



# **City of Bellflower**

## **Municipal Water System**

### **2017 Annual Report**

**September 11, 2017**

**City of Bellflower  
16600 Civic Center Drive  
Bellflower, California 90706  
(562) 804-1424**

1. **Introduction.** The following report has been prepared for the City Council to provide an overview of the City's Municipal Water System (MWS), including a brief history, summary of water sources and water costs, history of water rates, prior year accomplishments, and major initiatives for the coming year.

2. **Definitions.** Where used herein:

- "Acre-foot" or "AF" means the amount of water necessary to cover an acre of land to a depth of one foot. One acre-foot of water equals 325,851 gallons or 43,560 cubic feet. This is the standard unit of volume for large scale water resources.
- "Billing cycle" or "BiMB" means the interval between water bills, presently bimonthly.
- "BMC" means Bellflower Municipal Code.
- "BOR" means Bureau of Reclamation.
- "BSMWC" means Bellflower-Somerset Mutual Water Company.
- "Ccf" means 100 cubic feet, which is typically the unit basis for a commodity charge.
- "City" means the City of Bellflower.
- "Commodity charge" means the rate charged per 100 cubic feet (ccf) of water used, as established by resolution of the City Council.
- "CPUC" means the California Public Utilities Commission, a regulatory body that oversees, among other things, privately held water companies.
- "Customer" means the owner, tenant, or other occupant of the property who has established the water service connection.
- "Groundwater" means water pumped by a provider for its own use.
- "GPM" means "gallons per minute," the standard measurement used for water flow.
- "Imported water" means water obtained from a third-party source.
- "MWS" means the City of Bellflower Municipal Water System.
- "MWD" means the Metropolitan Water District of Southern California.
- "Owner" means the owner of the property at which the service connection is located, or his/her authorized agent.
- "Person" means any individual, firm, company, public entity, association, society, corporation, partnership, or group.

- “Service charge” means a charge which is applicable to all metered service to provide reimbursement to the City for the costs of services related to the supplying of water to the property. It is not directly related to the amount of water utilized at a site but, instead, is otherwise appropriately apportioned to the customer, as established by resolution of the City Council.
- “Service connection” means the water line and appurtenant facilities used to extend water service from the water main to the meter box.
- “Water service area” means the area of the City served by the MWS.
- “Water service” means supplying service through a pipe or other constructed conveyance for any purpose, but does not include the sale of water for human consumption by a water supplier to another water supplier for resale.
- “Water system” means the infrastructure of the City’s water system only.
- “Water system operator” or “operator” means the party with whom the City contracts for the operation of the water system, or delegated specific responsibilities for the operation of the water system, presently Bellflower-Somerset Mutual Water Company.

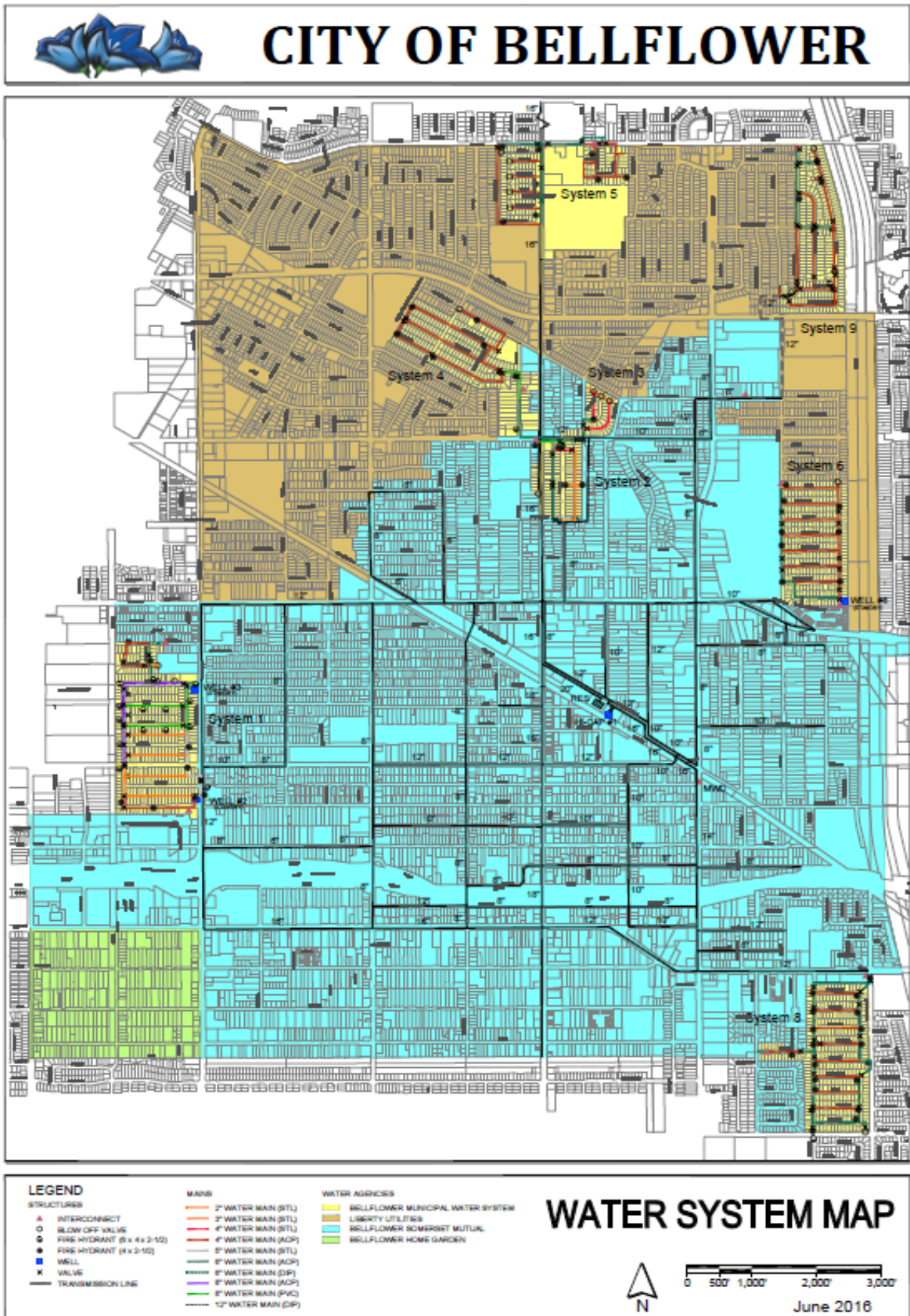
3. **Background.** The MWS was established by the City Council in 2007 to operate the water system acquired from Peerless Water Company. The system was purchased for \$5.8 million, plus an additional \$400,000 in costs associated with the acquisition, for a total acquisition cost of \$6.2 million.

a. The MWS currently serves 1,826 customers, or approximately 10% of the City, from eight separate systems in geographically separated areas:

<b>Distribution of MWS Customers by System</b>	
<b>System</b>	<b>Customers</b>
1	416
2 & 3	174
4	244
5	165
6	274
8	309
9	244
<b>Total</b>	<b>1,826</b>

<b>Distribution of MWS Customers by Meter Size</b>	
<b>Meter Size</b>	<b>Customers</b>
5/8" x 3/4"	1,774
3/4"	23
1"	8
1 1/2"	4
2"	15
3"	1
4"	1 Fire
<b>Total</b>	<b>1,826</b>

Of the MWS's 1,826 customers, 1,791 are single-family residential, 30 are multi-family residential, 2 is commercial, and 3 are industrial.



b. The MWS production facilities consist of one high capacity water well (HCW):

MWS Water Wells						
Well	Location	Status	Dimension	Depth to Water	Pumping Capacity	Quantity Pumped in FY 16-17
HCW 1	Flora Vista Street	Active	30"	101'	3,500 gpm	1,913.51 AF

Wells 2, 3, and 8 were previously taken out-of-service and are waiting decommissioning. Well 17 was decommissioned in June 2014.

c. The MWS distribution system consists of 78,577 linear feet of asbestos cement pipe, ductile iron, polyvinyl chloride and welded steel pipe ranging from 2-inches to 12-inches in diameter. The majority of the distribution system consists of 4-inch and 6-inch AC pipe. The system also includes approximately 1,826 meters and 82 fire hydrants.

Pipeline Summary					
Pipe Diameter (inches)	Pipe Lengths (feet) Asbestos Concrete	Pipe Lengths (feet) Ductile Iron	Pipe Lengths (feet) Polyvinyl Chloride	Pipe Lengths (feet) Steel	Total Length (feet)
2	0	0	0	1,047	1,047
3	0	0	0	6,212	6,212
4	38,332	78	0	193	38,603
5	0	0	0	1,281	1,281
6	20,601	405	90	0	21,096
8	2,308	832	4,318	0	7,458
12	0	2,880	0	0	2,880
<b>Total</b>	<b>61,241</b>	<b>4,195</b>	<b>4,408</b>	<b>8,733</b>	<b>78,577</b>

Except for 8,475 linear feet of new and replacement distribution piping installed during the last ten years, the age of the pipelines typically ranges from 50 to 70 years with more than 50% of the distribution system reaching the end of its service life within the next 20 years.

d. The MWS' average estimated service demand since 2007 is 676 AF per year, which includes approximately 50 AF used during routine maintenance operations.

e. The MWS System owns 986 AF of water rights which is sufficient to meet our 676 AF per year average estimated service demand and to lease water rights surplus to our needs at competitive rates to other water purveyors. Separate from the MWS, the City also owns another 394 AF of water rights for a grand total of 1,380 AF. In Fiscal Year 2016-17, the City leased 680 AF (with flex) of water rights to BSMWC.

f. Under the direction of the City Manager, the Director of Public Works oversees strategic planning, financial management, policy development, and capital projects for the MWS. The Director is assisted by the City's Finance Department, the City's contract water program manager, and the City's contract water system operator.

g. The City's contract water system operator, Bellflower-Somerset Mutual Water Company, is responsible for the day-to-day operation of the Water System.

4. **Key Dates.** The following are key dates in the history of the Municipal Water System:

Circa 1940	Peerless Land and Water Company founded.
May 2000	Southern California Water Company and Peerless Water Company submit a joint application to the CPUC for approval of a merger.
October 2000	Peerless customers ask that City intervene to block the merger and City Council adopts resolution opposing the proposed merger.
November 8, 2001	CPUC denies the proposed merger.
August 2002	City begins formal negotiations to purchase Peerless Water System.
May 24, 2004	City Council authorizes offer to purchase Peerless Water Company assets and to research into issuance of bonds to finance acquisition.
December 13, 2004	City Council initiates action to condemn Peerless Water Company.
February 2005	City suspends negotiations to purchase Peerless Water System.
May 2005	City enters into litigation with Peerless Water Company.
June 2006	City creates the Bellflower Public Financing Authority (BFA).
August 2006	City enters into an Operating Agreement with BSMWC.
December 11, 2006	City adopts PWC rates as initial MWS water rates.
January 12, 2007	City assumes control of PWC assets; litigation terminated.
June 2007	City increases water rates by 60%.
June 2007	Carfax/Nava interconnection in System 6 completed.
April 2008	MWS completes its 2008 Water Master Plan.
June 2008	City increases water rates by 4%.
June 2008	Completes Lakewood and Walnut interconnection in System 1.
July 9, 2008	Completes sale of \$8.23 million in MWS Certificates of Participation.
November 2008	Completes closure of 12 inactive and abandoned water wells.
October 2009	Completes Mapledale to Van Ruiten interconnection in System 9.
November 2009	City increases water rates by 3.5%.
April 2010	Completes partial reconstruction of System 1 serving 108 customers.
October 2010	City begins principal payments on MWS Certificates of Participation.
March 2012	City completes the High Capacity Well construction.
June 2012	City takes Wells #3 and #8 off-line and out-of-service.
August 2012	City decreases bimonthly water service charge by \$10.
November 2012	Completes Dunbar interconnection.

February 2013	First meeting of the Municipal Water Commission.
June 2013	City decreases bimonthly water service charge by \$5.
April 2014	Completes Somerset/Leahy Main Extension.
April 2014	Governor Jerry Brown declares a drought emergency.
June 2014	Decommissions Well #17.
July 2014	City receives a BOR grant to install 600 smart water meters.
August 2014	In response to the Governor's drought declaration, City Council adopts Resolution 14-49 to restrict outdoor irrigation of ornamental landscaping by MWS customers to two days per week.
November 2014	Installs phosphate treatment system at the High Capacity Well.
November 2014	Abandons 800 feet of deteriorating 4" main on Bellflower Blvd. and relocates 12 services to a nearby main owned by BSMWC.
April 2015	Governor Jerry Brown declares a continued drought emergency.
May 2015	SWRCB imposes mandatory urban water conservation restrictions on all water suppliers and consumers to achieve a statewide 25% reduction of potable water usage by February 2016.
June 2015	City Council lifts the suspension on Bellflower Municipal Code 13.16 (Water Conservation Measures) and amends it to include SWRCB's mandated water conservation regulations.
November 2015	Completes Felson and Carpintero interconnection in System 8.
November 2015	Completes Glandon Avenue interconnection and main replacement in System 4.
May 2016	City issues a Request for Proposals to purchase the MWS and receives four proposals, including one from California-American Water Company.
November 2016	Residents approve the sale of the MWS to California-American Water Company for \$17M, during a November 8, 2016 Special Municipal Election.
March 2017	Completes the installation of 600 smart meters under a BOR grant received through the Gateway Water Management Authority.
April 2017	Governor Jerry Brown declares an end to the statewide drought emergency.
May 2017	City Council dissolves the Municipal Water Commission in light of the pending sale of the MWS to California-American Water Company.

5. **Water Conservation.** Traditionally, the City has relied on voluntary water conservation measures. In the event of a statewide drought or other water emergency, the City may implement mandatory water conservation measures regulating hose watering, watering lawns and landscaping, indoor plumbing and fixtures, washing vehicles, drinking water in restaurants, and water-efficient landscaping. These measures, which are found in Chapter 13.16 of the Bellflower Municipal Code, were originally implemented during a drought in 2009 and suspended following the conclusion of the drought in 2011.

In 2015, the State declared another drought emergency and imposed mandatory urban water restrictions to reduce potable water use by 25 percent. To comply with these restrictions, City Council lifted the suspension of BMC Chapter 13.16 to include the new restrictions on June 8, 2015.

By March 2016, California achieved a 24 percent water savings statewide and recommended less stringent restrictions that allowed water agencies to adopt their own conservation measures. This was followed by record rain falls this past winter, which led Governor Jerry Brown to declare an end to the emergency drought on April 2017 and to ease potable water use restrictions. However, the City continues to strongly encourage residents to conserve water whenever possible, as water remains our most valuable natural resource.

6. **Water Usage.** Due to conservation efforts and improved system maintenance, MWS water usage in FY 2016-17 reached a record low of 611.69 AF. However, the end of the drought is expected to encourage greater usage, which is anticipated to increase by approximately 4% in FY 2017-18.

<b>MWS Water System Usage<sup>1</sup></b>	
<b>2007-08</b>	763.33 AF
<b>2008-09</b>	703.67 AF
<b>2009-10</b>	672.36 AF
<b>2010-11</b>	656.78 AF
<b>2011-12</b>	659.34 AF
<b>2012-13</b>	658.36 AF
<b>2013-14</b>	732.00 AF
<b>2014-15</b>	688.40 AF
<b>2015-16</b>	613.11 AF
<b>2016-17</b>	611.69 AF
<b>2017-18 Projected</b>	636.00 AF

7. **Water Sources.** Water used by customers in Bellflower is either “groundwater” (i.e., water pumped from a well) or “imported water” (i.e., water transported via aqueduct or pipe from a remote source - Colorado River, Sacramento Delta, etc.). These water supplies are limited. Therefore it is necessary to conserve water and prevent the unnecessary and wasteful use of these limited resources. The City is served by four retail water providers:

<sup>1</sup> Includes approximately 50 AF/yr expended for system flushing and other maintenance operations.



Water Sources						
Water Provider	Percent of City Served	Average Annual Service Demand	Operating Wells	Water Source		Water Rights
				Ground	Imported	
Bellflower Municipal Water System	10%	676 AF	1	100%	0%	986 AF
Bellflower-Somerset Mutual Water Co.	61%	5,000 AF	7 <sup>2</sup>	100%	0%	4,412 AF
Liberty Utilities <sup>3</sup>	25%	1,768 AF	1 <sup>4</sup>	42%	58%	822 AF <sup>5</sup>
Bellflower Home Garden Water Co.	4%	324 AF	0	100% <sup>6</sup>	0%	306 AF
<b>Total</b>	<b>100%</b>	<b>7,768 AF</b>	<b>9</b>	<b>86.8%</b>	<b>13.2%</b>	<b>6,526 AF</b>

A retail water provider that anticipates a shortfall in water rights needed to meet its service demand can lease additional water rights on the open market or import water from the MWD, provided sufficient water supplies are available.

**8. Water Costs.** The cost of water is largely determined by its source, with groundwater being much less expensive than imported water. Since 2012, the MWS has relied entirely on groundwater. For historical information on the cost of imported water, see the 2011 MWS Annual Report.

MWS Current and Estimated Future Water Costs		
Cost	Rate per Acre-Foot	
	Jul 2016	Jul 2017
WRD Recharge Assessment <sup>7</sup>	\$297	\$318
Energy	\$195	\$205
Treatment	\$79	\$83
<b>Total</b>	<b>\$571</b>	<b>\$606</b>

**9. Water Rates.** The water rates are reviewed annually, whether or not any rate change is proposed. Water rates have been raised three times since the MWS began operations, in June 2007, June 2008, and November 2009. Furthermore, water rates have decreased in August 2012 and June 2013 and have remained unchanged since 2013.

<sup>2</sup> BSMWC owns and operates 7 wells, but also utilizes an 8<sup>th</sup> well, the high capacity well owned by the MWS. This well is not reflected in the chart, since it is accounted for by the MWS.

<sup>3</sup> Liberty Utilities data is for calendar year 2016. Service demand and water source data are extrapolated from data for its Bellflower-Norwalk service area, and includes 3% recycled water.

<sup>4</sup> Only includes Liberty Utilities wells physically located in Bellflower.

<sup>5</sup> Includes all Liberty Utilities water rights in the Central Basin.

<sup>6</sup> BSMWC provides water to Bellflower Home Garden Water Company through its distribution system. All water used by Home Garden Water customers comes from groundwater sources; none is imported.

<sup>7</sup> MWS is required to pay a \$318 per AF Recharge Assessment ("RA") to the Water Replenishment District of Southern California in FY17-18 to cover the MWS' share of the costs incurred to recharge the aquifer that supplies groundwater to the MWS.

The following is a summary of water rate changes made since acquisition of the MWS in January 2007. The annual average customer cost depends on the amount of water used in a given year.

History of MWS Water Rates				
	Bi-Monthly Service Charge <sup>8</sup>	Commodity Charge per ccf	Average Customer	
			Use <sup>9</sup>	Cost <sup>10</sup>
Initial Rate	\$26.44	\$1.720	36.00 ccf/BiMB	\$88.36
2007	\$68.98	\$2.051	28.11 ccf/BiMB	\$126.63
2008	\$71.74	\$2.133	30.62 ccf/BiMB	\$137.05
2009	\$74.26	\$2.208	28.22 ccf/BiMB	\$136.57
2010	\$74.26	\$2.208	26.78 ccf/BiMB	\$133.39
2011	\$74.26	\$2.208	26.16 ccf/BiMB	\$132.02
2012	\$64.26	\$2.208	26.26 ccf/BiMB	\$122.24
2013	\$59.26	\$2.208	26.22 ccf/BiMB	\$117.15
2014	\$59.26	\$2.208	29.14 ccf/BiMB	\$123.60
2015	\$59.26	\$2.208	27.37 ccf/BiMB	\$119.69
2016	\$59.26	\$2.208	24.42 ccf/BiMB	\$113.18
2017	\$59.26	\$2.208	24.33 ccf/BiMB	\$112.98

The following chart compares current local water rates:

Comparison of Current Local Water Rates for FY 2017-2018			
Provider	Service Charge	Commodity Charge per CCF	Average Bill <sup>11</sup>
Bellflower Home Garden Water <sup>12</sup>	\$59.00 BiMB	\$0.00	\$59.00
Bellflower-Somerset Mutual Water Company <sup>13</sup>	\$39.43 BiMB	Ea ccf ≤ 16 - \$1.29 Ea ccf from 17-27 - \$1.58 Ea ccf ≥ 28 - \$1.79	\$73.23
Bellflower Somerset Mutual Water Company (X-County Customers) <sup>14</sup>	\$59.43 BiMB	Ea ccf ≤ 16 - \$1.29 Ea ccf from 17-27 - \$1.58 Ea ccf ≥ 28 - \$1.79	\$93.23
Municipal Water System	\$59.26 BiMB	Ea ccf - \$2.208	\$112.98
Liberty Utilities	\$43.94 BiMB	Ea ccf ≤ 18 ccf - \$5.553 Ea ccf > 18 - \$6.371	\$184.22

<sup>8</sup> Bimonthly service charge for 5/8 x 3/4-inch meter

<sup>9</sup> Individual customer's estimated average bimonthly use. Total production is averaged over 6 bi-monthly payments and the total number of services (excluding 4" fire service)

<sup>10</sup> Average bimonthly water bill based on estimated average bimonthly use and service charge for a 5/8 x 3/4-inch meter.

<sup>11</sup> Based on MWS' average customer use of 24.33 ccf/BiMB in FY 16-17, using a service charge rate for a 5/8 x 3/4" meter

<sup>12</sup> Bellflower Home Garden charges a flat rate for each dwelling unit (a.k.a., "door") on a property.

<sup>13</sup> BSMWC's commodity charge is specific to a single-family home with a 5/8x3/4-inch meter. Commercial, multi-family housing, non-residential, and irrigation customers pay a fixed fee of \$1.47 per ccf.

<sup>14</sup> In 2005, BSMWC acquired a portion of County Water Company which did not include water rights. As a consequence BSMWC customers who were formerly customers of County Water Company are charged an additional fee of \$20 to pay for the additional water imported by BSMWC to serve their needs.

10. **MWS Finances.** MWS revenue principally comes from water sales; however federal infrastructure grants, cash advances from the City’s General Fund, and City-provided in-kind services are significant components. The following table shows federal grants received.

Federal Grants Received				
Program	Amount	Match	Total	Use
2002 EPA STAG	\$873,000	\$714,273	\$1,587,273	Interconnect & HCW
2006 EPA STAG	\$361,300	\$295,609	\$656,909	HCW
2009 CDBG-R	\$319,000	\$0	\$319,000	System 1 Partial Replacement
2014 BOR Water Smart Grant	\$96,364	\$143,636	\$240,000	600 smart water meters

The following table shows monies advanced to date by the City to cover the MWS’ cash deficit and City expenses incurred for the MWS, including foregone interest, City personnel costs for MWS management, and ratepayer assistance.

City General Fund Expenditures for MWS				
Fiscal Year	Staff Support & Forgone Interest	Ratepayer Assistance	Total Subsidy <sup>15</sup>	Advance for MWS Cash Deficit <sup>16</sup>
2006-07	\$55,000	\$0	\$55,000	\$276,595
2007-08	\$110,000	\$2,944	\$112,944	\$0
2008-09	\$110,000	\$7,504	\$117,504	\$435,929
2009-10	\$110,000	\$9,339	\$119,339	\$707,137
2010-11	\$113,000	\$15,618	\$128,618	\$180,680
2011-12	\$116,000	\$12,575	\$128,575	\$712,718
2012-13	\$80,000	\$11,612	\$91,612	\$0
2013-14	\$64,000	\$11,198	\$75,198	\$0
2014-15	\$66,000	\$6,256	\$72,256	\$0
2015-16	\$68,000	\$5,145	\$73,145	\$0
2016-17	\$71,000	\$1,531	\$72,531	\$0
2017-18 Estimated	\$73,000	\$0	\$73,000	\$0
Accrued Interest				\$568,053
<b>Total</b>	<b>\$1,036,000</b>	<b>\$83,722</b>	<b>\$1,119,722</b>	<b>\$2,881,112</b>
Less MWS Repayment to General Fund - Actual <sup>17</sup>				(\$143,574)
Less MWS Repayment to General Fund – Authorized <sup>18</sup>				(\$61,000)
<b>Balance</b>				<b>\$2,676,538</b>

<sup>15</sup> Total Subsidy is fully paid by the City’s General Funds and does not need to be reimbursed by the MWS.

<sup>16</sup> MWS is required to repay the Advance for MWS Cash Deficit balance.

<sup>17</sup> Interest payment of \$82,000 and working capital repayment of \$61,574.

<sup>18</sup> Authorized repayment in FY 2017-18.

In July 2008, the City completed the sale of \$8.23 million in Certificates of Participation (COP), the proceeds of which have been used to reimburse the City's General Funds for the purchase price of the MWS, pay the costs of issuance, and help pay for capital improvements to the System's infrastructure. As collateral for the COP, the City used the Bellflower Civic Center (City Hall and William & Jane Bristol Civic Auditorium) and Thompson Park. With the completion of the high capacity well project, the balance of these funds was exhausted.

<b>Proceeds From Sale of Certificates of Participation</b>		
Revenue From Sales	\$8,230,000	
Less Peerless Water Company Purchase Price	-\$5,800,000	
Less Associated Acquisition Costs (legal, engineering, appraisal, etc. services)	-\$412,081	
Less Cost of Issuance	-\$244,598	
Less Underwriter's Discount	-\$123,450	
Less Net Original Issue Discount	-\$144,983	
Less Deposit to Debt Service Reserve Fund	-\$539,819	
Less Expenditures for MWS Capital Projects: <sup>19</sup>	Well Disconnection / Destruction / Rehabilitation	-\$292,267
	Mapledale - Van Ruiten Waterline Interconnection	-\$171,169
	Local Match for System 1 Partial Water Main Replacement	-\$140,721
	High Capacity Well	-\$360,912
<b>Balance</b>	<b>\$0</b>	

The high capacity well was completed in June 2012 at a cost of \$2.83 million and paid for using federal grants, proceeds from the sale of Certificates of Participation, and cash advances from the City's General Fund reserves.

<b>Expenditures for High Capacity Well</b>	
Federal Grants	\$987,323
2008 Certificates of Participation	\$360,912
Advanced from City's General Fund	\$1,480,987
<b>Total</b>	<b>\$2,829,222</b>

**11. Prior Years' Major Accomplishments.**

**2007 – 2009**

- a. **Decommissioning and Closure of 12 Inoperative Wells.** 12 of 16 water wells acquired from Peerless Water Company were found to be either abandoned or permanently inactive, but not properly decommissioned in accordance with County and State regulations. By properly decommissioning the wells in November 2008, the City

<sup>19</sup> The total of expenditures for MWS capital projects is \$965,069.

eliminated a potential source of water contamination, eliminated potential liability due to accident or injury, and made the properties available for sale or quit claim to the underlying property owners.

b. **Completed System Interconnection at Lakewood and Walnut.** Prior to the construction of the high capacity well, System 1 provided water from two active wells, but was not connected to a backup water source. The interconnection completed in June 2008 connected to BSMWC's 12-inch distribution line at the corner of Lakewood Boulevard and Walnut Street. The new interconnect ensures redundancy of water service including fire flow, in case of equipment or power failure, disaster, or other emergency.

c. **Replacement of Well 8's Expansion Tank and Pump.** The City completed an emergent replacement of the expansion tank at Well No. 8. In September 2008, the expansion tank at Well No. 8 failed which resulted in the well being taken off-line until the tank could be replaced. The tank replacement was completed in February 2009. In March 2009, we discovered that Well 8 was contaminated by lubricating oil leaking from the well pump's seals and that the pump was beyond repair. The pump was replaced with the pump recently purchased for Well 17 and the well returned to service in June 2009.

d. **Water Master Plan.** Completed the Water Master Plan in April 2008.

e. **Service Connections.** Replaced 315 customer service connections.

f. **Water Meters.** Replaced 363 water meters.

## **2009 – 2010**

a. **Completed Mapledale to Van Ruiten Interconnect.** In October 2009, the City completed construction of a 2,800 foot pipeline connecting customers in System 9 to BSMWC's 12-inch distribution line at McNab and Mapledale. The \$331,000 project, which was built using federal grant funds and proceeds from the 2008 Certificates of Participation, allowed the MWS to purchase water at a substantial savings.

b. **Completed Partial Reconstruction of System 1.** Using \$319,000 in federal Community Development Block Grant - Recovery funds (with no matching local funds and at no direct cost to the MWS customers), the City replaced the water system serving 108 MWS customers in the low- and moderate-income census tract (Tract # 5543), which includes those portions of Oak and Belmont Streets between Pimenta and Hayter Avenues, as well as sections on Pimenta Avenue and Mayne Street. The project included replacement of main lines, service laterals, hydrants and service connections, and the relocation and as needed replacement of water meters. The project was completed in April 2010.

c. **Began Construction of the High Capacity Well.** Construction began in April 2010.

d. **Service Connections.** Replaced 142 customer service connections, including 108 in System 1.

e. **Water Meters.** Replaced 168 water meters, including 108 in System 1.

### 2010 – 2011

- a. **Continued Construction of the High Capacity Well.** Construction continued throughout the year.

### 2011 – 2012

- a. **Completed Construction of the High Capacity Well.** In March 2012, the City completed construction of the High Capacity Well which was placed in service in June 2012. The well enabled the MWS to meet 100% of its customer's service demand using groundwater and eliminated dependence on more costly water imported from the MWD.

The High Capacity Well was completed at a cost of \$2.83 million and paid for using \$987,323 in federal grants and \$1,841,899 from the combination of 2008 Certificates of Participation and the City's General Fund reserves.

- b. **Service Connections.** Replaced 15 service connections.
- c. **Water Meters.** Replaced 11 water meters.
- d. **Fire Hydrants.** Replaced 4 fire hydrants and added 4 new hydrants.

### 2012 – 2013

- a. **High Capacity Well Operations.** During its first year in service, the High Capacity Well pumped 3,464 AF of water - 658 AF to MWS customers and 2,806 AF to BSMWC.
- b. **Dunbar Interconnect.** In November 2012, the City completed construction of a system interconnection at Dunbar Street linking System 1 to the rest of the MWS distribution system, thereby ensuring redundancy of service and fire flow in the event of an emergency.
- c. **Service Connections.** Replaced 22 service connections.
- d. **Water Meters.** Replaced 21 water meters.

### 2013 – 2014

- a. **High Capacity Well Operations.** During FY 2013-14, the High Capacity Well pumped 2,243 AF of water: 732 AF to MWS customers and 1,511 AF to BSMWC.
- b. **Decommissioning of Well 17.** Well 17, previously abandoned due to manganese contamination above maximum permissible levels, was decommissioned in June 2014.
- c. **Somerset/Leahy Main Extension.** A new section of water main in System 2 was installed on Somerset Boulevard, and a new hydrant was installed on Leahy Avenue.
- d. **Service Connections.** Replaced 8 service connections.

- e. **Water Meters.** Replaced 12 water meters.

### 2014 – 2015

- a. **High Capacity Well Operations.** The High Capacity Well pumped 1,987 AF of water - 688 AF to MWS customers and 1,299 AF to BSMWC.
- b. **Bellflower Boulevard Main Services.** Due to a series of water main failures affecting 12 service connections on Bellflower Boulevard south of Somerset Boulevard, the MWS collaborated on a project with BSMWC to abandon 800 feet of MWS 4-inch steel main and connect the services to BSMWC's existing water main on Bellflower Boulevard.
- c. **High Capacity Well Install Phosphate Treatment System.** The MWS completed the installation of phosphate treatment equipment at the High Capacity Well, which has successfully kept iron and manganese in solution and mitigated colored water conditions.
- d. **Smart Water Meters.** To encourage water conservation and eliminate the need for staff to enter backyard easements to read meters, the MWS began replacing traditional water meters with smart meters. The meters, which are funded through a BOR grant, will use a cellular connection to transmit meter reads to operations staff and customers via a computer or smart phone app. Staff installed 75 smart meters this year.

### 2015-2016

- a. **High Capacity Well Operations.** The High Capacity Well pumped 1,913 AF of water - 613 AF to MWS customers and 1,300 AF to BSMWC.
- b. **Glandon Avenue Water Main Replacement and Interconnection.** To improve low water pressure problems on Glandon Avenue between Blaine Avenue and Prichard Street, the MWS replaced 700 feet of an existing 4 inch water main with 6 inch main. This project also established an interconnection to a nearby BSMWC hydrant to provide redundancy and reliability to Systems 2, 3, and 4.
- c. **Interconnection at Felson and Carpintero.** The MWS installed a metered service connection to BSMWC's distribution system on Felson Street and Carpintero Avenue to provide a secondary water source for System 8.
- d. **Billing System.** The MWS installed a new billing system to replace the existing billing system which is no longer in production and does not offer adequate technical support.
- e. **Smart Water Meters.** Installed 266 smart meters this year.
- f. **Fire Hydrants.** Repaired 6 fire hydrants with broken operating nuts.

**2016-2017**

- a. **Smart Water Meters.** Finished the installation of 600 smart meters through the BOR WaterSmart grant program and met all grant requirements. Approximately 33% of the MWS is now equipped with smart meters.
- b. **Grants and Loans.** The City will continue its aggressive pursuit of federal and state grant and loan funds necessary to improve the MWS.

**12. Major Initiatives for 2017-2018**

- a. **Water System Sale.** Complete the sale of the MWS to California-American Water Company.
- b. **Fire Hydrants.** Repair or replace fire hydrants throughout the system, as needed.

**13. Residential Ratepayer Assistance Programs.** The City continues to provide ratepayer assistance programs to qualified residential customers, when funding is made available. Customers seeking more information about these programs should contact the MWS office at (562) 925-6174.

- a. **Amortization Payment Plan.** Any residential customer who, on the certification of a licensed physician that the termination of water service will be life threatening to the customer, and upon the customer providing information to demonstrate that the customer is financially unable to pay for service within the normal payment period, and who is willing to enter into an amortization agreement with the City with respect to all charges that the customer is unable to pay prior to delinquency shall, upon request, be permitted to amortize, over a period not to exceed 12 months, the unpaid balance of any bill asserted to be beyond the means of the customer to pay within the normal period for payment.
- b. **Low Income Assistance Program for Service Line Repairs.** Subject to the availability of funds, qualified low income residential customers may receive a deferred loan under the City's Home Improvement Program for the purpose of repairing service lines (i.e., the line connecting the meter to the house, up to the customer's turn-off valve). The City Manager will establish additional rules and regulations necessary to administer this program.
- c. **Shutoff Protection for Qualified Military Customers.** In accordance with Section 827 of the California Military and Veterans Code, a Qualified Military Customer may apply for and receive shutoff protection for a period of 180 days.