



West Basin Municipal Water District

# Water Use Report

Fiscal Year 2016-2017

Providing a Safe And Reliable Supply of High Quality Water To The Communities We Serve

# WATER USE REPORT

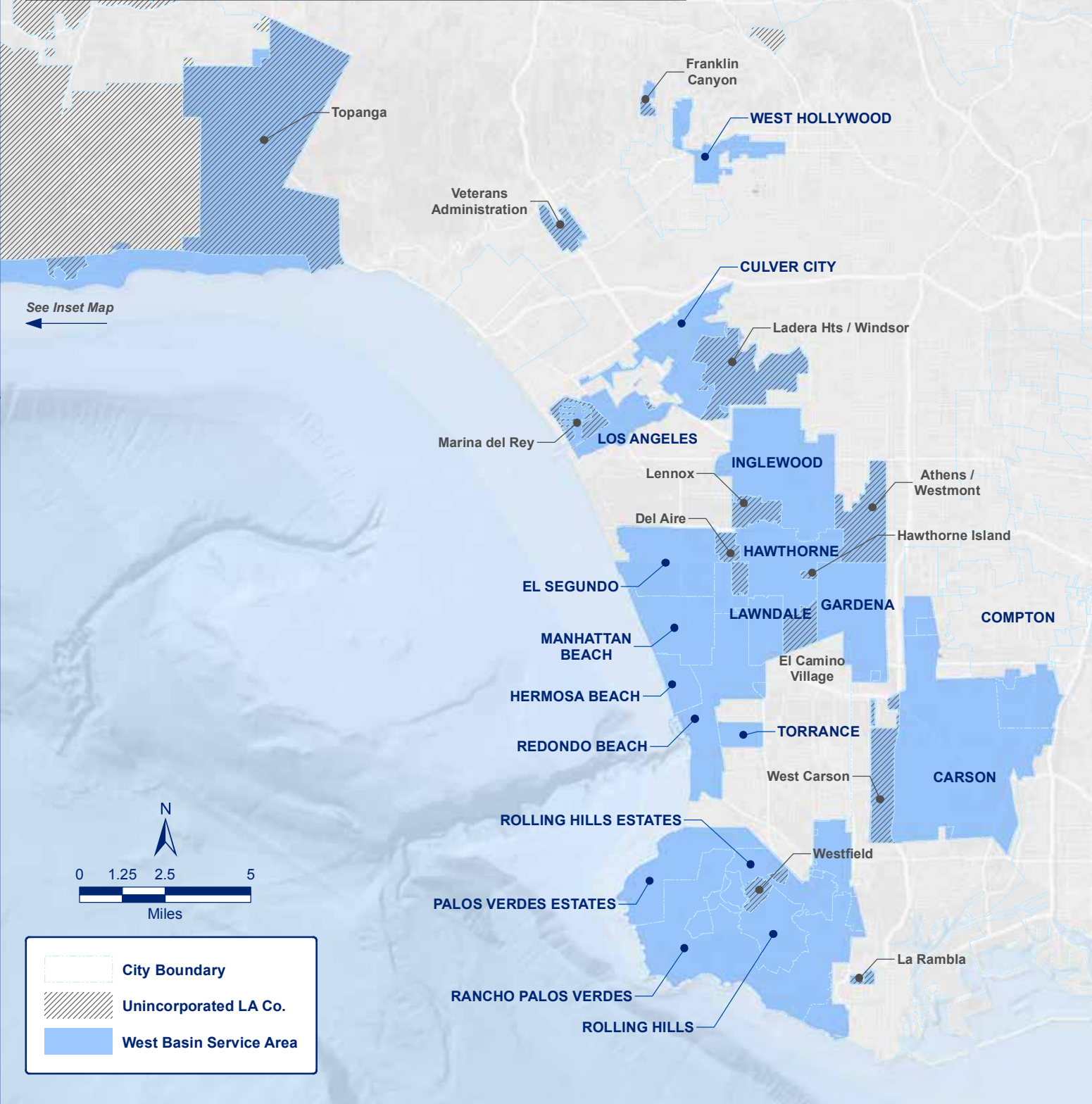
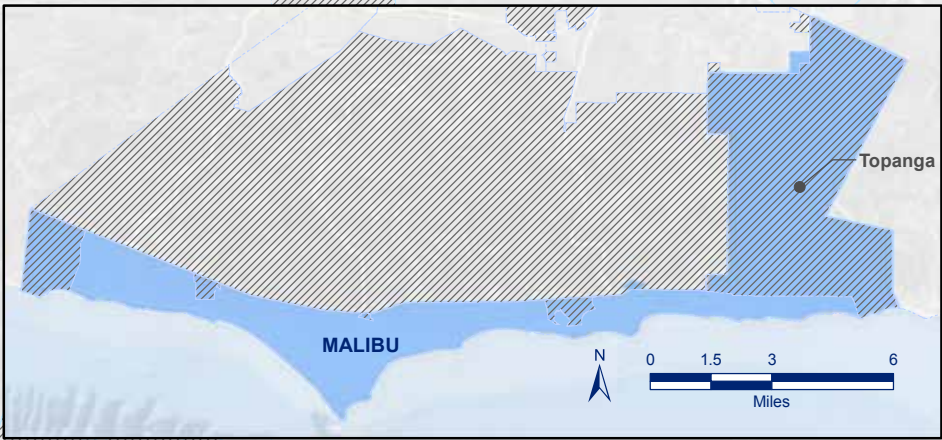
Fiscal Year 2016-2017

17140 S. Avalon Blvd., Suite 210  
Carson, CA 90746

[www.westbasin.org](http://www.westbasin.org)



**WEST BASIN  
MUNICIPAL WATER DISTRICT  
SERVICE AREA**



See Inset Map

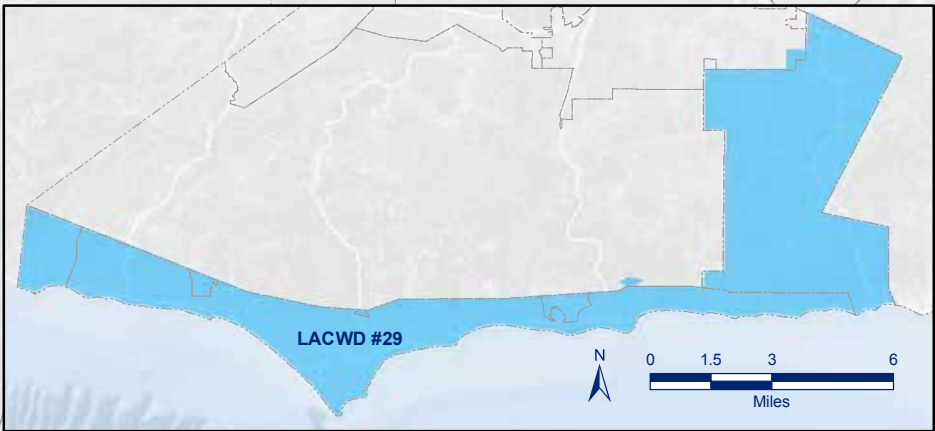


**City Boundary**

**Unincorporated LA Co.**

**West Basin Service Area**

**WEST BASIN  
MUNICIPAL WATER DISTRICT**



See Inset Map

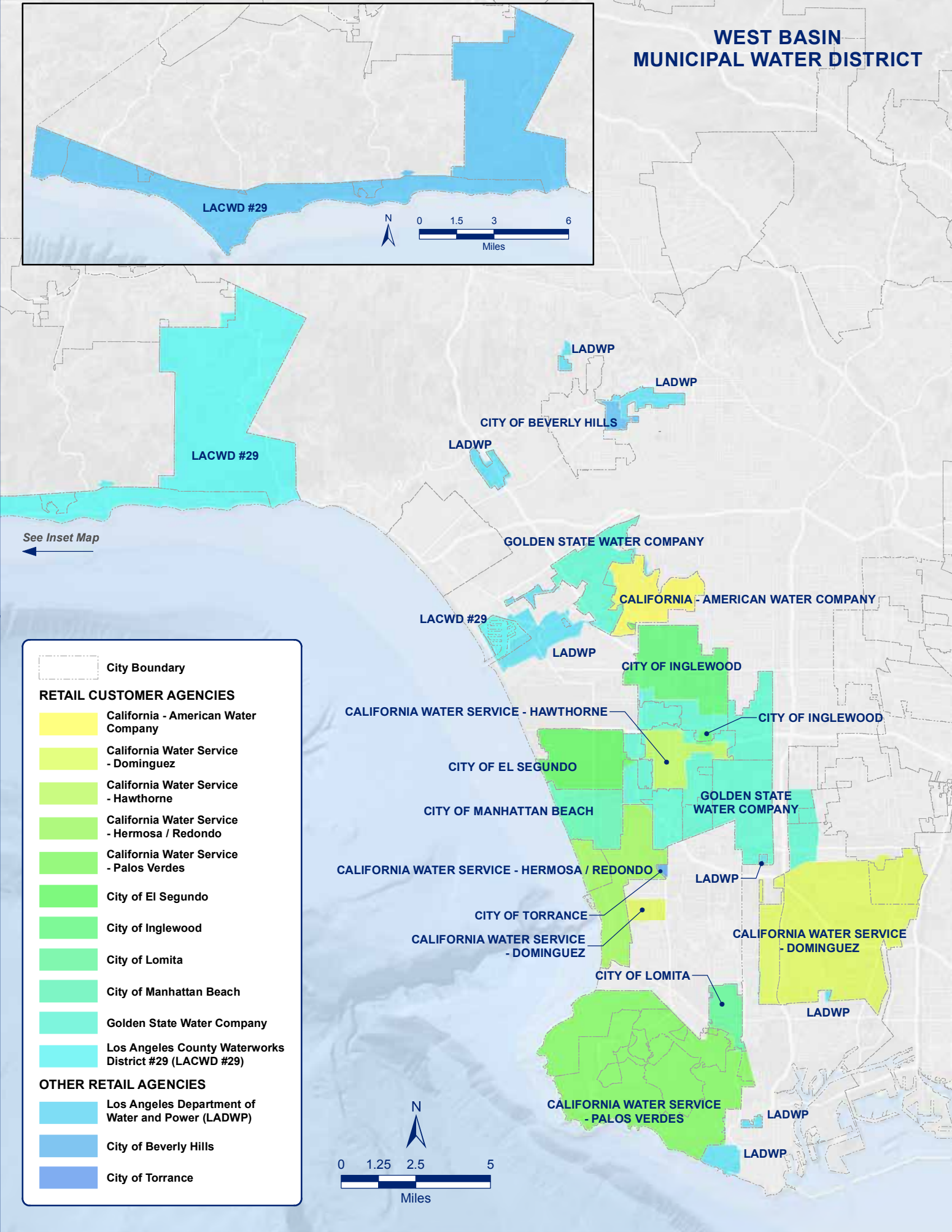
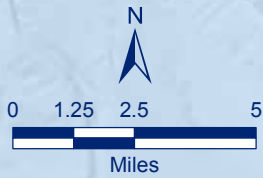
City Boundary

**RETAIL CUSTOMER AGENCIES**

- California - American Water Company
- California Water Service - Dominguez
- California Water Service - Hawthorne
- California Water Service - Hermosa / Redondo
- California Water Service - Palos Verdes
- City of El Segundo
- City of Inglewood
- City of Lomita
- City of Manhattan Beach
- Golden State Water Company
- Los Angeles County Waterworks District #29 (LACWD #29)

**OTHER RETAIL AGENCIES**

- Los Angeles Department of Water and Power (LADWP)
- City of Beverly Hills
- City of Torrance



# FISCAL YEAR 2016-2017 ACCOMPLISHMENTS



## FINANCE

- Completed the required biennial actuarial report for the Public Agency Retirement Services (PARS) plan.
- Received an Innovation Award from the California Society of Municipal Finance Officers for its work on improved processes in asset management to record and dispose of capital assets.
- Received an Excellence in Financial Reporting Award for West Basin's Comprehensive Annual Financial Report (CAFR) for Fiscal Year (FY) 2015-16 from the Government Finance Officers Association (GFOA).
- Received Excellence in Budget Recognition for the FY 2016-17 Operating Budget from GFOA and the California Society of Municipal Finance Officers (CSMFO).
- Successfully secured a Wellness Grant through Association of California Water Agencies/Joint Powers Insurance Authority (ACWA/JPIA) to assist in West Basin's health and wellness initiatives for its employees.

## WATER RECYCLING OPERATIONS

- Developed a Microfiltration Taskforce to implement short and long-term microfiltration improvements across all water recycling facilities to ensure reliability and water quality requirements.
- Completed Juanita Millender-McDonald Carson Regional Water Recycling Plant (JMMCRWRP) HVAC building improvements.
- Installed field monitoring devices for water quality, pressure and flow.
- Connected nine new recycled water sites, adding an estimated 129 Acre-Feet (AF) of demand annually.
- Negotiated and executed a new five-year operations and maintenance agreement with California Water Service.
- Upgraded the District's ArcGIS system to produce maps and other geospatial data.

## CAPITAL IMPROVEMENT PROGRAM

- Began the design of the Solids Handling System Rehabilitation Project to ensure reliability of West Basin's ability to process biosolids removed from the Hyperion Water Reclamation Plant (Hyperion) secondary effluent.
- Began design of the Edward C. Little Water Recycling Facility (ECLWRF) Phase IV and Phase V Microfiltration Optimization Project, to increase annual barrier water production and ensure reliability to both the barrier and Chevron boiler feed systems.
- Began design of the Phase III Clearwell Repair & Rehabilitation (Clearwell R&R) Project to ensure continued and reliable production of the Chevron boiler feed system.
- Completed feasibility studies for expansion of the District's recycled water distribution system to the Kenneth Hahn State Park, the Palos Verdes Peninsula and the City of Torrance.
- Completed the design of the JMMCRWRP expansion, intended to deliver approximately 2,000 Acre-Feet per Year (AFY) additional recycled water to the Tesoro Refinery for cooling tower applications, as well as improve reliability of the microfiltration system used in the boiler feed treatment system.
- Completed the construction of the Carson Mall Lateral Phase II Project to deliver recycled water into new areas within the City of Carson.
- Completed the construction of the South Gardena Lateral Project to deliver recycled water into new areas within the Gardena area.
- Completed construction for the disinfected tertiary recycled water Alkalinity Improvement Project. This project addressed the need for nitrified water upgrades to improve the water quality and enhance production capacity.
- Completed three of seven customer pipeline and connection construction projects with grant funding from California's Proposition 84 grant funding.

# FISCAL YEAR 2016-2017 ACCOMPLISHMENTS

## PUBLIC INFORMATION

- Produced the annual Water Harvest festival, including a Water Reliability Awards breakfast; festival attendance reached approximately 1,750 community members, in which West Basin led tours for nearly 400 attendees.
- Successfully partnered in Metropolitan Water District's (MWD) education programs; sponsored three high school Solar Cup teams and engaged more than 400 students in the Water is Life art contest.
- Served more than 8,000 students in grades 3 to 12 with free water education programs.
- Developed new and/or improved communication vehicles to showcase West Basin's brand and value; including the redesign and development of the organization's website and E-newsletter.
- Offered free, public water education programs: Water 101 Classes, public tours of the ECLWRF and a speakers bureau, all of which reinforce the District's Water Reliability program messages.

## WATER POLICY AND RESOURCE DEVELOPMENT

- Provided monthly updates to customer agencies regarding the State Water Resources Control Board's mandatory water conservation reporting.
- Conducted an informational workshop with customer agencies to review proposed FY 2017-18 budget and water rates and provide updates on various District programs and projects.
- Increased state and federal advocacy efforts related to securing project and program funding for the West Basin service area.
- Provided regular and timely updates to West Basin's state and federal legislators regarding the ongoing drought crisis, conservation and new local water supply projects.

## CONSERVATION

- Successfully completed five free Rain Barrel Distribution events and distributed more than 1,800 rain barrels.
- Provided residents and large landscape facilities with free landscape surveys and high efficiency nozzle installations.
- Conducted 12 California Friendly Landscape Training classes to teach residents about native and drought tolerant landscaping principles.
- Successfully applied for and was awarded, more than \$800,000 in grant funding from the Department of Water Resources (DWR) for two new water efficiency programs.
- Partnered with customer agencies, local cities and environmental organizations in the development and implementation of its water efficiency programs.

## WATER QUALITY MONITORING PROGRAM

- Completed annual customer water quality reports for participating retailers.
- Met or exceeded all permit and contractual water quality requirements: completed laboratory services required to comply with Federal Safe Drinking Water Act and California Title 22 Drinking Water regulations such as analyses of all inorganic, organic compounds and radioactivity.
- Provided purveyor workshops to help coordinate between water entities on important water quality and compliance issues.



# FISCAL YEAR 2017-2018 STRATEGIES



## FINANCE

- Incorporate the Board's input on the fixed revenue charge on FY 2017-18 budget and rate cycle. Develop scope and post solicitation for an evaluation of the recycled water system rates and charges and recommend changes, if any, to the current rate methodology for imported water and other charges.
- Continue to develop elements of a Small Business Enterprise program from reporting to the solicitation process.
- Plan and conduct the second annual Wellness Fair in support of West Basin's wellness initiatives for all staff.
- Update the District's Succession Plan for review and approval of Senior Management and the Board.
- Board of Directors will finalize the review of the Strategic Business Plan and deploy to staff to develop the strategies to accomplish the Board-directed goals.

## WATER RECYCLING OPERATIONS

- Continue to support existing customer water quality inquiries.
- Enhance and increase the water sampling locations throughout the distribution system.
- Update the current Computerized Maintenance Management System software to make it more user-friendly and improve data reliability.
- Continue to develop and implement the prioritized asset management recommendations to maximize the asset life and optimize maintenance activities.
- Install a flowmeter to capture all "Westside" Los Angeles Department of Water and Power recycled water demands.
- Implement instrumentation upgrades as a result of the dashboard reports.
- Complete the Arc Flash electrical hazard assessments for the water recycling facilities.

## CAPITAL IMPROVEMENT PROGRAM

- Begin construction of the JMMCRWRP expansion, intended to deliver approximately 2,000 AFY additional recycled water to the Tesoro Refinery for cooling tower applications.
- Continue construction of the Hyperion Effluent Pump Station Expansion and Secondary Electrical Feed Project. The pump station project will provide additional capacity to serve future recycled water demands and add a second power source to the existing facility.
- Complete design and begin operation of the ECLWRF Phase IV Microfiltration Optimization Project, to increase annual barrier water production and ensure reliability to both the barrier and Chevron boiler feed systems.
- Begin construction of the ECLWRF Phase V Microfiltration expansion project.
- Complete construction of the Phase III Clearwell R&R Project to ensure continued and reliable production of the Chevron boiler feed system.
- Complete construction of the Chlorine Contact Basin Rehabilitation Project to ensure adequate chlorine contact time for disinfected tertiary recycled water.
- Complete construction of the Reverse Osmosis (RO) Clean-in-Place Waste Discharge Project to allow RO cleaning chemicals to be discharged to the sewer rather than being combined with RO brine and discharged to Hyperion ocean outfall.
- Complete the construction for the ECLWRF Visitor Center Renovation to expand the visitor center space, renovate interior of the existing office spaces, relocate the control room, update interpretive messages and renovate exhibits.
- Begin several Repair & Rehabilitation (R&R) projects including: Torrance Refinery Water Recycling Plant Waste Discharge Capacity Increase Project, Hyperion Secondary Effluent Pump Station, Facility-Wide Surge Tank Project and Welded Steel Storage Tank Rehabilitation Project.

# FISCAL YEAR 2017-2018 STRATEGIES

## PUBLIC INFORMATION

- Host the annual Water Harvest festival in 2018 to provide the community with informative, water and environmental stewardship related booths, information and devices.
- Provide quality education programs for grades 3 to 12, including the enhancement of educational information on the District website and participation in Solar Cup.
- Continue to support the update of the exhibits and educational facilities at the ECLWRF.
- Improve District communications highlighting recycled water accomplishments and strategies for maximizing water reuse.
- Outreach to key stakeholders throughout the service area to inform and assess support for the District's Ocean Water Desalination Program, a component of the Water Reliability Program.

## CONSERVATION

- Update West Basin's long-term Water Use Efficiency Plan.
- Launch the new "Comprehensive Water Conservation Program" in the cities of Malibu and Topanga.
- Launch two new DWR grant funded programs:
  1. Cash for Kitchens
  2. Disadvantaged Area Community (DAC) Water and Energy Savings Initiative Program
- Continue to seek federal and state grant funding to support new and ongoing water efficiency programs.
- Continue to provide free landscape surveys for residential and commercial sites within the District's service area.
- Continue to partner with environmental organizations for the distribution of rain barrels and provide free rainwater/greywater public workshops.

## WATER POLICY AND RESOURCE DEVELOPMENT

- Continue to monitor and advocate for long term solutions to California's water crisis, including the Bay Delta Conservation Plan/California WaterFix.
- Monitor and advocate for legislation and regulations to implement a long-term strategy to make water conservation a "California Way of Life."
- Continue to pursue state, federal and other external funding for conservation and reliability projects within the West Basin service area and support the efforts of our customer agencies and stakeholders, particularly for projects that provide immediate water savings during the drought.
- Continue leadership role in the Greater Los Angeles County Integrated Regional Water Management Program, including administration, on behalf of the region, of its financial resources.
- Pursue a Local Resources Program (LRP) incentive with MWD for the District's recycled water expansion to the Tesoro Refinery in the City of Carson.

## WATER QUALITY MONITORING PROGRAM

- Complete annual customer water quality reports for participating retailers.
- Meet permit and contractual water quality requirements: Complete laboratory services required to comply with Federal Safe Drinking Water Act and California Title 22 Drinking Water regulations such as analyses of all inorganic, organic compounds and radioactivity.
- Provide purveyor workshops to help coordinate between water companies on important water quality and compliance issues.



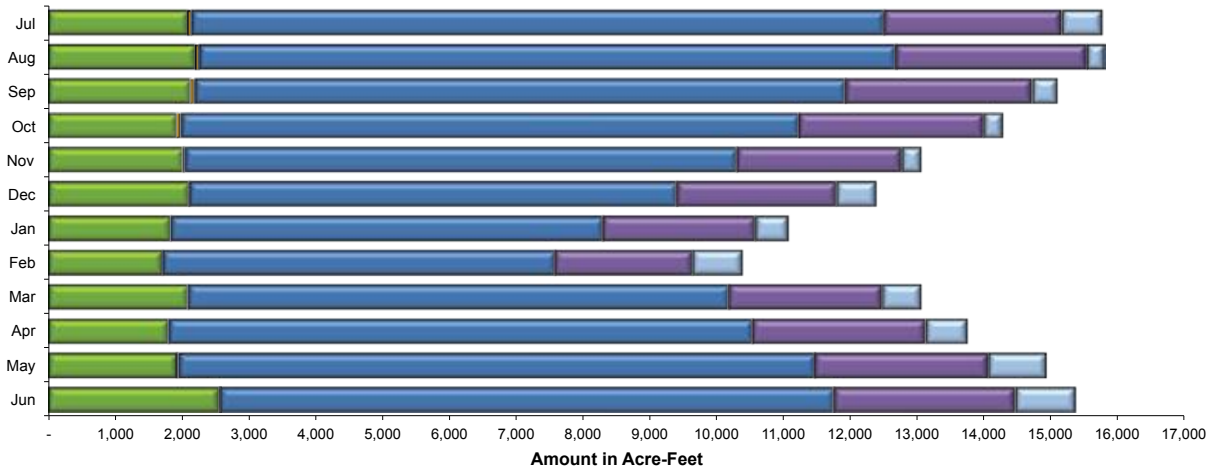
A high-speed photograph of a water splash, creating a dynamic and fluid background. The water is captured in various stages of movement, with droplets and splashes of varying sizes scattered across the frame. The color is a deep, vibrant blue, giving it a clean and modern feel.

## TOTAL WATER USE

# West Basin Municipal Water District

17140 S. Avalon Blvd., Carson CA 90746

## FY 2016-17 Total Water Use



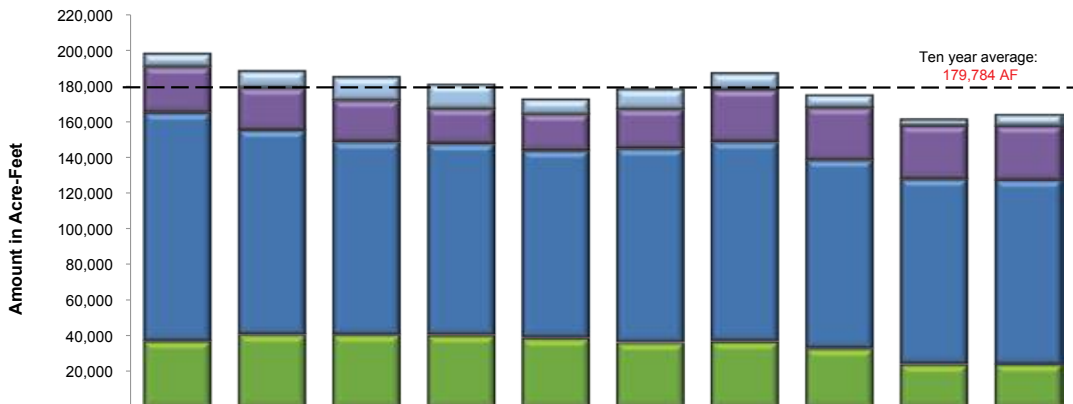
West Basin MWD	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater*	2,085	2,194	2,124	1,926	2,016	2,101	1,825	1,703	2,086	1,796	1,921	2,541	24,317
Desalted	54	55	58	54	21	-	-	-	-	-	23	20	284
Imported	10,368	10,435	9,752	9,257	8,271	7,312	6,481	5,887	8,099	8,745	9,527	9,200	103,333
Recycled Water**	2,659	2,852	2,788	2,761	2,466	2,389	2,287	2,067	2,298	2,595	2,598	2,706	30,469
Seawater Barrier***	592	263	371	280	288	587	490	740	577	618	857	900	6,563
<b>Total</b>	<b>15,758</b>	<b>15,799</b>	<b>15,093</b>	<b>14,277</b>	<b>13,063</b>	<b>12,389</b>	<b>11,084</b>	<b>10,396</b>	<b>13,060</b>	<b>13,754</b>	<b>14,926</b>	<b>15,367</b>	<b>164,965</b>

\*Source: WBMWD Database for groundwater production (inside service area only and pumping from Central Basin).

\*\*Source: WBMWD Database (excludes City of Torrance, Torrance - Torrance Refining Recycled Water, and LADWP).

\*\*\*Includes imported sales to WRD-West Coast Barrier and Dominguez Gap.

## 10-Year Average Total Water Use



Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater*	37,116	40,728	40,691	40,283	38,568	36,174	36,825	32,994	24,072	24,317	35,177
Desalted	467	682	372	882	958	825	817	690	779	284	675
Imported	127,925	114,293	108,261	107,151	104,851	108,550	111,629	105,569	103,638	103,333	109,520
Recycled Water**	25,459	23,588	23,331	19,579	20,431	22,135	29,224	29,110	30,116	30,469	25,344
Seawater Barrier***	7,609	9,774	13,054	13,534	8,504	11,320	9,285	7,354	3,681	6,563	9,068
<b>Total</b>	<b>198,577</b>	<b>189,065</b>	<b>185,709</b>	<b>181,428</b>	<b>173,313</b>	<b>179,004</b>	<b>187,780</b>	<b>175,717</b>	<b>162,286</b>	<b>164,965</b>	<b>179,784</b>

\*Source: WBMWD Database for groundwater production (inside service area only and pumping from Central Basin).

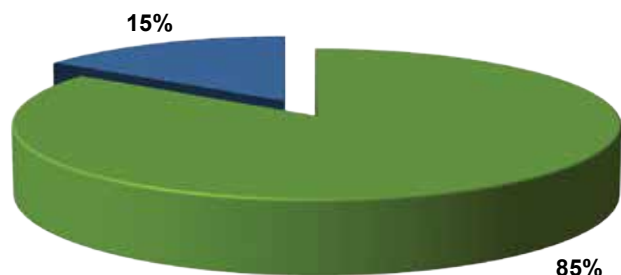
\*\*Source: WBMWD Database (excludes City of Torrance, Torrance - Mobil Recycled Water, and LADWP).

\*\*\*Includes imported sales to WRD-West Coast Barrier and Dominguez Gap.

# California American Water Company

8657 Grand Ave., Rosemead, CA 91770

## FY 2016-17 Total Water Use



■ Groundwater\* ■ Imported

**Adjudicated Water Rights**  
2,067 AF

**Imported Connections**  
WB-22 WB-27

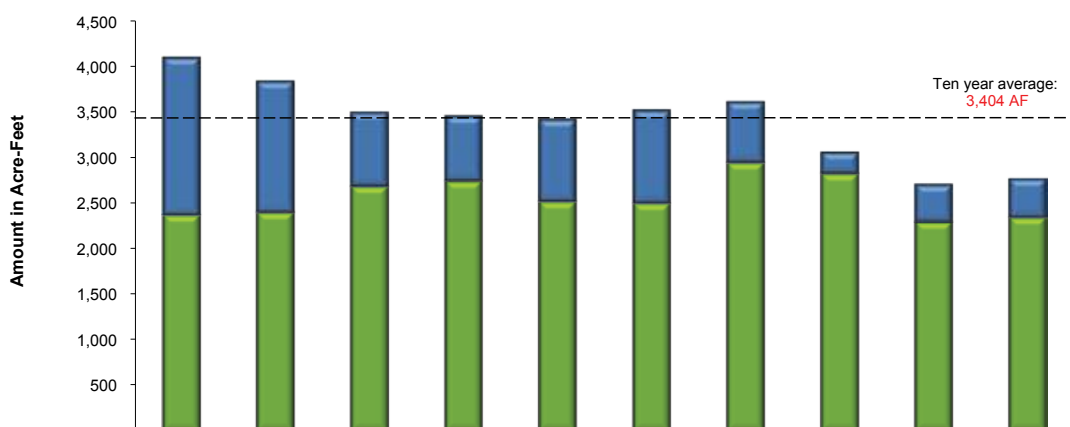
**2017 Capacity Reservation Charge (cfs)**  
2014 = 3.7 (CRC) 2015 = 2.8 2016 = 1.3

*Note: The 2017 CRC is the highest daily average flow for the past three years*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater*	211	192	222	188	197	247	161	148	211	215	184	176	2,351
Imported	50	74	72	34	3	-	0	-	-	-	78	117	428
Recycled	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>260</b>	<b>266</b>	<b>294</b>	<b>222</b>	<b>200</b>	<b>247</b>	<b>161</b>	<b>148</b>	<b>211</b>	<b>215</b>	<b>262</b>	<b>293</b>	<b>2,779</b>

\*All groundwater is pumped from Central Basin and imported into Cal American service area within West Basin.

## 10-Year Average Total Water Use



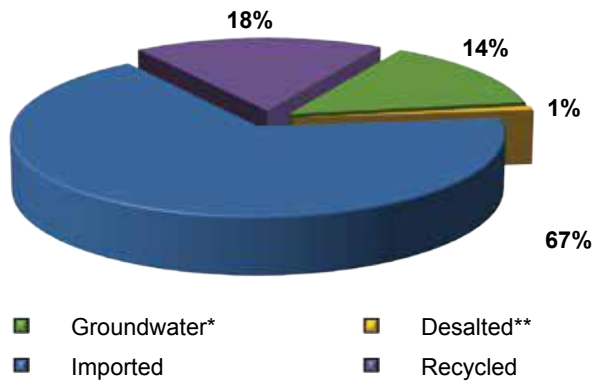
Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	2,378	2,406	2,692	2,750	2,527	2,506	2,953	2,830	2,300	2,351	2,569
Imported	1,725	1,436	809	712	902	1,019	667	238	415	428	835
Recycled	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>4,103</b>	<b>3,842</b>	<b>3,501</b>	<b>3,462</b>	<b>3,428</b>	<b>3,525</b>	<b>3,619</b>	<b>3,068</b>	<b>2,715</b>	<b>2,779</b>	<b>3,404</b>

**Contact:** Mr. Garry Hofer, Vice President of Operations  
**Office:** (626) 614-2511

# California Water Service – Dominguez

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272

## FY 2016-17 Total Water Use



**Adjudicated Water Rights**  
10,417 AF

**Imported Connections**

WB-09 WB-10 WB-14 WB-19  
WB-21 WB-35 WB-36 WB-39

**2017 Capacity Reservation Charge (cfs)**

2014 = 51.1 (CRC) 2015 = 46.5 2016 = 45.9

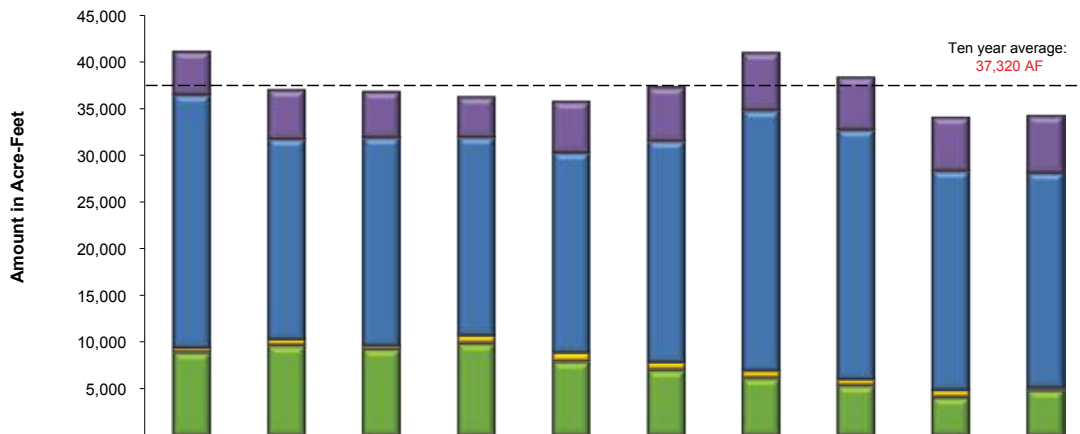
Note: The 2017 CRC is the highest daily average flow for the past three years

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater*	349	470	428	384	452	466	413	418	488	271	288	463	4,888
Desalted**	54	55	58	54	21	-	-	-	-	-	23	20	284
Imported	2,312	2,287	2,179	1,981	1,786	1,766	1,607	1,454	1,902	1,868	2,001	1,907	23,049
Recycled	604	620	603	528	525	504	483	398	409	517	468	511	6,169
<b>Total</b>	<b>3,319</b>	<b>3,431</b>	<b>3,268</b>	<b>2,946</b>	<b>2,784</b>	<b>2,735</b>	<b>2,504</b>	<b>2,269</b>	<b>2,799</b>	<b>2,655</b>	<b>2,779</b>	<b>2,900</b>	<b>34,389</b>

\*Cal Water Dominguez has groundwater rights within the West Coast Basin and Central Basin. The number shown is the amount pumped from both West Coast Basin and Central Basin.

\*\*The Desalted Water is not pumped but rather sold to Cal Water Dominguez.

## 10-Year Average Total Water Use



Water Supply*	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	8,962	9,666	9,298	9,885	7,959	7,050	6,183	5,379	4,158	4,888	7,343
Desalted	467	682	372	882	958	825	817	691	779	284	676
Imported	27,095	21,483	22,310	21,226	21,425	23,730	27,871	26,735	23,489	23,049	23,841
Recycled	4,690	5,293	4,959	4,392	5,538	5,841	6,245	5,669	5,803	6,169	5,460
<b>Total</b>	<b>41,215</b>	<b>37,124</b>	<b>36,938</b>	<b>36,385</b>	<b>35,880</b>	<b>37,446</b>	<b>41,115</b>	<b>38,474</b>	<b>34,230</b>	<b>34,389</b>	<b>37,320</b>

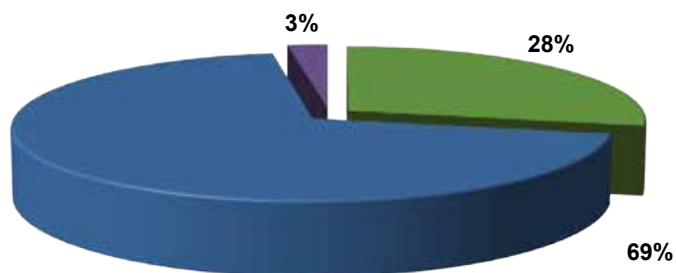
\*California Water Service merged with Dominguez Water Company in mid-2000 and was renamed as California Water Service - Dominguez District.

**Contact:** Mr. Daniel Armendariz Jr., District Manager  
**Office:** (310) 257-1425 **Fax:** (310) 326-6327

# California Water Service – Hawthorne

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272

## FY 2016-17 Total Water Use



Groundwater Imported Recycled

### Adjudicated Water Rights

1,882 AF

### Imported Connections

WB-18 WB-20

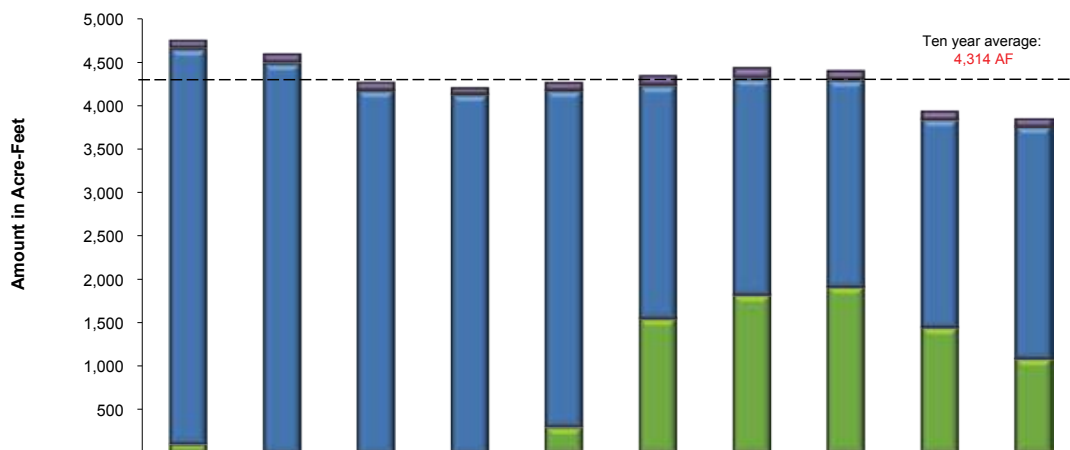
### 2017 Capacity Reservation Charge (cfs)

2014 = 7.5 (CRC) 2015 = 6.5 2016 = 6.0

Note: The 2017 CRC is the highest daily average flow for the past three years

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	138	160	146	116	71	141	105	-	-	0	57	162	1,095
Imported	202	174	175	204	251	149	174	265	316	310	300	159	2,678
Recycled	11	14	13	12	7	7	2	1	2	6	8	10	94
<b>Total</b>	<b>351</b>	<b>348</b>	<b>334</b>	<b>331</b>	<b>329</b>	<b>296</b>	<b>281</b>	<b>266</b>	<b>318</b>	<b>317</b>	<b>365</b>	<b>331</b>	<b>3,868</b>

## 10-Year Average Total Water Use



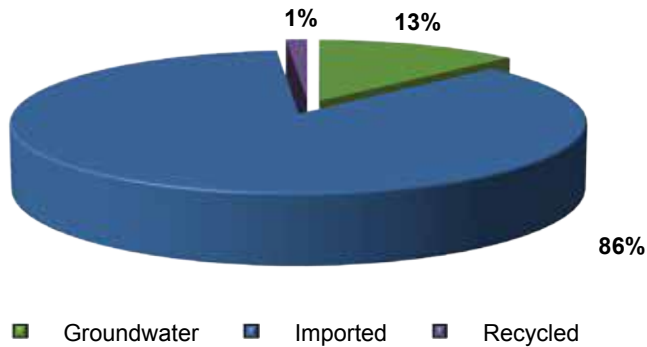
Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	110	8	1	3	313	1,554	1,824	1,912	1,451	1,095	827
Imported	4,554	4,489	4,186	4,137	3,872	2,689	2,499	2,397	2,401	2,678	3,390
Recycled	85	99	90	79	91	108	118	98	104	94	96
<b>Total</b>	<b>4,749</b>	<b>4,596</b>	<b>4,277</b>	<b>4,219</b>	<b>4,276</b>	<b>4,351</b>	<b>4,441</b>	<b>4,407</b>	<b>3,956</b>	<b>3,868</b>	<b>4,314</b>

**Contact:** Mr. Daniel Armendariz Jr., District Manager  
**Office:** (310) 257-1425 **Fax:** (310) 326-6327

# California Water Service – Hermosa Redondo

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272

## FY 2016-17 Total Water Use



**Adjudicated Water Rights**  
4,070 AF

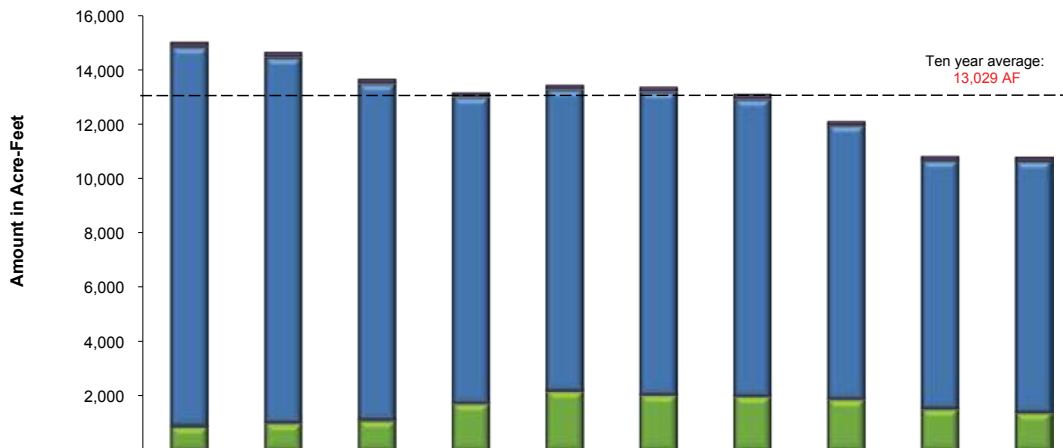
**Imported Connections**  
WB-2B WB-5 WB-16 WB-29

**2017 Capacity Reservation Charge (cfs)**  
2014 = 20.7 (CRC) 2015 = 18.6 2016 = 17.1

Note: The 2017 CRC is the highest daily average flow for the past three years

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	119	145	133	144	144	151	106	84	93	92	92	93	1,397
Imported	887	873	819	796	707	657	665	595	742	780	892	868	9,280
Recycled	19	18	26	18	10	8	4	1	2	8	14	19	148
<b>Total</b>	<b>1,026</b>	<b>1,036</b>	<b>977</b>	<b>959</b>	<b>862</b>	<b>816</b>	<b>775</b>	<b>680</b>	<b>838</b>	<b>881</b>	<b>997</b>	<b>979</b>	<b>10,825</b>

## 10-Year Average Total Water Use



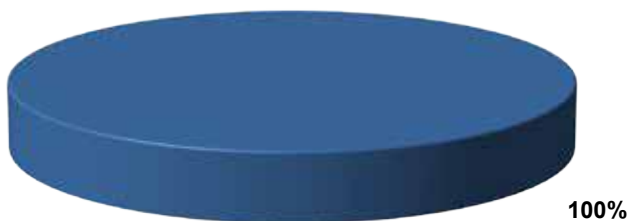
Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	899	1,018	1,130	1,739	2,186	2,043	1,993	1,896	1,541	1,397	1,584
Imported	13,971	13,471	12,393	11,295	11,118	11,182	10,966	10,098	9,169	9,280	11,294
Recycled	145	163	150	133	137	162	167	147	156	148	151
<b>Total</b>	<b>15,014</b>	<b>14,652</b>	<b>13,673</b>	<b>13,166</b>	<b>13,441</b>	<b>13,388</b>	<b>13,126</b>	<b>12,141</b>	<b>10,866</b>	<b>10,825</b>	<b>13,029</b>

**Contact:** Mr. Daniel Armendariz Jr., District Manager  
**Office:** (310) 257-1425 **Fax:** (310) 326-6327

# California Water Service – Palos Verdes

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272

## FY 2016-17 Total Water Use



100%

■ Imported

### Adjudicated Water Rights

– AF

### Imported Connections

WB-6A WB-6B WB-32 WB-40

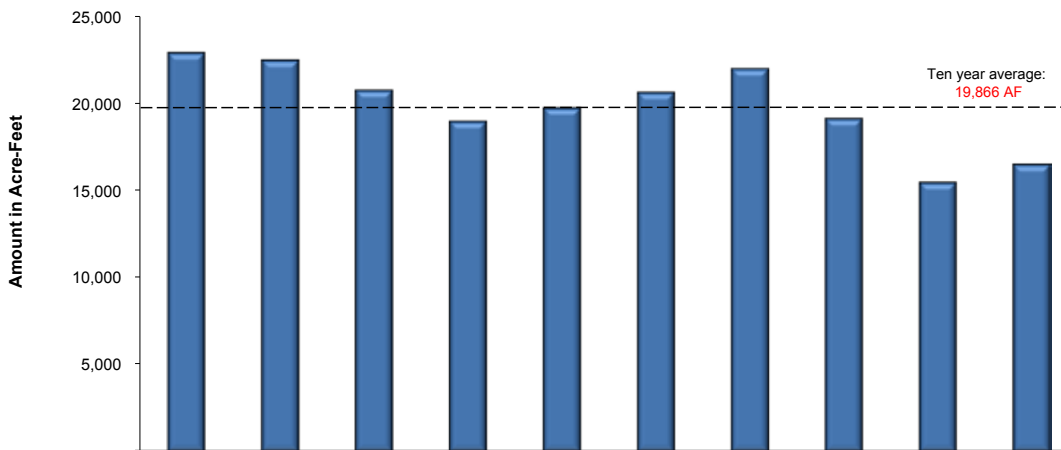
### 2017 Capacity Reservation Charge (cfs)

2014 = 44.2 (CRC) 2015 = 33.9 2016 = 34.8

Note: The 2017 CRC is the highest daily average flow for the past three years

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	1,782	1,773	1,683	1,563	1,309	979	699	606	1,202	1,509	1,678	1,734	16,515
Recycled	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>1,782</b>	<b>1,773</b>	<b>1,683</b>	<b>1,563</b>	<b>1,309</b>	<b>979</b>	<b>699</b>	<b>606</b>	<b>1,202</b>	<b>1,509</b>	<b>1,678</b>	<b>1,734</b>	<b>16,515</b>

## 10-Year Average Total Water Use



Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	-	-	-	-	-	-	-	-	-	-	-
Imported	22,911	22,485	20,765	18,984	19,755	20,647	21,996	19,138	15,466	16,515	19,866
Recycled	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>22,911</b>	<b>22,485</b>	<b>20,765</b>	<b>18,984</b>	<b>19,755</b>	<b>20,647</b>	<b>21,996</b>	<b>19,138</b>	<b>15,466</b>	<b>16,515</b>	<b>19,866</b>

## FY 2016-17 Total Water Use



■ Imported ■ Recycled

**Adjudicated Water Rights**  
953 AF

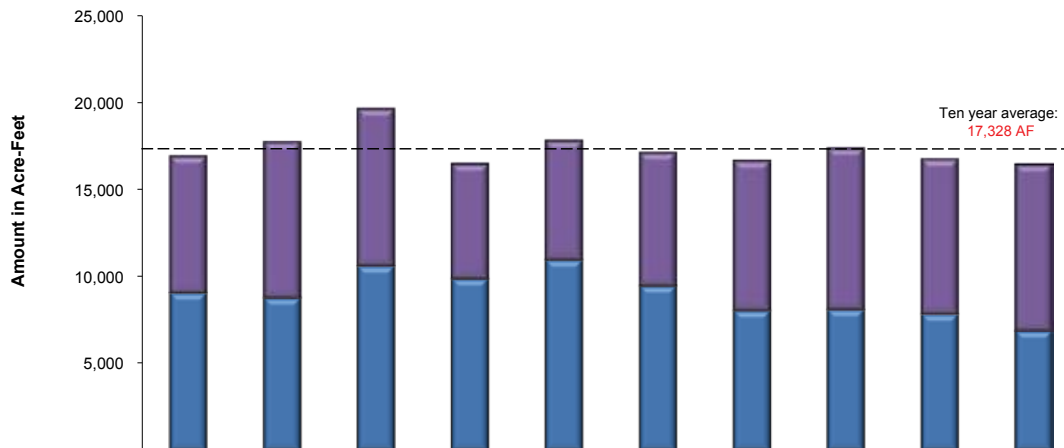
**Imported Connections**  
WB-03 WB-28

**2017 Capacity Reservation Charge (cfs)**  
2014 = 20.5 2015 = 20.6 (CRC) 2016 = 11.4

*Note: The 2017 CRC is the highest daily average flow for the past three years*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	682	723	653	595	553	530	512	412	544	540	575	582	6,901
Recycled	865	838	798	853	798	790	720	679	785	795	857	803	9,581
<b>Total</b>	<b>1,547</b>	<b>1,560</b>	<b>1,451</b>	<b>1,447</b>	<b>1,351</b>	<b>1,320</b>	<b>1,232</b>	<b>1,091</b>	<b>1,329</b>	<b>1,336</b>	<b>1,432</b>	<b>1,385</b>	<b>16,482</b>

## 10-Year Average Total Water Use

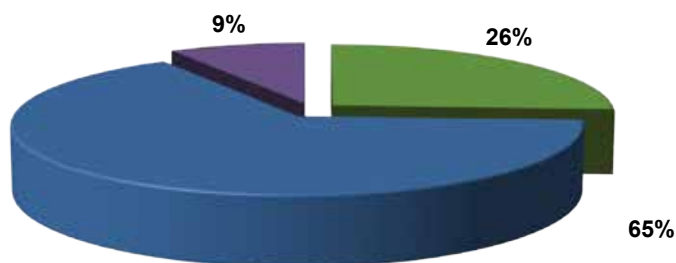


Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	-	-	-	-	-	-	-	-	-	-	-
Imported	9,085	8,795	10,632	9,885	10,961	9,479	8,075	8,127	7,854	6,901	8,979
Recycled	7,865	8,978	9,035	6,638	6,888	7,677	8,616	9,289	8,927	9,581	8,349
<b>Total</b>	<b>16,950</b>	<b>17,773</b>	<b>19,666</b>	<b>16,522</b>	<b>17,848</b>	<b>17,156</b>	<b>16,691</b>	<b>17,416</b>	<b>16,781</b>	<b>16,482</b>	<b>17,328</b>

# City of Inglewood

One Manchester Blvd., Inglewood, CA 90301

## FY 2016-17 Total Water Use



■ Groundwater ■ Imported ■ Recycled

### Adjudicated Water Rights

4,450 AF

### Imported Connections

WB-17 WB-38

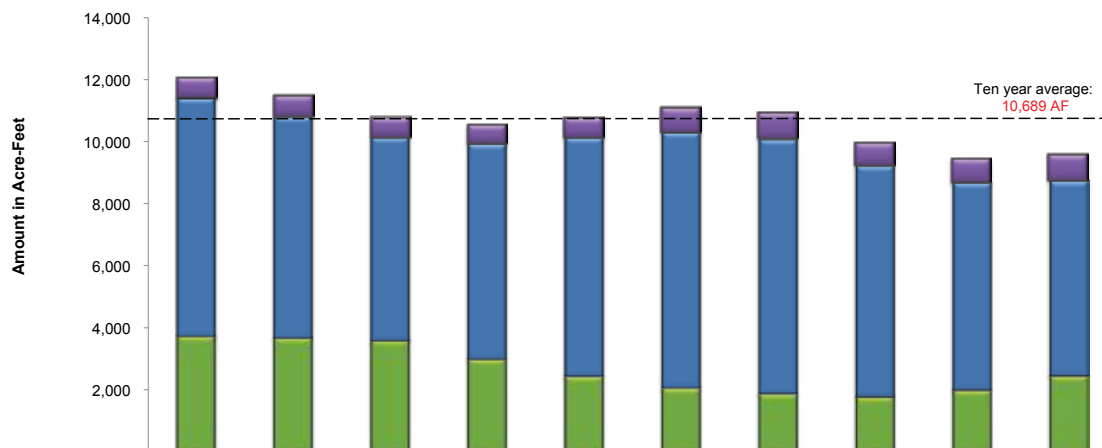
### 2017 Capacity Reservation Charge (cfs)

2014 = 15.0 (CRC) 2015 = 11.5 2016 = 12.0

Note: The 2017 CRC is the highest daily average flow for the past three years

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	205	196	178	199	222	229	227	210	214	205	198	199	2,483
Imported	612	625	593	570	491	444	406	358	486	533	586	590	6,293
Recycled	122	117	102	80	57	20	7	5	50	80	99	95	834
<b>Total</b>	<b>938</b>	<b>938</b>	<b>873</b>	<b>849</b>	<b>771</b>	<b>693</b>	<b>639</b>	<b>573</b>	<b>750</b>	<b>818</b>	<b>884</b>	<b>884</b>	<b>9,610</b>

## 10-Year Average Total Water Use



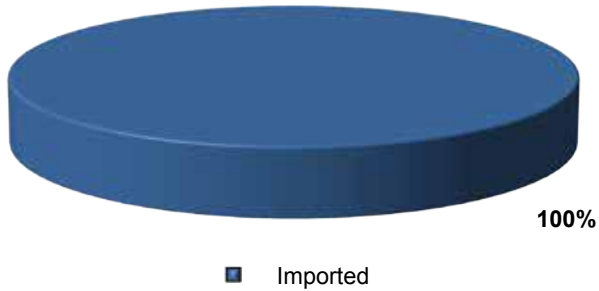
Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	3,751	3,695	3,622	3,020	2,476	2,097	1,911	1,809	2,025	2,483	2,689
Imported	7,689	7,137	6,552	6,939	7,685	8,238	8,201	7,445	6,693	6,293	7,287
Recycled	650	680	621	606	642	783	827	728	765	834	714
<b>Total</b>	<b>12,090</b>	<b>11,512</b>	<b>10,795</b>	<b>10,565</b>	<b>10,802</b>	<b>11,117</b>	<b>10,939</b>	<b>9,982</b>	<b>9,483</b>	<b>9,610</b>	<b>10,689</b>

**Contact:** Mr. Louis Atwell, Public Works Director  
**Office:** (310) 412-5333 **Fax:** (310) 412-5552

# Los Angeles County Waterworks District 29 & Marina Del Rey

900 S. Freemont Ave., Alhambra, CA 91803

## FY 2016-17 Total Water Use



**Adjudicated Water Rights**  
-- AF

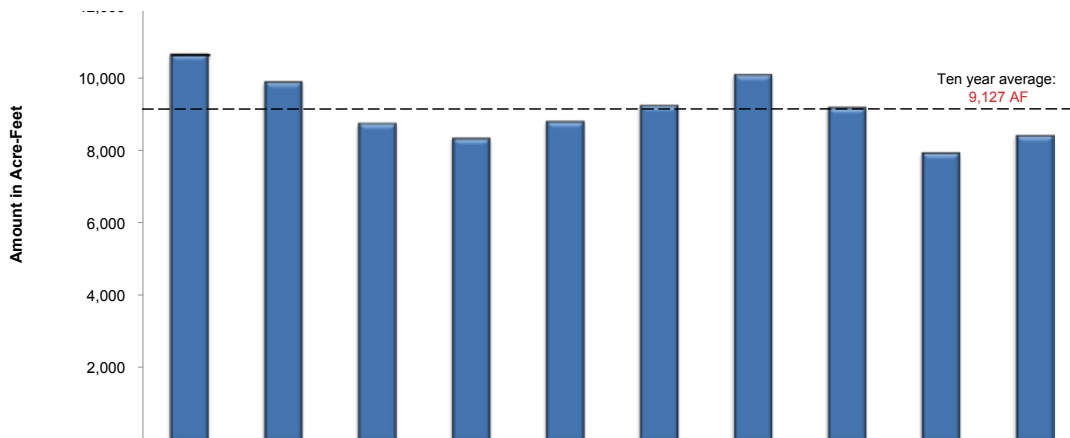
**Imported Connections**  
WB-26A WB-26B WB-26C

**2017 Capacity Reservation Charge (cfs)**  
2014 = 18.2 (CRC) 2015 = 16.9 2016 = 17.7

*Note: The 2017 CRC is the highest daily average flow for the past three years*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	856	890	808	850	812	594	411	361	601	703	764	766	8,414
Recycled	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>856</b>	<b>890</b>	<b>808</b>	<b>850</b>	<b>812</b>	<b>594</b>	<b>411</b>	<b>361</b>	<b>601</b>	<b>703</b>	<b>764</b>	<b>766</b>	<b>8,414</b>

## 10-Year Average Total Water Use

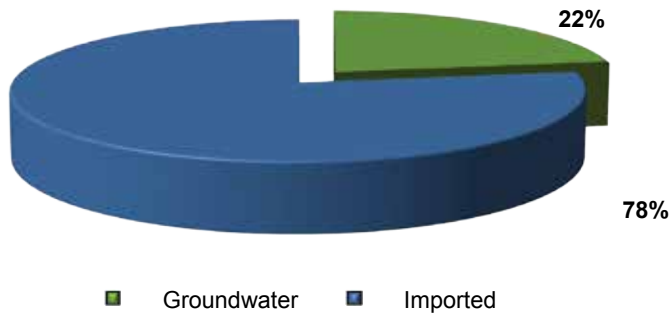


Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	-	-	-	-	-	-	-	-	-	-	-
Imported	10,654	9,886	8,750	8,331	8,802	9,234	10,090	9,182	7,932	8,414	9,127
Recycled	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>10,654</b>	<b>9,886</b>	<b>8,750</b>	<b>8,331</b>	<b>8,802</b>	<b>9,234</b>	<b>10,090</b>	<b>9,182</b>	<b>7,932</b>	<b>8,414</b>	<b>9,127</b>

# City of Lomita

P.O. Box 339, Lomita, CA 90717

## FY 2016-17 Total Water Use



**Adjudicated Water Rights**  
1,352 AF

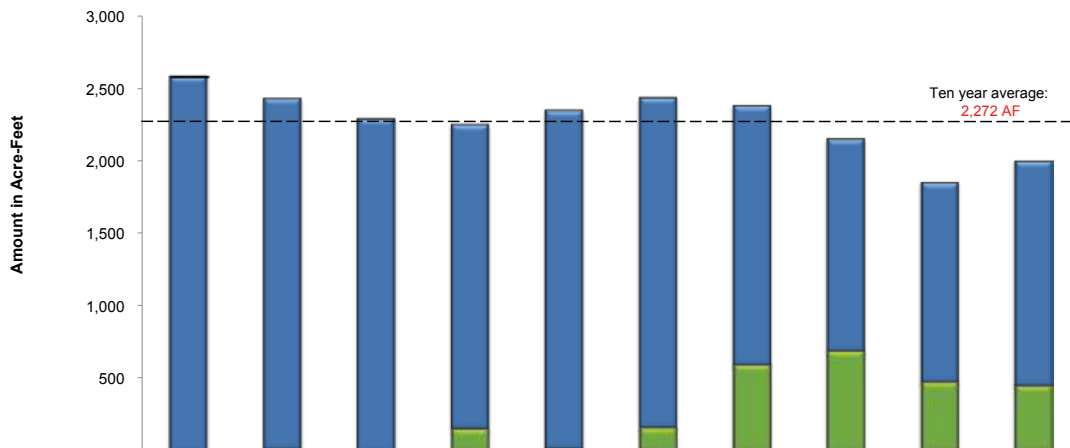
**Imported Connections**  
WB-07 WB-08

**2017 Capacity Reservation Charge (cfs)**  
2014 = 3.6 2015 = 3.9 (CRC) 2016 = 3.8

*Note: The 2017 CRC is the highest daily average flow for the past three years*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	55	6	2	17	47	44	15	34	47	57	64	60	449
Imported	133	185	178	177	111	102	123	89	104	109	121	117	1,549
Recycled	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>187</b>	<b>191</b>	<b>180</b>	<b>194</b>	<b>158</b>	<b>146</b>	<b>138</b>	<b>124</b>	<b>151</b>	<b>167</b>	<b>185</b>	<b>177</b>	<b>1,998</b>

## 10-Year Average Total Water Use

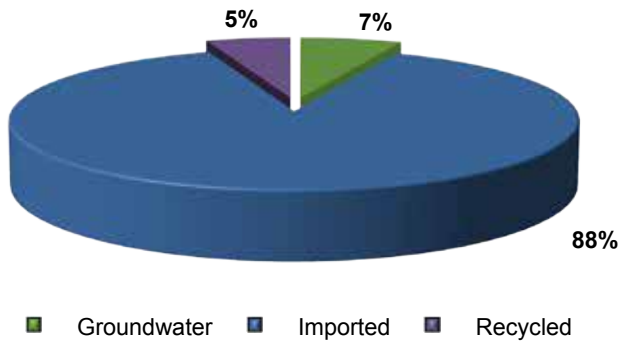


Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	-	12	-	155	13	162	592	688	476	449	255
Imported	2,583	2,420	2,290	2,096	2,336	2,275	1,788	1,463	1,374	1,549	2,017
Recycled	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2,583</b>	<b>2,432</b>	<b>2,290</b>	<b>2,251</b>	<b>2,349</b>	<b>2,437</b>	<b>2,380</b>	<b>2,151</b>	<b>1,850</b>	<b>1,998</b>	<b>2,272</b>

# City of Manhattan Beach

3621 Bell Ave., Manhattan Beach, CA 90266

## FY 2016-17 Total Water Use



### Adjudicated Water Rights

1,131 AF

### Imported Connections

WB-04

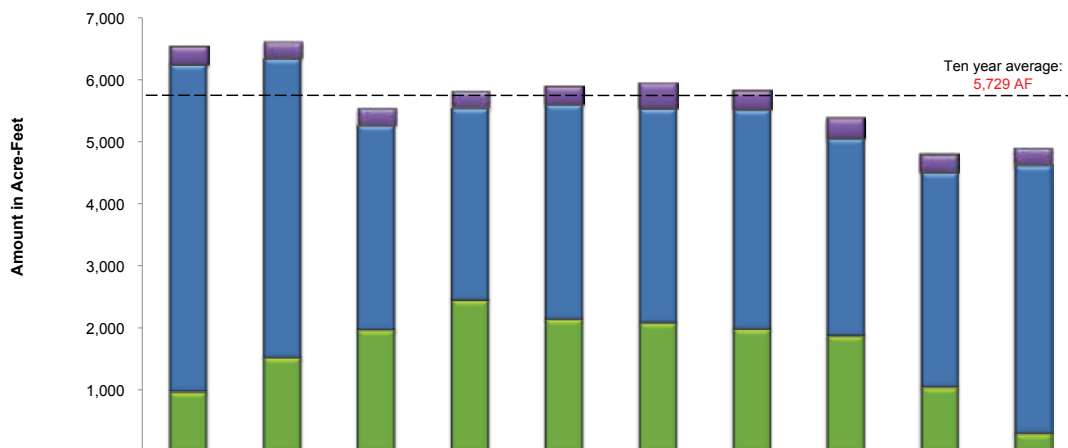
### 2017 Capacity Reservation Charge (cfs)

2014 = 10.3 (CRC) 2015 = 7.8 2016 = 8.2

Note: The 2017 CRC is the highest daily average flow for the past three years

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	13	28	17	15	7	15	9	12	50	25	63	63	318
Imported	437	417	400	400	370	334	295	253	308	364	370	369	4,317
Recycled	37	41	28	27	18	11	1	1	17	21	30	33	265
<b>Total</b>	<b>487</b>	<b>485</b>	<b>446</b>	<b>441</b>	<b>395</b>	<b>361</b>	<b>305</b>	<b>267</b>	<b>375</b>	<b>410</b>	<b>462</b>	<b>465</b>	<b>4,900</b>

## 10-Year Average Total Water Use

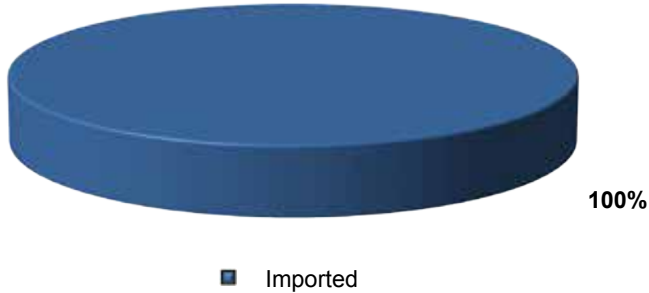


Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	984	1,534	1,979	2,460	2,148	2,096	1,989	1,884	1,059	318	1,645
Imported	5,278	4,822	3,301	3,095	3,466	3,450	3,544	3,184	3,458	4,317	3,791
Recycled	288	251	264	264	291	405	305	313	280	265	293
<b>Total</b>	<b>6,549</b>	<b>6,607</b>	<b>5,544</b>	<b>5,819</b>	<b>5,905</b>	<b>5,951</b>	<b>5,839</b>	<b>5,381</b>	<b>4,797</b>	<b>4,900</b>	<b>5,729</b>

# Golden State Water Company – Culver City

5839 Green Valley Circle., Suite 106, Culver City, CA 90230

## FY 2016-17 Total Water Use



**Adjudicated Water Rights**  
7,502 AF

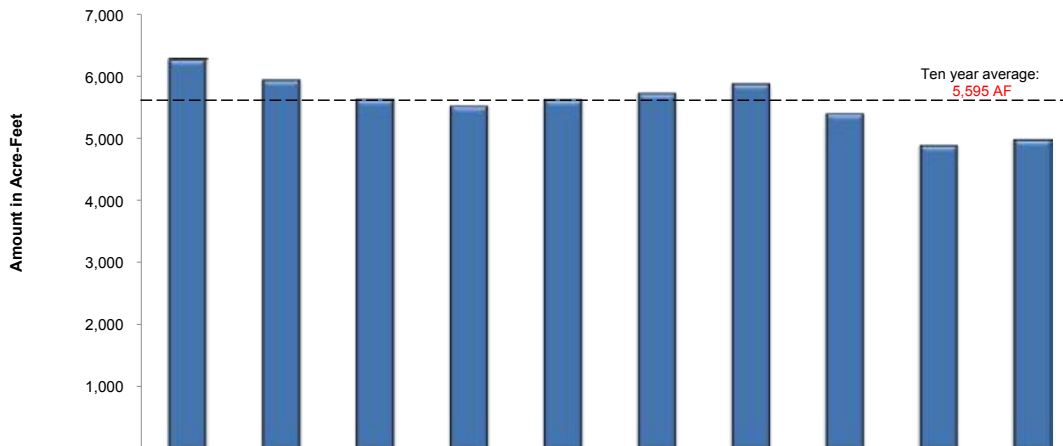
**Imported Connections**  
WB-23 WB-24 WB-34

**2017 Capacity Reservation Charge (cfs)**  
2014 = 34.3 2015 = 44.3 (CRC) 2016 = 43.8

*Note: The 2017 CRC is the highest daily average flow for the past three years. The CRC shown is for GSWC Southwest District and Culver City combined.*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported	469	489	453	438	412	383	337	304	395	426	448	437	4,988
Recycled	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>469</b>	<b>489</b>	<b>453</b>	<b>438</b>	<b>412</b>	<b>383</b>	<b>337</b>	<b>304</b>	<b>395</b>	<b>426</b>	<b>448</b>	<b>437</b>	<b>4,988</b>

## 10-Year Average Total Water Use

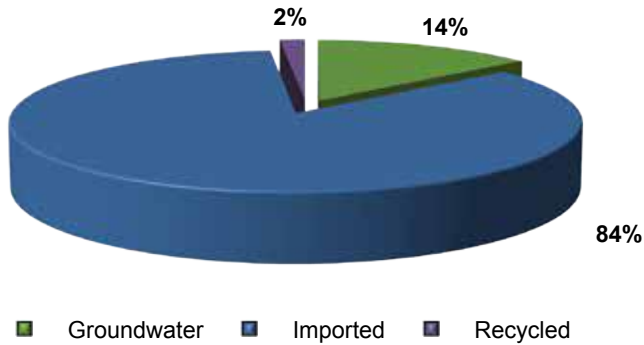


Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
Groundwater	-	-	-	-	-	-	-	-	-	-	-
Imported	6,279	5,953	5,640	5,533	5,635	5,737	5,887	5,406	4,896	4,988	5,595
Recycled	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>6,279</b>	<b>5,953</b>	<b>5,640</b>	<b>5,533</b>	<b>5,635</b>	<b>5,737</b>	<b>5,887</b>	<b>5,406</b>	<b>4,896</b>	<b>4,988</b>	<b>5,595</b>

# Golden State Water Company – Southwest District

1600 W. Redondo Beach Blvd., #101, Gardena, CA 90247

## FY 2016-17 Total Water Use



### Adjudicated Water Rights 7,502 AF

#### Imported Connections

WB-1 WB-2A WB-11 WB-12 WB-13  
WB-15 WB-25 WB-30 WB-31 WB-33

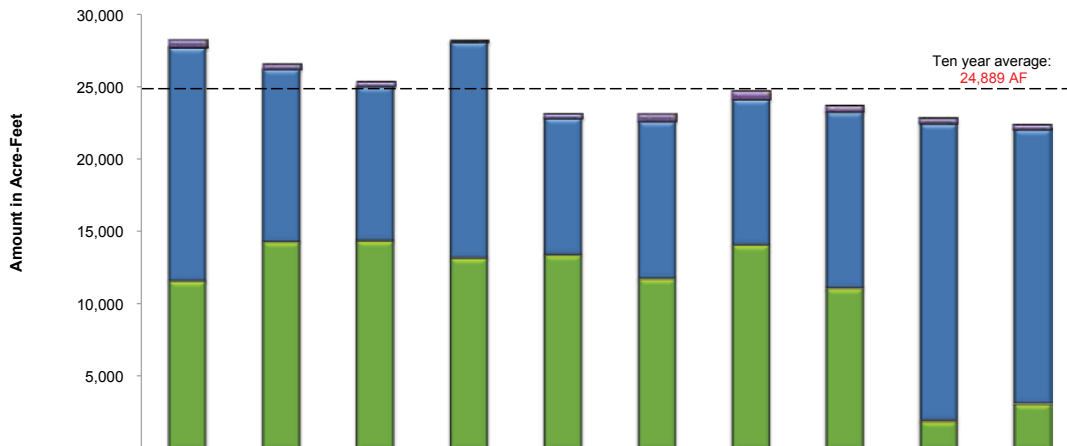
#### 2017 Capacity Reservation Charge (cfs)

2014 = 34.3 2015 = 44.3 (CRC) 2016 = 43.8

*Note: The 2017 CRC is the highest daily average flow for the past three years. The CRC shown is for GSWC Southwest District and Culver City combined.*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	191	195	282	250	228	234	234	209	264	239	321	525	3,172
Imported	1,946	1,928	1,740	1,651	1,466	1,374	1,252	1,190	1,499	1,603	1,716	1,555	18,920
Recycled	55	48	44	34	21	11	2	1	13	44	46	45	364
<b>Total</b>	<b>2,192</b>	<b>2,171</b>	<b>2,066</b>	<b>1,935</b>	<b>1,716</b>	<b>1,619</b>	<b>1,488</b>	<b>1,400</b>	<b>1,776</b>	<b>1,886</b>	<b>2,082</b>	<b>2,126</b>	<b>22,456</b>

## 10-Year Average Total Water Use

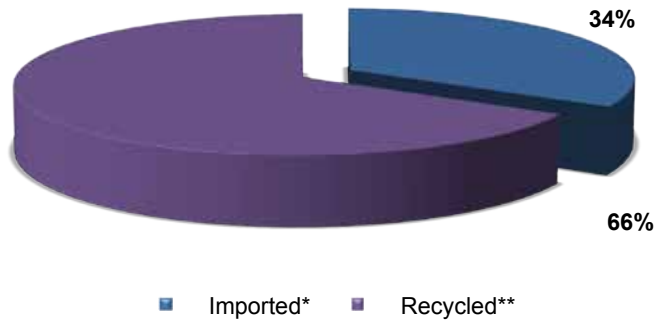


**Contact:** Ms. Katherine Nutting, District Manager  
**Office:** (310) 767-8200 ext. 500 **Fax:** (310) 436-6065

# Water Replenishment District of Southern California

4040 Paramount Blvd., Lakewood, CA 90712

## FY 2016-17 Total Water Use



**Adjudicated Water Rights**  
-- AF

**Imported Connections**  
WB-28 WB-37

**2017 Capacity Reservation Charge (cfs)**  
2014 = 22.7 (CRC) 2015 = 2.8 2016 = 14.3

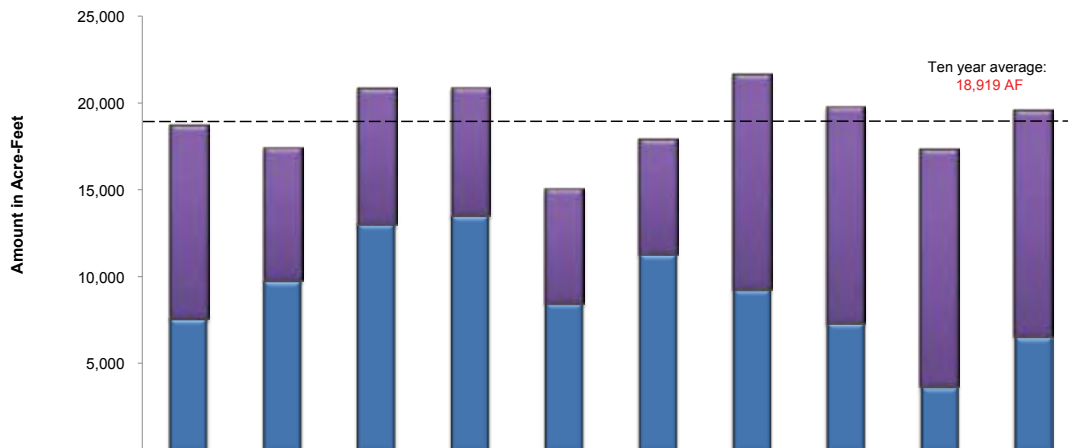
*Note: The 2017 CRC is the highest daily average flow for the past three years*

Water Supply	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Groundwater	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported*	592	263	371	280	288	587	490	740	577	618	857	900	6,563
Recycled**	946	1,156	1,174	1,209	1,030	1,039	1,068	981	1,021	1,124	1,076	1,191	13,014
<b>Total</b>	<b>1,538</b>	<b>1,420</b>	<b>1,545</b>	<b>1,489</b>	<b>1,318</b>	<b>1,626</b>	<b>1,557</b>	<b>1,721</b>	<b>1,598</b>	<b>1,742</b>	<b>1,933</b>	<b>2,091</b>	<b>19,577</b>

\*Imported water purchased is for the West Coast and Dominguez Gap Seawater Barriers.

\*\*All recycled water purchased is for the West Coast Seawater Barrier.

## 10-Year Average Total Water Use



Water Supply	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 14-15	FY 16-17	Ten Year Averages
Groundwater*	-	-	-	-	-	-	-	-	-	-	-
Imported**	7,609	9,774	13,054	13,534	8,504	11,320	9,285	7,354	3,681	6,563	9,068
Recycled***	11,129	7,652	7,797	7,320	6,531	6,622	12,372	12,403	13,677	13,014	9,852
<b>Total</b>	<b>18,738</b>	<b>17,426</b>	<b>20,851</b>	<b>20,853</b>	<b>15,034</b>	<b>17,942</b>	<b>21,658</b>	<b>19,757</b>	<b>17,358</b>	<b>19,577</b>	<b>18,919</b>

\*Groundwater purchased is for the WRD Goldsworthy Desalter.

\*\*Imported water purchased is for the West Coast and Dominguez Gap Seawater Barriers.

\*\*\*All recycled water purchased is for the West Coast Seawater Barrier.

**Contact:** Mr. Robb Whitaker, General Manager  
**Office:** (562) 275-4220 **Fax:** (562) 275-4270

A dynamic, high-speed photograph of a water splash, rendered in a monochromatic blue color scheme. The splash originates from the left side, with a large, turbulent mass of water moving towards the right. Numerous individual water droplets of various sizes are captured in mid-air, scattered across the frame, particularly concentrated in the upper and lower right areas. The background is a light, uniform blue, which makes the darker blue tones of the water stand out. A dark blue, angular banner is positioned in the upper right quadrant, containing the text 'WATER RECYCLING PROGRAM' in white, uppercase, sans-serif font.

# WATER RECYCLING PROGRAM

# WATER RECYCLING PROGRAM



## CURRENT & PLANNED PROJECTS

To effectively respond to current and potentially long-term drought conditions, imported water uncertainty and regulatory restrictions, West Basin Municipal Water District (West Basin) actively pursues locally supplied water as a viable alternative to ensure a reliable supply of water today and for the future. To meet this objective, West Basin has implemented an aggressive program to find the right solution for the region by continuing conservation efforts, increasing recycled water deliveries and potentially incorporating ocean-water desalination into West Basin's water portfolio in the future. The major recycled water capital projects taking place in the more immediate term are explained in further detail below.

## ECLWRF REVERSE OSMOSIS CLEAN-IN-PLACE WASTE DISCHARGE



**Purpose:** Currently, Reverse Osmosis (RO) and Microfiltration (MF) Clean-in-Place (CIP) waste is discharged into the existing brine line along with the RO brine. The existing brine line connects to the Hyperion Wastewater Treatment Plant ocean outfall. This project will allow West Basin to discharge the RO CIP waste to the sewer system to ensure the District will be in compliance with the brine permit issued by the Regional Water Quality Control Board (RWQCB).

**Benefits:** The proposed waste discharge improvements will ensure that West Basin will be in compliance with the brine permit issued by the RWQCB, in order to maintain continuous production for the barrier system and boiler feedwater system for Chevron.

**Project Completion Date:** FY 2017-2018

## HYPERION PUMP STATION IMPROVEMENTS



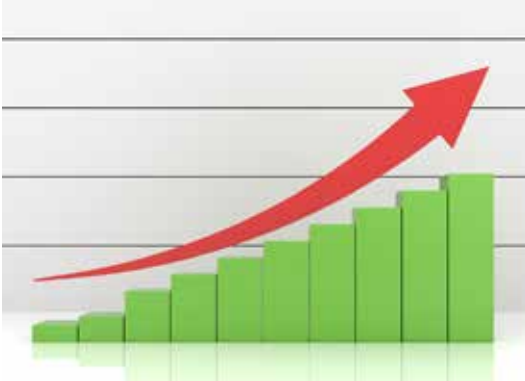
**Purpose:** Construct additional reliability through added pumping capacity and a backup power at West Basin's pump station located at Hyperion Water Reclamation Plant (Hyperion).

**Benefits:** The Hyperion Secondary Effluent Pump Station provides treated wastewater to the ECLWRF where it is further treated to produce recycled water by West Basin. This project will improve the District's overall recycled water system capacity and reliability with additional capacity and a backup power source for redundancy.

**Project Completion Date:** FY 2018-2019

## BARRIER PRODUCTION INCREASE

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**Purpose:** West Basin's goal is to maximize the recycled water available for injection into the West Coast Basin Seawater Intrusion Barrier (Barrier). The microfiltration systems constructed as part of the Phase IV and V expansions at ECLWRF both include provisions for new membrane units to be installed. The first phase of the project will include modifications to the Phase IV MF units to accommodate replacement membranes and chlorinated cleanings.

**Benefits:** The benefits to West Basin include a reduction of potable water used for injection into the Barrier and an increase in revenue through additional sales of recycled water to the Water Replenishment District of Southern California.

**Project Completion Date:** FY 2017-2018

## PALL MICROFILTRATION SYSTEM EXPANSION

---



**Purpose:** This project includes the expansion of the Pall Microfiltration System installed at the ECLWRF as part of the Phase V expansion project.

**Benefits:** The Pall MF System will supplement the diminished capacity of the existing MF trains at ECLWRF and will eventually provide redundancy and additional capacity to West Basin's total microfiltration processes.

**Project Completion Date:** FY 2018-2019

## ECLWRF VISITOR CENTER RENOVATION

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**Purpose:** Complete construction for the ECLWRF visitor center renovation by expanding the visitor center space, renovating interior office spaces and updating educational exhibits

**Benefits:** The expanded visitor center and additional conference space will allow West Basin to host multiple large special events, industry meetings, conferences and public tours at the ECLWRF. The updated exhibits and visitor center will reinforce the District's mission and will highlight water-related issues and topics for the region.

**Completion Date:** FY 2018-2019

# WATER RECYCLING PROGRAM

## PALOS VERDES RECYCLED WATER PIPELINE PROJECT



**Purpose:** Expand West Basin's recycled water distribution system into the Palos Verdes Peninsula.

**Benefits:** West Basin continues to expand its recycled water distribution system to reach large landscapes and other high water-use commercial and industrial sites throughout the service area. The Palos Verdes Recycled Water Pipeline Project will deliver recycled water from the ECLWRF to reach potential customers on the Palos Verdes Peninsula in the southern region of the District's territory.

**Project Completion Date:** FY 2019-2020

## JUANITA MILLENDER-MCDONALD CARSON REGIONAL RECYCLED WATER PLANT TESORO EXPANSION

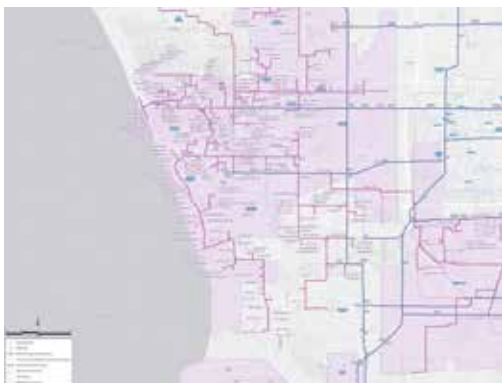


**Purpose:** Provide 2.59 Million of Gallons per Day (MGD) of increased supply to the Tesoro Refinery by constructing a tertiary- Membrane Biological Reactor (t-MBR) and fully restoring the MF system capacity.

**Benefits:** This project will increase the supply of recycled water to Tesoro; improve water quality of the nitrified water; reduce breakpoint chlorination to the current nitrified effluent, thereby reducing the chloride content of the wastewater; optimize the Tesoro blend of RO & nitrified water used in their cooling towers; and remove total suspended solids and colloidal iron concentrations.

**Project Completion Date:** FY 2018-2019

## WEST BASIN PIPELINE LATERAL EXTENSIONS



**Purpose:** Provide increased supply of West Basin's disinfected tertiary recycled water for irrigation and cooling tower supply to various facilities within the District's service area.

**Benefits:** The construction of additional laterals increases West Basin's supply of disinfected tertiary recycled water and reduces the amount of imported water used for potable services. The additional supply also improves the water quality within the distribution system by moving water faster through the system, reducing the potential for biological growth, scale and corrosion within the pipeline.

**Completion Date:** Continuous

Santa Monica

## WEST BASIN MUNICIPAL WATER DISTRICT FACILITIES

Vernon



**CHEVRON NITRIFICATION PLANT**



**EDWARD C. LITTLE WATER  
RECYCLING FACILITY**

Los Angeles

Inglewood

Long Beach

South Gate



El Segundo



Hawthorne



Lynwood

Manhattan Beach

Lawndale

Gardena

Compton

**TORRANCE REFINERY  
WATER RECYCLING PLANT**



Torrance

Carson



**JUANITA MILLENDER- MCDONALD  
CARSON REGIONAL  
WATER RECYCLING PLANT**




Rolling Hills Estates


Lomita




Long Beach



 **WEST BASIN FACILITY**

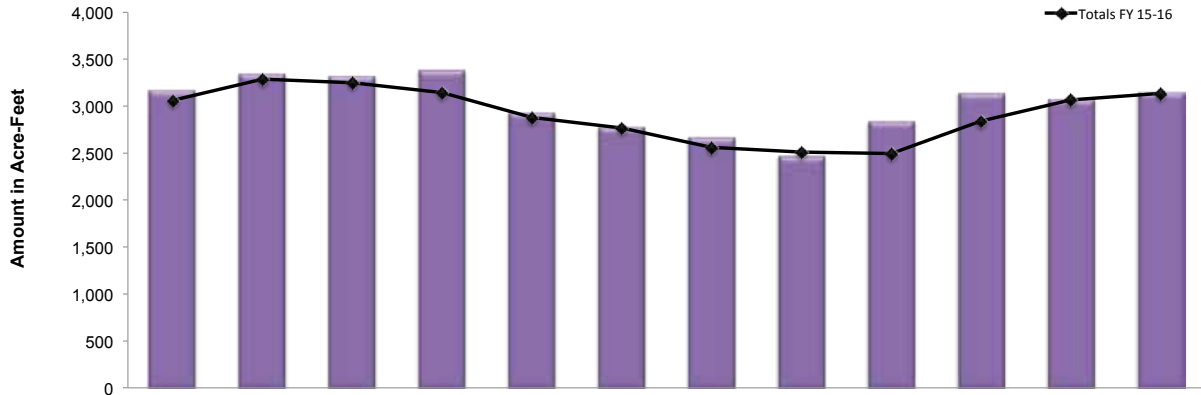
 **CITY BOUNDARY**

 **SERVICE AREA**

# West Basin Municipal Water District

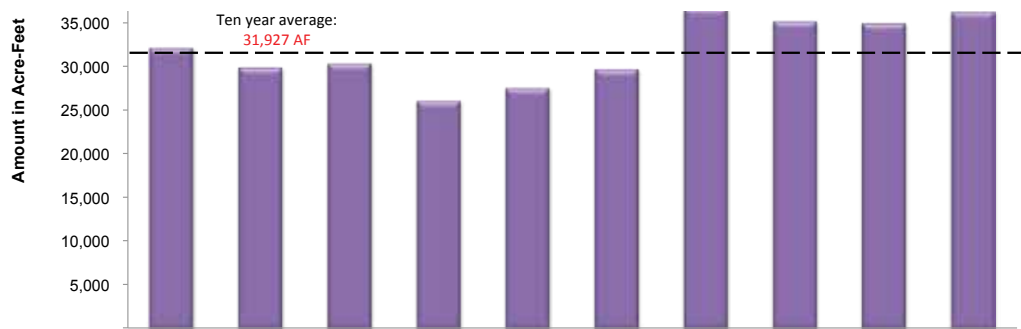
17140 S. Avalon Blvd., Carson CA 90746

## FY 2016-17 Recycled Water Sales



West Basin MWD	FY 2016-17												TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
CWS - Dominguez	604	620	603	528	525	504	483	398	409	517	468	511	6,169
CWS - Hawthorne	11	14	13	12	7	7	2	1	2	6	8	10	94
CWS - Hermosa Redondo	19	18	26	18	10	8	4	1	2	8	14	19	148
City of El Segundo	865	838	798	853	798	790	720	679	785	795	857	803	9,581
City of Inglewood	122	117	102	80	57	20	7	5	50	80	99	95	834
City of Manhattan Beach	37	41	28	27	18	11	1	1	17	21	30	33	265
City of Torrance	402	397	432	549	415	360	371	384	502	472	394	361	5,037
Golden State Water Company	55	48	44	34	21	11	2	1	13	44	46	45	364
LA Dept. of Water and Power	115	102	107	80	58	33	17	23	43	77	85	86	825
Water Replenishment District	946	1,156	1,174	1,209	1,030	1,039	1,068	981	1,021	1,124	1,076	1,191	13,014
<b>Total</b>	<b>3,176</b>	<b>3,351</b>	<b>3,327</b>	<b>3,390</b>	<b>2,939</b>	<b>2,781</b>	<b>2,675</b>	<b>2,474</b>	<b>2,843</b>	<b>3,144</b>	<b>3,077</b>	<b>3,153</b>	<b>36,331</b>

## 10-Year Recycled Water Sales



West Basin MWD	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Ten Year Averages
CWS - Dominguez	4,690	5,293	4,959	4,392	5,522	5,841	6,245	5,669	5,803	6,169	5,458
CWS - Hawthorne	85	99	90	79	90	108	118	98	104	94	96
CWS - Hermosa Redondo	145	163	150	133	136	162	167	147	156	148	151
City of El Segundo	7,865	8,978	9,035	6,638	6,888	7,677	8,616	9,300	8,927	9,581	8,350
City of Inglewood	650	680	621	606	642	783	827	728	765	834	714
City of Manhattan Beach	288	251	264	264	291	405	305	313	280	265	293
City of Torrance	6,389	5,876	6,445	5,785	6,352	6,634	6,529	5,270	4,012	5,037	5,833
Golden State Water Company	552	410	360	148	333	538	573	452	405	364	414
Inglewood Unified School District*	56	62	56	-	-	-	-	-	-	-	35
LA Dept. of Water and Power	360	444	608	763	788	968	998	870	874	825	750
Water Replenishment District	11,129	7,652	7,797	7,320	6,531	6,622	12,372	12,403	13,677	13,014	9,852
<b>Total</b>	<b>32,209</b>	<b>29,908</b>	<b>30,384</b>	<b>26,127</b>	<b>27,571</b>	<b>29,737</b>	<b>36,751</b>	<b>35,250</b>	<b>35,002</b>	<b>36,331</b>	<b>31,927</b>

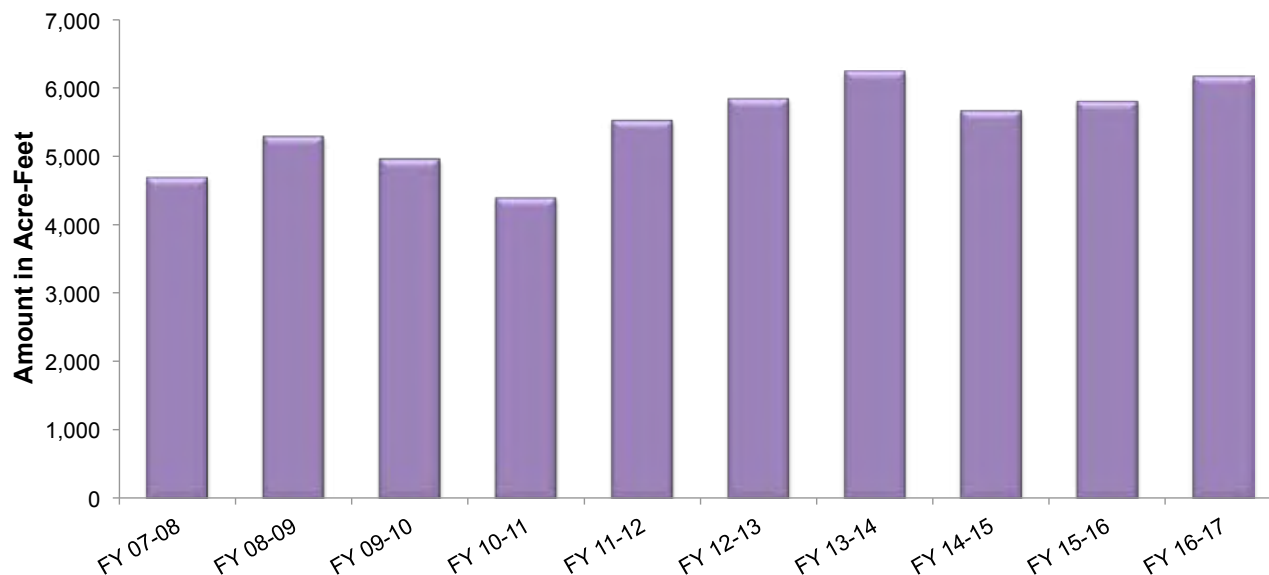
\* Volumes from FY 10-11 onward are included in the total Recycled Water Sales for the City of Inglewood.

CWS = California Water Service

# California Water Service – Dominguez

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272

## FY 2016-17 Recycled Water Sales



Recycled Water Customer	AF
1 Anza Elementary * ***	12.2
2 Avalon Median N/Elsmere	2.9
3 CSU Dominguez Hills *	142.9
4 City of Carson	3.6
5 Entradero Park	51.6
6 Goodyear	39.3
7 Main Street Medians * **	0.0
8 Paradise Park	9.1
9 Porsche Experience Center **	0.0
10 StubHub Center * **	56.3
11 Sunny Glenn Park	9.5
12 Tesoro Refinery - Nitrification	1,217.1
13 Tesoro Refinery - R/O	4,353.6
14 Victor Elementary *	16.4
15 Victor Park	5.2
16 Victoria Golf Course	219.9
17 West High School *	29.5
<b>Total</b>	<b>6,168.9</b>

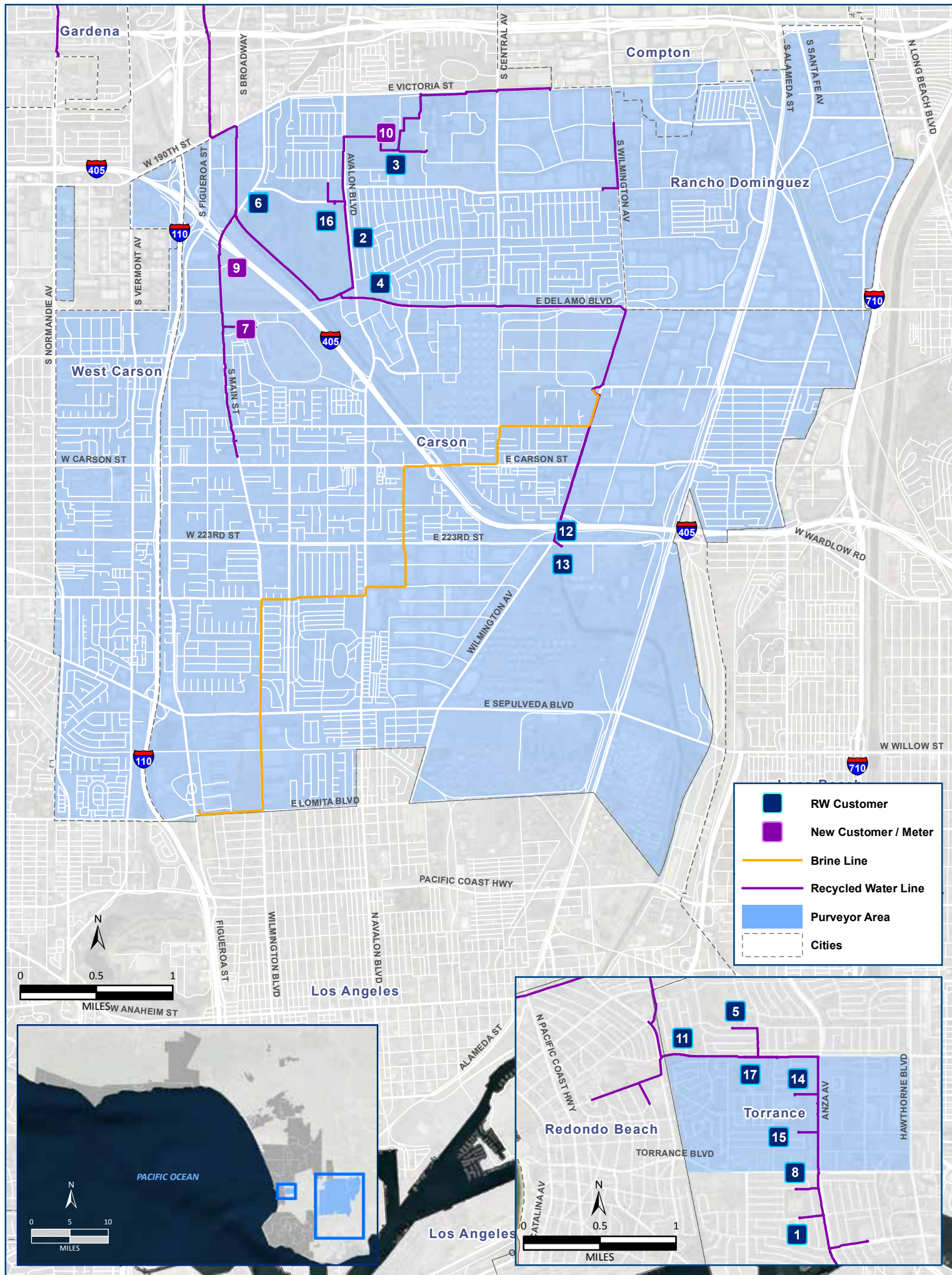
\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

\*\*\* Anza Elementary is located within the City of Torrance boundaries.

The site map on the next page corresponds to the numbers listed in the table above.

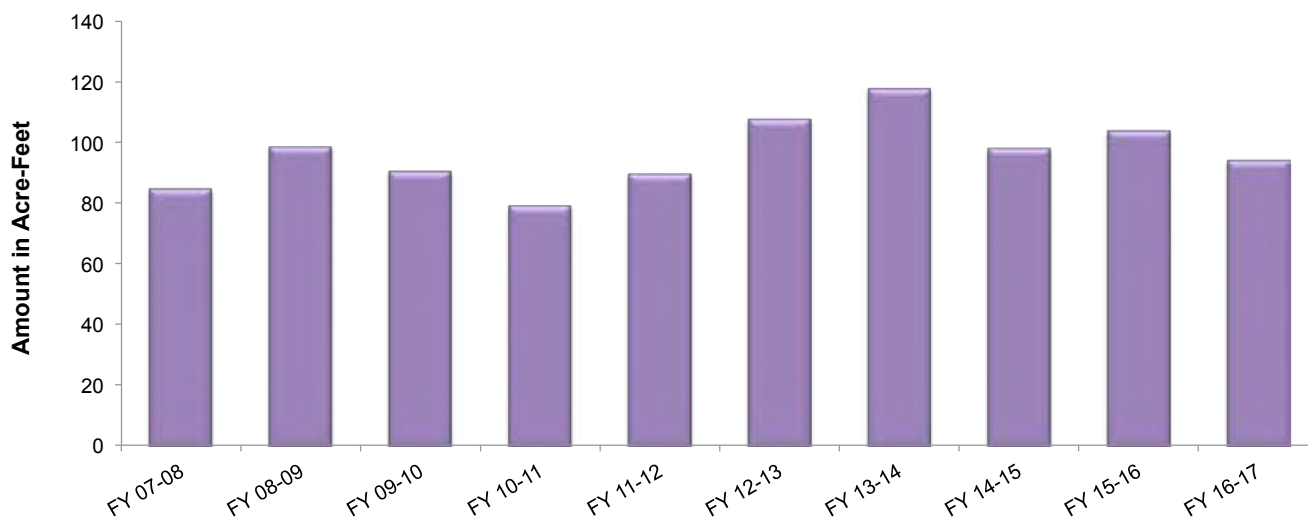
1 Acre-Foot (AF) is equal to 325,851 gallons



# California Water Service – Hawthorne

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272

## FY 2016-17 Recycled Water Sales



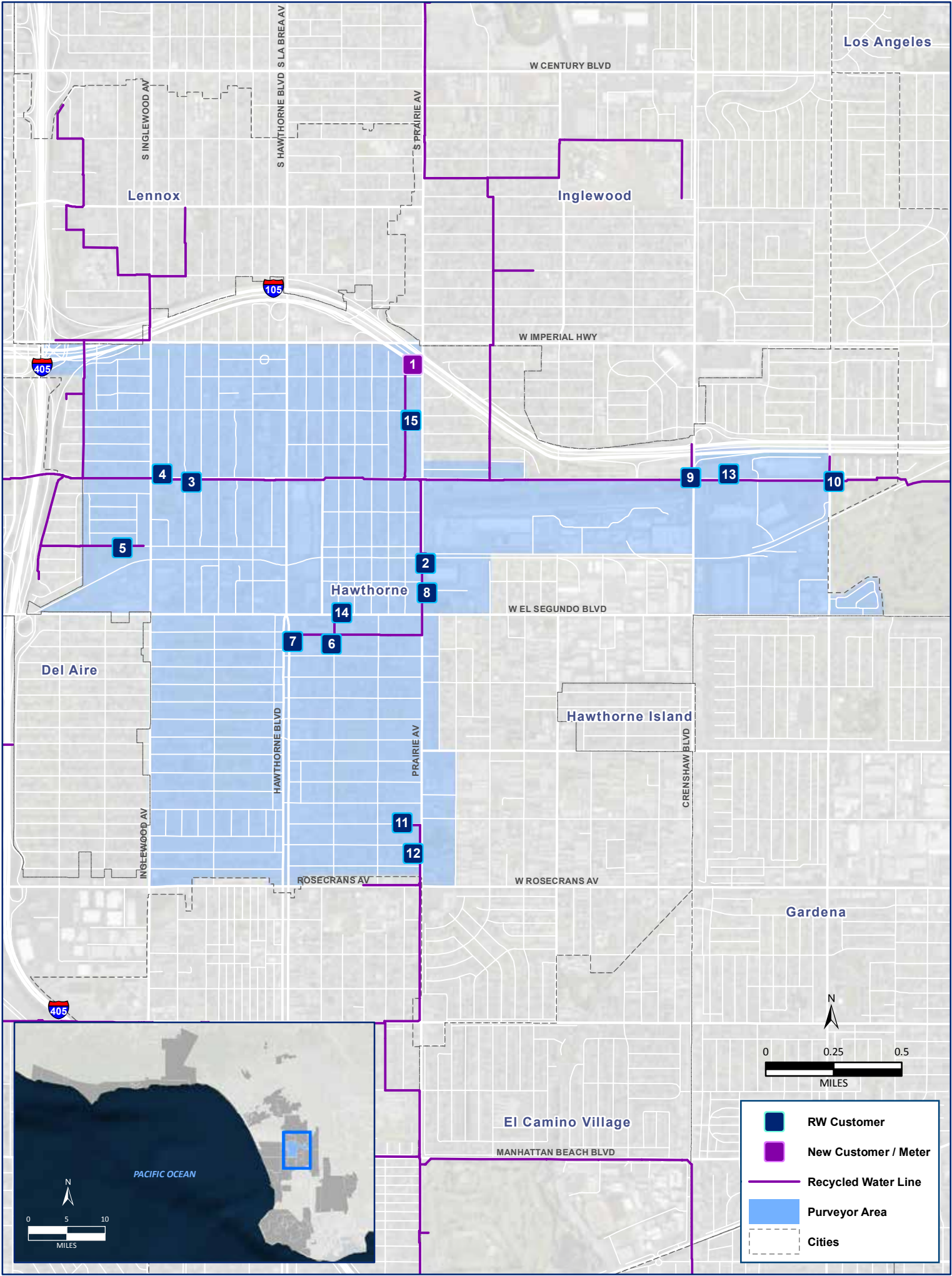
Recycled Water Customer		AF
1	Caltrans D07-Maint. **	1.7
2	City of Hawthorne *	3.2
3	Eucalyptus Avenue School *	5.6
4	Eucalyptus Park *	6.3
5	Hawthorne High School *	18.5
6	Hawthorne Intermediate School *	3.8
7	Hawthorne Medians *	9.4
8	Hawthorne Memorial Park *	10.5
9	Hawthorne Municipal Airport *	0.4
10	Holly Park *	15.4
11	Jefferson School	1.8
12	Jim Thorpe Park *	11.1
13	Lowe's	1.1
14	Washington Avenue School *	1.8
15	York Avenue School *	3.5
Total		94.1

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

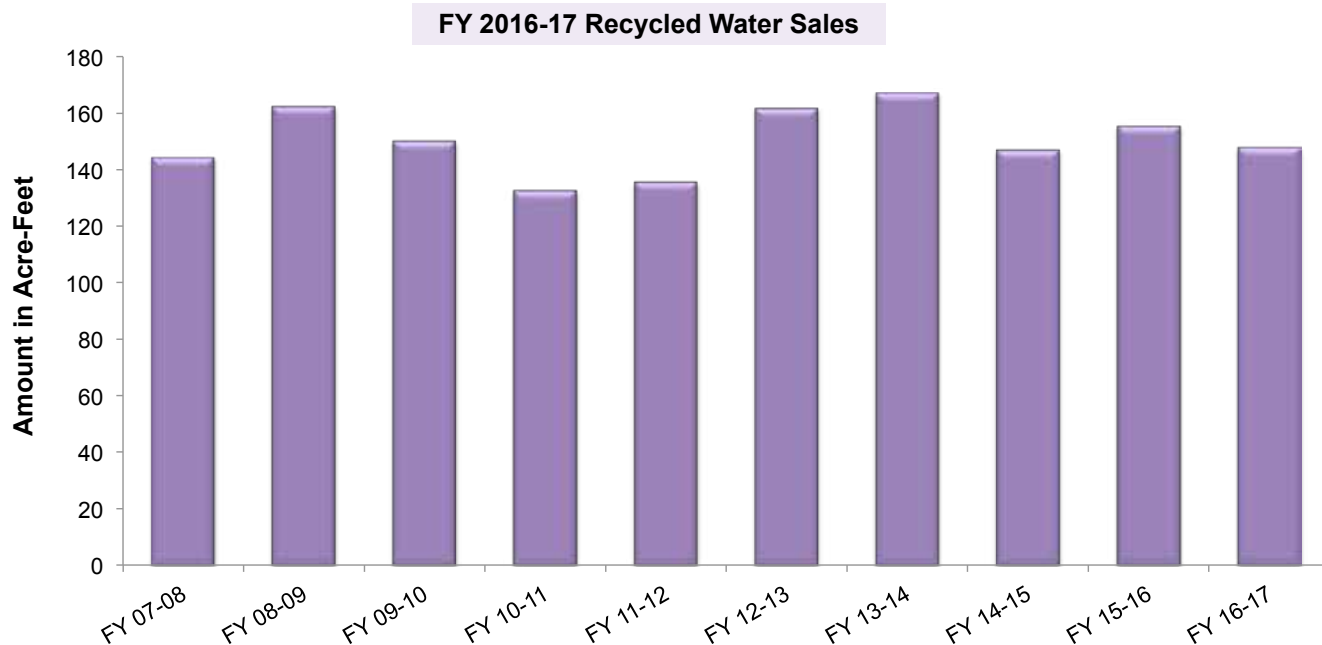
The site map on the next page corresponds to the numbers listed in the table above.

1 Acre-Foot (AF) is equal to 325,851 gallons



# California Water Service – Hermosa Redondo

2632 West 237<sup>th</sup> Street, Torrance, CA 90505-5272



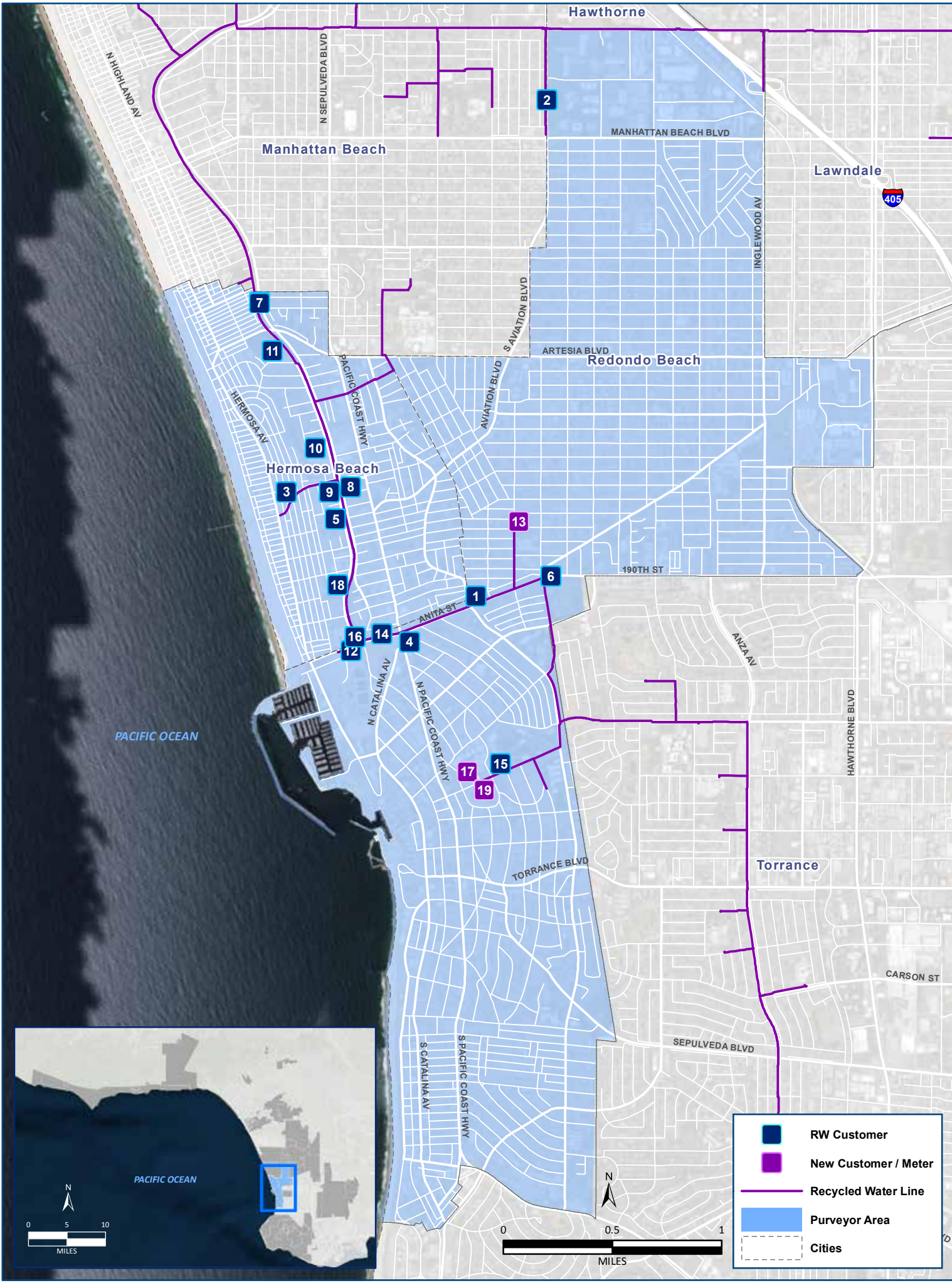
Recycled Water Customer	AF
1 190th St./Prospect Ave Medians (400 Blk) *	0.9
2 Aviation Park *	6.4
3 City of Hermosa Beach	2.4
4 City of Redondo Beach	0.1
5 Clark Park *	9.5
6 Dominguez Park *	23.6
7 Hermosa Beach Greenbelt *	23.5
8 Hermosa Beach Community Center	3.0
9 Hermosa Beach Library And City Hall *	0.5
10 Hermosa Valley Elementary School *	8.2
11 Hermosa Valley Park II *	28.4
12 Herondo/Francisca Median *	3.8
13 Jefferson Elementary School **	0.0
14 PCH/Herondo-King Harbor Park *	0.6
15 Redondo Beach School District *	26.6
16 Redondo Technology Center *	1.0
17 Redondo Union High School * **	0.0
18 South Park *	9.7
19 Vincent Park **	0.0
<b>Total</b>	<b>148.0</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

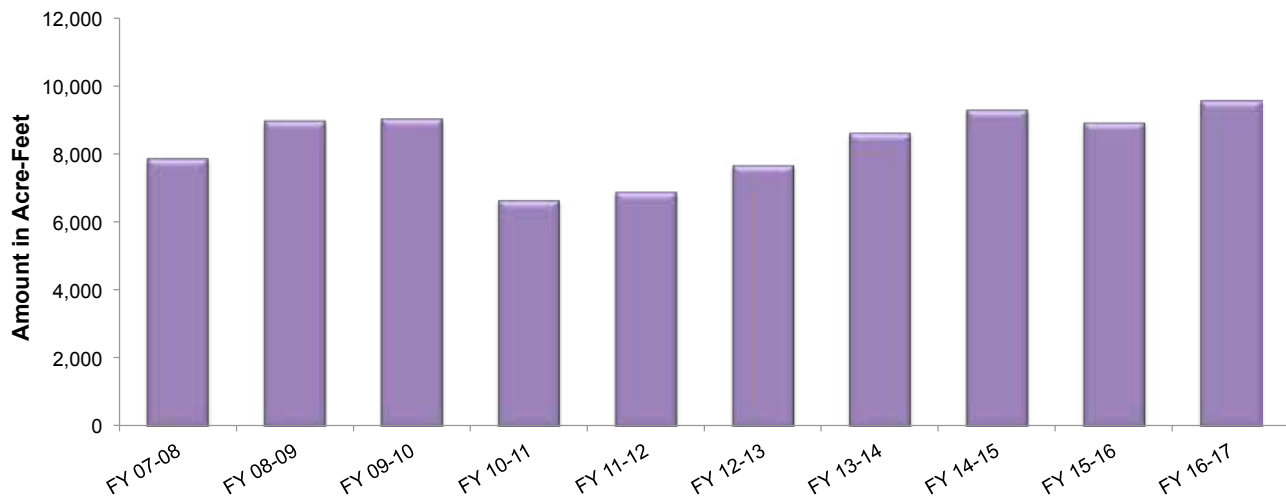
1 Acre-Foot (AF) is equal to 325,851 gallons



# City of El Segundo

350 Main Street, El Segundo, CA 90245-3895

## FY 2016-17 Recycled Water Sales



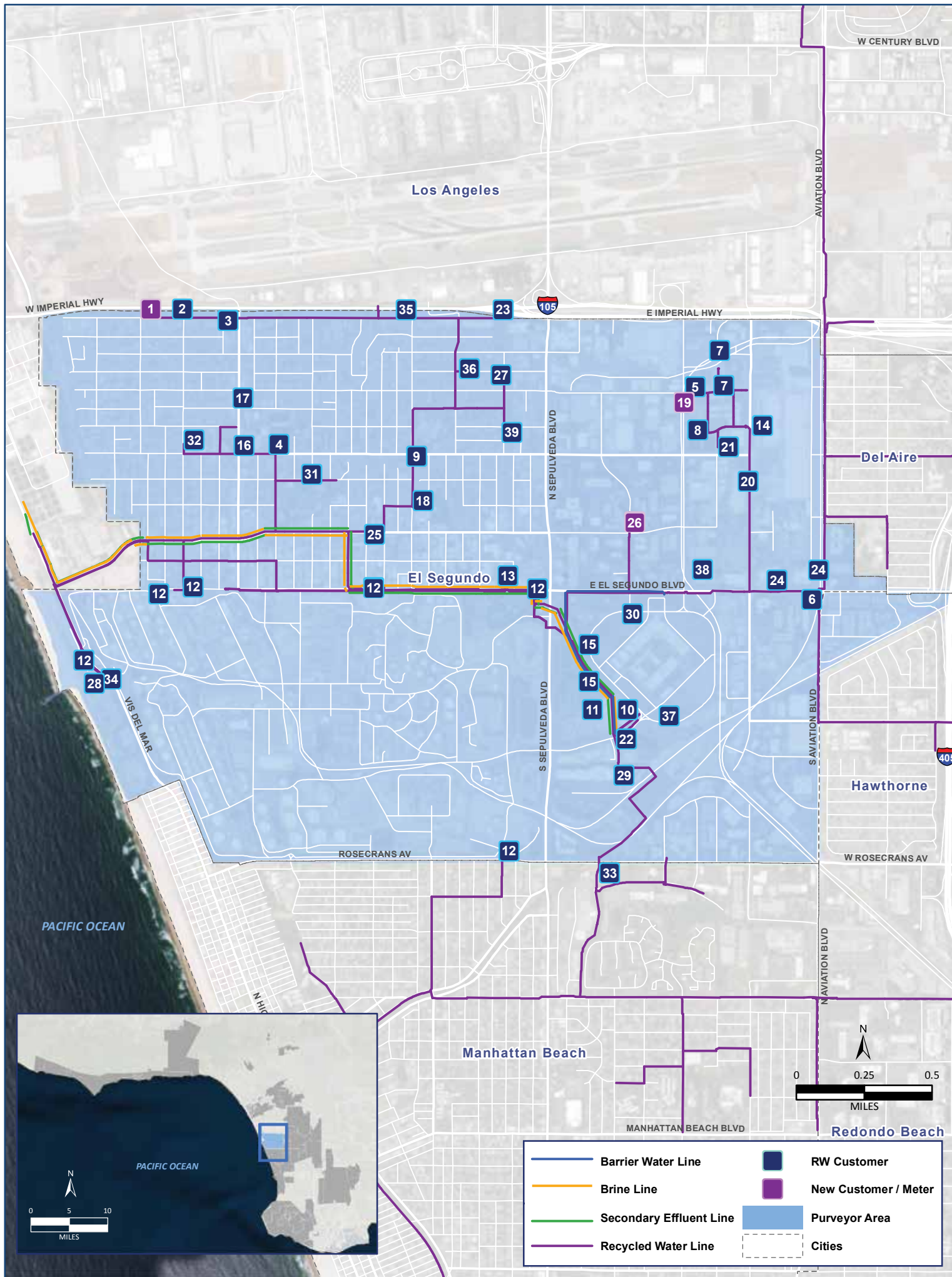
Recycled Water Customer		AF	Recycled Water Customer		AF
1	350 Main St/Parks * **	9.8	21	Fire Station #2 *	0.6
2	351 Main St/Parks *	8.2	22	Hughes Way Median *	2.6
3	352 Main St/Parks *	6.6	23	Imperial Ave. Parkway *	4.3
4	640 Sheldon St *	10.6	24	LAAFB *	38.2
5	750 N Nash St	1.2	25	Maryland Hilltop Park *	2.5
6	Aerospace Corp	34.9	26	Mattel **	7.3
7	Campus El Segundo *	9.0	27	Nash & Continental Medians *	6.1
8	CDC MAR Campus LLC	2.7	28	NRG *	33.8
9	Center Elementary School *	14.7	29	Plaza El Segundo *	1.6
10	Chevron (HP)	2,662.9	30	Raytheon *	110.3
11	Chevron (LP)	1,827.8	31	Recreation Park -El Segundo *	27.4
12	Chevron Irrigation*	123.5	32	Richmond School	6.1
13	Chevron Nitrification Plant	4,486.9	33	Snyder Langston	12.0
14	El Segundo Association *	6.1	34	So. Cal Edison - Generation Station *	20.6
15	El Segundo Golf Course *	58.8	35	Storm Drain Plant 17	4.7
16	El Segundo High School *	6.6	36	Sycamore Park	2.7
17	El Segundo Library Park	0.6	37	The Jungle Nursery	1.5
18	El Segundo Middle School *	15.6	38	The Station *	0.9
19	Elevon at CES * **	4.0	39	Washington Park *	7.1
20	Equinox Operating Co. *	0.3			
					<b>Total 9,580.7</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

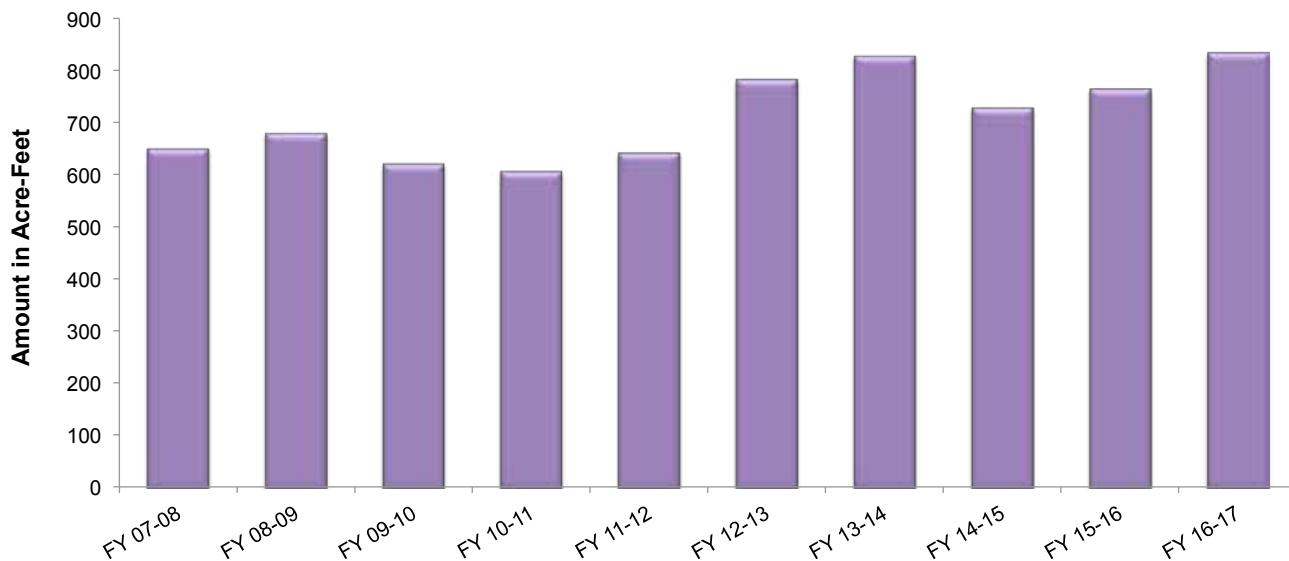
1 Acre-Foot (AF) is equal to 325,851 gallons



# City of Inglewood

One Manchester Blvd., Inglewood, CA 90301

## FY 2016-17 Recycled Water Sales



Recycled Water Customer	AF
1 Ashwood Park	3.9
2 Caltrans (I-105/Crenshaw) *	1.5
3 Caroline Coleman Stadium *	10.4
4 Centinela (Vincent) Park	78.1
5 Crozier Jr. High	3.5
6 Florence Median	0.1
7 Grevillea Mall Park *	2.5
8 Hillcrest	0.1
9 Hollywood Park * **	166.7
10 Inglewood City Hall	7.4
11 Inglewood Park Cemetery	511.2
12 Manchester	3.3
13 Market Street Medians * **	2.0
14 Morningside School	23.0
15 Rogers Park	16.1
16 Water Treatment Plant *	4.2
<b>Total</b>	<b>833.8</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

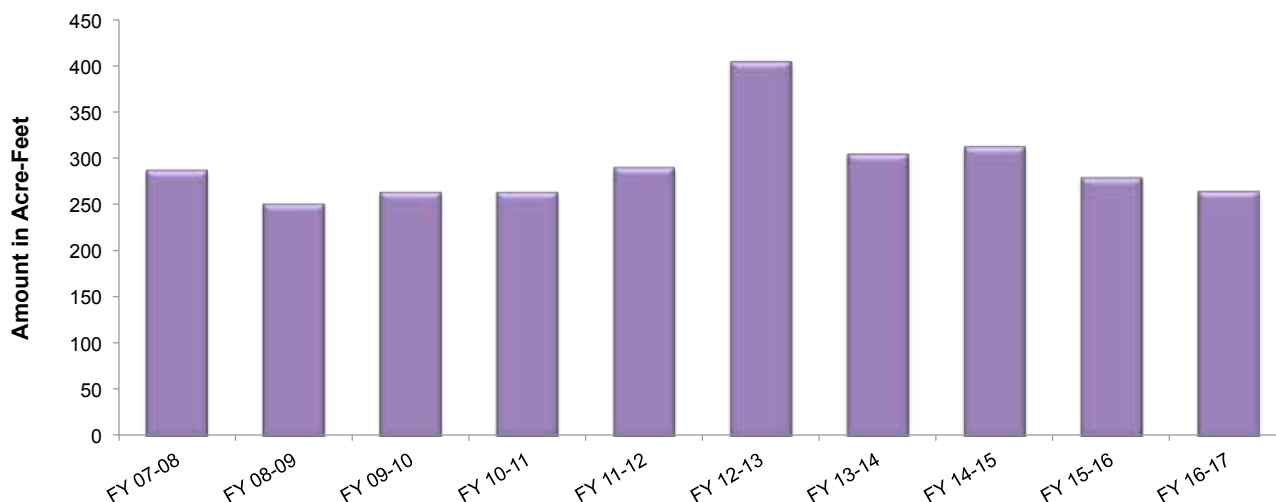
1 Acre-Foot (AF) is equal to 325,851 gallons



# City of Manhattan Beach

3621 Bell Ave., Manhattan Beach, CA 90266

## FY 2016-17 Recycled Water Sales



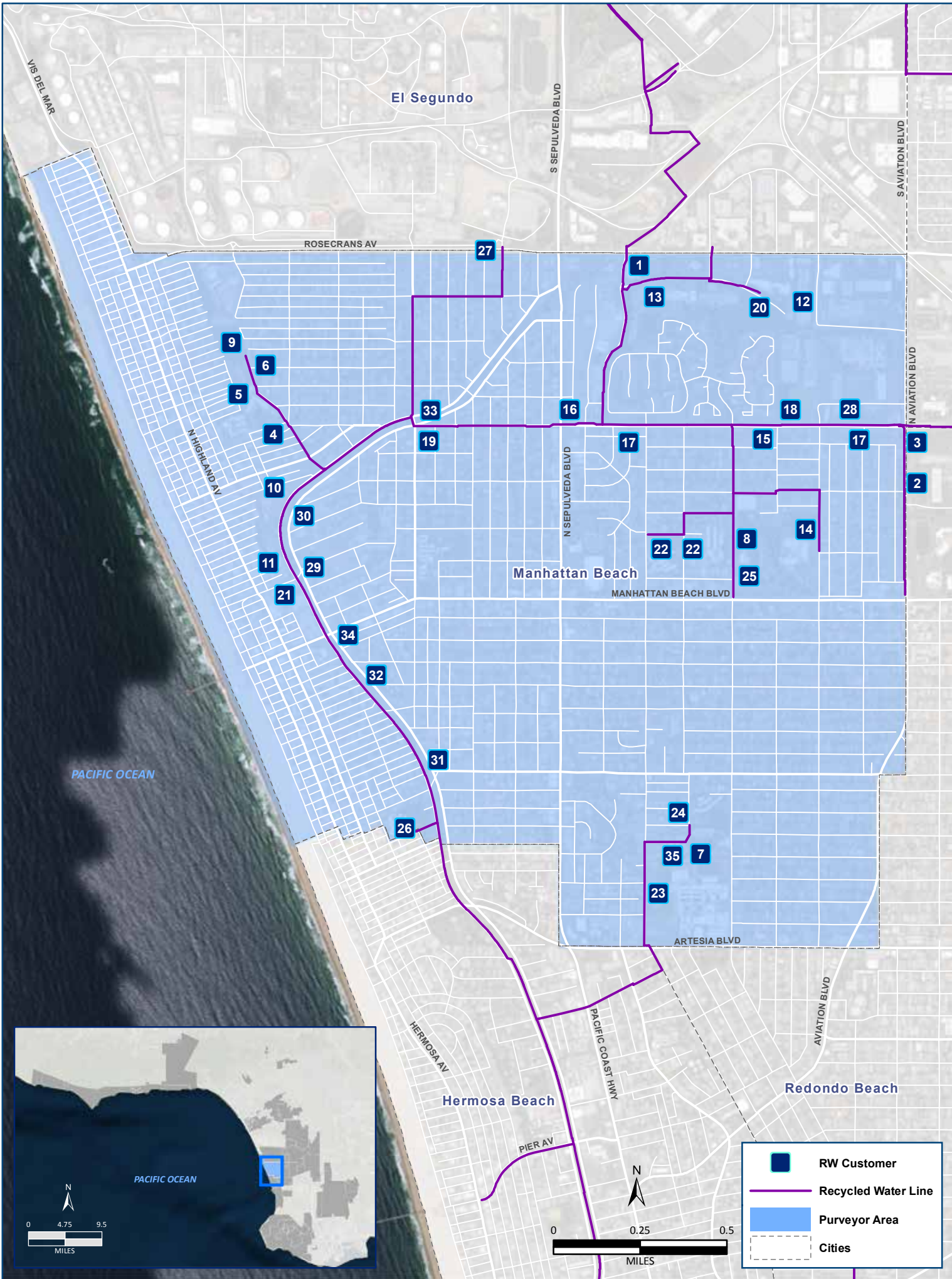
Recycled Water Customer		AF	Recycled Water Customer		AF
1	1230 Rosecrans *	2.5	19	Marine Triangle Median	0.6
2	1508 Aviation *	0.2	20	Marriott Golf	53.9
3	2202 Aviation	0.1	21	MB Fire & Police Landscape	2.4
4	2511 Bell Ave., (Grand View/Ladera) *	3.2	22	Meadows Elementary School *	6.1
5	2632 Bell Ave. E., (Grand View/Ladera) *	5.4	23	Mira Costa High School	21.9
6	2632 Bell Ave. W., (Grand View/Ladera) *	2.1	24	Pennekamp Elementary School *	10.4
7	325 S. Peck	3.5	25	Polliwog Park *	27.4
8	Begg Elementary School	7.4	26	Robinson Elementary School *	5.7
9	Bell Ave. S. of Park *	5.7	27	Rosecrans Medians @ Pine	1.1
10	Dorsey Field *	5.7	28	Sports Park	12.9
11	Live Oak Park *	1.6	29	Valley/Ardmore Greenbelt @ 15Th St.	1.8
12	Manhattan Studios	13.7	30	Valley/Ardmore Greenbelt @ 19Th St. *	12.5
13	Manhattan Village Park	2.7	31	Valley/Ardmore Greenbelt @ 2nd	9.3
14	Mar Brad Middle School - La Marina Field	13.2	32	Valley/Ardmore Greenbelt @ 8Th St.	3.7
15	Marine & Herrin Median	1.1	33	Valley/Ardmore Greenbelt @ Ardmore *	9.8
16	Marine & Sepulveda Median *	0.3	34	Valley/Ardmore Greenbelt @ M.B.B.S.E.	4.6
17	Marine Avenue Median *	2.7	35	Voorhees Sump	0.1
18	Marine Avenue Park	9.6			
					<b>Total 265.0</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

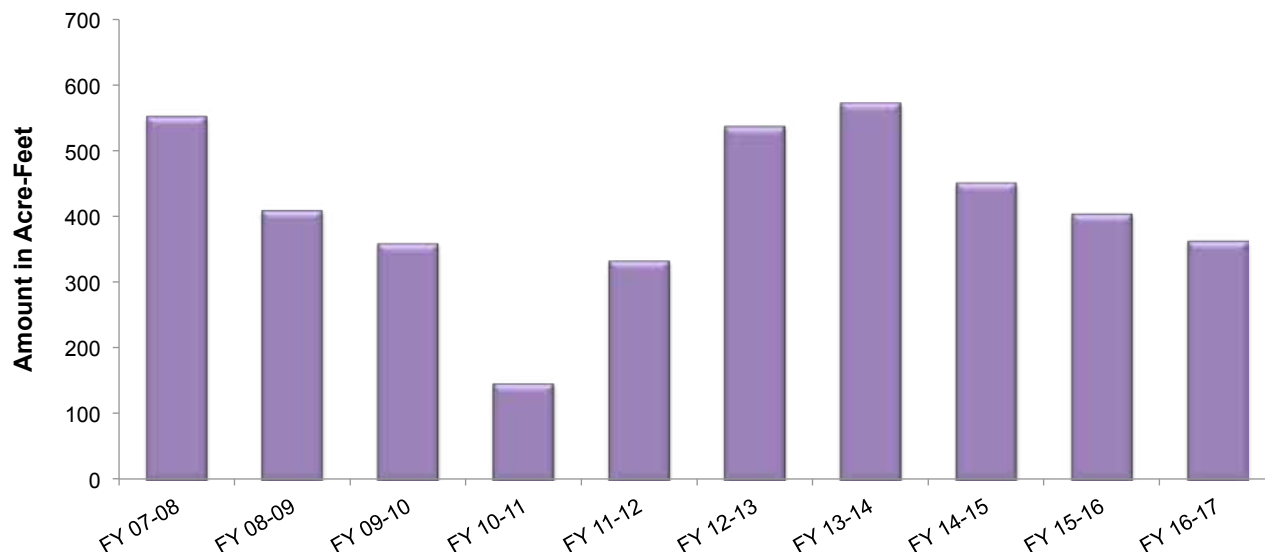
1 Acre-Foot (AF) is equal to 325,851 gallons



# Golden State Water Company

1600 W. Redondo Beach Blvd., #101, Gardena, CA 90247

## FY 2016-17 Recycled Water Sales



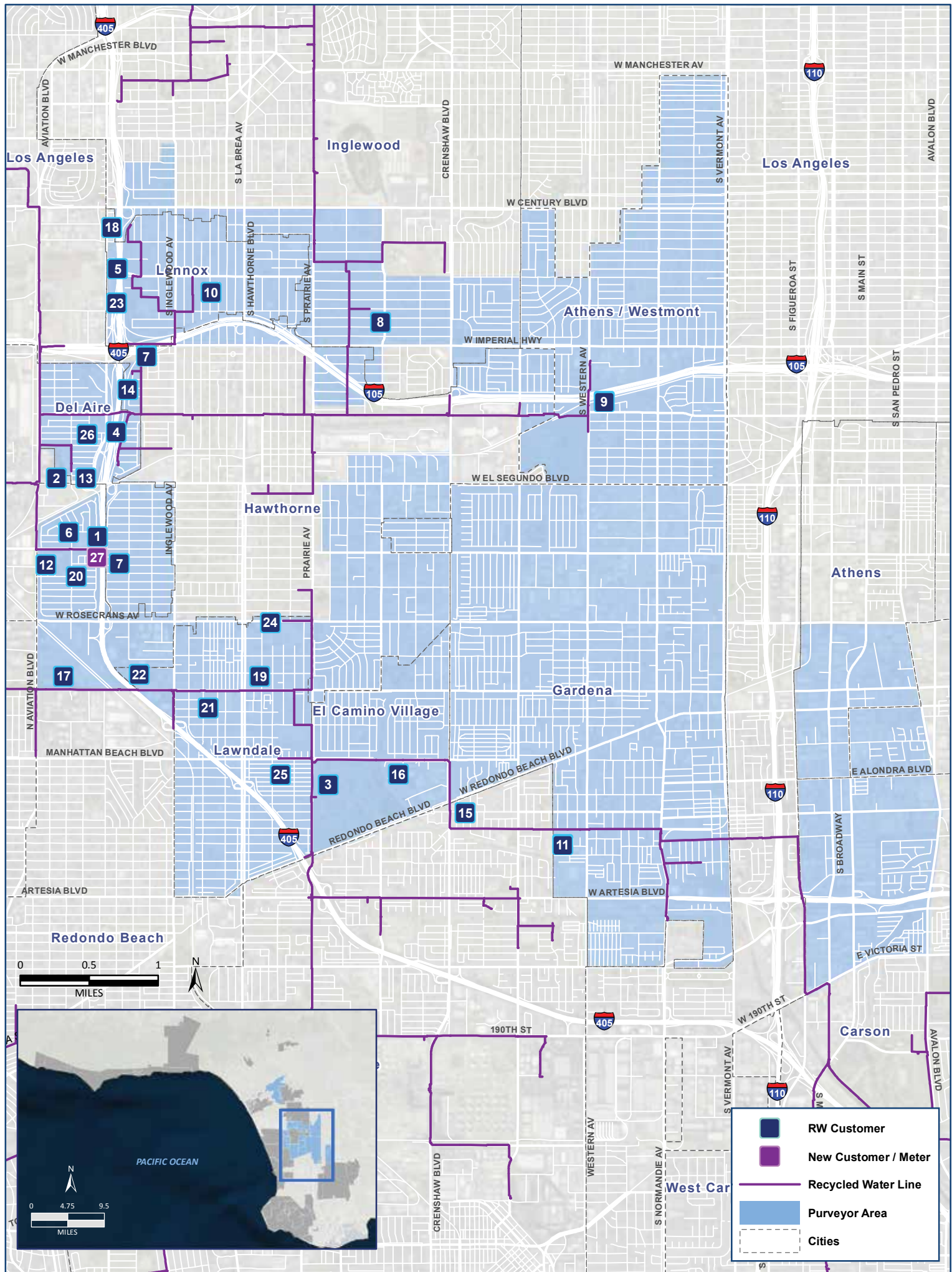
Recycled Water Customer		AF	Recycled Water Customer		AF
1	13500 Glasgow *	10.0	15	Del Taco DT895	0.7
2	Aerospace Corp	4.8	16	El Camino College *	8.9
3	Alondra Park (West) *	16.5	17	Federal Building - Hawthorne	7.7
4	Anza Elementary School *	3.9	18	Felton Elementary School	0.3
5	Buford Elementary School	4.5	19	Hawthorne Blvd/Marine	12.5
6	Cabrillo Elementary School *	6.9	20	Holly Glen Park *	1.4
7	Caltrans *	2.3	21	Jane Addams Park	7.4
8	Center Park *	4.5	22	Lawndale Union High School District	28.6
9	Chester Washington Golf Course *	145.9	23	Lennox Middle School	22.2
10	Condon Park (Lennox Park)	7.0	24	Leuzinger High School	23.0
11	Crenshaw Lumber	0.1	25	Rogers Anderson Park	19.7
12	Dana-Burnett Elementary School	10.3	26	Sepulveda Elementary School	5.5
13	Del Air Park	8.3	27	Wiseburn Walking Trail **	0.0
14	Del Aire Assembly of God *	1.1			
					<b>Total</b>
					<b>364.0</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

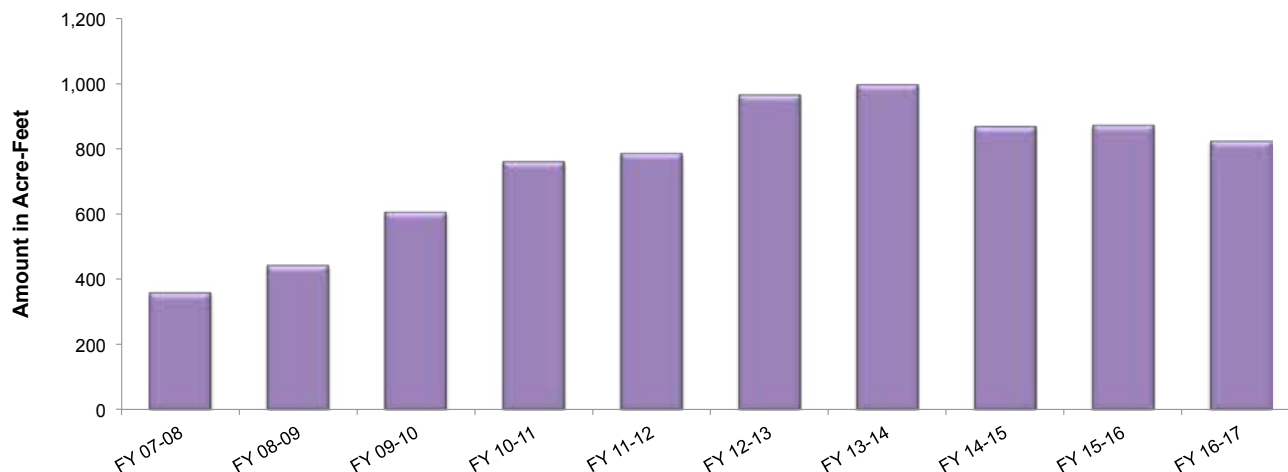
1 Acre-Foot (AF) is equal to 325,851 gallons



# Los Angeles Department of Water and Power

111 N. Hope St., Los Angeles, CA 90012

## FY 2016-17 Recycled Water Sales



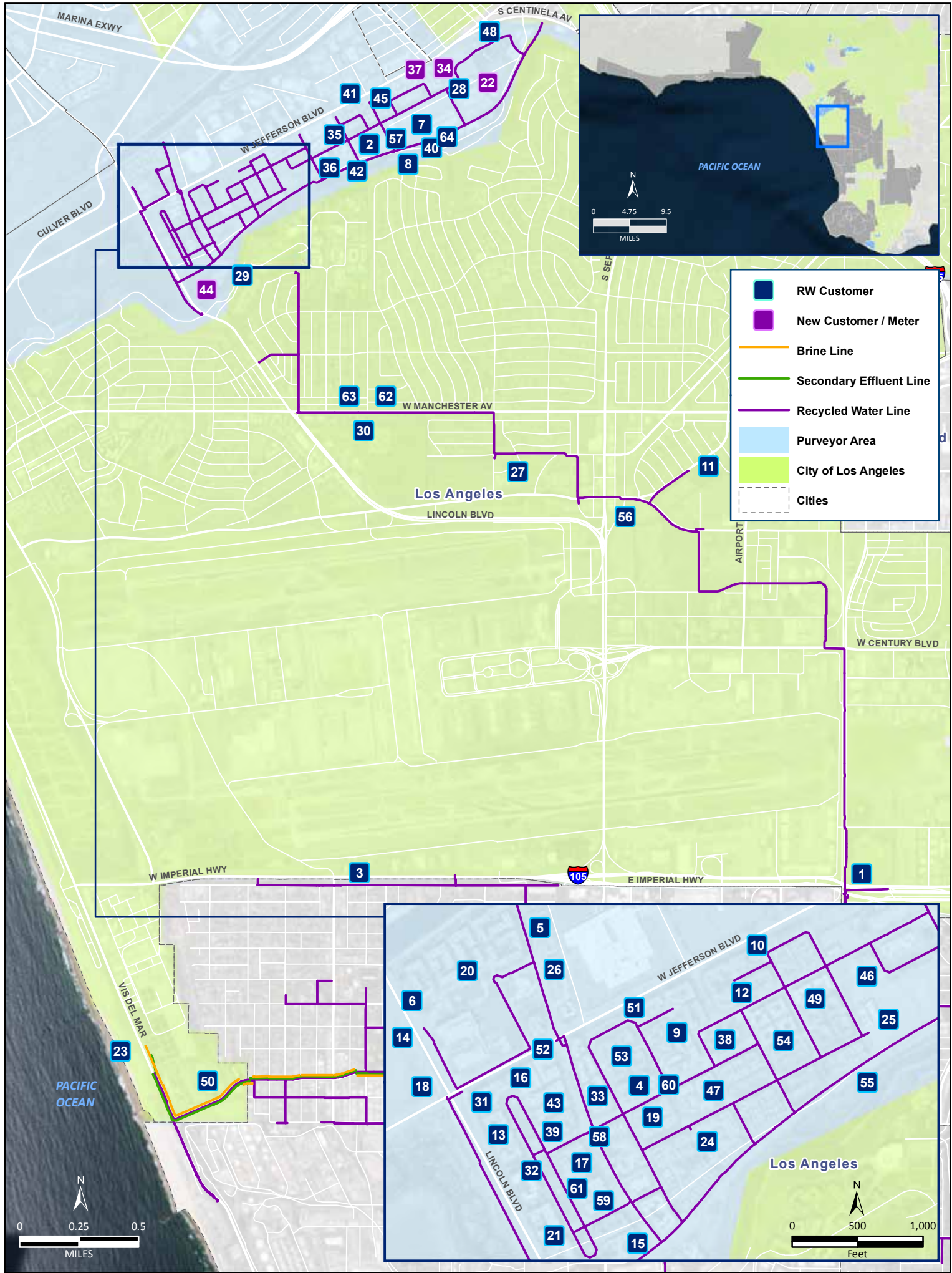
Recycled Water Customer	AF	Recycled Water Customer	AF	Recycled Water Customer	AF
1 11310 Aviation Blvd. *	5.6	23 Hyperion Treatment Plant *	80.8	45 POC #2	2.8
2 12760 W Millennium	1.0	24 JLH Realty Constr *	4.3	46 POC #4	1.7
3 7055 Imperial Hwy - a *	7.9	25 KB Home Coastal *	1.5	47 Promenade at Playa	1.7
4 Avalon Maintenance	0.7	26 LA City Bureau Pub Bldgs *	0.8	48 PV Campus Parcel 3 *	16.6
5 Bridgeway Mills HOA *	5.1	27 LAX *	116.8	49 Runway Lofts Venture LLC	0.9
6 CAL TRANS	0.0	28 Lincoln ASB - Playa Vista *	1.2	50 Scattergood *	0.5
7 Campus at Playa -A *	7.1	29 Loyola Marymount University *	125.7	51 Serenade Community Assoc.	5.1
8 Campus at Playa Vista	8.3	30 Maintenance - Manchester *	0.2	52 Sunrise Playa Vista Senior	1.6
9 Capri Court HOA *	2.8	31 Metro Condo Assoc.	1.8	53 Tapestry Maint. *	4.4
10 Carabella Community	4.0	32 Off-Crescent	2.0	54 Tempo Comm. Ctr.	0.9
11 Carl Neilson Youth Park *	14.9	33 Paraiso	9.9	55 The Lee Group	1.3
12 Catalina Maintenance Corp.	2.8	34 Park 4-1 **	0.0	56 The Parking Spot	0.5
13 Chatelaine	0.8	35 Park Lot 39	7.0	57 The Ratkovich Company	5.2
14 Coldwell Banker	1.4	36 Park Lot 7	2.6	58 Villa D'Este Corp.	1.1
15 Coronado Maintenance Corp.	0.8	37 Park, Lot 9 **	5.3	59 Villa Savona Maint Corp.	0.5
16 Crescent Park *	4.1	38 PH & L Community *	1.2	60 Warmington PV	0.4
17 Crescent Walk at Playa	1.2	39 Playa Capital Co.*	30.2	61 Waterstone Condo Assoc.	1.2
18 Dreamworks Interactive *	7.5	40 Playa Phase 1	5.9	62 Westchester Golf Course	165.5
19 Esplanade Assoc.	1.4	41 Playa Villas Apt *	4.0	63 Westchester Park *	31.7
20 Essex Property Trust *	7.3	42 Playa Vista	1.2	64 William J. Hoffman-Receiver	4.4
21 Finvest Playa *	8.2	43 Playa Vista Median	0.5		
22 Horizon PH Office Holdings * **	9.7	44 Playa Vista Parks * **	71.5		
				<b>Total</b>	<b>824.7</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

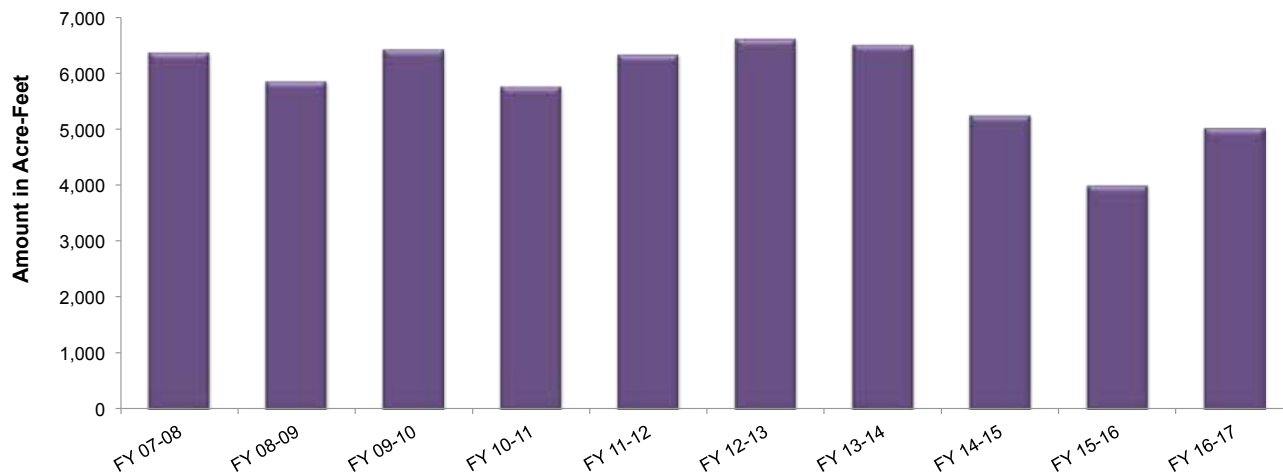
1 Acre-Foot (AF) is equal to 325,851 gallons



# City of Torrance

3031 Torrance Blvd., Torrance, CA 90503

## FY 2016-17 Recycled Water Sales



## City of Torrance

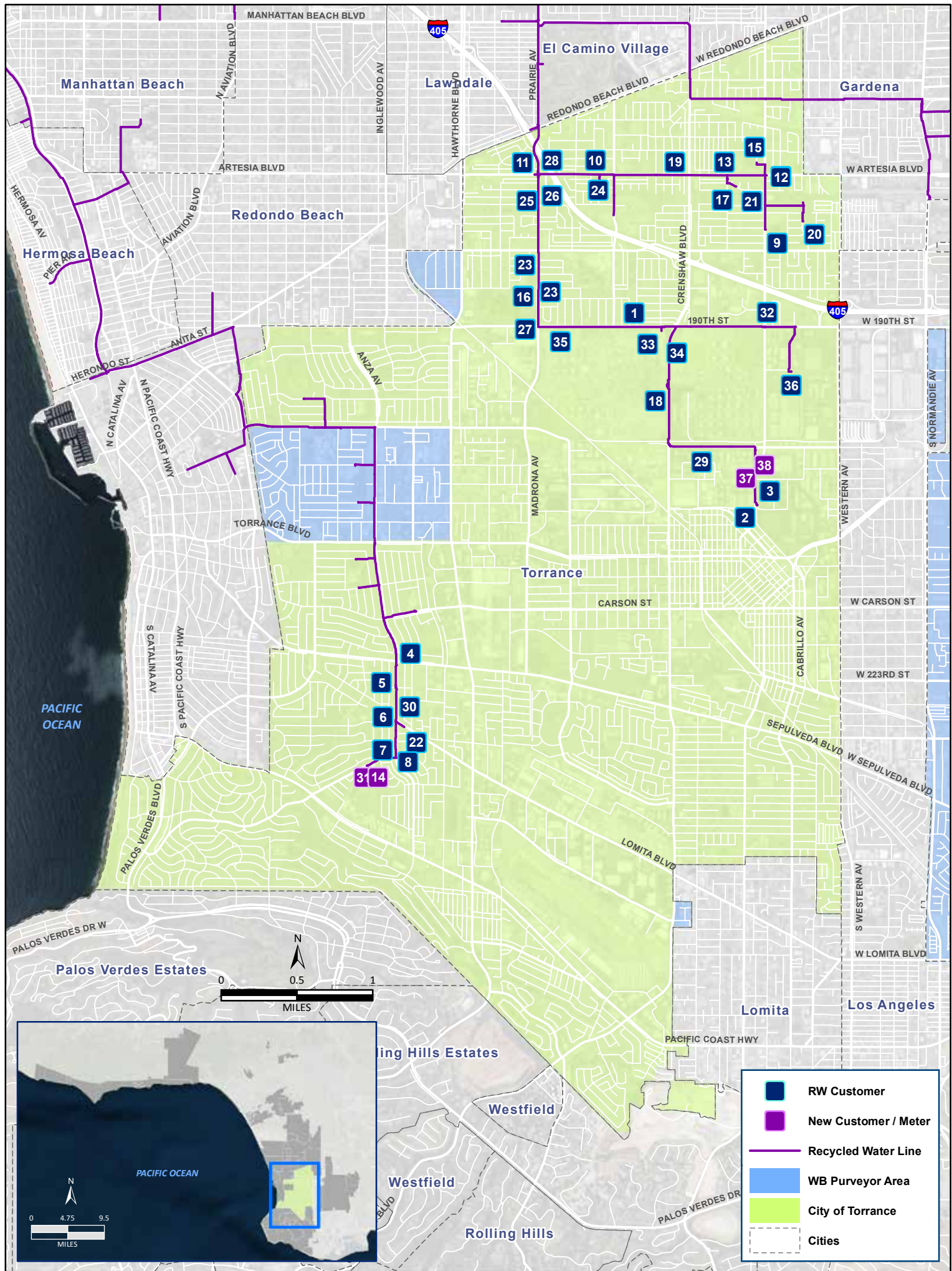
Recycled Water Customer	AF	Recycled Water Customer	AF	Recycled Water Customer	AF
1 190th St. 3403-Median *	0.0	14 Calle Mayor Middle School **	0.0	27 Prairie Ave. @ 190th Street	0.0
2 American Honda-A	51.0	15 Casimir School	4.8	28 Prairie Ave. @ Artesia Blvd.	0.0
3 American Honda-B	10.2	16 Columbia Park *	77.1	29 Pueblo Park	0.8
4 Anza Medians #3	0.4	17 Descanso Park	4.4	30 Seaside Heroes Park	1.4
5 Anza Medians #4 *	0.6	18 Exxon Fire	0.0	31 South High School **	0.0
6 Anza Medians #5	0.0	19 Falda Ave	0.2	32 Torrance Business Center	3.9
7 Anza Medians #6 *	0.1	20 Guenser Park	46.5	33 Torrance Refinery Boiler Feed	1,976.2
8 Anza Medians #7 *	0.0	21 Kobata Growers	6.2	34 Torrance Refinery Cooling Towers	2,748.3
9 Arlington School	6.1	22 La Paloma Park	5.3	35 Torrance Refinery Irrigation *	36.4
10 Artesia Blvd/Kornblum	0.7	23 Magruder Middle School *	7.8	36 Toyota Motor Sales *	41.2
11 Artesia Blvd/Prairie	0.4	24 McMaster Park	5.7	37 Virco Industrial **	0.0
12 Artesia Blvd/Van Ness	0.8	25 Prairie Ave. @ 175th Place	0.0	38 Virco Irrigation **	0.0
13 Artesia Blvd Median	1.2	26 Prairie Ave. @ 175th Street	0.0		
				<b>Total</b>	<b>5037.5</b>

\* This data reflects the total for multiple meter connections.

\*\* This is a new customer/meter connection for FY 16-17.

The site map on the next page corresponds to the numbers listed in the table above.

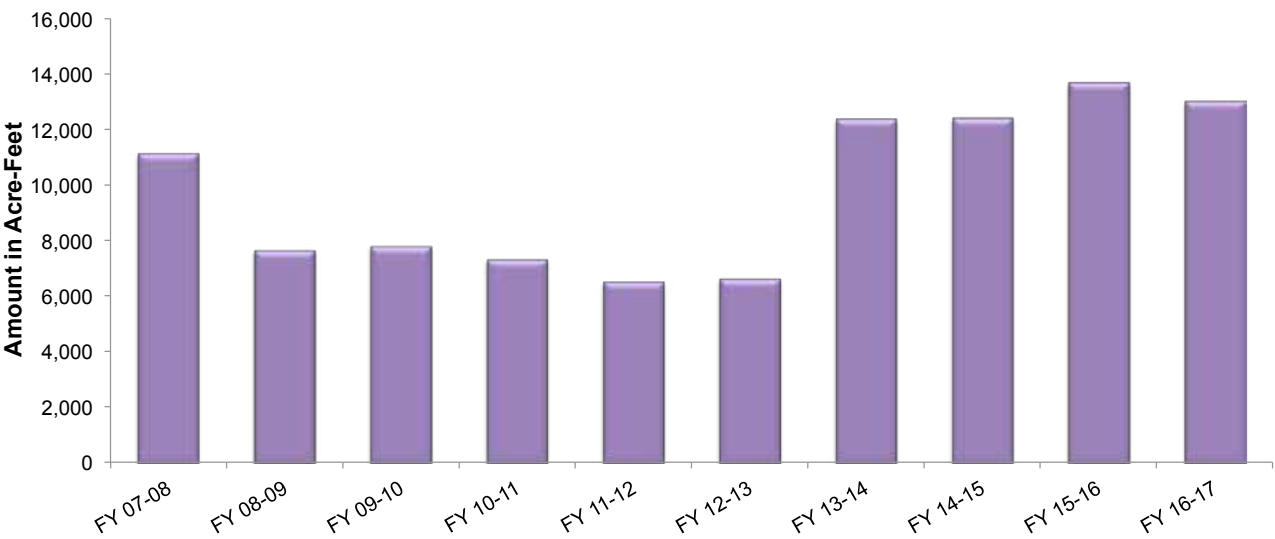
1 Acre-Foot (AF) is equal to 325,851 gallons



# Water Replenishment District of Southern California

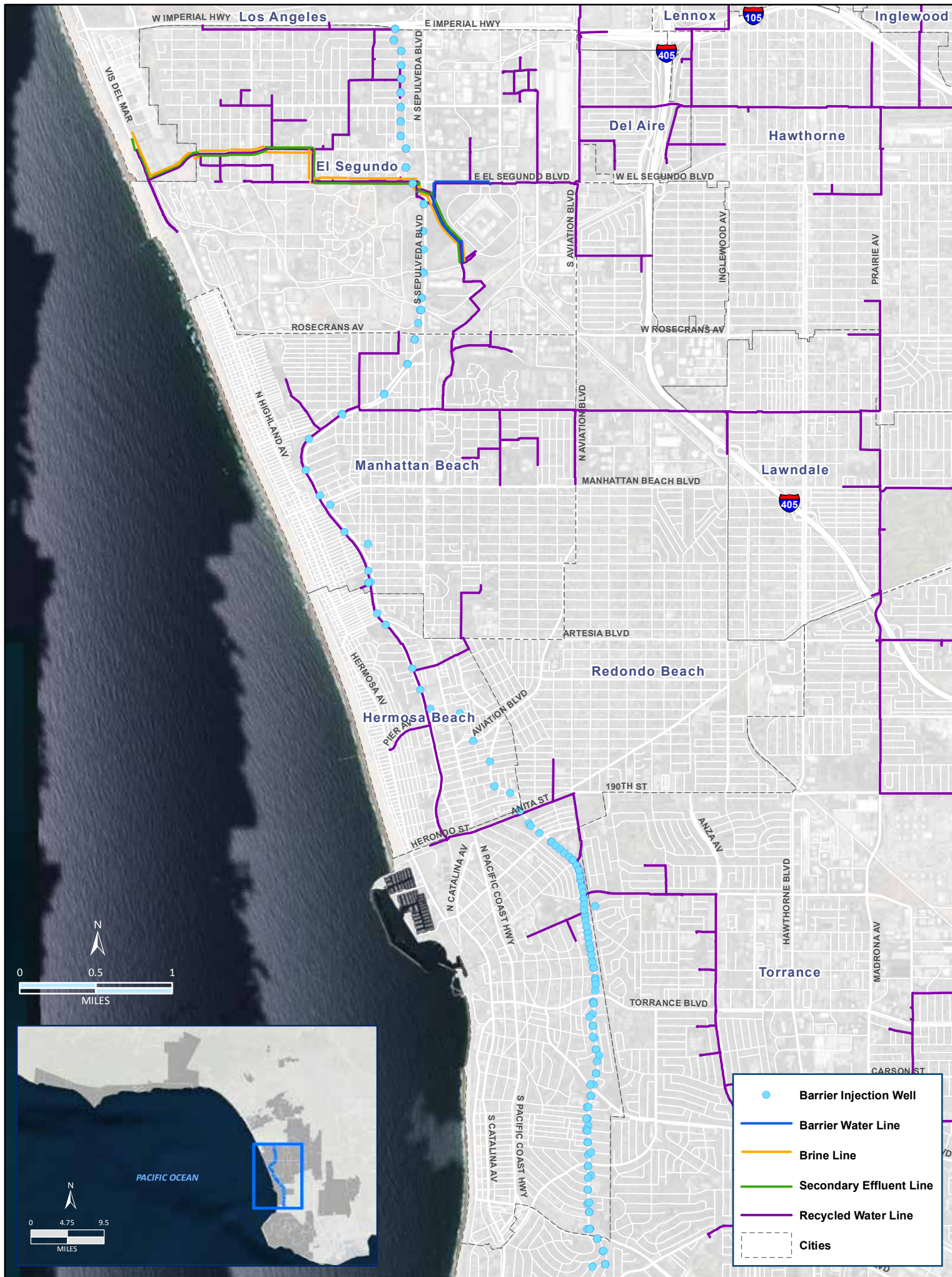
4040 Paramount Blvd., Lakewood, CA 90712

FY 2016-17 Recycled Water Sales



Recycled Water Use		AF
1	West Coast Barrier	13,014.3
Total		13,014.3

1 Acre-Foot (AF) is equal to 325,851 gallons





RATES

# FY 2017-18 WATER RATES AND CHARGES

## Rates Effective July 1, 2017 to December 31, 2017

	<b>MWD Commodity</b>	<b>MWD RTS</b>	<b>Reliability Svc Charge</b>	<b>Total</b>
Non-Interruptible Retail & Barrier (Tier 1)	\$979/AF	\$116/AF	\$237/AF	<b>\$1,332/AF</b>
Non-Interruptible Retail & Barrier (Tier 2)	\$1,073/AF	\$116/AF	\$237/AF	<b>\$1,426/AF</b>

## Rates Effective January 1, 2018

	<b>MWD Commodity</b>	<b>MWD RTS</b>	<b>Reliability Svc Charge</b>	<b>Total</b>
Non-Interruptible Retail & Barrier (Tier 1)	\$1,015/AF	\$102/AF	\$237/AF	<b>\$1,354/AF</b>
Non-Interruptible Retail & Barrier (Tier 2)	\$1,101/AF	\$102/AF	\$237/AF	<b>\$1,440/AF</b>

## MWD Non-Interruptible Commodity Rate

### Effective Dates

	<u>1/1/16</u>	<u>1/1/17</u>
Supply Rate Tier 1	\$201	\$209
Supply Rate Tier 2	\$295	\$295
System Access Rate	\$289	\$299
Water Stewardship Rate	\$52	\$55
Treatment Rate	\$313	\$320
Power Rate	\$124	\$132
<b>Total Tier 1</b>	<b>\$979</b>	<b>\$1,015</b>
<b>Total Tier 2</b>	<b>\$1,073</b>	<b>\$1,101</b>

## Capacity Charge

Designated Amount <sup>(1)</sup>

Effective Jul 1 to Dec 31, 2017

Effective Jan 1, 2018

**\$6,600/cfs**

**\$7,300/cfs**

(1) Designated amount is an Agency's highest peak (per cfs) from the past three summer periods (May 1-Sept. 30)

## Monthly Water Service Charge

Effective July 1, 2017

WBMWD Water Service Charge

**\$67/cfs <sup>(2)</sup>**

(2) Per cfs as determined by agency's meter capacity

## WBMWD Recycled Water Rates

Effective July 1, 2017

Volume (AF/Month)	WBMWD Service Area	Outside Service Area	Designer Recycled Water	Per AF
0-25	\$1,105/AF	\$1,147/AF	West Coast Barrier	\$836/AF
25-50	\$1,095/AF	\$1,137/AF	Nitrified	\$1,085/AF
50-100	\$1,085/AF	\$1,127/AF	Low Pressure Boiler Feed	\$1,333/AF
100-200	\$1,075/AF	\$1,117/AF	High Pressure Boiler Feed	\$1,689/AF
200+	\$1,065/AF	\$1,107/AF		

CONTACT INFORMATION

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Co-General Manager ..... Shivaji Deshmukh .....310-660-6234  
Co-General Manager ..... Fernando Paludi .....310-660-6214

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Planning / Water Resources..... E.J. Caldwell .....310-660-6286  
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