review and report on annexations completed during the past 11 years. In the overview that follows, there are two distinct discussions. One will address the more numerous and typical annexations to Calleguas Municipal Water District on the one hand; the other the largest and most significant on the other, Port Hueneme. This report is the first formal effort by Calleguas to review and evaluate compliance with water use efficiency guidelines in past annexations.

**Overview:**

Calleguas Annexation No 32:

In 1996 Calleguas completed the annexation of the City of Port Hueneme, Channel Islands Beach Community Services District and the Naval bases at Point Mugu and Port Hueneme now merged as Naval Base Ventura County. Collectively this is known as the Port Hueneme Annexation and all of the area of the annexation is served by the Port Hueneme Water Authority (PHWA). Annexation 32 was unique among the annexations in this study both due to its size and because it involved the annexation of fully developed land rather than vacant land with pending construction plans. Little has changed in the City of Port Hueneme in terms of water consumption and development since annexation. Over time the Navy facilities have experienced wide swings in military population and civilian employment activity as their assigned missions changed and defense budgets grew or retreated. Adding 7,906 acres to the District, the Port Hueneme Annexation represented an increase of slightly over 3% in the service area of the District, and amounted to over 80% of the total growth in the District from 1995 through 2004.

Two sources of water served the Port Hueneme area prior to annexation. Local groundwater from wells close to the coast was deteriorating in quality due to seawater intrusion. Groundwater from further inland supplied by United Water Conservation District was high in mineral content and contained trihalomethane precursors. These sources were also subject to mandatory reductions in pumping to reduce aquifer overdraft. Desires for higher quality water and a more dependable supply motivated the annexation.

For a time the PHWA was a direct Calleguas member purveyor. Calleguas delivered water to PHWA through a pipeline the City of Oxnard owns and leased to Calleguas. In 2003 PHWA, Calleguas and the City of Oxnard signed the Three Party Agreement under which the City of Oxnard purchases water from Calleguas and re-sells it to PHWA.

Prior to annexation, the area served by PHWA required 6,524 A.F. annually. From 1997 through 2002, the years when PHWA was a direct customer of Calleguas, average

demand was 2,653 AF annually. During those years, PHWA also transferred 700 AF of its groundwater allotment to Calleguas annually, resulting in a net demand under the 2,000 A.F. annually that was projected at the time of annexation.

The City of Port Hueneme viewed alone is a useful benchmark of water consumption for this report. Over the past 25 years, the population has grown slowly, there has been little new construction and modest redevelopment. Therefore, it can serve as a reasonable proxy for per-capita water consumption in the Oxnard-Port Hueneme area prior to 1980. In 1995 the City of Port Hueneme consumed 3,214 AF of potable water. According to the 1990 census, the population was approximately 20,320. The resulting per capita consumption was about 6,891 cubic feet per person per year. Unfortunately, given the flat rate structure and only partial customer metering, there is insufficient data in Port Hueneme to arrive at per-household consumption.

### Other Annexations

Annexations to Calleguas are more typically modest in size and characterized by in-fill closures of windows and fringe annexations to municipalities. In addition to Port Hueneme, the District completed 39 annexations in the eleven years under consideration. They ranged from 1 acre to 442 acres and averaged approximately 50 acres. Together they added 1,963 acres to the District; less than one per cent of growth over ten years. Five of these annexations were in the City of Camarillo. The rest, save two in unincorporated territory, were in the City of Oxnard. With the passage of time, it grows more difficult to contact developers and gain historical data. For that reason, Calleguas focused on annexations during the most recent five years to assess compliance with water use efficiency guidelines.

Please refer to Appendix A for more detailed information on Calleguas annexations.

### **Application of Water Use Efficiency Guidelines**

Calleguas conditioned all annexations during the period of study with the Best Management Practices and Section 3107 of the Metropolitan Administrative Code. Please refer to Attachments A and B, which were consistently incorporated in annexation resolutions by the Calleguas Board. By 1995 most BMPs had been incorporated into state law and local ordinances. Hence, primary enforcement has been performed by local building jurisdictions. The District lacks sufficient staff to conduct field investigations.

### **Use of Reclaimed Water**

Reclaimed water is available in limited portions of the Calleguas service area through member purveyors who independently, or through Calleguas facilities distribute imported and locally produced reclaimed water. None of the areas annexed during the past ten years are located where reclaimed water is available. Hence, although all newly annexed areas are required to use reclaimed water if it is available, none have done so. The City of Camarillo treats municipal wastewater and distributes it to agricultural customers. The City of Oxnard's G.R.E.A.T. Program will treat wastewater and brackish groundwater for distribution to agricultural users and inject it as a seawater intrusion

barrier. Neither city presently plans to offer reclaimed water to retail customers through dual distribution systems.

### **Compliance with Water Use Efficiency Guidelines**

Calleguas Annexation 32:

PHWA has little opportunity to foster water conservation in new development because there is so little new construction. A water conservation plan for PHWA is in place. State requirements for water conserving plumbing fixtures in new construction are enforced. Sensibly, its focus is on retrofit programs such as ULFT toilets in the existing housing and commercial properties rather than new development. The Authority has an aggressive program promoting the Metropolitan hardware rebates and the Water Wise program. A landscape ordinance geared to water conservation is in progress.

Progress is also being made toward compliance with the BMPs in other areas. Prior to 1992 individual customers were not metered. Since 1992 all new connections are metered. Installation of meters to all customers is underway and PHWA expects to complete the project by 2009. When the meter project is completed, billing will be converted to commodity (conservation) rates as opposed to the present flat rate structure. Loss accounting and leak detection will be improved when metering is complete. Present leak detection is through periodic surveys of the system using electronic detection devices. PHWA plans another survey in 2006. The federal facilities served by PHWA are an exception to the metering project. As has been reported in the news media, the federal government is resisting the installation of individual facility meters due to the capital costs.

Other Annexations:

The 25 annexations during the past five years comprised 27 development projects. Of those, five have not begun construction. Two involved annexation of existing buildings or other facilities. Calleguas attempted to reach all of the developers or owners of the 20 projects that have progressed to construction. Twelve responded with letters stating that they substantially complied with the water use efficiency guidelines. Eight either could not be reached or were unresponsive to requests for information. Therefore, sixty percent of the projects that are under construction, or completed reported substantial compliance. Since all projects fall under state law and local ordinances, it is reasonable to conclude that all have largely met the conservation guidelines.

### **Case Study: Santa Clara Cemetery**

One particular annexation illustrates the value of focusing on water sources and conservation during the application process. Calleguas Annexation No. 84 will bear further discussion.

Late in the 1800's the Catholic Church acquired about 29 acres of land to use as a cemetery north of what was then the small community of Oxnard. In the course of the next century about a third of the land was consumed by burials while the remainder stayed in agricultural production. At one time there were a number of wells on the site.

Two remain; one used for the agriculture on the majority of the land; a second devoted to the landscape irrigation on the cemetery. Some time after World War II a small office and a mausoleum were constructed at the cemetery. In the 1970's the City of Oxnard added the cemetery to the incorporated area of the City. At the same time, about a third of the land was annexed to Calleguas. By the late 1980's the Cemetery was surrounded by the expanding City. With an independent source of water, the remaining two thirds of the Cemetery were never annexed to Calleguas.

In 2002 the Archdiocese of Los Angeles began planning the conversion of the remainder of the Santa Clara Cemetery land to burial use. A second mausoleum was planned along with a larger office and undertaking facility. When the plans were submitted to the City of Oxnard, the City's list of conditions for the conditional use permit included annexation to Calleguas and Metropolitan so that the City could provide municipal water and sewer service to the cemetery. Calleguas initiated its Annexation No. 84.

At the outset of the City's review process and the annexation application, the requirements of the City also included the surrender of groundwater rights to the City, the abandonment of the existing wells and the supply of all future water needs of the Cemetery through the municipal water system. Given that the majority of the land would be in turf, the irrigation demand on the newly annexing land alone would have approximated 40 acre feet annually. Since Calleguas supplies roughly half of the water consumed by Oxnard, the annual demand on Calleguas and Metropolitan would have been around 20 acre feet.

Early in the discussions of annexation, Calleguas made clear Metropolitan policy and its own preference that large turf areas be irrigated using reclaimed water and questioned the viability of annexing the turf areas. The City of Oxnard has no reclaimed water available to municipal customers.

Metropolitan, Calleguas and the Archdiocese also discussed the appropriate boundary of the annexation. That portion of the Cemetery that was not yet annexed constituted a window in Calleguas' service area. Calleguas, Metropolitan and the Ventura Local Agency Formation Commission also have established a policy that annexations should encompass whole parcels rather than fractions of a parcel. These considerations argued in favor of annexing the entire cemetery while concerns of cost and the avoidance of District water use for turf irrigation weighed in favor of annexing only that portion of the land occupied by buildings requiring municipal service. Policy prevailed and the boundary was set to include the entire window.

From the perspective of the Archdiocese, the project was threatened by the possible loss of groundwater rights. Irrigation is a significant component of a cemetery operating budget and the high cost of municipal water would be unwelcome. The City desired to manage water resources within its boundaries and viewed the groundwater allocation to the cemetery as one of those resources. Fox Canyon Groundwater Management Agency (GMA) has authority over the key aquifers in southern Ventura County, including that from which the wells were drawing water. Calleguas simply viewed water conservation as paramount regardless of ownership. Earnest negotiations began among the Archdiocese, the GMA, and the City of Oxnard. United Water Conservation District also participated because of its management interest in surface and groundwater resources north of Oxnard. Historical records of water use and water rights were thoroughly examined and often found to be contradictory or ambiguous. More

complications were added when it was discovered that the lessee of the land used for agriculture had been over-pumping for many years. That finding in turn came into question when the groundwater allocation for the land was found to have been miscalculated some years earlier. All parties agreed that the past allocation should have been higher, but views differed on the exact figure. The negotiations grew contentious and at one point the Archdiocese threatened litigation.

Ultimately, an agreement was reached in which the Archdiocese retained its wells and actually increased its groundwater rights. The Archdiocese agreed to pay substantial penalties to the GMA for the still-disputed over-pumping. The GMA allocation for the cemetery land was set at 68 A.F. per year. Oxnard will receive a transfer of 5 A.F. annually from the Archdiocese. The Archdiocese will be allowed to 'bank' unused groundwater from its allocation. Only the domestic water requirements of the office, restrooms and undertaking facility will be served with municipal water. Those uses are estimated at only one acre-foot per year.

Independent of the discussion of water rights, the cemetery architects focused on the irrigation and landscape maintenance of the cemetery. They specified an efficient irrigation system for the new areas of the cemetery and called for replacement of the existing system with similar hardware. High efficiency sprinkler heads were selected and coupled to moisture sensors and a smart control system. All turf areas were to be planted or re-planted with a relatively drought-tolerant hybrid variety of grass. A modern turf management program was implemented. Estimated irrigation demand for the entire property dropped below 35 acre feet annually. The Archdiocese expects to bank more than thirty A.F. annually.

From the perspective of Calleguas and Metropolitan the end result of the attention given to water use was positive for everyone concerned. Local groundwater pumping will be reduced by the more efficient irrigation system. Careless use of water by both the farming lessee and the cemetery staff was stopped. Oxnard will enjoy a small gain in groundwater availability. Santa Clara Cemetery retained an inexpensive source of water. Annexation 84 resulted in virtually insignificant new demand on the Calleguas and Metropolitan systems.

### **Newly Annexed Areas and Overall Development**

Annexation and its relationship to the overall growth of water demand has been the focus of a number of policy discussions concerning water conservation and supply dependability. A rough measure of the fraction of growth attributable to annexed land can be arrived at by comparing annexed area to total developed area in the District.

Port Hueneme is not included in this analysis of development because its annexation did not facilitate development. Annexation of PHWA did not increase regional water demand, while annexations completed in anticipation of new development did. . It is more useful to compare new construction in recent annexations to the overall District development.

At the beginning of 1994 Calleguas' service area amounted to slightly over 361 square miles. Most new construction since then took place in that existing service area. A variety of data sources were used to estimate the total amount of new development

within the District from January 1994 through December 2004. None of the reporting agencies track acreage developed with as much interest as they do such variables as metered connections, housing starts, industrial and commercial square footage or population. Consequently, the following figures summarizing overall development are offered as an estimate with a probable accuracy of plus or minus twenty percent. Only the development to date in newly annexed areas is known with any precision.

Vacant land annexed to Calleguas during the study period was noted above at 1,784 acres. Of that land, about 1,374 acres have been built out or underlie projects under construction as of this writing. Therefore, newly annexing land contributed about 15 percent of the total District development. Development distribution in the Calleguas service area is illustrated in the following table.

Summary of Development in Calleguas Municipal Water District 1994-2004

Area	Development in Previously Annexed Territory	Development in Newly Annexed Territory	Total
City of Camarillo	925	123	1,048
City of Moorpark	644		644
City of Oxnard	915	1,249	2,164
City of Thousand Oaks	2,300		2,300
City of Simi Valley	1,841		1,841
Unincorporated Ventura County	1,236	2	1,236
Totals	7,861	1,374	9,233
<i>Percentage of Development</i>	85%	15%	

Figures are in acres.

## Conclusion

Adoption of water conservation into state law and local municipal ordinances has largely displaced the roll of the water use efficiency guidelines annexations were conditioned with over the past eleven years. Most property owners and builders have complied with those guidelines and they have done so largely due to state law and its enforcement by local building jurisdictions. Some developers have voluntarily gone further with water conservation.

While annexations have contributed significantly to growth in water demand in the Calleguas service area, in-fill development was several times greater. Meaningful water conservation will be accomplished only by broad measures that influence consumer behavior District-wide.

**Appendix 'A'**  
**Calleguas Municipal Water District**  
**Annexations Completed 1995 Through 2004**

Completed Annexations	Recordation Date	Name/Annexee	Reporting/Status	Acreage
32	3/5/1996	Port Hueneme	City annexed as a whole-virtually 100% built out at time of annexation. Only changes are minor redevelopment projects.	7,906
38	12/19/1994	Knightsbridge Holdings, Inc.	Built out with 213 RES-SFD	97.43
39	2/2/1994	Patterson Park Partners (Laguna Pacific)		83.14
40	5/16/1994	Oxnard Union High School	Built out with public high school	55.55
41	8/6/1994	Rancho Victoria Plaza	Approximately 20% built out with retail commercial. Remainder may become residential	20.27
43	8/6/1994	Summerfield Homes	Built out with 256 RES-SFD and 6 acre public park.	78.56
45	8/16/1994	Parcel A-Bank of Montecito (Lopes & Reyna)	Remains vacant	1.11
46	9/27/1994	Vista Properties (Parcels A-D)		44.987
47	9/19/1995	Oxnard Lands		
		Parcel A	Approximately 2/3 built out with multi-family residential	31.23
		Parcel B	Approximately 80% built out with industrial projects	20.90
		parcel C	100% built out with industrial projects	5.71
		Parcel D	Approximately 15% built out with a single industrial project	4.16
48	12/21/1995	Target, et al.	Built out as retail shopping center.	87.24
49	12/18/1996	Beazer Homes	Built out as residential subdivision	2.81
51	6/9/1998	Lombard/Oxnard Union High School Reorg.	Built out as public high school	53.59
52A	11/14/1997	Seabreeze/UDC Homes	Built out as residential subdivision	31.18
52B	12/23/1997	Murdock	Built out as single residence estate	10.3
53	12/19/1997	Secret Cove	Residential subdivision built out	14.14
54	1/26/1999	McGrath-Standard Pacific	Built out with 350 homes. Reported full compliance with Implementation Plan	73.26
55	1/27/1999	Lombard/Levy - Centex Homes	Project sold. Built out with 467 homes.	81.78
	12/29/1999	Barcus Bard Mooradian		
		Aparcel A Barcus-sold to KCD LLC	Reported substantial compliance	0.62
57		Parcel B Bard	Property apparently sold to USA Petroleum-unable to establish contact with present owner.	9.77
		Parcel C Mooradian	Sold-early stages of industrial construction-reported substantial compliance.	6.83
58	12/29/1999	Aldea Del Mar - Shea	Construction of 350 homes completed. Reported full compliance.	53.59
60	12/29/1999	John Laing Homes	Construction of 179 single family homes, 65 detached condominiums, a public park completed.	51.601
61	10/27/1999	Prime Retail	No construction activity yet	

**Appendix 'A'**  
**Calleguas Municipal Water District**  
**Annexations Completed 1995 Through 2004**

<b>Completed Annexations</b>	<b>Recordation Date</b>	<b>Name/Annexee</b>	<b>Reporting/Status</b>	<b>Acreage</b>
63	12/28/2000	Northwest Golf Course Community	Sold to Western Pacific Homes-construction of 426 homes nearly complete-reported full compliance. Also includes expansion of municipal golf course.	257.9
65	8/2/2000	Rio del Valle	Construction of gymnasium/community clinic complete; reported partial compliance.	8.91
66	8/4/2000	Oxnard Secured Self Storage	Project complete; reported substantial compliance.	6.492
67	12/22/2003	North Shore at Mandalay Bay	Undrgoing environmental remediation with no construction activity in progress.	88.964
68	4/17/2001	Home Depot	Big Box retail building complete	25.58
69	7/20/2001	William Lyon Homes	197 single family homes under construction	47.42
70	7/27/2001	Prime Business Center	Multi-tenant industrial building complete	3
72	11/26/2001	Daily	Fast food and gas station complete. Reported substantial compliance	5.99
73	12/22/2003	North Shore at Mandalay Bay 2	No construction activity to date	5.781

**Appendix 'A'**  
**Calleguas Municipal Water District**  
**Annexations Completed 1995 Through 2004**

Completed Annexations	Recordation Date	Name/Annexee	Reporting/Status	Acreage
74	12/17/2001	Oxnard Village	Residential portion complete: 117 homes.	16.03
75	4/24/2002	Spears-Teitelbaum	Exist/new	2
76		Concorcia - Stnadard Pac		
	7/2/2002	Parcel A Concordia	60 residential units for seniors completed	13.782
	7/26/2002	Parcel B Standard Pacific -Jeff Malone	117 detached condominiums completed: reported substantial compliance	19.11
77	6/4/2004	Selleck	No construction activity to date	
78	3/3/2004	Pfeiler - John Laing	224 single family homes under construction as Tr 5389	46.54
79	5/27/2003	Patterson & Fifth LLC (Centex)	Under Construction as Tract 5340; 200 homes; reported substantial compliance	51.4
80	12/9/2002	Riverpark	Project sold; no construction activity to date.	441.57
81	8/11/2003	Huff -	Built out with 10 single family homes: reported substantial compliance.	3
82	9/22/2003	Airport Commerce	Sold - No Construction activity to date.	
84	10/22/2004	Santa Clara Cemetery	Existing	

Total Acreage 9,869.23  
Acreage Excluding Port Hueneme 1,963.23

Eastern Municipal Water District  
Fringe Area Annexations 1994 – 2004

Background

During the period 1994 – 2004, Eastern Municipal Water District completed 15 annexations totaling 1,031.29 net acres (see chart below). The size of the annexations ranged from 5.9 acres to 481 acres. The majority of Eastern’s annexations were 40 acres or less in size. The largest involved the annexation of a portion of Murrieta County Water District into Eastern Municipal Water District with the remaining annexed into Western Municipal Water District. Excluding the Murrieta County Water District annexation, 9 annexations were in the Temecula area and are being served by Rancho California Water District; 4 are within Eastern’s water service area; and 1 is served by Elsinore Valley Water District.

FA #	Comp. Date	Acreage	Proponent	Subagency
57	12/09/94	34.99	ADOBE SPRINGS II	
62	07/03/96	15.22	PIGEON PASS II	
63	10/28/96	21.51	BROUWER	RANCHO
64	08/28/97	10.14	KEMMIS/UTAH PACIFIC	RANCHO
65	12/28/00	481.00	MURRIETA COUNTY WD	MURRIETA
66	11/17/03	150.48	AMERICAN BEAUTY	
68	01/15/02	162.95	GREER RANCH	ELSINORE
69	11/27/01	39.27	PACIFIC CENTURY HOMES	RANCHO
70	08/29/01	9.60	OMDAHL, FERGUSON, SEARS	RANCHO
71	06/20/02	34.10	FIRESTONE/OMDAHL	RANCHO
72	10/21/03	26.53	FIELDSTONE	
73	11/17/03	15.13	MAUDELENE DUTTON TRUST	RANCHO
74	11/17/03	17.04	SUPERIOR READY MIX	RANCHO
75	6/2/2004	7.43	ALESCO	RANCHO
76	04/06/04	5.90	MURRIETA MINI STORAGE	RANCHO

At the beginning of 1994, Eastern’s service area was approximately 539 square miles. Annexations/detachments from 1994 through 2004 resulted in a net gain of 1.6 square miles to our service area or less than one-third of one percent of our total area.

Status of Annexed Properties

57<sup>th</sup> Fringe Area – 35 acres planned for construction of 70 single-family homes. The project is located north of Los Alamos Road, south of Clinton Keith and east of the I-215 in the City of Murrieta. Construction has started on some homes but no homes have been completed for occupancy.

62<sup>nd</sup> Fringe Area – five existing dwelling units located north of Moreno Valley requested annexation due to insufficient well water production. The five parcels comprise a total of 19.25 acres; most of the acreage is not irrigated.

63<sup>rd</sup> Fringe Area – the proposed development is an industrial park consisting of 11 parcels to be developed for light manufacturing or office buildings. No development has occurred yet, however, the property is located approximately three-quarters of a mile from existing recycled water facilities therefore, large landscaped areas will be required to utilize recycled water for landscape irrigation.

64<sup>th</sup> Fringe Area – development of 10 acres of commercial/industrial property in the City of Murrieta consists of two construction office buildings and storage yards for heavy equipment and construction supplies. To date, the property owner has not applied for a service connection from Rancho for imported water supplies; they are currently utilizing an on-site well to meet their water demands.

65<sup>th</sup> Fringe Area – Murrieta County Water District requested annexation to MWD because the available groundwater supplies would be insufficient to meet the anticipated growth in the area. Approximately 481 acres of the Murrieta County Water District are Eastern's service area; the remainder is within Western. At full build-out, approximately 50% of the 1,584 AFY water demand will come from imported water supplies from MWD.

66<sup>th</sup> Fringe Area – located south of Murrieta Hot Springs Road and east of I-215 adjacent to the northwest boundary of the 72<sup>nd</sup> fringe area. The area encompasses 150 acres to be developed into 768 single-family homes and one 5-acre commercial site. The project is still under construction with 289 homes completed to date. Because the landscaped area is greater than 3,000 sf, a separate dedicated irrigation meter and an approved water budget was required. In addition, recycled water is required for landscape irrigation and the developer has installed the recycled water facilities.

68<sup>th</sup> Fringe Area – is comprised of approximately 163 acres of land located north of Clinton Keith Road and one mile west of the I-215 in the City of Murrieta. The development includes a total of 308 single-family homes and large areas of native non-irrigated open spaces. There are no recycled water facilities available in this area.

69<sup>th</sup> Fringe Area - Pacific Century Homes' Arboretum project consisting of 39.38 acres is located within the City of Murrieta, at the northeast corner of Jackson Avenue and Elm Street. The property has been developed into 508 condo units. No recycled water facilities available at this time.

70<sup>th</sup> Fringe Area – this 8.8 acre commercial/industrial site has been split into four separate parcels and is currently undeveloped. The property is located approximately one-half mile from existing recycled water facilities. Development approval will be conditioned on utilizing recycled water for large landscape irrigation.

71<sup>st</sup> Fringe Area –the 34 acre commercial/industrial site has been split into nine parcels, two of which have been developed. Parcel 909-060-043 has applied for potable water service and consists of an open-storage facility, warehouse, and office building for a total 2.07 EDU's, but no recycled water. The other parcel 909-060-058 is beginning development for a material recycling center. They have applied to use recycled water for landscape irrigation. The other seven parcels are currently undeveloped.

72<sup>nd</sup> Fringe Area – consists of approximately 26 acres located south of Murrieta Hot Springs Road and east of I-215 off of Jackson Avenue in the City of Murrieta. A total of 140 single-family dwelling units on 4,000 – 5,000 sq ft. lots have been constructed and the project is complete. Landscaped areas are minimal so no separate landscape meter is required. Recycled water is not required for this project.

73<sup>rd</sup> Fringe Area – the property owner has split this 13.72-acre industrial parcel into two parcels. No development has occurred as yet and there are no recycled water facilities available in this area.

74<sup>th</sup> Fringe Area –consists of 15.51 acres of industrial property located at the northwest quadrant of Adams Avenue and Elm Street in the City of Murrieta. The property is in the very beginning stages of development of a concrete processing plant. They currently have a recycled construction meter for grading purposes. Recycled water service is available to this property from facilities within Adams Avenue. When complete, the owner will utilize recycled water for the plant process and their landscaping.

75<sup>th</sup> Fringe Area – this 6.91 acre parcel located between Jefferson Avenue and Adams Avenue in the City of Murrieta has been developed into a business park with small open storage facilities and warehouses. Recycled water is available from an existing recycled water pipeline within Adams Avenue fronting this property and is used for landscape irrigation.

76<sup>th</sup> Fringe Area – the property consists of 5.69 acres of industrial property located at Jefferson Avenue and Elm Street in the City of Murrieta. The property has been developed into industrial storage units. Potable water meter was installed approximately one-year ago and usage to date is 334 units of water. No recycled water is available to this property.

### Area Growth

Over the past several years Eastern has experienced a surge in growth within our boundaries, which include Moreno Valley, Perris, Sun City, Menifee, Temecula, Winchester, Romoland, Hemet, and San Jacinto. The population more than doubled, increasing from 251,500 in 1994 to 553,000 in 2004. Our sub-agencies include Rancho California Water District, Elsinore Valley Water District, City of Perris, Nuevo Water Company, Lake Hemet Municipal Water District, City of Hemet, City of San Jacinto and Murrieta County Water District. Most all of the new growth has taken place within the existing service area (prior to 1994). The total number of new water service connections served directly by Eastern (excluding areas served by our subagencies) increased nearly 40%, from 75,000 in 1994 to 104,000 in 2004. Of the additional 29,000 new connections within this time period, an insignificant number is attributed to Eastern's annexations. For this reason, our report will focus primarily on the best management practices carried out by Eastern on a district-wide basis rather than limiting the scope to a few annexing parcels.

Eastern imports approximately 80% of our water demand. Purchase of imported water from MWD remained relatively stable from 1994 – 1999 (approximately 55,000 AFY), but as the housing industry boomed it also increased our demand on MWD. Steady increases in imported water purchases occurred through 2003 when it topped out at approximately 80,000 AFY. The past two years have netted a decline in the purchase of imported water to approximately 75,000 AFY. This is due primarily to conservation measures, utilization of recycled water, and the production of other sources of water such as desalinization plants, water treatment facilities, and groundwater recharge.

### Conservation Measures

Eastern, by resolutions adopted by its Board, conditioned all these annexations to comply with the Best Management Practices (BMP's). By 1995 most of the BMP's had been incorporated into state and local plumbing and landscaping codes. Although field investigations were not conducted by Eastern for each annexation, the developments were required to meet City or County building codes that included water conserving plumbing fixtures as well as landscaping requirements for California Friendly landscaping. Landscaped areas of 3,000sf or more are required to have a separate dedicated irrigation meter and an approved water budget.

Eastern's goal is to reduce per capita water use by 25% over the next two decades. Our conservation programs represent an overall savings of 12,000 AF - enough to serve 24,000 homes. Some of those programs and estimated amounts of savings during the past 10 years include:

- Ultra-Low Flush Toilets – more than 15,700 units have been installed in residential homes (5,000 AF saved)
- Residential High Efficiency Clothes Washers – more than 1,000 units have been installed. (232 AF saved)
- Commercial-Industrial-Institutional Hardware Incentive Program (1,420 AF saved)
- Water-Saving Showerhead Program – more than 25,500 kits have been handed out.
- Waterbroom Giveaway Program – every school in our service area was given a free waterbroom (192 AF saved)
- Commercial-Industrial-Institutional Landscape Irrigation Program (5,033 AF saved).

### Recycled Water

Eastern is the fourth largest producer of recycled water in California. More than 150 miles of large diameter recycled water pipeline link five regional water reclamation facilities. In addition, more than 6,000 AF of storage pond capacity have been constructed at 10 locations throughout our service area for seasonal storage of any surplus recycled water.

About 25,000 AF of recycled water are sold to customers at 110 different sites. Recycled water helps displace the need to tap fresh water for golf courses, parks, school grounds and crop irrigation. Currently, agriculture accounts for 70 percent of our total recycled water sales, however, as development continues, our recycled water sales will continue to grow, eventually replacing much of our agricultural demand. We estimate 20% of total domestic potable water demand in our service area could be met with recycled water.

Eastern has pressurized the recycled system making it more reliable and attractive for domestic and commercial/industrial development.

## Desalination Plants

Eastern has implemented a desalination program in the Perris basin area of our District. When complete, the program will have constructed three reverse osmosis desalination plants, 9-12 brackish groundwater well, and a network of feed water and high-salinity waste disposal pipelines. This program will generate up to 12,000 AFY of potable water. The first desalination plant has been in operation since 2003 and produces 3.5 MGD. A second plant, capable of producing 4.5 MGD, is being commissioned and will be on-line soon. The third plant is being designed and is expected to be on-line by 2008 and will produce 3.0 MGD.

## Freshwater Treatment Plants

A 10 MGD freshwater treatment plant has been constructed in Perris at our EM-4 connection. Construction is underway way to expand the plant to 20 MGD. The plant treats Colorado River Water and/or State Project Water.

A second treatment plant is under construction in the Hemet/San Jacinto area. This 10 MGD plant will treat State Project Water.

## Conjunctive Use Program

Eastern proposes to implement a conjunctive use program in the San Jacinto Valley that is expected to yield up to 25,000 AFY. The program includes construction of infrastructure needed to recharge the San Jacinto groundwater sub basin with State Water Project purchased from MWD during wet years. Up to 45,000 AF of imported water could be stored in the San Jacinto sub basin for subsequent recovery during future droughts, thereby reducing Eastern's need for imported water. Recycled water produced from a proposed desalination plant at our San Jacinto Valley RWRP will be an alternative source of supply for groundwater recharge.

## Case Study

Superior Ready Mix (74th FA) was annexed in November 2003. The commercial site, consisting of 15.51 acres is located at the northwest quadrant of Adams Avenue and Elm Street in the City of Murrieta. Superior Ready Mix is in the beginning stage of improvement plans to develop this site for concrete production purposes. An existing recycled water pipeline within Adams Avenue will provide the recycled water to be utilized in the concrete production process. It is unknown at this time how much recycled water will be required for the concrete production.

Inland Empire Energy Center is another example of utilizing recycled water for industrial processes. Inland Empire Energy Center plans to construct a natural gas-fueled electric generating facility in our service area located south of Hwy 74 and east of Antelope Road in Romoland, Riverside County. The project will utilize approximately 4,800 AFY of recycled water, in lieu of potable water, to meet the process demands of the facility. In the event that there is insufficient recycled water available to meet the demand, a supplemental raw water connection will be installed at Eastern's Perris Water Filtration Plant. A 30-year recycled water service agreement has been executed between Eastern and Inland Empire Energy Center with the option to extend the agreement for two additional 10-year periods.

## Conclusions

1. Even though the annexed lands have contributed to increased water demand in general, the impact of these annexations have been minor compared to the increase in water demand attributed to in-fill growth.
2. Eastern has taken a very pro-active approach in the implementation of water conservation programs and the development of alternative sources of water. These programs have significantly reduced the impact brought about by the upsurge in new development.
3. State and local municipal ordinances have incorporated many of the building requirements set forth in the water use efficiency guidelines; the other requirements contained in the water use efficiency guidelines (e.g. school education programs, ULFT replacement program, etc.) were targeted at the water purveyors, and therefore, beyond the control of the individual developer requesting annexation.
4. In addition to the increase in population, changes in the socio-economic composition of the community have also had an impact on water usage. Much of the rural native lands have been replaced with sprawling urban development with irrigated parks, landscaped medians, and recreational amenities such as decorative fountains, lakes, swimming pools etc. Modern conveniences like dishwashers and automatic sprinklers as well as lifestyle changes have also affected per capita water usage. While we can't change the make-up of the community, we can control wasteful consumption through conservation, education, and adoption of stringent building codes.

Water Use Efficiency Guidelines  
Case Study of the  
Olympic Training Center Boathouse

Prepared for the Metropolitan Water District of Southern California  
By the San Diego County Water Authority  
August 2005

## Case Study: Olympic Training Center Boathouse

In October 2004, the Metropolitan Water District of Southern California (Metropolitan) Board of Directors adopted water-use efficiency guidelines for annexations. Metropolitan has required its member agencies to submit one case study that reports on the implementation of the water use efficiency guidelines after finalization of a designated annexation. The San Diego County Water Authority (Water Authority), in conjunction with the Otay Water District (Otay) and staff at the Olympic Training Center (OTC), have prepared this case study which discusses the OTC boathouse annexation water conservation measures.

The OTC is located in the City of Chula Vista, adjacent to Lower Otay Reservoir and within Otay's service area (Attachment 1). The 155-acre complex trains 4,000 athletes per year, supporting their efforts to excel in Olympic archery, rowing, canoeing, kayaking, soccer, softball, field hockey, tennis, track and field, and cycling. The award-winning designed boathouse was one of the first projects completed at the OTC where canoers and kayakers train for world competition.

The OTC boathouse annexation was completed in August 1994. The annexation of this 4.75-acre property included a "Plan for Implementing Water Use Efficiency Guidelines", dated October 1993 (Attachment 2). The OTC boathouse was designed to use all practical water conservation measures and has a dedicated meter. The average water demand for the boathouse annexation is 1.14 acre-feet per year. The easterly side of the OTC site (including the boathouse area) drains into the Lower Otay Reservoir, a potable water source. Due to its location, this portion of the complex (about 30 percent of the entire site) is irrigated with potable water provided by Otay. The western side of the complex, which makes up the remaining 70 percent of the site, is irrigated with reclaimed water produced by Otay at their Jamacha Basin Reclaimed Water Facility.

The Water Authority is an active participant in all of Metropolitan's Best Management Programs and the Groundwater Recovery Program. The Water Authority provides incentives to its member agencies, including funds for reclamation feasibility studies.

The Water Authority and its member agencies have conceived, developed and administered several major urban and agricultural water conservation programs. These programs have saved approximately 322,000 acre-feet of water over the past 14 years. The Water Authority invests more than \$1 million each year in conservation programs, including ultra-low-flush toilets, water-saving showerheads, residential high-efficiency clothes washers, and water-saving commercial-industrial-institutional hardware.

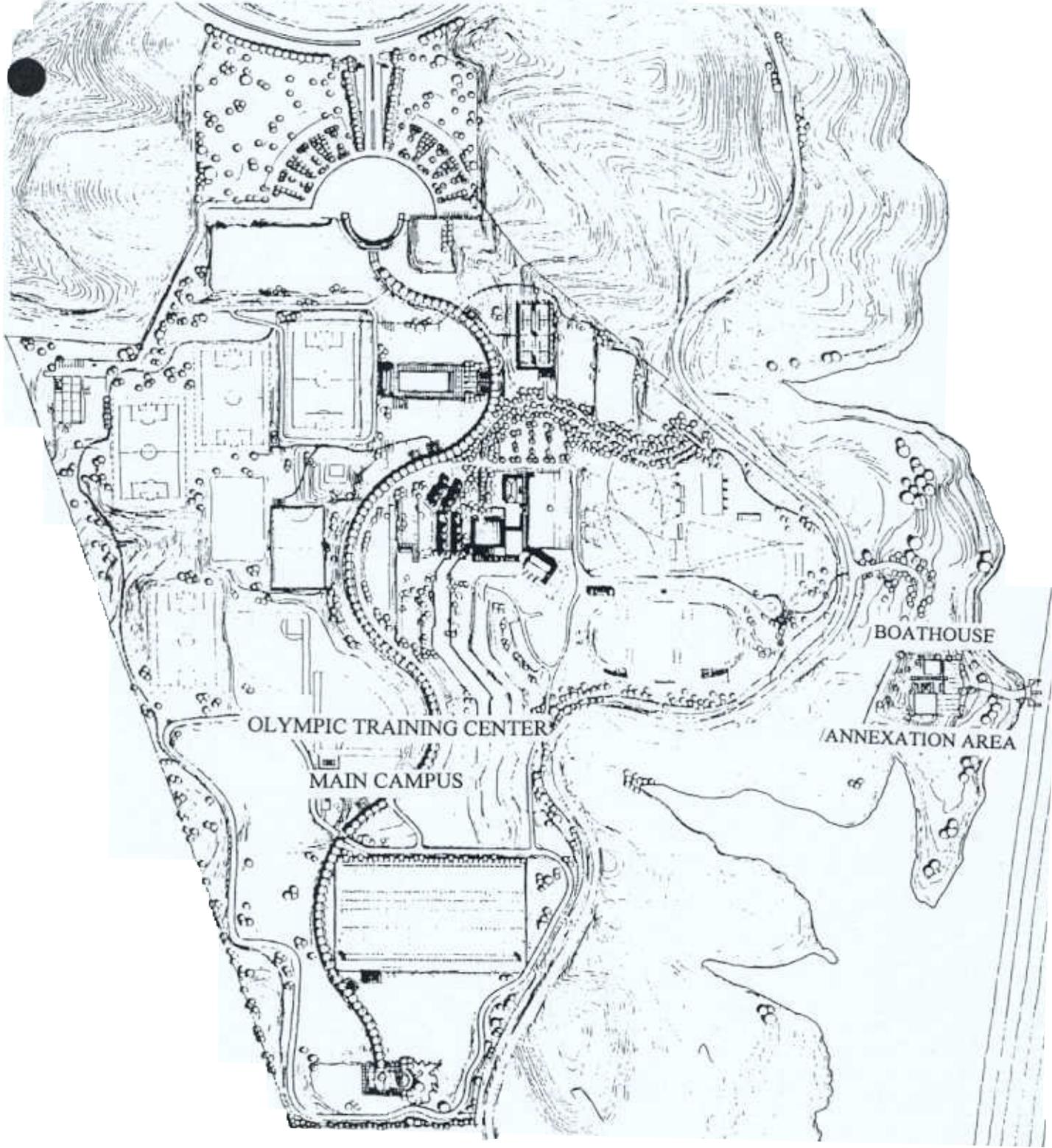
Otay, which serves the OTC and currently has one of the largest recycled water distribution systems in San Diego County, is firmly committed to expand the use of recycled water and minimize its overall demand for potable water. Recycled water uses include, but are not limited to, the irrigation of greenbelt and agricultural areas, filling of artificial lakes, and appropriate industrial and commercial uses.

Water conservation at the annexed 4.75-acre, 15,000 sq-foot boathouse includes the use of ultra-low-flush toilets and water-conserving showerheads in the athlete's shower/locker rooms. Through an in-kind grant from the Water Authority, the OTC installed a computer system to minimize landscape irrigation in the boathouse area. This system is expected to conserve over 1,700 acre-feet of water per year.

Otay, along with other Water Authority member agencies, have partially funded a xeriscape demonstration garden at the OTC. Up to 500,000 visitors tour the OTC complex each year and are exposed to the educational elements of the xeriscape garden and the OCT water conservation program.

Implementation of water-use efficiency measures for the OTC boathouse annexation meets the requirements of Metropolitan's Water Use Efficiency Guidelines that were in place at the time this annexation was completed. While annexations have not contributed significantly to the increase in the regional water demand within the Water Authority's services area, the adoption of water conservation measures, including Metropolitan's Water Use Efficiency Guidelines, help ensure the planning, implementation and reporting of critical water conservation measures are addressed.

# Attachment No. 1



Attachment No. 2

**United States Olympic Committee  
Olympic Training Center Boathouse  
Annexation to Otay Water District, San Diego County Water Authority, and  
Metropolitan Water District**

**PLAN FOR IMPLEMENTING WATER USE EFFICIENCY GUIDELINES  
(Code Section 3107)**

Prepared for The San Diego  
National Sports Training Foundation  
By McKinley Nielsen Associates, Inc.  
October, 1993

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**This Plan for Implementing Water Use Efficiency Guidelines has been prepared, as required by the Metropolitan Water District, for the annexation of the Olympic Training Center Boathouse. Annexation of this 4.75 acres will allow water to be provided by the Otay Water District, a member agency of the San Diego County Water Authority, to a new boathouse to be constructed for the United States Olympic Committee. The Olympic Training Center boathouse is being constructed by the San Diego National Sports Training Foundation and will be used to train American rowers, canoeists and kayakers for world competition - including Olympic Games.**

**This Plan addresses how the project, and the agencies which will serve the project with water, will meet the requirements of Code Section 3107, the Water Use Efficiency Guidelines.**

**Plan for Implementing Water Use Efficiency Guidelines**  
**Olympic Training Center Boathouse Annexation**

Section 3107

- a. Annual water demands shall be minimized by incorporating water conservation measures into the development plans : use of local groundwater, surface water, and reclaimed wastewater supplies shall be maximized to reduce demands on the District, and**
- b. Peak demands on the District shall be minimized by construction and operation of local storage and groundwater production facilities**

**Project Specific**

The Olympic Training Center (OTC) Boathouse has been designed to use all practicable water conserving measures. Institutional constraints prohibit the use of reclaimed water onsite, due to the projects' adjacency to the Lower Otay Reservoir, a potable water resource owned by the City of San Diego. However, the project will incorporate water-saving toilets and showers, and will be irrigated utilizing a state-of-the art computer irrigation system, designed specifically to conserve irrigation water use throughout the Training Center campus. In addition, landscaping at the site has been planned for low water use.

As noted, **water conservation** within the boathouse will be accomplished by the installation of water-saving toilets and shower heads. **Landscape irrigation conservation** will be achieved through the use of a centrally located irrigation computer system. The OTC has worked closely with the San Diego County Water Authority (CWA) to purchase and install a state-of-the-art central computer irrigation system on the Training Center campus. This system, which will operate at the boathouse as well as throughout the adjacent main campus, will minimize the use of water for irrigation at all landscaped areas. The system is expected to conserve over 58 million gallons of water per year (main campus and boathouse/annexation area combined.)

The Olympic Training Center is located west and adjacent to Lower Otay Reservoir. Approximately one-half of the OTC site, including the OTC boathouse (area to be annexed), drains into this potable water resource. This easterly half of the Training Center along with the Boathouse, will therefore be irrigated with potable water provided by the Otay Water District. A dual distribution system has been installed onsite, however, and the western side of the Training Center will be irrigated with **reclaimed water** produced by the District at their Jamacha reclamation facility.

Member Agency/District Measures

The San Diego County Water Authority has developed an extensive program to encourage **water conservation measures** throughout the CWA service area. The Water Authority is a signator to the statewide "Best Management Practices" Memorandum of Understanding, and is an active participant in all of the Metropolitan Water District Best Management Practices programs.

In addition to promoting water conservation, CWA is participating in MET's **Groundwater Recovery Program** and is pursuing local groundwater sources in cooperation with its' member agencies. CWA is also cooperating with MET in the Local Projects Program to encourage development of **reclamation facilities**. CWA provides incentives to member agencies, including funds for reclamation feasibility studies and financial assistance to defray the cost of production of reclaimed water.

CWA is, in addition, currently studying options for additional emergency storage which will provide, as an additional benefit, new seasonal **storage capacity**. The study has identified thirteen potential sites for a new reservoir. These sites are currently undergoing more detailed review, and will be narrowed, in February 1994, to five selected potential sites. An EIR/EIS addressing environmental and other considerations for all five sites will then be prepared.

The Otay Water District, the CWA member agency which will serve the Olympic Training Center boathouse, owns and operates the Jamacha Basin **Reclaimed Water Facility**. Development and operation of this facility is consistent with the District's adopted mandatory use ordinance, Section 26 "Water Reclamation Plan and Implementing Procedures" (copy attached). This District policy states that "by developing and utilizing reclaimed water, the need for additional imported water can be reduced.....It is the policy of the District that reclaimed water shall be used within the jurisdiction wherever its use is financially and technically feasible, and consistent with legal requirements, preservation of public health, safety and welfare, and the environment." The policy requires the use of reclaimed water for greenbelts, golf courses, parks and highway landscaped areas whenever feasible, and directs the development of a Water Reclamation Master Plan "to define, encourage, and develop the use of reclaimed water within the District's boundaries."

The Otay Water District is also involved in pursuing the use of **local groundwater** sources to augment other water supplies. The District has completed, in conjunction with the Sweetwater Authority, the Middle Sweetwater River Study, which reviewed the

possibility of development of groundwater resources in the Sweetwater area. The Study is now entering Phase II, which will include preliminary designs to tap the identified groundwater resources.

In addition to the Middle Sweetwater River Study, the District is currently preparing a Well Masterplan. This study has identified five potential groundwater source sites, and is evaluating each as a potential new water supply source.

Finally, the District has completed an agreement with the Mainstream Company, which has begun operations to drill at a specified site within the District. The agreement stipulates that the District will avail itself of this new water supply if the well is capable of delivering a minimum 360 GPM.

The Otay Water District currently has no **surface water** sources. However, the District is engaged in a study to identify potential sources of surface water that may be utilized by the District. This study is focusing on the potential of cooperative agreement(s) with the Sweetwater Authority and/or City of San Diego for potential surface storage of emergency water.

Other **local storage** for the Otay Water District is provided by storage tanks. The new Eastlake Greens Reservoir is currently under construction. When complete, this facility will add an additional storage capacity for the District of 30 million gallons.

**c. Reclaimed wastewater or other non-potable water shall be used on all golf courses,**

Not applicable

**decorative lakes**

Not applicable

**and other landscape areas exceeding one acre, including multi-family complexes,**

Not applicable

**commercial and industrial developments and similar areas**

Institutional constraints prohibit the use of reclaimed water onsite, due to the projects' adjacency to the Lower Otay Reservoir, a potable water resource owned by the City of San Diego.

**Reclaimed wastewater and other non-potable supplies shall be used for industrial processes and other suitable uses. If such supplies do not presently exist, a dual distribution system shall be constructed to accommodate such supplies when they become available in the future.**

Not applicable

**d. "Best Management Practices" conservation measures, as identified by the District from time to time, shall be applied in all new and existing developments within the annexed area.**

**Project Specific**

The annexing area is the site for a new Olympic Training Center Boathouse. This project, which is part of a larger Training Center facility already located within the District, is designed to meet "Best Management Practices" to the greatest extent. This includes the use of low-flush toilets and water-conserving shower heads in the athlete's shower/locker rooms, and landscape irrigation controlled by a state-of-the-art mainframe computer installed at the main OTC campus.

**Member Agency/District Measures**

The San Diego County Water Authority is a signator to the statewide "Best Management Practices" Memorandum of Understanding and is an active participant in all of MET's Best Management Practices programs. The Water Authority pursues each of the program's elements (listed below), except conservation pricing - a practice available only to retail water providers.

As a member of CWA, the Otay Water District has adopted several policies and practices to encourage "Best Management Practices" as outlined by the Metropolitan Water District and CWA. Reflecting the "Urban Conservation Best Management Practices" list, these measures are described below:

**1. Interior and Exterior Residential and Governmental/Institutional Water Audits**  
OWD has an active water audit program, which is handled by the District's Water Conservation Coordinator.

**2a. Enforcement of ULFT Requirement in New Construction Beginning January 1992**

The OTC Boathouse site is located within the jurisdiction of the City of Chula Vista. Although not a water purveyor, the City is the agency that enforces building construction codes and policies. This City does enforce the ULFT Requirements for new construction, and the requirements are being met in the new boathouse.

**2b. Support of State and Federal Legislation Prohibiting Sales of Toilets that Use More Than 1.6 Gallons per Flush**

The City of Chula Vista requires toilets that flush 1.6 gallons or less, and the OTC boathouse is complying with this requirement.

**2c. Residential Plumbing Retrofits**

Not applicable

**3. Distribution System Water Audits, Leak Detection and Repair**

OWD audits its water loss reports to detect potential leaks. The District has a loss average of 5%, compared to the average 10%.

**4. Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections**

OWD meters all its connections.

**5. Large Landscape Water Audits and Incentives**

The OWD water audit program begins with, and is tailored to specifically include, the District's largest water users. The District limits landscape irrigation to 48". Both the CWA and OWD have worked closely with the Olympic Training Center to encourage special water-saving efforts are in place for irrigation at the Training Center. Through an in-kind grant from the CWA, the Training Center has been able to install a state-of-the-art central computer system to minimize the use of water in landscape irrigation. This system, which will control landscape irrigation at the boathouse, is expected to conserve over 58 million gallons of water per year.

**6. Support of and Compliance with "Water Conservation in Landscaping Act" (AB325) for Commercial, Industrial, Institutional, Governmental and Multifamily Developments.**

Both CWA and OWD have been active in promoting xeriscape landscaping techniques throughout the region. OWD is the leading proponent of the xeriscape demonstration garden at Cuyamaca College. In addition, OWD has contributed, along with the Sweetwater Authority, partial funding for the development of a xeriscape demonstration garden at the Olympic Training Center.

**7. Public Information, and**

**8. School Education**

CWA is actively involved in public information and school education programs related to water conservation. It's member agency, the Otay Water District, has a Public Information Officer who works closely with the District's Water Conservation Coordinator to keep District constituents informed about water conservation measures, and makes presentations on water conservation to local schools.

The Olympic Training Center, in cooperation with both CWA and OWD, will participate in providing public information on water conservation through development of an onsite xeriscape demonstration garden. The project's xeriscape garden (plan attached) is integrated into the Center's public tour viewing point. Information about the low-water use landscaping, planted throughout the site, will be available to visitors, as well as pamphlets on xeriscape gardening, which will be provided by CWA and OWD. The Training Center will be visited by up to 500,000 visitors each year. In addition, an estimated 35,000 local school-children will visit the site each year on educational field trips. All these visitors will be exposed to the public education elements of the xeriscape garden and the OTC water-conservation program.

**9. Commercial and Industrial Water Conservation**

Not applicable

**10. New Commercial and Industrial Water Use Review**

Not applicable

**11. Conservation Pricing**

OWD uses conservation pricing. Monies from this program are used to fund the District's water conservation program. Attached is the District's Code of Ordinance, Section 25, "Rates and Conditions of Water Service."

**12. Support of and Compliance with "Water Conservation in Landscaping Act" (AB325) for Single Family Homes**

Not applicable

**13. Enactment and Enforcement of Water Waste Prohibition Ordinances**

Pursuant to California Water Code Sections 375 et seq., OWD has adopted Section 39, "District Water Conservation Program", for the purpose of conserving the water supplies of the District and "based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortage." A copy of OWD Section 39 is attached.

**14. Designation of a Water Conservation Coordinator**

Both CWA and OWD have designated Water Conservation Coordinators.

**15. Financial Incentives**

CWA has provided specific financial incentive to the Olympic Training Center through its in-kind donation for the irrigation computer system. OWD provides financial incentives for water conservation through its rate structure (see item 11, Conservation Pricing) and through grants to projects such as the Cuyamaca College and the Olympic Training Center xeriscape demonstration garden projects.

**16. Ultra Low Flush Toilet Replacement Program**

CWA participates in the Metropolitan District's ULFT replacement program.

**At least one model home constructed in each new development within the annexed area shall demonstrate a water conserving landscape**

Not applicable

**e. Local storage, groundwater production capacity, system interconnections, and other measures shall be able to sustain a 7-day interruption in service from the District.**

In November, 1990, the County Water Authority adopted an Incremental Interruption and Conservation Plan (IICP) to promote water conservation planning. The Plan applies to all member agencies of the CWA.

Pursuant to the CWA IICP, OWD has adopted a long-term masterplan to move toward sustaining a minimum ten-day interruption in service. The District can, and has, sustained an outage of seven days or greater, primarily through the application of water conservation measures. In addition to water conservation measures, OWD has **system interconnections** with Helix Water District and the City of San Diego, and local (District-wide) **water storage**, which is implemented through the use of storage tanks, is being expanded. A new, 30 million gallon storage facility, Eastlake Greens Reservoir, is currently under construction. In addition, the District is actively pursuing local **groundwater resources**, as described previously under items a) and b).

**The Member Agency within which the annexed area is located shall be responsible for assuring compliance with these provisions and report to Metropolitan regarding such compliance.**

The San Diego County Water Authority will be responsible for assuring compliance with these provisions. In addition to continuing its cooperative effort with the Olympic Training Center on the computerized irrigation system, CWA will review and approve specifications for toilets and showers for the OTC boathouse to insure the use of low water use fixtures throughout the project.

# **Upper San Gabriel Valley Municipal Water District**

## **“Case Study”**

### **Mountain Cove Annexation**

**Prepared by:**

Stetson Engineers Inc.  
861 Village Oaks Drive, Suite 100  
Covina, CA 91724

## **Case Study**

### **“Mountain Cove Annexation to City of Azusa, Upper San Gabriel Valley Municipal Water District, and Metropolitan Water District of Southern California”**

#### **Introduction**

Metropolitan Water District of Southern California (Metropolitan) has requested its member agencies to review and report on annexations completed within its jurisdiction. The Upper San Gabriel Valley Municipal Water District (Upper District), a member of Metropolitan, has been requested to review and evaluate compliance with water use efficiency guidelines, included as Appendix A, used with newly annexed parcels.

#### **General Description of Annexed Area**

Upper District annexed Mountain Cove Development (MCD) owned by Standard Pacific Homes, a residential developer in the region. MCD is an area of approximately 258 acres, developed with 327 single-family homes. The majority of the project site was already within the boundaries of Upper District, Metropolitan, and the City of Azusa. However, a portion of the project (77.5 acres) was outside of these jurisdictions, and is known as the Mountain Cove Annexation.

The 77.5 acres annexed to Upper District, Metropolitan, and the City of Azusa, under a concurrent Local Agency Formation Commission (LAFCo)

annexation, is divided into various land use areas. Of this total acreage, approximately 55.5 acres is dedicated as open space and is not irrigated or require domestic water service. Azusa Light and Water (ALW) serves the remaining 22 acres of the annexed area. The annexed area consists of approximately 37 residential lots and limited landscape and irrigation water uses. Assuming 50 percent of the area is used for residential development, the approximate lot size is about 13,000 square feet. This is about two times the average lot size in much of the ALW service area. Consequently, about two times the water usage would normally be expected without conservation measures.

### **Metropolitan's Water Use Efficiency Guidelines**

#### **Sources of Supply**

The sources of water supply for ALW include groundwater from the Main San Gabriel Basin (Main Basin); surface water from San Gabriel River treated at ALW's Canyon Filtration Plant and treated imported water by Metropolitan to meet emergency demands. Water from Metropolitan service connection USG-8 can serve only the southerly portion of ALW's distribution system and can not provide water to the annexed area of MCD. The annexed area of MCD, located at the northerly portion of the ALW distribution area, is serviced by water from the Main Basin and from San Gabriel River. The annexed area of MCD does not rely on water from Metropolitan. Typically about 83 percent of ALW's source of

supply comes from Main Basin, 16 percent from San Gabriel River and one percent from Metropolitan.

The annexed area of MCD is not served by imported water, therefore does not have any impact on the peak demand of Upper District. Recent deliveries from Upper District to ALW were made on behalf of an adjacent water system and not for ALW.

### **Recycled Water**

Currently there are two wastewater treatment plants in the Main Basin which provide recycled water: San Jose Creek Water Reclamation Plant and Whittier Narrows Water Reclamation Plant. Both Plants are located at the southerly portion of the Main Basin and are more than eight miles from the annexed area of MCD and therefore recycled water is not being used. However, ALW will continue to participate in Upper District's studies on potential future use of recycled water in its service area.

### **Water Conservation**

The City of Azusa passed Ordinance No. 2446 in May 1990 which amended the city code to include a Water Conservation Plan. It requires all new structures to be equipped with low-flush toilets, low-flow showers and faucets. The annexed area consists of approximately 37 residential lots and limited landscape and irrigation water uses. The water usage of residential customers in the annexed area of MCD is about 0.9 acre-feet per meter, compared to the water usage of residential customers in the general service area of ALW at 0.8

acre-feet per meter. This indicates that without the water conservation measures the water usage in the annexed area of MCD would have been approximately 1.6 acre-feet per meter because the lot size is two times greater. Because the recorded usage was 0.9 acre-feet per meter, this indicates that the conservation measures applied to the annexed area of MCD have reduced water usage, assuming similar size lot were provided water by ALW.

The sources of supply of the annexed area of MCD are groundwater from Main Basin and surface water from San Gabriel River. ALW is able to sustain a 7-day interruption in service from Upper District.

Upper District is a member of the California Urban Water Conservation Council (CUWCC). As a member of the CUWCC, Upper District signed a Memorandum of Understanding pledging to implement “Best Management Practices (BMP)”, which are cost-effective conservation programs. Upper District intends to apply the BMPs throughout its service area, including ALW, as part of its continuing water conservation effort.

## **Conclusion**

The annexed area of MCD is supplied by water from the Main Basin and from San Gabriel River. Therefore it does not rely on imported water from Metropolitan. The water conservation measures adopted by ALW and Upper District’s BMPs have reduced the water demand by the annexed area of MCD.

IMPLEMENTATION PLAN  
WATER USE EFFICIENCY GUIDELINES  
FOR THE ANNEXATION OF A  
PORTION OF THE MOUNTAIN COVE DEVELOPMENT  
IN THE  
CITY OF AZUSA  
TO UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT  
AND  
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

GENERAL DESCRIPTION OF ANNEXING AREA

A portion of the Mountain Cove Development (approximately 77.5 total acres, 22 of which are developable).

Maps and legal descriptions attached

The Mountain Cove Development in Azusa consists of approximately 258 acres and will be developed with 327 single-family homes. The majority of the project site is already within the boundaries of to Upper District and MWD as well as the City of Azusa; a portion of the project (77.5 acres) lies outside of these jurisdictions.

A total area of 77.5 acres is proposed to be annexed to the Upper San Gabriel Valley Municipal Water District (USGVMWD) and Metropolitan Water District of Southern California (MWD), as well as the City of Azusa under a concurrent Local Agency Formation Commission (LAFCo) annexation. Of this total acreage, approximately 55.5 acres will be dedicated as open space and will not be irrigated or require domestic water service. The remaining 22 acres in the proposed annexation area will contain a million-gallon water tank, an access road, limited landscaping and approximately 37 residential lots, or portions thereof. Assuming 4 persons per residence, an estimated 148 people will be served under the annexation.

### ANNUAL WATER USAGE

The annual demand for water within the annexing area is 36 acre feet per year (AFY), and 295 AFY for the remaining portion of the Mountain Cove Project. The retail agency for the entire project, including the proposed annexed property, is the City of Azusa. The Azusa Light & Water system serves the City of Azusa and parts of Covina, Glendora, Irwindale, West Covina and unincorporated Los Angeles County. Azusa Light & Water produces its water in the upper reaches of the San Gabriel River. About 29% of the water is diverted and treated as surface water from San Gabriel Reservoir at the Canyon Filtration Plant; about 71% comes from six wells in the Canyon Basin, two wells in the Intermediate Basin and one well in the Main San Gabriel Basin; and <1% from a Metropolitan Water District connection, which provides water service to the southerly portion of Azusa Light & Water and is within the USGVMWD, an MWD member agency.

### PEAK WATER USAGE

Peak water demands for the annexed area will be effectively addressed through the construction of a new storage tank within the annexed area in the uppermost elevated area. The tank will be part of the City of Azusa's system and will provide additional fire flow and increase the system's ability to meet peak demands for their entire service area.

The maximum day demand for the annexed area (using an estimated 2.0 peak factor) is estimated at 45 gallons per minute (gpm). The maximum day demand for the other project area (2.0 peak factor) is estimated at 368 gpm.

### DISTRICT WATER MANAGEMENT

The District's system sets flows based on past system averages for its service area for a given 24-hour period and meets peak daily water demands from Heck Reservoir. The City currently provides an average of 22 million gallons per day (MGD) of water to its customers.

#### Seasonal Storage

Azusa does not presently participate in a seasonal storage program.

#### Local Area Water Management

Water demands (peaking) from the Azusa system can be effectively managed through:

- Increased groundwater pumping from Canyon Basin.
- Increased groundwater pumping from the Intermediate Basin.
- Increased groundwater pumping from the Main San Gabriel Basin.

- Additional production will be available with next year's expansion of the Canyon Filtration Plant from its current 7.5 MGD capacity to 16 MGD.

#### WATER CONSERVATION AND EDUCATION

Additional water demands placed on MWD will be minimized by incorporating the following conservation measures.

##### Azusa:

- The City adopted Ordinance No. 2446 (see Attachment A), which amended their city code to include their "Water Conservation Plan" (see Attachment B).
- The Plan includes 9 prohibited water uses, including no irrigation runoff, no washdown of hardscape areas, water service to customers in restaurants only by request, no agricultural or commercial watering after 11:00 a.m. from May through October.
- The Plan includes New Development Standards that require low-flow appliances, and a water reuse/conservation plan must be submitted for large users.
- The Plan includes landscape and irrigation standards which include landscaping using native plants and inspection/evaluation of the irrigation system.
- The Plan includes monetary penalties ranging from \$50.00 for the first violation, to \$200.00 and filing of misdemeanor charges for the third violation for failure to comply with the Ordinance.
- Has a two tiered rate schedule for water billing based on water usage.

##### Annexing Area (USGVMWD):

The USGVMWD has an extensive water conservation and education program (see Attachment C).

Among the highlights of their program:

- Has distributed over 15,000 Ultra low-flush toilets to single family dwellings and over 3,000 to multi-family dwellings since 1992.
- Retrofitted fifteen skilled nursing facilities after conducting extensive indoor/outdoor water use surveys .

- Handed out over 58,000 low flow showerheads; over 2,000 toilet displacement devices; over 25,000 kitchen faucet aerators, over 10,000 garden hose nozzles and over 5,000 shower timers.
- Conducts landscaping and gardening seminars in English and Spanish.
- Prints water savings tips on water bills.
- Runs three elementary to high school water education programs for students.
- Keeps a resource library of water education materials available for loan to the public.
- Provides displays, public speakers and access to their webpage for further water information.

Model Home: At least one model home within the annexation area shall demonstrate a water conserving landscape.

#### RECLAIMED WATER

##### Azusa:

Currently, reclaimed water is unavailable in this area, and is not planned for use on the proposed annexed area.

##### Annexing Area (USGVMWD)

The District is developing a Recycled Water Program to use 10,000 acre-feet of recycled water per year for groundwater recharge. The USGVMWD has allocated funding for the construction of a pipeline to bring reclaimed water into their service area along the San Gabriel River, downstream of the Santa Fe Dam. It is expected that this construction will be completed within the next five years.

When reclaimed water is available to the annexed area, a dual distribution system shall be constructed to accommodate such supplies and turf areas over one acre shall be irrigated with reclaimed water.

#### WATER DELIVERY CURTAILMENT

##### Azusa:

Azusa has an integrated water delivery system which allows all areas in its service area to receive water from alternative sources of water. The main source of water supply is from groundwater. The second source of water is from storage in Heck Reservoir, after treatment at the Canyon Filtration Plant.

Because of the groundwater basin's storage ability, the City would be able to sustain more than a 7 day interruption in service from MWD or USGVMWD.

Annexing Area (USGVMWD):

The district delivers and spreads supplemental water in the underground water basin underlying the major portion of the valley. These sources can sustain more than a 7 day interruption in service from MWD.

CAPITAL CONSTRUCTION CHARGE

Azusa has implemented a capital construction charge for all new development within its service area. The charge was established to raise the funds necessary to build additional facilities required for expansion of the City's water facilities.

URBAN CONSERVATION BEST MANAGEMENT PRACTICES

The USGVMWD is a signatory to the Memorandum of Understanding Regarding Urban water Conservation in California, an agreement formulated in cooperation with the State Department of Water Resources and the State Water Conservation Coalition. As a signatory, USGVMWD will make good faith efforts to implement a series of water conservation measures referred to as Best Management Practices, or BMPs (see enclosed Attachment D) To the extent practicable to do so, within the limits of its authority and jurisdiction, the USGVMWD intends to apply the 14 BMPs as identified by MWD throughout its service area in accord with and as a part of its continuing water conservation efforts.

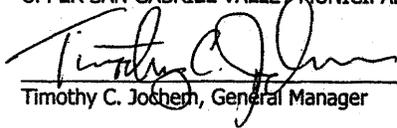
COMPLIANCE

To the extent practicable, the following agencies and property owners will assure compliance with the provisions of MWD's water use Efficiency Guidelines as indicated in MWD's Administration Code Section 3107 and shall report to MWD regarding such compliance.

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

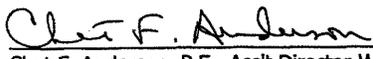
To the extent practicable, the USGVMWD will assure compliance with the provisions of MWD's water use Efficiency Guidelines as indicated in MWD's Administrative Code Section 3107 and shall report to MWD regarding such compliance.

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

  
\_\_\_\_\_  
Timothy C. Jochem, General Manager

Date: 7/30/01

CITY OF AZUSA LIGHT & WATER

  
\_\_\_\_\_  
Chet F. Anderson, P.E., Ass't Director-Water Operations

Date: July 30, 2001

AZUSA ASSOCIATES, LLC/STANDARD PACIFIC HOMES

  
\_\_\_\_\_  
Michael C. Battaglia  
Director of Forward Planning  
Standard Pacific Homes

Date: 30 July 01

## **Mountain Cove Annexation**

### **Present Use of Each Parcel**

Presently the annexation area is undeveloped and undergoing rough grading.

### **Existing or Proposed Development Plans**

Mountain Cove is a single-family residential development. The entire Mountain Cove project was approved for the development of 331 single-family homes (327 are planned for construction) on approximately 258 acres. The total annexation area is approximately 77.5 acres, the majority of which (approximately 57.5 acres) will be comprised of undeveloped open space with the exception of the development of approximately 37 homes, or portions thereof, a million gallon water tank with access road and limited landscaping.

Currently the annexation area is within the jurisdiction of the County of Los Angeles. A City annexation proposal is pending before LAFCO. The County's General Plan designates the annexation area as O, Open Space and the County's zoning designation is A-1, Light Agriculture. In January 2000, the City of Azusa approved a General Plan Amendment designating the annexation area as C, Conservation and L, Lower Density Residential and a Zone Change designating the annexation area as W, Water Conservation, CF, Community Facilities and PRD, Planned Residential Development.

### **Peak Water Demands**

Peak water demands for the annexed area will be effectively addressed through the construction of a new storage tank within the annexed area in the uppermost elevated area. The tank will be part of the City of Azusa's system and will provide additional fire flow and increase the system's ability to meet peak demands for their entire service area.

The maximum day demand for the annexed area (using an estimated 2.0 peak factor) is estimated at 45 gallons per minute (gpm). The maximum day demand for the other project area (2.0 peak factor) is estimated at 368 gpm.

**Western Municipal Water District  
Report on Water Use Efficiency Compliance in Annexed Lands**



Metropolitan Water District of Southern California (Metropolitan) requested that its member agencies review and report on annexations completed during the past 10 years. The member agency was asked to include a case study demonstrating water use efficiency measures implemented as a result of Metropolitan’s annexation policy.

**Fringe Area Annexations 1994 – 2005**

From 1994 to 2005, Western Municipal Water District (Western) completed 16 annexations totaling approximately 4,700 acres (Table 1). The individual area of each annexation ranges from 1.75 to 3,014 acres. In early 1994, Western’s General District service area was approximately 510.14 square miles. At the writing of this report, Western’s general service area has grown to approximately 517.48 square miles.

**TABLE 1**

<b>Fringe #</b>	<b>Gross Acres</b>	<b>Completion Date</b>
34 <sup>th</sup>	304.4	10-31-94
35 <sup>th</sup>	52.54	5-23-97
35 <sup>th</sup>	60	10-10-97
37 <sup>th</sup>	34.08	12-30-97
38 <sup>th</sup>	97.41	10-08-99
39 <sup>th</sup>	48.36	10-24-00
40 <sup>th</sup>	53.59	11-22-99
41 <sup>st</sup>	3,014.20	12-28-00
42 <sup>nd</sup>	380	5-14-01
43 <sup>rd</sup>	Cancelled	
44 <sup>th</sup>	1.75	6-14-05
45 <sup>th</sup>	7.73	6-20-02
46 <sup>th</sup>	235.02	11-24-03
47 <sup>th</sup>	149.49	4-20-05
48 <sup>th</sup>	44.45	12-14-03
49 <sup>th</sup>	138.18	4-28-04
50 <sup>th</sup>	78.75	4-20-05
<b>Total</b>	<b>4,699.95</b>	

## **Application of Water Use Efficiency Guidelines**

Western Municipal Water District, by resolutions adopted by its Board of Directors, conditioned all sixteen annexations to comply with Section 3107 of Metropolitan Water District's Administrative Code and Best Management Practices (BMPs). By 1995 most of the BMP's had been incorporated into state and local plumbing codes for new construction and local landscaping codes reflected the State's landscape model ordinance resulting from AB 325. Although individual field investigations were not conducted by Western for each annexation, all new developments are required to meet City or County building codes that included water conserving plumbing fixtures, as well as comply with local model water efficient landscape ordinances. Western offers water conservation, education and information programs to new development areas, existing residential and business customers and to its wholesale customers (sub agencies).

Western supplies its water demands with imported water from the Metropolitan Water District. Metropolitan supplies approximately 98% +/- of all Western's retail demand. Purchase of imported water from Metropolitan remained relatively stable from 1994 to 1999 ranging from 55,513 to 83,074 AF per year with an average of 67,248 AF per year. Steady increases in imported water purchases have occurred each year since 1999 culminating with a calendar year purchase of 102,902 AF for 2004.

Western Municipal Water District, at the request of Metropolitan, submits the following summary of the 49<sup>th</sup> Fringe Annexation as an illustration of the effect of Metropolitan's annexation policy on reducing potable water demands in new development.

### **Case Study: 49<sup>th</sup> Fringe Annexation - Tract 30172 AND Tract 30173**

The 49<sup>th</sup> Fringe Annexation is located in southwest Riverside County, California within the boundaries of the City of Murrieta and the general service area of Western Municipal Water District. The annexed area consists of approximately one hundred forty-four (144) acres of undeveloped, rural property. The annexed area is geographically divided into two distinct sites. Wynfield, LLC and Murrieta Bridlewood, LLC have proposed to develop these sites into a large lot, single-family home developments. The proposal is to create fifty-seven (57) parcels approximately 2½-acres each. Typical house sizing for this development will be 5,000 to 6,000 square feet with 4 to 5 bedrooms and 4 to 6 bathrooms or half baths. Total water demand for this type of development is usually greater than typical residential development due to the increased home size and larger landscaped area around the home. There will not be any commercial development or open space (park or golf course) development within this annexed area. The City of Murrieta has approved the development plans for these projects. Rancho California Water District, a wholesale customer of Western, is the retail water purveyor.

Metropolitan Water District Administrative Code 3107 - Water Use Efficiency Guidelines, states *recycled water of adequate quality shall be used whenever it is available to be used, in accordance with California Water Code Sections 13550-13554*. The state water code, section 13551 declares, *a person or public agency, including a state agency, city, county, city and county, district, or any other political subdivision of the state, shall not*

*use water from any source of quality suitable for potable domestic use for nonpotable uses including cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses if suitable recycled water is available.*

In compliance with Metropolitan and State of California codes, Rancho California Water District (Rancho) required the developer to install dual water systems to meet the demands for landscaping and domestic use. Potable water will be used indoors and for other domestic uses requiring potable water (swimming pools, spas, etc.) and recycled water will be used for outdoor irrigation purposes. RCWD required that the on-site irrigation system conform to its requirements for recycled water use, such as requiring the installation of purple pipe and irrigation heads, and proper separation between on-site potable and recycled facilities.

The projected total average-day potable water demand in the annexation area for the proposed use is 85,500 gallons per day (GPD) or 96 acre-feet per year (AFY). The projected maximum-day water demand in the annexation area is estimated to be approximately 213,750 GPD, based on a peaking factor of 2.5 times the average daily demand. The maximum demand on MWD will be minimized with the operation of local storage facilities to lessen the peaking on MWD facilities. Demand estimation is based upon equivalent estate sized homes. Potable water will be used for interior use and recycled water will be used for irrigation purposes. The annexation area will receive water from MWD via the RCWD EM-20 Turnout Connection. Since RCWD currently maximizes the use of local water sources, the proposed project will depend upon the imported supplies from MWD to meet its needs.

### **Use of Reclaimed Water**

WMWD promotes the use of recycled water by means of an active program involving its member agencies. RCWD has adopted a Recycled Water Master Plan for the utilization of recycled water for the benefit of RCWD and to minimize dependence upon imported supplies. At the present time, about 3,255 AF/year of recycled water is sold for agricultural, commercial, landscaping, and golf course irrigation. Additional uses are planned as more recycled water becomes available and the recycled water distribution system is expanded. California State Codes and the RCWD Water Conservation Resolution promote the use of recycled water whenever possible. During drought situations, the use of potable water may be restricted, or even disallowed. By the use of recycled water, these restrictions may be eliminated. RCWD has taken a very proactive approach for the use of recycled water to a point that RCWD has contributed financially to install new systems or retrofit existing systems (particularly for schools and city governments) in order to promote recycled water use.

### **Tract 30173 - 32 Homes**

MWD conditioned this annexing property to utilize recycled water for irrigation purposes other than household use. The developer constructed a separate potable and recycled water system to serve these developments. Tract 30173 has been built-out and homeowners are living in the homes since late 2004.

Because the homes are on a dual water system RCWD created new “*Rules and Regulations for the Use of Recycled Water for Single Family Residential Lots*” and a “*Recycled Water Agreement*”. RCWD developed a “*Water Reclamation Program and Regulations for its Administration and the Use of Reclaimed Water*” in June of 1993. The homeowners are required to sign the “*Recycled Water Agreement*” and sign an acknowledgement that homeowner received RCWD’s regulations. Regulations and Agreement are attached to this report.

For each home a ¾” potable water meter with backflow was installed for the house. A 2” reclaimed water meter was installed for irrigating the remainder of the lot.

The common area has two reclaimed water meters for irrigation.

**Tract 30172 – 25 Homes**

Tract 30172 will have the same dual water system as Tract 30173. Currently this tract is in the plan check stage and water usage can be obtained at a future date.

**Water Usage**

The following chart list is an example of the potable usage and the reclaimed water usage for a selection of homes in Tract 30173.

	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05
Potable	11	6	8	1	2	2	3	7
Reclaimed	97	27	130	89	168	150	326	268
Total	108	33	138	90	170	152	329	275
Potable	3	0	1	0	1	0	1	8
Reclaimed	82	28	22	57	281	278	323	256
Total	85	28	23	57	282	278	324	264
Potable	3	0	0	1	0	0	3	2
Reclaimed	255	99	88	96	328	296	386	504
Total	258	99	88	97	328	296	389	506
Potable	3	1	0	1	0	0	1	2
Reclaimed	107	55	75	87	273	234	404	403
Total	110	56	75	88	273	234	405	405

**Summary Off-Set of Potable By Reclaimed**

Based on a review of similar homes that were constructed and occupied in early 2000 within Western Municipal Water District’s retail service area, Western estimates that the total outdoor water consumption will exceed 5.5 acre feet per home site. The estimated total yearly outdoor demand for the entire project is in excess of 330 acre feet per year. One hundred percent of the outdoor demand will be supplied by reclaimed water.



**RULES AND REGULATIONS  
FOR THE USE OF  
RECYCLED WATER FOR SINGLE FAMILY RESIDENTIAL LOTS**

**RANCHO CALIFORNIA WATER DISTRICT  
42135 WINCHESTER ROAD  
POST OFFICE BOX 9017  
TEMECULA, CALIFORNIA**

**(951) 296-6900**

**JULY 2005**

RANCHO CALIFORNIA WATER DISTRICT  
RECYCLED WATER  
IRRIGATION SYSTEM REQUIREMENTS FOR  
SINGLE-FAMILY RESIDENTIAL LOTS

**CONDITIONS FOR FUTURE RECYCLED WATER IRRIGATION SYSTEM**

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*\*\*Recycled materials are not available through local home centers; these are only available through a pipe supplier.*

The following conditions will be required of all owners of single-family residences, which are within the Rancho California Water District's (RCWD/District) boundaries where recycled water service is available.

**I. IRRIGATION PLANS**

Prior to construction of any buried irrigation system, the owner shall be in possession of the final irrigation plans that have been **reviewed and approved by the District. RCWD requires fifteen (15) working days per submittal for the review period.** Plans shall show the following features:

- Property lines and building footprints including dwellings, garages, sheds, etc.
- All potable, fire, and irrigation waterlines exterior to the dwelling structure.
- All existing and future points of connection for potable, fire, and recycled water.
- Potable water hose bibs.
- Fountains, pools, etc. and means for supplying water.
- Location and type of fencing.
- Driveways, walkways, patios, etc.
- Detail showing the existing potable water service (include water meter and valves).

- Termination points of all exterior potable water lines and irrigation lines.
- Irrigation control valves or electrical controllers.
- Material schedule.
- Backflow devices.

## REQUIRED IRRIGATION PLAN NOTES

The following special notes shall be shown on all construction plans for recycled water irrigation systems:

1. The installation of the irrigation water system shall conform to all requirements as set forth within the latest version of the document titled, "Water Reclamation Program and Regulation for its Administration and the Use of Reclaimed Water."
2. Any modifications to the potable water or irrigation water systems from these plans shall be approved in writing by **Rancho California Water District, (951) 296-6900, three (3) working days (minimum) prior to the start of construction.**
3. All buried on-site irrigation piping shall be purple colored polyvinyl chloride (PVC).
4. All potable water piping exterior to structures shall be copper. Potable water piping shall not be tapped into for irrigation use.
5. Installation of quick couplers is prohibited.
6. **Rancho California Water District shall be notified two (2) days prior to the start of construction at (951) 296-6900.**
7. All irrigation pressure main line piping shall be installed as to maintain 10-foot minimum horizontal, one foot minimum vertical separation from all potable water piping. Where irrigation and potable water pressure piping cross, the irrigation line shall be installed at a minimum of 12-inches below the potable waterline. In cases where this requirement cannot be met, the irrigation pipe shall be installed within a Class 200 white-colored PVC pipe

8. sleeve, which extends a minimum of 10 feet on either side of the potable water piping. Purple warning tape shall run continuously along the top side of the sleeve and be affixed at 3-foot intervals.
9. The recycled irrigation system shall be operated within the time period of 9:00 p.m. to 6:00 a.m., unless otherwise established by the Rancho California Water District.
10. Spray heads shall be adjusted to prevent over-spray onto areas not under the control of the customer; such as neighboring yards, streets, and sidewalks.
11. Recycled water piping shall not be installed in any structure.
12. Failure to comply with any or all of the above requirements shall result in termination of service until the appropriate corrective steps have been taken.
13. Irrigation with recycled water shall not result in ponding or nuisance runoff.

## II. DESIGN REQUIREMENTS

### Irrigation Piping and Fittings

#### A. General

All irrigation water piping shall be installed in accordance with the latest edition of the Uniform Plumbing Code and all other local governing codes, rules, and regulations. All piping shall be continuously and permanently marked with the manufacturer's name or trademark, nominal size, and schedule or class indicating the pressure rating. All on-site irrigation water systems for single-family residential lots shall be purple PVC pipe in accordance with the requirements specified herein.

#### B. Minimal Requirements of Irrigation Piping and Fittings

The minimum class or schedule of **purple PVC** piping and fittings shall be as follows:

- PVC constant-pressure main line piping 2 inches and larger: Rubber-ring joint, PVC Class 160, or solvent weld joint, PVC Class 315.
  - PVC constant-pressure main line piping 1½ inches and smaller: Solvent weld joint, PVC Schedule 40.
  - PVC intermittent pressure lateral line piping: Solvent weld joint, PVC Class 200, Schedule 40.
  - PVC fittings: PVC Schedule 40 solvent weld and factory manufactured, or Schedule 40 with rubber-ring joint.
- C. Minimum marking requirements for constant-pressure rating in pounds per square inch (psi) at 73 degrees; ASTM designations such as 1785, 2241, 2672, 3139; and printing shall be placed continuously on two sides of the pipe.

#### Irrigation Sprinkler Heads

- A. Irrigation sprinkler heads shall come equipped with purple identifier caps.
- B. Sprinkler spray patterns shall be designed so as to prevent overspray onto fountains, swimming pools, patio decks, public sidewalks, structures or adjoining property.

#### Hose Bibs and Quick Couplers

- A. All hose bibs on the potable water system shall be located within 12-inches of the dwelling structure. Hose bibs and quick couplers are **not** allowed on the recycled water irrigation system.

#### Irrigation Meter and Valve Boxes

- A. Irrigation boxes for valves shall be purple in color. If concrete boxes are used, the removable concrete lid portion shall be painted purple (color code is Pantone 512).

### Potable Water Piping

- A. All potable water piping exterior to structures shall be copper and constructed in accordance with the UPC as adopted by the District.
- B. As much as practical, exterior potable water pipe shall be located beneath concrete driveways, walkways and patios.
- C. A reduced pressure principal (RPP) backflow assembly shall be installed on the potable water line downstream of the water meter in accordance with the RCWD cross connection control ordinance.
- D. Only potable water shall be used within structures, pools, and fountains.
- E. Potable water piping shall not be tapped into for irrigation use.

### **III. WATER SUPERVISOR**

Single-family residential lots within the recycled service area shall have a "Water Supervisor." The property owner shall be designated as the Water Supervisor, unless the District is notified otherwise in writing. The Water Supervisor should be knowledgeable of the potable and irrigation water systems on the property and shall also be responsible for the installation and use of pipe and appurtenances, as well as for the prevention of cross-connections. If the owner desires to designate another person as Water Supervisor, then the owner is responsible for notifying RCWD in writing of such action. In the event that someone other than the owner is designated as the Water Supervisor and this person is no longer associated with the property, the owner shall again be considered the Water Supervisor until written notification is made to the District.

In the event of cross-connection on the premises, the Water Supervisor shall be responsible for notifying RCWD so that appropriate measures may be taken to mitigate the contamination or pollution.

#### **IV. MAINTENANCE**

Repairs or modifications to the irrigation piping or potable water piping exterior to structures shall be **reviewed and approved by the District** in writing, prior to any work being performed. In the event of an emergency, all repair work shall be left exposed until visual inspection and approval is made by RCWD. Cross-connections, including temporary jumper connections between potable water facilities and irrigation water facilities, are strictly prohibited.

In the event purple PVC pipe is not available for an emergency repair on the irrigation system, non-purple plastic pipe may be temporarily used for the repair until purple PVC pipe can be obtained. The repaired portion of the irrigation system shall remain exposed until a permanent repair is made and subsequently approved.

Piping modifications shall be approved by the District prior to construction.

#### **V. MONITORING AND INSPECTION**

The Water Quality Supervisor or his authorized representative shall have the right to enter upon the customer's premises during reasonable hours for the purpose of inspecting the customer's potable water and irrigation water systems. This inspection is also to ensure that cross-connection between potable water facilities and irrigation water facilities do not exist. Property owner will be notified in writing to coordinate an appointment.

#### **VI. CROSS-CONNECTION SHUTDOWN TEST**

The State of California and the County Health Department requires that an annual cross-connection test be performed on each single-family residential lot dedicated to the use of recycled water for irrigation. The test shall be conducted by a party approved by RCWD. The irrigation water system should be shut down at the meter, while the potable water system remains in service. The irrigation system shall then be checked to verify a no-flow condition. Each potable water faucet on the property

shall be turned on to check for a positive flow condition. Following this, the potable water system will be shut down and the irrigation system activated. The potable water faucets would be checked to assure that no-flow condition exists.

## **VII. WATER SERVICE TERMINATION**

When the District determines that water uses or conditions represent a clear and immediate hazard to the RCWD water supply that cannot be immediately abated, the District shall institute action for discontinuing water use. Conditions or water uses that may create a basis for water service termination shall include, but are not limited to the following:

1. Failure to install a required backflow prevention device.
2. Failure to test a backflow prevention device
3. Failure to repair a faulty backflow prevention device.
4. Failure to replace a faulty backflow prevention device.
5. Direct or indirect connection between the potable water system and a sewer.
6. Unprotected direct or indirect connection between the potable water system and equipment containing contaminants.
7. Unprotected direct or indirect connection between the potable water system and an auxiliary water system.
8. A situation that presents an immediate health hazard to the RCWD's water system, as determined by the District's health department.
9. Whenever copper piping is not installed for the potable water system or purple PVC pipe for the irrigation water system.
10. Failure to report a plumbing change exterior to the dwelling structure.
11. Commencement of work/modifications prior to receiving RCWD approval.

## **VIII. SIGNAGE, LABELING, AND TAGGING REQUIREMENTS**

Any additional requirements for the posting of signs, labeling, and tagging that may be imposed by the District at the time of adding additional irrigation to the recycled system must be in compliance before service is provided.



**Rancho  
Water**

July 27, 2005

Monica Rodriguez  
Post Office Box 2298  
Sun City, CA 92586

**SUBJECT: ACCOUNTS NO. 279-31012-2 AND NO. 200-31012-1  
25881 BAY MEADOWS WAY**

Board of Directors

Csaba F. Ko  
President

Ben R. Drake  
Sr. Vice President

Stephen J. Corona

Ralph H. Daily

Lisa D. Herman

John E. Hoagland

Michael R. McMillan

Dear New Homeowner:

Welcome to Rancho California Water District (RCWD/District).

Officers:

Brian J. Brady  
General Manager

Phillip L. Forbes  
Director of Finance-Treasurer

E.P. "Bob" Lemons  
Director of Engineering

Perry R. Louck  
Director of Planning

Jeff D. Armstrong  
Controller

Linda M. Fregoso  
District Secretary/Administrative  
Services Manager

C. Michael Cowett  
Best Best & Krieger LLP  
General Counsel

Your property was annexed into RCWD's water service boundary. The District will provide domestic water service to your property. During the annexation process, the Metropolitan Water District of Southern California (MWD) conditioned the annexing property to utilize recycled water for irrigation purposes other than household use. To satisfy this requirement, the prime developer constructed a separate potable and recycled water system to serve your development. You will be required to use recycled water for landscape irrigation demands.

RCWD's recycled water is highly treated wastewater that meets the State of California Health Code – Title 22 requirements. Recycled water is suitable for landscape irrigation uses and therefore minimizes the need to import and treat potable water for this purpose, thus saving this resource for more productive uses. The major difference between the two types of water is that recycled water cannot be used for human consumption; therefore, two separate on-site water systems will be required to prevent intermixing of the two sources of water.

Please remember that before you install, remove, or modify any piping in your landscape irrigation system or your domestic water system, you must obtain a permit from RCWD. After acquiring the permit, final plan approval for the recycled water system must be acquired from the District before you begin construction. Please contact either Rich Ottolini or Michael Meyerpeter at this office at (951) 296-6900.

Monica Rodriguez

July 27, 2005

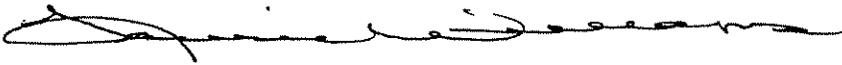
Page Two

Enclosed are documents that need to be completed. Prior to activation of potable and recycled service, please complete the Recycled Water Agreement as well as the Document Acknowledgement and then return to my attention, acknowledging that Rancho California Water District has provided you with this information.

If you should have any questions, please contact me at this office at (951) 296-6900.

Sincerely,

RANCHO CALIFORNIA WATER DISTRICT



Laurie Williams  
Engineering Services Supervisor

05LW:at219FCF

c: Rich Ottolini, Water Quality Supervisor

Enclosures





**RECYCLED DOCUMENT ACKNOWLEDGEMENT**

Account Number: 200-31012-1

Name: MONICA RODRIGUEZ

Service Address: 25881 BAY MEADOWS WAY

Telephone Number: \_\_\_\_\_

I have received the following from Rancho California Water District:

- “Recycled Water Agreement”
- “Rules and Regulations for the Use of Recycled Water for Single Family Residential Lots”
- “Water Reclamation Program and Regulations for its Administration and the Use of Reclaimed Water”

**Sign & Ref** **Pl**

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Date Received

05\W:at219\FCF



**RECYCLED WATER  
AGREEMENT**

**RANCHO CALIFORNIA WATER DISTRICT  
LOT NO. 12 OF TRACT NO. 30173**

THIS AGREEMENT is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2005, by and between Rancho California Water District, a public agency ("DISTRICT"), and \_\_\_\_\_ ("Owner"). Owner shall hereinafter be referred to as "USER."

DISTRICT owns and operates a major system of sewage interceptor, transmission, treatment, disposal, and water reclamation facilities, hereafter referred to as DISTRICT'S Regional Water Reclamation System; and

In accordance with DISTRICT policies, the recycled water, which results from the operation of DISTRICT'S Regional Water Reclamation System, has been made available for approved uses; and

USER desires to purchase, accept delivery of, control, and use the quantity of recycled water provided for in Paragraph 4 below for approved irrigation purposes within the boundaries of the District, under the terms and conditions set forth below; and

Such sales and deliveries would be in accordance with DISTRICT'S policy of using recycled water for beneficial purposes; and

DISTRICT is willing to sell and deliver recycled water for irrigation purposes under the terms and conditions set forth below.

In consideration of the mutual covenants herein contained, it is mutually agreed as follows:

1. **SALE AND DELIVERY TERMS AND CONDITIONS**

A. **Point of Delivery**

The recycled water delivered pursuant to this Agreement shall be measured through the DISTRICT-owned, -operated, and -maintained metering facilities located at the Point of Delivery shown on the attached Exhibit "A." Any facilities, which have been or shall be installed by DISTRICT at USER'S request shall be paid for by USER, in accordance with applicable DISTRICT Rules and Regulations.



B. Availability Acknowledgment

USER acknowledges that DISTRICT does not guarantee the availability of recycled water throughout the term of this Agreement due to possible changes in regulatory agency requirements, reduction in plant flow, and/or other conditions beyond DISTRICT'S control.

USER holds DISTRICT free and harmless from any and all legal liabilities and/or economic losses that it may sustain as the result of discontinuance or reduction in the amount of delivery of recycled water as specified above.

C. Scheduling of Deliveries

USER shall arrange and coordinate schedule of all deliveries of recycled water with DISTRICT'S Water Operations Department. Changes to the schedule shall be made by giving the DISTRICT a minimum of 24 hours' notice. DISTRICT will make every reasonable effort within the capabilities of its recycled water system facilities and staffing to accommodate requested delivery schedules. However, it is specifically understood and agreed that DISTRICT cannot and does not guarantee that it will be able to accommodate the timing of such delivery schedules, especially in regard to short notice changes in amount of delivery.

D. Pressure

The recycled water to be delivered pursuant to this Agreement shall, as far as possible, be delivered at the Point of Delivery shown on attached Exhibit "A" at pressures of 0 to 150 psi. USER shall be responsible for, at its cost, providing any and all additional pressure or equipment required to deliver the recycled water to the point(s) of use.

E. Facility Provision and Operational Responsibility

- (1) DISTRICT shall be responsible for providing and operating its Regional Water Reclamation System facilities, up to and including the Point of Delivery, in compliance with the applicable requirements of District, Federal, State and local regulatory agencies.

DISTRICT shall be responsible for supplying recycled water, which meets or exceeds all applicable Federal, State, and local regulatory agency quality standards.

DISTRICT shall monitor recycled water deliveries and use sites as it deems necessary and in accordance with applicable Federal, State, and local regulatory agency requirements.

- (2) USER shall:

- Make application for recycled water service.



- Pay all fees and deposits for recycled water service.
- Post and maintain all required warning signs informing the public that recycled water is being used on the site. Signs shall be placed as shown on the landscape/irrigation construction drawings.
- Designate a recycled water supervisor. Said supervisor shall be available 24 hours a day.
- Inform all employees that recycled water is being used for irrigation and dust control purposes.
- Instruct all employees in the proper handling of recycled water and the potential health hazards involved with its use.
- Identify all above-ground fittings and appurtenances, etc. as containing recycled water and not suitable for human consumption. Signs shall be painted or otherwise permanently affixed to equipment. All signs shall be in place prior to the meter(s) being installed.
- Recycled water must not be introduced into any domestic water piping system and no connection shall be made between equipment containing, or having contained recycled water and any part of a domestic water system until such time as equipment has been properly disinfected.
- Be responsible for providing, operating, maintaining, and repairing USER pipeline together with all appurtenant facilities as are necessary to accept, convey, control, and use the recycled water in compliance with the applicable requirements of District, Federal, State, and local regulatory agencies on their respective owned or controlled lands.
- Recycled water shall be used only on the areas depicted on the attached exhibits and landscape/irrigation construction drawings.

F. USER Acknowledgment

USER acknowledges it is understood that:

- (1) DISTRICT'S Regional Water Reclamation System's purpose is to control the biological quality of the recycled water resulting from its operation; and



- (2) Said System is not equipped to detect, treat, or remove harmful chemicals or toxic materials except as required to meet Federal, State, and local regulatory agency discharge standards.

G. Indemnification

USER agrees to hold DISTRICT free and harmless from any and all legal liability and/or economic loss, which it may sustain as a result of the recycled water, delivered in compliance with all applicable discharge standards under this Agreement.

2. USE TERMS AND CONDITIONS

Use of the recycled water delivered pursuant to this Agreement shall be subject to the following terms and conditions:

A. Rules and Regulations

All recycled water delivered pursuant to this Agreement shall be used only for approved purposes on the specified use site as shown and depicted as USER lands on attached Exhibit "B," in compliance with applicable rules and regulations of District, Federal, State, and local regulatory agencies.

THIS AGREEMENT has no application to the operation of the DISTRICT'S sewer and domestic water operation, including the assessment of fees and the enforcement of rules and regulations pertaining thereto. USER must comply with all rules and regulations of the DISTRICT pertaining to any properties owned by USER, which connect to the DISTRICT'S Regional Water Reclamation System.

Failure to observe all regulations governing the use of recycled water will result in the immediate termination of recycled water service until such time as the deficiencies are corrected to the satisfaction of the DISTRICT.

Failure to observe said regulations shall be subject to Unauthorized Use Charges established by the District.

B. Reclamation Requirements

USER shall apply to the DISTRICT for all applicable use permits. District shall apply for all required Permits of Reclamation Requirements from the California Regional Water Quality Control Board, hereinafter referred to as the Regional Board, covering the use of the disinfected recycled water to be delivered and used pursuant to this Agreement. User shall comply with the provisions of such Reclamation Requirements. USER shall use recycled water on only those areas specified in such Reclamation Requirements unless otherwise provided for in future amendments to said Reclamation Requirements.



C. Responsibility for Conveyance and Control

(1) DISTRICT

DISTRICT shall be solely responsible for conveying and controlling the recycled water up to and including the Point of Delivery provided for in Paragraph 1.A., above.

(2) USER

USER shall be responsible for conveying and controlling, in compliance with applicable regulatory agency requirements, the recycled water delivered through USER's Facilities, from the Point of Delivery as shown on attached Exhibit "A", and DISTRICT shall have no responsibility whatsoever relative to said USER's Facilities.

3. PURCHASE PRICE

During the term of this Agreement, USER shall pay to DISTRICT:

X A. The sum of \$192.50\* per acre-foot for the amount of :

\_\_\_ 1) Disinfected Secondary Water; or

X 2) Tertiary Water Used during the month.

\_\_\_ B. A Daily Demand Charge in the amount of \$ \_\_\_\_\_ per day.

X C. Excess pumping costs incurred by DISTRICT in the event DISTRICT supplies pumping equipment and/or DISTRICT delivers water at a pressure higher than specified in Paragraph 1.D., above.

Said Cost shall be:

X 1) \$45.66\* per acre-foot, or

\_\_\_ 2) The actual cost of lease, rental, or purchase for any equipment supplied by DISTRICT for USER (said cost is estimated at \$10.00 per month).

X D. The actual cost of lease, rental, or purchase for any equipment supplied by DISTRICT for USER. Said cost is estimated at \$10.00 per month.

*\* The District reserves the right to modify or adjust the rate schedule(s) for providing recycled water to reflect changes in the District's operating costs, if any, as determined by the District.*



4. QUANTITY

A. Basic Quantity

DISTRICT agrees to sell and deliver and USER agrees to purchase, accept delivery of, control, and use recycled water at an average basic quantity in the amount of up to 2,660 gallons per day. Said quantity shall be delivered on an "as available" basis.

B. Supplemental Quantity

As and when DISTRICT has additional recycled water, which is in excess of the average basic quantity specified in Subparagraph 4.A, and such quantities are not contractually obligated to others, available at the Point of Delivery shown on attached Exhibit "A" as determined by DISTRICT, DISTRICT will sell and deliver to USER such amounts as may be mutually agreed upon.

5. BILLING FOR RECYCLED WATER

DISTRICT will render monthly billings for recycled water deliveries made during the preceding month, based on meter reading at Point of Delivery. Billings, in accordance with the District's prevailing Rules and Regulations, shall be paid within thirty (30) days of the date thereof. Any late payments shall be considered delinquent and shall be subject to the DISTRICT'S standard penalty charges and disconnect procedures then in effect.

6. ASSIGNMENT

Except as provided below, USER shall not assign any of its individual or collective rights under this Agreement to any person or entity, or become associated with any other party involving, in any way, the recycled water to be delivered pursuant to this Agreement without the prior written consent of the DISTRICT and of any regulatory agencies having jurisdiction, which consent shall not be unreasonably withheld.

In the event USER desires to enter into a transaction for the sale or financing of the use site, DISTRICT will not unreasonably withhold its consent.

7. TERM OF AGREEMENT

The term of this Agreement shall begin with the date of Agreement (first written above) and shall continue until terminated by the USER or DISTRICT.

8. CANCELLATION

A. USER or DISTRICT shall have the right to terminate this Agreement, with no financial liability to the other party, by giving thirty (30) working days' written notice, as long as both parties mutually agree.



- B. DISTRICT shall have the right to terminate this Agreement, with no financial liability to the USER, for USER'S noncompliance with applicable use and/or payment requirements.
- C. Notwithstanding Paragraph 1.B., DISTRICT shall also have the right to terminate this Agreement by giving USER ten (10) days' written notice in the event the wastewater treatment criteria under which the DISTRICT currently operates is changed by operation of law, or by any regulatory agency having jurisdiction, such that the DISTRICT'S Regional Water Reclamation system, as it presently exists, cannot produce wastewater which complies with such changes without incurring additional costs or modifications to said facilities.

9. **ATTORNEY'S FEES**

In the event of litigation or arbitration between the parties hereto arising out of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees and costs to be fixed by the court or by arbitration.

10. **PREPARATION OF THIS AGREEMENT**

This Agreement shall not be construed against the party preparing it, but shall be construed as if both parties prepared it.

11. **CAPTIONS**

Captions to Paragraph/Subparagraphs of this Agreement are for convenience purposes only and are not part of this Agreement.

12. **PROVISIONS BINDING**

This Agreement and Exhibits "A" and "B" attached hereto are binding on the heirs, representatives, successors, and assigns of the parties of this Agreement.

13. **CERTIFICATION**

The undersigned DEVELOPER and RECYCLED WATER SUPERVISOR hereby certify compliance with all operational responsibilities contained in Section 1.E.(2) above.

14. **AUTHORITY TO SIGN AGREEMENT**

The undersigned individuals hereby warrant and represent that they each have full legal authority to sign this Agreement and bind the parties hereto.



IN WITNESS WHEREOF, this Agreement has been executed as of the day, month, and year first above written.

RANCHO CALIFORNIA WATER DISTRICT

PROPERTY OWNER(S)

By: \_\_\_\_\_  
Brian J. Brady, General Manager

By: \_\_\_\_\_

Date: \_\_\_\_\_, 2005

Date: \_\_\_\_\_, 2005

RECYCLED WATER SUPERVISOR

By: \_\_\_\_\_

Date: \_\_\_\_\_

Day Phone: \_\_\_\_\_

Night Phone: \_\_\_\_\_

Pager: \_\_\_\_\_

05\W:at222\agmt\REC-WTR\FEG



RANCHO CALIFORNIA WATER DISTRICT  
APPLICATION FOR  
USE OF RECYCLED WATER

PROJECT NAME: \_\_\_\_\_

PROJECT ADDRESS: \_\_\_\_\_

LOCATION: \_\_\_\_\_  
(PLEASE ENCLOSE MAP SHOWING PROJECT SITE)

DEVELOPER: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

PHONE: \_\_\_\_\_

\*ONSITE SUPERVISOR: \_\_\_\_\_

PHONE: (DAY) \_\_\_\_\_

(NIGHT) \_\_\_\_\_

PAGER: \_\_\_\_\_

DESCRIPTION OF RECYCLED WATER USE:

Residential Landscaping

\_\_\_\_\_

\_\_\_\_\_

START DATE: \_\_\_\_\_

END DATE: \_\_\_\_\_

QUANTITY (GALLONS PER DAY): 2,660

MEANS OF DISTRIBUTION: \_\_\_\_\_

Irrigation

DEVELOPER SIGNATURE \_\_\_\_\_

CUSTOMER SIGNATURE \_\_\_\_\_

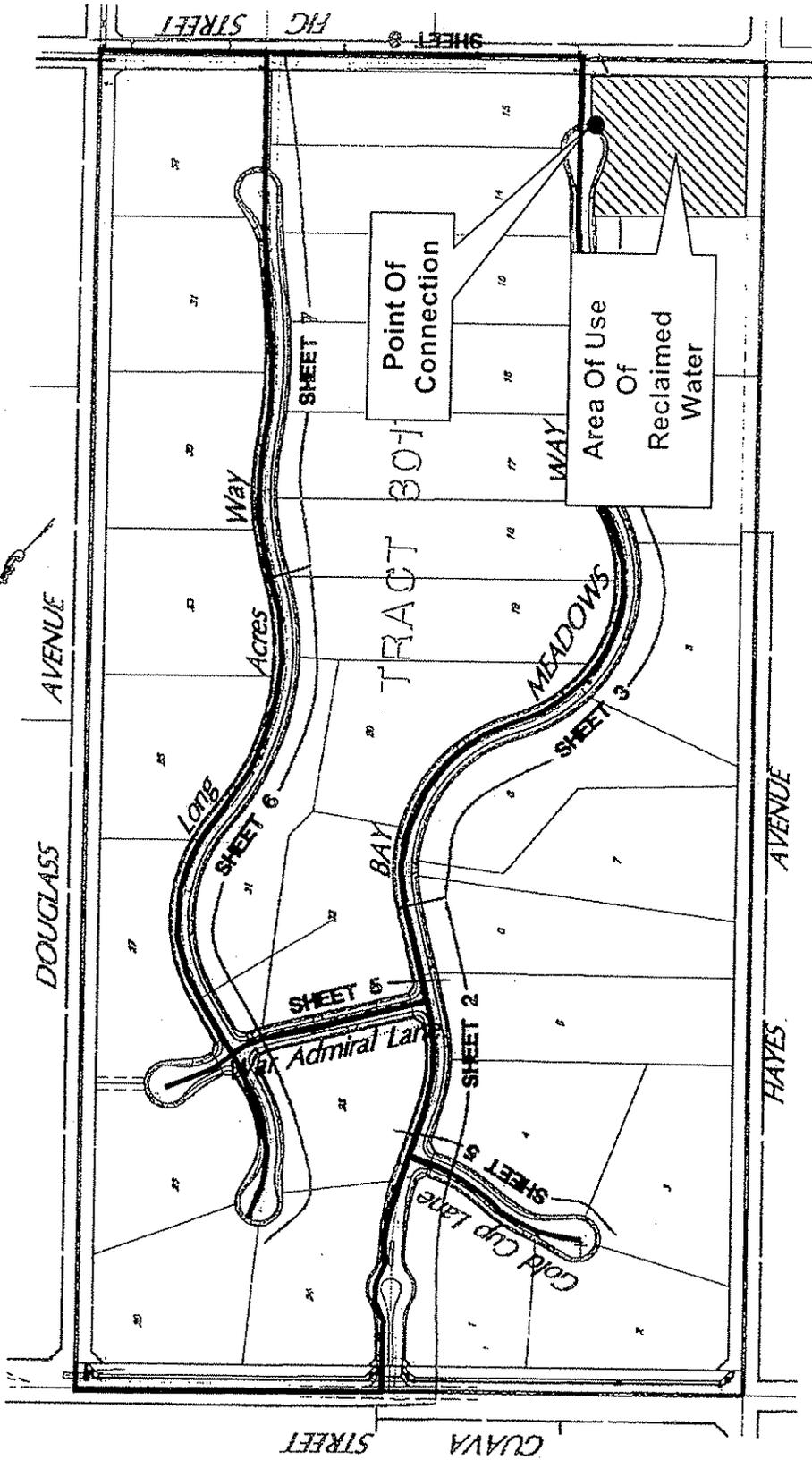
DATE \_\_\_\_\_

DATE \_\_\_\_\_

\*MUST BE ABLE TO CONTACT 24 HOURS/DAY

05\LW:at222a\agmt\REC-WTR\FEG





RANCHO CALIFORNIA WATER DISTRICT

42135 Winchester Road - Temecula - CA - 92590 - (951) 296-6900

EXHIBIT **A**

Lot 12  
Tract 30173  
Reclaimed Water Use Agreement

GRAPHIC REPRESENTATION ONLY  
DRAWING NOT TO SCALE

PREPARED BY: L. Vineyard

CHECKED BY: L. Williams