



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: February 27, 2018

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Adoption of United States Bureau of Reclamation Contract Compliance Report

RECOMMENDATION:

That Council adopt a resolution adopting a Water Management Plan and authorizing the Public Works Director to transmit the Plan to the United States Bureau of Reclamation in accordance with contract requirements for receiving Cachuma water supplies.

DISCUSSION:

The Central Valley Project Improvement Act of 1992 and Section 2010(b) of the Reclamation Reform Act of 1982 require the preparation and submittal of a Water Management Plan from certain entities that enter into a repayment contract or water service contract with the United States Bureau of Reclamation (USBR). The USBR currently administers the Cachuma Project under a 1996 Water Service Contract (175r-1802R), or Master Contract, with the Santa Barbara County Water Agency (SBCWA). In turn, the SBCWA holds subcontracts with five Cachuma Member Units which include the City of Santa Barbara. As such, the City is required to submit a Water Management Plan report to the USBR every five years under the current contract requirements. The City's last report submitted to USBR was approved in 2012. Staff is recommending that Council adopt a resolution authorizing the Public Works Director to transmit an updated report to USBR in order to be in compliance with terms of the current contract.

The 2017 report has been reviewed by USBR staff twice, per the USBR's standard procedure, and staff have been advised the report meets all required criteria. The purpose of the criteria, according to the USBR, is to promote, using the best available cost-effective technology and Best Management Practices (BMPs), the highest level of delivery water management achievable by contractors, along with the implementation of water-use efficiency measures reasonably achievable by their customers. The USBR developed and distributed a Water Management Planner detailing the type of information required by the criteria, which staff used to develop the 2017 report update. The report is broad in scope and includes an overview of the City's water rights/entitlements, water service area and facilities, water pricing/rates, water shortage allocation policies, supply sources, and consumption patterns. It also includes a detailed summary of the City's

water conservation program, including a 5 year budget for the implementation of water conservation BMPs. The report to USBR was prepared based on information in the City's adopted 2011 Long-Term Water Supply Plan (LTWSP). Any future updates to the City's LTWSP would be incorporated into the next five-year cycle of USBR Water Management Plan reports.

The main report sections and tables are provided as Attachments 1 and 2. A copy of the full report with required attachments is on file at the City Clerk's office. The USBR requires a specific format that is quite different from the City's other water management plans, including the State mandated Urban Water Management Plan (UWMP) and the City's own LTWSP. In the past, staff typically completed this document and submitted it as a part of administrative activities. For the 2017 version, the USBR is requiring adoption by resolution of the City Council.

On February 15, 2018, the Water Commission reviewed the proposed resolution and voted ~~X-X-X~~ to recommend its adoption.

ATTACHMENT(S): 1. City of Santa Barbara Water Management Plan, 2017 Criteria
2. Required Urban Water Supplier Tables

PREPARED BY: Joshua Haggmark, Water Resources Manager/DC/sp

SUBMITTED BY: Rebecca J. Bjork, Public Works Director

APPROVED BY: City Administrator's Office

RESOLUTION NO. _____

A RESOLUTION OF THE COUNCIL OF THE CITY OF SANTA BARBARA ADOPTING A WATER MANAGEMENT PLAN AND AUTHORIZING THE PUBLIC WORKS DIRECTOR TO TRANSMIT THE PLAN TO THE UNITED STATES BUREAU OF RECLAMATION IN ACCORDANCE WITH CONTRACT REQUIREMENTS FOR RECEIVING CACHUMA WATER SUPPLIES

WHEREAS, Section No. 3405 (e) of the Central Valley Project Improvement Act of 1992 (Title XXXIV, Public Law 102-575, 106 Stat. 4713) requires the Secretary of the Interior to establish an office to develop criteria for evaluating water conservation plans developed to Central Valley Project Contractors, and evaluate the adequacy of plans submitted by project contractors;

WHEREAS, Section 210 of the Reclamation Reform Act of 1982 (Public Law 97-293; 43 U.S. 390jj) requires districts with repayment or water supply contracts to develop and maintain water conservation plans containing definite goals, appropriate water conservation measures, and time schedule for meeting conservation objectives;

WHEREAS, Reclamation currently administers the Cachuma Project under a 1996 Water Service Contract (175r-1802R), or Master Contract, with the Santa Barbara County Water Agency (SBCWA); and

WHEREAS, the SBCWA holds subcontracts with five Cachuma Member Units, including the City of Santa Barbara, and the City is required to submit a Water Management Plan to Reclamation every five years under the current contract requirements.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SANTA BARBARA THAT the Council of the City of Santa Barbara formally adopts the Water Management Plan update (2017 criteria) and authorizes the Public Works Director to transmit the City's Plan to Reclamation in accordance with contract requirements for receiving Cachuma water supplies.

**City of Santa Barbara
Water Management Plan
2017 Criteria**

**Date of first draft – August 29, 2017
Date of final – January 18, 2018**

Index

		<u>Page</u>
Section 1:	Description of the District	1
Section 2:	Inventory of Water Resources	13
Section 3:	Best Management Practices (BMPs) for Agricultural Contractors	N/A
Section 4:	Best Management Practices for Urban Contractors	27
Section 5:	District Water Inventory Tables	
Attachment A	District Maps	1
Attachment B	District Rules and Regulations	3
Attachment C	Measurement Device Documentation	53
Attachment D	District Sample Bills	64
Attachment E	District Water Shortage Plan	94
Attachment F	Groundwater Management Plan	170
Attachment G	Groundwater Banking Plan	N/A
Attachment H	Annual Potable Water Quality Report – Urban	257
Attachment I	Example Education Program Brochures and Resources Available to Customers ..	263
Attachment J	District Agricultural Water Order form	N/A
Attachment K	Drainage Problem Area Report	N/A

Section I: Description of the District

District Name: City of Santa Barbara

Contact Name: Dakota Corey

Title: Water Supply Analyst

Telephone: (805) 680-8350

E-mail: Dcorey@SantaBarbaraCA.gov

Web Address: www.SantaBarbaraCA.gov/water

A. History

1. *Date district formed:* April 9, 1850

Date of first Reclamation contract: 1953

Original size (acres): 8,000

Current year (last complete calendar year): 2016

2. *Current size, population, and irrigated acres*

	2016
<i>Size (acres) – Water Service Area</i>	12,671
<i>Population served (urban connections)</i>	93,881
<i>Irrigated acres</i>	0

3. *Water supplies received in current year*

<i>Water Source</i>	<i>AF</i>
<i>Federal urban water (Tbl 1)</i>	2,488
<i>Federal agricultural water (Tbl 1)</i>	0
<i>State water (Tbl 1)</i>	3,175
<i>Other Wholesaler (define) (Tbl 1)</i>	0
<i>Local surface water (Gibraltar, Devil's Canyon) (Tbl 1)</i>	0
<i>Upslope drain water (Tbl 1)</i>	N/A
<i>District groundwater (Tbl 2)</i>	3,405
<i>Banked water (Tbl 1)</i>	N/A
<i>Transferred water (Tbl 1)</i>	0
<i>Recycled water (Tbl 3)</i>	889
<i>Other (define) (Tbl 1)</i>	N/A
<i>Total</i>	9,957

4. *Annual entitlement under each right and/or contract*

	<i>AF</i>	<i>Source</i>	<i>Contract #</i>	<i>Availability period(s)</i>
<i>Reclamation Urban</i>	8,277 AFY	Cachuma Project	175r-1802R	Continuous, subject to Cachuma Project operating agreements
<i>SWP</i>	3,300 AFY	State Water facilities	Water Supply Agreement between City and CCWA,	Continuous, subject to availability of SWP deliveries

			dated 9-3-1991 (City Agreement No. 16,162)	
<i>Gibraltar Reservoir</i>	~5,000 AFY	Santa Ynez River	Per <i>Gin Chow Judgment</i> , current operation pursuant to Upper Santa Ynez River Operations Agreement (City Agreement No. 15,070)	As available, as provided in USYROA.
<i>Mission Tunnel</i>	Historical average infiltration of 1,125 AFY	Infiltration of groundwater to Mission Tunnel	Pre-1914 water right	Continuous
<i>Devils Canyon Creek</i>	Historical diversions range from 0 to 557 AFY	Santa Ynez River	Pre-1914 water right	Typically available only during winter
<i>Groundwater</i>	Historical pumping of approx. 1,000 AFY	Storage Units No. 1 & No. 3 of the Santa Barbara basin; and Foothill basin	Historical pumping record	Managed conjunctively; lower pumping during wet years; maximum pumping during severe droughts

5. *Anticipated land-use changes.*

The City's service area is primarily comprised of residential and commercial uses. Commercial uses are predominantly in the retail, food, and tourist industries. The City is largely built-out, though it should be assumed that infill and redevelopment will continue at roughly the same rate as in the recent past, resulting in a small amount of new demand in the residential and commercial sectors. In September 2010, the City completed an environmental analysis of its Plan Santa Barbara General Plan Update, which set the range of projected demand growth from new development.

6. *Cropping patterns (Agricultural only) – N/A*

List of current crops (crops with 5% or less of total acreage) can be combined in the 'Other' category.

<i>Original Plan (enter date)</i>		<i>Previous Plan (enter date)</i>		<i>Current Plan</i>	
<i>Crop Name</i>	<i>Acres</i>	<i>Crop Name</i>	<i>Acres</i>	<i>Crop Name</i>	<i>Acres</i>
<i>Other (<5%)</i>		<i>Other (<5%)</i>		<i>Other (<5%)</i>	
<i>Total</i>		<i>Total</i>		<i>Total</i>	

(See Planner, Chapter 3, Addendum D for list of crop names)

7. *Major irrigation methods (by acreage) (Agricultural only) – N/A*

<i>Original Plan (enter date)</i>		<i>Previous Plan (enter date)</i>		<i>Current Plan</i>	
<i>Irrigation Method</i>	<i>Acres</i>	<i>Irrigation Method</i>	<i>Acres</i>	<i>Irrigation Method</i>	<i>Acres</i>
Level Basin		Level Basin		Level Basin	

Furrow		Furrow		Furrow	
Sprinkler		Sprinkler		Sprinkler	
Low-volume		Low-volume		Low-volume	
Multiple		Multiple		Multiple	
<i>Other</i>		<i>Other</i>		<i>Other</i>	
<i>Total</i>		<i>Total</i>		<i>Total</i>	

B. Location and Facilities

See Attachment A, page 1, for a map containing the following: incoming flow locations, turnouts (internal flow), and outflow (spill) points, conveyance system, storage facilities, operational loss recovery system, district wells and lift pumps, water quality monitoring locations, and groundwater facilities.

1. Incoming flow locations and measurement methods

<i>Location Name</i>	<i>Physical Location</i>	<i>Type of Measurement Device</i>	<i>Accuracy</i>
Cater Influent Meter - Cater Treatment Plant (from Lake Cachuma & Gibraltar Reservoir)	1150 San Roque Road (upstream of Reservoir #13 on Attachment A)	36" Venturi Meter	+/- 1% accuracy
Sheffield Pump Station (from South Coast Conduit)	Adjacent to 2375 Foothill Road (east of Reservoir #6 on Attachment A)	24" Venturi Meter	+/- 1% accuracy
La Vista Reservoir (from Goleta Water District)	Adjacent to 1020 La Vista Road (Reservoir #8 on Attachment A)	6" Magnetic Flow Meter	+/- 1% accuracy
Los Robles Well Station (groundwater pumping)	Via Diego at Via Rosa (Well #3 on Attachment A)	6" Magnetic Flow Meter	+/- 1% accuracy
Hope Avenue Well Station (groundwater pumping)	Hope Avenue, north of Calle Esperanza (Well #1 on Attachment A)	6" Magnetic Flow Meter	+/- 1% accuracy
San Roque Park Well Station (groundwater pumping)	165 Canon Drive (Well #2 on Attachment A)	6" Magnetic Flow Meter	+/- 1% accuracy
Ortega Groundwater Treatment Plant Influent	220 East Ortega Street	16" Magnetic Flow Meter	+/- 1% accuracy
Ortega Groundwater Treatment Plant Effluent	220 East Ortega Street	16" Insertion Mag Meter	+/- 1% accuracy
Corporation Yard Well Station	402 East Ortega Street	8" Magnetic Flow Meter	+/- 1% accuracy
City Hall Well Station	735 Anacapa Street	6" Magnetic Flow Meter	+/- 1% accuracy
Vera Cruz Park Well Station	130 East Cota Street	6" Magnetic Flow Meter	+/- 1% accuracy
Alameda Park Well Station	1400 Santa Barbara Street	6" Magnetic Flow Meter	+/- 1% accuracy

High School Well Station	735 Anapamu Street	6" Magnetic Flow Meter	+/- 1% accuracy
Desal Facility	525 East Yanonali Street	24" Magnetic Flow Meter	+/- 1% accuracy
Recycled Water Facility	520 Yanonali Street	18" Magnetic Flow Meter	+/- 1% accuracy

2. *Current year Agricultural Conveyance System – N/A*

<i>Miles Unlined - Canal</i>	<i>Miles Lined - Canal</i>	<i>Miles Piped</i>	<i>Miles - Other</i>

3. *Current year Urban Distribution System*

<i>AC Pipe miles</i>	<i>Steel Pipe miles</i>	<i>Cast Iron Pipe miles</i>	<i>Ductile Iron miles</i>	<i>PVC miles</i>	<i>Copper miles</i>
8.47	26.22	168.3	41.5	50.49	2.7

4. *Storage facilities (tanks, reservoirs, regulating reservoirs)*

<i>Name</i>	<i>Type</i>	<i>Capacity (AF)</i>	<i>Distribution or Spill</i>
Lake Cachuma (regional)	Raw water storage	186,000	Spill
Gibraltar Reservoir	Raw water storage	5,250	Spill
Lauro Reservoir (regional)	Raw water storage	640	Distribution
Reservoir #1	Treated water storage	3.5	Distribution
Reservoir #2	Treated water storage	4.4	Distribution
Cater Reservoir	Treated water storage	15.5	Distribution
East Reservoir	Treated water storage	3.1	Distribution
El Cielito Reservoir	Treated water storage	3.1	Distribution
Escondido Reservoir (out of service)	Treated water storage	13.5	Distribution
Hope Reservoir	Treated water storage	3.1	Distribution
La Mesa Reservoir	Treated water storage	4.6	Distribution
La Vista Reservoir	Treated water storage	7.1	Distribution
Sheffield Reservoirs (2)	Treated water storage	40.0	Distribution
Skofield Reservoir	Treated water storage	1.8	Distribution
Tunnel Road Reservoir	Treated water storage	3.1	Distribution
Vic Trace Reservoir	Treated water storage	30.1	Distribution

5. *Description of the agricultural spill recovery system and outflow points. N/A*6. *Agricultural delivery system operation (check all that apply) – N/A*

<i>Scheduled</i>	<i>Rotation</i>	<i>Other (describe)</i>

7. *Restrictions on water source(s)*

<i>Source</i>	<i>Restriction</i>	<i>Cause of Restriction</i>	<i>Effect on Operations</i>
Gibraltar Reservoir	Periodic turbidity problems following precipitation events	Water quality degradation	Temporarily reduce or suspend deliveries from Gibraltar

All surface water	Manage supplies in preparation for potential sustained drought	Typical 5-year critical drought period reduces surface water deliveries	Shift operations to increase deliveries of State Water, increase groundwater pumping, and re-activate the desalination plant
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8. *Proposed changes or additions to facilities and operations for the next 5 years*

- Ongoing Water Main Replacement Program – minimizes water loss associated with water main breaks, improves fire protection, and avoids a backlog of deferred maintenance in the distribution system.
- Meter Replacement Program – a five-year program that focuses on replacing the City’s 24,000 5/8” meters and some of the larger meters to provide the City with a better accounting of its water loss.
- Capital Maintenance Program on distribution system pump stations – pump and motor replacements and telemetry upgrades
- Implement “Pass Through” operations mode – initiate a Warren Act contract to provide for storage of the City’s Gibraltar Water in Lake Cachuma, pursuant to the 1989 Upper Santa Ynez River Operations Agreement; operations under the agreement to date have not involved storage in Lake Cachuma
- Ongoing Water Conservation Program – The City's Water Conservation Program is a combination of the City's commitment to carrying out the California Water Efficiency Partnership Best Management Practices and the City’s dedication to water conservation as an element of the City’s Long-Term Water Supply Plan. Since January 1992 the City has been actively carrying out the Best Management Practices as well as additional water conservation measures for all water users.
- Support a sediment management plan/study for Lake Cachuma in cooperation with regional partners and Federal agencies.
- Optimize groundwater management, including completion of a groundwater modeling study and formation of a Groundwater Sustainability Agency.
- Investigate water banking opportunities to use available State Water Project deliveries to improve reliability during severe drought – aims to implement conjunctive management of the City’s State Water Project supplies by developing agreements to store available water in groundwater banks for later use during dry periods.
- Distribution System Master Plan – prioritize water facility upgrades and replacements.
- Well replacement/upgrade - convey the Alameda Well water to the Ortega Groundwater Treatment Plant for treatment. Depending on water supplies, consider upgrading a well to an Aquifer Storage Recovery (ASR) well for the injection of water into the groundwater basin.
- Upgrades/expansion related to desalination - depending on water demands, construct a dedicated transmission main from the Desalination Plant to Cater Water Treatment Plant (funding required).
- Upgrades at Gibraltar Reservoir – repair the damaged spillway; create a sediment management plan for the reservoir; perform operation and maintenance work to the intake valve and davit.

C. Topography and Soils

1. *Topography of the district and its impact on water operations and management*

The City borders the Pacific Ocean to the south and extends northward into the foothills of the Santa Ynez Mountains. Elevation ranges from sea level to approximately 1,100 feet. The City's distribution system is designed to be primarily gravity fed, with some exceptions. In the case of those exceptions, pumping stations are used instead.

2. *District soil association map (Agricultural only) – N/A*

3. *Agricultural limitations resulting from soil problems (Agricultural only) – N/A*

<i>Soil Problem</i>	<i>Estimated Acres</i>	<i>Effect on Water Operations and Management</i>
Salinity		
High-water table		
High or low infiltration rates		
Other (define)		

D. Climate

1. *General climate of the district service area*

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Annual Total/Avg.</i>
<i>Avg Precip. (inches)</i>	3.4	3.9	2.3	1.3	0.7	0.3	0.2	0.1	0.2	0.8	1.2	2.7	17.0
<i>Avg Temp. (°F)</i>	54.4	54.8	56.6	58.1	60.4	62.4	65.0	65.5	64.8	62.0	57.6	53.3	59.6
<i>Max. Temp. (°F)</i>	65.6	65.2	66.7	68.4	69.8	71.1	74.6	76.0	75.7	73.3	69.0	64.1	70.0
<i>Min. Temp (°F)</i>	45.0	45.6	47.2	48.7	52.0	54.9	57.7	57.5	56.4	52.8	47.7	44.1	50.8
<i>ETo (inches)</i>	1.8	2.3	3.6	4.6	5.0	4.9	5.4	5.3	4.1	3.2	2.1	1.7	44.0

Weather station ID: 107

Data period: 1994 to 2016

ET Station ID: 107

Average annual frost-free days: 360

Frost Free Days - According to National Oceanic and Atmospheric Administration (NOAA), frost free days are days with temperatures greater than 28 degrees Fahrenheit.

2. *Impact of microclimates on water management within the service area*

None.

E. Natural and Cultural Resources

1. *Natural resource areas within the service area*

<i>Name</i>	<i>Estimated Acres</i>	<i>Description</i>
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Pacific Ocean	Approx. 200 acres	Beach areas and related ocean resources along approximately 7 miles of coastline on the Santa Barbara Channel
Sycamore, Mission, and Arroyo Burro Creeks	Approx. 250 acres	Creeks draining three south sloping watersheds of the Santa Ynez Mountains
Visual Resources	NA	Generally scenic areas including ocean and mountain views

2. *Description of district management of these resources in the past or present*

The Water Resources Division is not directly responsible for the management of natural, cultural, or recreational resources. Other City departments administer these efforts. For example, watershed management is coordinated via the Creeks Division within the Parks & Recreation Department.

3. *Recreational and/or cultural resources areas within the service area*

<i>Name</i>	<i>Estimated Acres</i>	<i>Description</i>
City Parks System	1,885	56 City parks, including a regional park, passive open spaces, neighborhood parks, sports fields, and beach parks
Santa Barbara City College	90	Local and regional sports facilities
Santa Barbara School District	Citywide	Neighborhood sports fields and gyms
Downtown Cultural Arts & Entertainment District	250	Various venues supporting a variety of cultural activities, including theater, film, musical performances, and lectures
Santa Barbara Mission	25	Established in 1786 by Father Junipero Serra
Historic Design/ Preservation Districts	855	El Pueblo Viejo, Lower Riviera Special Design District, Riviera Campus Design District, Brinkerhoff Avenue Landmark District

F. Operating Rules and Regulations

1. *Operating rules and regulations*

See Attachment B, page 3, Water Related Rules and Regulations, City Municipal Code Chapter 14.

2. *Water allocation policy (Agricultural only) – N/A*

3. *Official and actual lead times necessary for water orders and shut-off (Agricultural only) – N/A*

4. *Policies regarding return flows (surface and subsurface drainage from farms) and outflow (Agricultural only) – N/A*

5. *Policies on water transfers by the district and its customers*

See Attachment B, page 3, Water Related Rules and Regulations, City Municipal Code Chapter 14. In most cases, the City Water Resources Division is the water purveyor for properties within the City limits. In some cases, agreements for service of City areas by neighboring agencies have been developed to provide for cost effective service. An example is the 1982 Overlap Agreement between the City and the neighboring Goleta Water District, by which the City and District cooperate to exchange water as

needed to provide service in an area of numerous small pockets of unincorporated land. Water exchanges at the retail and utility level are reconciled monthly to keep each agency whole. In addition to formal agreements, the City works cooperatively with neighboring agencies to provide for service to isolated pockets of customers that cannot be practically served by the jurisdiction within which the property lies. To a limited extent, groundwater is pumped by individual property owners for on-site use.

G. Water Measurement, Pricing, and Billing

1. Agricultural Customers

Refer to BMP A.1. Information on water measurement for agricultural contractors is completed under BMP A.1 on page 4-15. N/A

2. Urban Customers

- a. Total number of connections 27,026
- b. Total number of metered connections 27,026
- c. Total number of connections not billed by quantity: 0
- d. Percentage of water that was measured at delivery point 100%
- e. Percentage of delivered water that was billed by quantity 100%
- f. Measurement device table

<i>Meter Size and Type</i>	<i>Number</i>	<i>Accuracy* (+/-percentage)</i>	<i>Reading Frequency (Days)</i>	<i>Calibration Frequency (Months)</i>	<i>Maintenance Frequency (Months)</i>
<i>5/8-3/4" (Positive Displacement)</i>	21,376	1.5%	30	See note below.	See note below.
<i>1" (Velocity/Single Jet)</i>	3,907	1.5%	30		
<i>1 1/2" (Velocity/Single Jet)</i>	782	1.5%	30		
<i>2" (Velocity/Single Jet)</i>	886	1.5%	30		
<i>3" (Velocity/Single Jet)</i>	37	2%	30		
<i>4" (Velocity/Single Jet)</i>	20	2%	30		
<i>6" (Velocity/Single Jet)</i>	16	2%	30		
<i>8" (Velocity/Single Jet)</i>	2	2%	30		
<i>10" (Velocity/Single Jet)</i>	0	2%	30		
<i>Compound (Combination)</i>					
<i>Turbo</i>					
<i>Other (define)</i>					
<i>Total</i>	27,026				

Note: See Attachment C, page 53, regarding the accuracy of the City's meters. Average meter reading frequency within the City is 30 days; actual reading frequency varies between 28 and 33 days. The City's meters are checked using the gravimetric testing method, whereby the volume of water measured by the meter is checked against the volume weighed by the test bench. The scale on the test bench is calibrated annually. Meter accuracy is ensured by the City's meter maintenance/replacement program. The City's meter maintenance/replacement program includes replacing meters every 15 to 20 years,

based on the manufacturer's suggested lifetime of the meter and depending on the operating characteristics (as determined by bench testing data). Currently, the City is replacing all of its 5/8" meters and some of the larger meters over a period of five years in order to improve metering accuracy and provide the City with better accounting of its water loss.

3. *Agricultural and Urban Rates*

a. *Current year agricultural and /or urban water charges - including rate structures and billing frequency*

See Attachment D, page 64, for the City's Fiscal Year 2016 Water Fee Resolution.

b. *Annual charges collected from agricultural customers – N/A*

<i>Fixed Charges</i>			
<i>Charges (\$ by unit)</i>	<i>Charge units \$/acre, etc.</i>	<i>Units billed during year acres, etc.</i>	<i>Total \$ collected (\$ times units)</i>

Please refer to the guidebook for information when completing the table.

<i>Volumetric charges – N/A</i>			
<i>Charges (\$ by unit)</i>	<i>Charge units \$/AF, etc.</i>	<i>Units billed during year AF, etc.</i>	<i>Total \$ collected (\$ times units)</i>

Please refer to the guidebook for information when completing the table.

Annual charges collected from urban customers

<i>Fixed Charges*</i>			
<i>Charges (\$ by Unit)</i>	<i>Charge units (Meter Size)</i>	<i>Units billed during year (Meters)</i>	<i>Total \$ collected (\$ times units)</i>
\$23.49	5/8"	20,077	\$5,411,159.20
\$34.19	3/4"	1,269	\$536,119.81
\$55.61	1"	3,899	\$2,509,751.95
\$109.14	1 1/2"	727	\$974,096.55
\$173.38	2"	882	\$1,712,751.07
\$376.82	3"	35	\$134,842.19
\$676.61	4"	20	\$145,610.37
\$1,393.98	6"	15	\$256,372.47
\$2,571.74	8"	2	\$88,068.08
\$4,070.71	10"	0	\$ 0
<i>Total:</i>	-	26,926	\$11,768,771.69

*Note: The rates specified in this table reflect fiscal year 2016 (FY16) rates. The City bills its customers monthly, based on a fiscal year schedule (i.e., July 1 – June 30), and typically changes water rates to be effective at the start of each new fiscal year on July 1st. The Total \$ collected column represents actual fixed charges collected from the City's customers for FY16, as recorded in the City's utility billing system, and is not equal to the calculated value (Total \$ collected = charge * # of meters * 12 months), due to different accounts being active at different times throughout the year.

Volumetric charges*			
<i>Charges (\$ by unit)</i>	<i>Charge units (\$/HCF)</i>	<i>Units billed during year (HCF)</i>	<i>Total \$ collected (\$ times units)</i>
Ranges from \$2.43/HCF to \$18.59/HCF depending on customer classification and tier. Out-of-City customers are subject to a 30% surcharge (see City's fee schedule in Attachment D).	HCF	4,035,658	\$28,159,259.80

*Note: The rates specified in this table reflect FY16 rates. The City bills its customers monthly, based on a fiscal year schedule (i.e., July 1 – June 30), and typically changes water rates to be effective at the start of each new fiscal year on July 1st.

See Attachment D, page 86, for a sample City water bills for each customer class, including single family residential, multi-family residential, commercial and irrigation.

c. Describe the contractor's record management system

The City reads water meters monthly and primarily on a manual basis, with less than 500 meters on a drive-by radio read system. Water meter reads are imported to the City's utility billing software, CIS Infinity Version 3, which allows long-term storage of customer billing and consumption data. The billing system stores water use history data dating back to 2006. Metered sales reports are prepared every 6 months to track the metered sales ratio (i.e., ratio of metered customer sales to produced water).

Handheld meter reading devices provide a signal if a read is outside of a high/low threshold determined by past customer use. Once reads are uploaded to the billing system, exception reports are run to identify any readings that are outside of typical usage patterns, and the read is double checked in the field. An additional check is performed when bills are generated, based on billing dollar amount instead of the usage amount. If a meter read is verified in the field confirming a customer's usage is higher than their typical usage pattern, staff will leave a courtesy notice for the customer at their property notifying them of their high usage. If a customer has two months of abnormally high reads in a row, water conservation staff will send a letter to the account holder notifying them of their high usage.

Customers are mailed paper bills monthly. Customers may choose to opt out of paper billing and receive their bills electronically. Customers using this option may access their past ebills using their Utilities Online account. Customers receiving paper bills may contact billing staff to obtain copies of past bills going back seven years. The City utilizes an increasing block rate structure. This sends a marked price signal to customers with high water bills as the unit price of water gets higher as usage increases.

Customers may access their historic water usage by reading their paper bill, accessing their Utilities Online account, or by contacting City staff. Monthly water bills mailed to customers include a chart comparing monthly water usage of the current year to monthly water usage of the past year. In addition, below where water use charges are itemized, a chart is displayed that corresponds with the tiers of pricing, showing how much they have used in the various tiers to convey how their personal usage compares with the tiers. Customers can access the entirety of their water usage history back to 2006 through their Utilities Online account. Staff can also provide water use history as far back as 2006 to an account holder upon request.

H. Water Shortage Allocation Policies

- 1. Current year water shortage policies or shortage response plan - specifying how reduced water supplies are allocated*

See Attachment E, page 95, City Water Shortage Contingency Plan, excerpted from the City's 2015 Urban Water Management Plan, which was adopted on June 28, 2016, and page 117, City Long Term Water Supply Plan.

- 2. Current year policies that address wasteful use of water and enforcement methods*

See Attachment E, page 111, Resolution No. 15-036 and Resolution No. 16-173, which outline the City's water conservation and water waste regulations effective in 2016.

I. Evaluate Policies of Regulatory Agencies Affecting the Contractor and Identify Policies that Inhibit Good Water Management.

The City has no comment on possible modifications to regulatory agencies' policies at this time.

Section II: Inventory of Water Resources

A. Surface Water Supply

1. *Surface water supplies in acre feet, imported and originating within the service area, by month (Table 1).* See Chapter 5, Water Inventory Tables, Table 1

Deliveries from Lake Cachuma	2,488 AF
Deliveries from Gibraltar Reservoir/Devil's Canyon	0 AF
Deliveries of State Water	<u>3,175 AF</u>
Total Surface Water Deliveries	5,663 AF

2. *Amount of water delivered to the district by each of the district sources for the last 10 years*
See Chapter 5, Water Inventory Tables, Table 8.

B. Groundwater Supply

1. *Groundwater extracted by the district and delivered, by month (Table 2)*
See Chapter 5, Water Inventory Tables, Table 2

Pumped Groundwater Deliveries (Includes Mission Tunnel infiltration)	3,405 AF
Total Groundwater Deliveries	3,405 AF

2. *Groundwater basin(s) that underlies the service area*

<i>Name</i>	<i>Size (Square Miles)</i>	<i>Usable Capacity (AF)</i>	<i>Safe Yield (AF/Y)</i>
Storage Unit No. 1, S.B. Basin	7.0	10,000	800
Foothill Basin	4.5	6,000	900
Storage Unit No. 3, S.B. Basin	2.1	7,500	100

3. *Map of district-operated wells and managed groundwater recharge areas*
See Attachment F, page 171, for a Map of City Groundwater Facilities.

4. *Description of conjunctive use of surface and groundwater*
(Please review Guidebook definition of conjunctive use)

The storage capacities of the City's groundwater basins are limited, but groundwater is an important component of the overall water supply plan. Conjunctive use consists of pumping at or below the perennial basin yields in normal years and increased pumping during extended dry periods to offset reductions in surface water supplies. To augment natural recharge, the City has four wells with injection capability for artificial replenishment using treated surface water

5. *Groundwater Management Plan*

See Attachment E, page 117, Long Term Water Supply Plan 2011. See also Attachment F, page 172, Reclamation's report on the geohydrology and combined flow model for the Santa Barbara and Foothill Groundwater Basins.

The City, in partnership with USGS, has been the lead water agency studying the local groundwater basins through data collection and groundwater modeling for decades. The City has managed groundwater pursuant to the adopted Long-Term Water Supply Management Program (1994), and does

not have a formal groundwater management plan. The 1994 plan was updated in 2011 and includes a more comprehensive approach to groundwater management based on a three-year project with USGS to update modeling of the City's basins. The City's 2011 Long Term Water Supply Plan (LTWSP) policies include development of a formalized Assembly Bill 3030 groundwater management plan. Given the recent Sustainable Groundwater Management Act of 2014, the City is now reviewing new legislation and evaluating formation of a Groundwater Sustainability Agency (GSA) and preparation of a Sustainable Groundwater Management Plan. To date, the City's basins have been classified by the Department of Water Resources (DWR) as very low priority basins; thus, while the City sees value in forming a GSA and developing a Sustainable Groundwater Management Plan, it is not currently held to the same legislatively-mandated schedule requirements as agencies with medium and high priority basins.

The City has implemented several groundwater management actions. The City's Municipal Code Chapter 14.32 also has requirements for new groundwater wells. In addition to water conservation and use of alternative supplies (described in other sections), the City has implemented the following groundwater management actions:

- Groundwater level and water quality monitoring
- Metering and measuring of groundwater pumping
- Groundwater well permitting
- Groundwater modeling to estimate sustainable yield
- Recharge and Conjunctive Use Programs

6. Groundwater Banking Plan

The City's groundwater banking plan is equivalent to the conjunctive management program described in Item 4, above. In addition, regional banking opportunities are being investigated to augment the limited storage and recharge capacity of local basins, and to optimize the use of available Table A deliveries from the State Water Project.

C. Other Water Supplies

1. "Other" water used as part of the water supply – Describe supply

State Water Project: The City holds a Table A amount of 3,300 AFY, which is administered by the Central Coast Water Authority. A minimum delivery amount of approximately 600 AFY is defined in an "Exchange Agreement" with the Santa Ynez River Water Conservation District, Improvement District No. 1. Deliveries in excess of that amount are taken as needed and as available. Calendar year 2016 deliveries were 3,175 AF. State Water Project water is included in Table 1 in the "State Water" column (as opposed to the "Other Water" column).

Recycled Water: The City initiated planning for a recycled water project in the early 1980s. Phase I was completed in 1989, which included a tertiary treatment plant with carbon filtration and disinfection at the City's El Estero Wastewater Treatment Plant (EEWTP), a 600,000-gallon distribution reservoir and pumping station and 5.1 miles of distribution main. Phase II was completed in 1992, adding an additional pumping station, a 1.5 million gallon reservoir, and 8.3 miles of distribution main. Recently, the City completed upgrades to its tertiary treatment plant to include a microfiltration/ultrafiltration treatment process. The existing recycled water customer demand is approximately 800 AFY, plus approximately 300 AFY of process water for use at EEWTP. The system provides recycled water to 90 accounts that serve parks, schools, golf courses, and other large landscaped areas. Some public

restrooms have been retrofitted to use recycled water for toilet flushing. The City completed a potable reuse study in May 2017. The results of this study will be incorporated into future planning efforts.

Desalination: The City constructed the Charles E. Meyer desalination facility, a reverse osmosis seawater desalination facility, as an emergency water supply during the drought of 1987-1992. After the drought ended and surface water was available to meet demands, the facility was put in long-term storage mode to reduce maintenance costs. The facility has since been incorporated into the City's Long Term Water Supply Plan (LTWSP) as a way of reducing shortages due to depleted surface supplies during drought, and the City has maintained permits to provide for desalination supply of up to 10,000 AFY. Due to the severity of the recent statewide drought, the City has reactivated the Charles E. Meyer desalination facility. The initial construction phase provides up to 3,125 AFY of supply. The role of desalination under current City policy continues to be as a drought and emergency supply, although it is permitted under various operating scenarios. Future updates to the City's LTWSP will re-evaluate the role of desalination. The addition of desalinated water to the City's distribution system began in May 2017; therefore, no desalinated water is included in any of the Urban Water Supply Tables for 2017.

D. Source Water Quality Monitoring Practices

1. *Potable Water Quality (Urban only)*

See Attachment H, page 258, – City Annual Potable Water Quality Report

2. *Agricultural water quality concerns:* Yes _____ No X
 (If yes, describe)

3. *Description of the agricultural water quality testing program and the role of each participant, including the district, in the program – N/A*

4. *Current water quality monitoring programs for surface water by source (Agricultural only) – N/A*

<i>Analyses Performed</i>	<i>Frequency</i>	<i>Concentration Range</i>	<i>Average</i>

Current water quality monitoring programs for groundwater by source (Agricultural only) – N/A

<i>Analyses Performed</i>	<i>Frequency</i>	<i>Concentration Range</i>	<i>Average</i>

E. Water Uses within the District

1. *Agricultural – N/A*

See Chapter 5, *Water Inventory Tables, Table 5 - Crop Water Needs*

2. *Types of irrigation systems used for each crop in current year – N/A*

<i>Crop name</i>	<i>Total Acres</i>	<i>Level Basin - acres</i>	<i>Furrow - acres</i>	<i>Sprinkler – acres</i>	<i>Low Volume - acres</i>	<i>Multiple methods - acres</i>

TOTAL						

3. Urban use by customer type in current year

Customer Type	Number of Connections	AF
Single-family	15,817	3,915
Multi-family	6,453	2,298
Commercial	2,637	1,772
Industrial	55	198
Institutional (included with commercial)	N/A	0
Landscape irrigation		
Residential	491	211
Commercial	130	48
Recreation	149	141
Agricultural	62	131
Wholesale	N/A	0
Recycled	98	587
Actual M&I Water Sales		9,301
Process Water to El Estero WWTP		181
Other Uses per Table 6		450
Total Uses		9,932
Unaccounted for Water		25
Total Water Supply		9,957

4. Urban Wastewater Collection/Treatment Systems serving the service area

Treatment Plant	Treatment Level (1, 2, 3)	AF	Disposal to / uses
El Estero Wastewater Treatment Plant – Tertiary Treatment	3	825	Recycled water distribution system.
EEWWTP – Secondary Treatment	2	6,077	Pacific Ocean discharge, 1.5 miles offshore
	Total	6,902	
Total discharged to ocean and/or saline sink		6,077	

5. Groundwater recharge in current year (Table 6)

Recharge Area	Method of Recharge	AF	Method of Retrieval
N/A*		0	
	Total	0	

Note: No groundwater recharge occurred in 2016, as the City was in the midst of a multi-year drought and did not have any excess water supply to use for recharge.

6a. Transfers and exchanges *into* the service area in current year – (Table 1)

From Whom	To Whom	AF	Use
N/A	N/A	0	N/A
	Total	0	

6b. Transfers and exchanges *out* of the service area in current year – (Table 6)

From Whom	To Whom	AF	Use
-----------	---------	----	-----

City distribution system	Net transfers to Goleta Water District pursuant to the 1982 Overlap Agreement	158	Inter-agency transfer between potable distribution systems.
	Total	158	

7. *Wheeling, or other transactions in and out of the district boundaries – (Table 6)*

<i>From Whom</i>	<i>To Whom</i>	<i>AF</i>	<i>Use</i>
Central Coast Water Authority	La Cumbre Mutual Water Company (LCMWC)	430	Treatment and conveyance of LCMWC's State Water through the City's distribution system; this water is netted out of water supplies going into the City's distribution system and is reimbursed outside this calculation as well. Therefore it does not show in the Water Balance Inventory Table 6.
	Total	430	

8. *Other uses of water*

<i>Other Uses</i>	<i>AF</i>
N/A	0

F. Outflow from the District (Agricultural only) – N/A

See Facilities Map, Attachment A, for the location of surface and subsurface outflow points, outflow measurement points, outflow water-quality testing locations

1. *Surface and subsurface drain/outflow – N/A*

<i>Outflow point</i>	<i>Location description</i>	<i>AF</i>	<i>Type of measurement</i>	<i>Accuracy (%)</i>	<i>% of total outflow</i>	<i>Acres drained</i>

<i>Outflow point</i>	<i>Where the outflow goes (drain, river or other location)</i>	<i>Type Reuse (if known)</i>

2. *Description of the Outflow (surface and subsurface) water quality testing program and the role of each participant in the program – N/A*

3. *Outflow (surface drainage & spill) Quality Testing Program – N/A*

<i>Analyses Performed</i>	<i>Frequency</i>	<i>Concentration Range</i>	<i>Average</i>	<i>Reuse limitation?</i>

Outflow (subsurface drainage) Quality Testing Program – N/A

<i>Analyses Performed</i>	<i>Frequency</i>	<i>Concentration Range</i>	<i>Average</i>	<i>Reuse limitation?</i>

4. Provide a brief discussion of the District's involvement in Central Valley Regional Water Quality Control Board programs or requirements for remediating or monitoring any contaminants that would significantly degrade water quality in the receiving surface waters.

*Districts included in the drainage problem area, as identified in "A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley (September 1990)," should also complete **Water Inventory Table 7 and Addendum C (include in plan as Attachment J)***

G. Water Accounting (Inventory)

Go To Chapter 5 for Agricultural Water Inventory Tables and Instructions.

Go To Chapter 6 for Urban Water Inventory Tables and Instructions.

Section III: Best Management Practices (BMPs) for Agricultural Contractors – N/A

A. Critical Agricultural BMPs

1. Measure the volume of water delivered by the district to each turnout with devices that are operated and maintained to a reasonable degree of accuracy, under most conditions, to +/- 6%

- a. Number of delivery points (turnouts and connections) _____
- b. Number of delivery points serving more than one farm _____
- c. Number of measured delivery points (meters and measurement devices) _____
- d. Percentage of water delivered to the contractor that was measured at a delivery point _____
- e. Total number of delivery points not billed by quantity _____
- f. Delivery point measurement device table

Measurement Type	Number	Accuracy* (+/- %)	Reading Frequency (Days)	Calibration Frequency (Months)	Maintenance Frequency (Months)
Orifices					
Propeller meter					
Weirs					
Flumes					
Venturi					
Metered gates					
Acoustic doppler					
Other (define)					
Total					

*Documentation verifying the accuracy of measurement devices must be submitted with Plan and included in Attachment C.

2. Designate a water conservation coordinator to develop and implement the Plan and develop progress reports

Name: _____ Title: _____

Address: _____

Telephone: _____ E-mail: _____

Provide the job description and minimum qualifications

3. *Provide or support the availability of water management services to water users*
 See Attachment H, Notices of District Education Programs and Services Available to Customers.

a. On-Farm Evaluations

1) On farm irrigation and drainage system evaluations using a mobile lab type assessment

	<i>Total in district</i>	<i># surveyed last year</i>	<i># surveyed in current year</i>	<i># projected for next year</i>	<i># projected 2nd yr in future</i>
<i>Irrigated acres</i>					
<i>Number of farms</i>					

2) Timely field and crop-specific water delivery information to the water user

b. Real-time and normal irrigation scheduling and crop ET information

c. Surface, ground, and drainage water quantity and quality data provided to water users

d. Agricultural water management educational programs and materials for farmers, staff, and the public

<i>Program</i>	<i>Co-Funders (If Any)</i>	<i>Yearly Targets</i>

See Attachment H for samples of provided materials and notices

e. Other

4. *Pricing structure - based at least in part on quantity delivered*
 Adopt a water pricing structure based on the measured quantity delivered

5. *Evaluate and improve efficiencies of district pumps*

Describe the program to evaluate and improve the efficiencies of the contractor’s pumps.

	<i>Total in district</i>	<i># surveyed last year</i>	<i># surveyed in current year</i>	<i># projected for next year</i>
<i>Wells</i>				
<i>Lift pumps</i>				

B. Exemptible BMPs for Agricultural Contractors

(See Planner, Chapter 2, Addendum B for examples of exemptible conditions)

1. *Facilitate alternative land use*

<i>Drainage Characteristic</i>	<i>Acreage</i>	<i>Potential Alternate Uses</i>
<i>High water table (<5 feet)</i>		
<i>Poor drainage</i>		
<i>Groundwater Selenium concentration > 50 ppb</i>		
<i>Poor productivity</i>		

Describe how the contractor encourages customers to participate in these programs.

2. *Facilitate use of available recycled urban wastewater*

<i>Sources of Recycled Urban Waste Water</i>	<i>AF/Y Available</i>	<i>AF/Y Currently Used in District</i>

3. *Facilitate the financing of capital improvements for on-farm irrigation systems*

<i>Program</i>	<i>Description</i>

4. *Incentive pricing*

Describe incentive rate structure or other programs and purpose.

5. a) *Line or pipe ditches and canals*

<i>Canal/Lateral (Reach)</i>	<i>Type of Improvement</i>	<i>Number of Miles in Reach</i>	<i>Estimated Seepage (AF/Y)</i>	<i>Accomplished/Planned Date</i>

b) *Construct/line regulatory reservoirs*

<i>Reservoir Name</i>	<i>Location</i>	<i>Describe improved operational flexibility and AF savings</i>

--	--	--

6. *Increase flexibility in water ordering by, and delivery to, water users*
 See Attachment I, contractor ‘agricultural water order’ form

7. *Construct and operate district spill and tailwater recovery systems*

<i>Distribution System Lateral</i>	<i>Annual Spill (AF/Y)</i>	<i>Quantity Recovered and reused (AF/Y)</i>
Total		

<i>Drainage System Lateral</i>	<i>Annual Drainage Outflow (AF/Y)</i>	<i>Quantity Recovered and reused (AF/Y)</i>
Total		

Describe facilities that resulted in reduced spill and tailwater

8. *Plan to measure outflow.*

Total # of outflow (surface) locations/points _____

Total # of outflow (subsurface) locations/points _____

Total # of measured outflow points _____

Percentage of total outflow (volume) measured during report year _____

Identify locations, prioritize, determine best measurement method/cost, submit funding proposal

<i>Location & Priority</i>	<i>Estimated cost (in \$1,000s)</i>				
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>

9. *Optimize conjunctive use of surface and groundwater*

Describe the potential for increasing conjunctive use of surface and groundwater.

10. *Automate distribution and/or drainage system structures*

Identify locations where automation would increase delivery flexibility and reduce spill and losses. Describe program to achieve these benefits and estimate the annual water savings.

11. *Facilitate or promote water customer pump testing and evaluation*

See Attachment H, Notices of District Education Programs and Services Available to Customers

12. *Mapping*

<i>GIS maps</i>	<i>Estimated cost (in \$1,000s)</i>				
	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 5</i>	<i>Year 6</i>
<i>Layer 1 – Distribution system</i>					
<i>Layer 2 – Drainage system</i>					
<i>Suggested layers:</i>					
<i>Layer 3 – Groundwater information</i>					
<i>Layer 4 – Soils map</i>					
<i>Layer 5 – Natural & cultural resources</i>					
<i>Layer 6 – Problem areas</i>					

C. Provide a 5-Year Budget for Implementing BMPs

1. Amount actually spent during current year.

<u>Year 2017 or Year 1</u>		<i>Actual Expenditure</i>	
<i>BMP #</i>	<i>BMP Name</i>	<i>(not including staff time)</i>	<i>Staff Hours</i>
A 1	<i>Measurement</i>	\$0	0
2	<i>Conservation staff</i>	\$0	0
3	<i>On-farm evaluation /water delivery info</i>	\$0	0
	<i>Irrigation Scheduling</i>	\$0	0
	<i>Water quality</i>	\$0	0
	<i>Agricultural Education Program</i>	\$0	0
4	<i>Quantity pricing</i>	\$0	0
5	<i>Contractor's pumps</i>	\$0	0
B 1	<i>Alternative land use</i>	\$0	0
2	<i>Urban recycled water use</i>	\$0	0
3	<i>Financing of on-farm improvements</i>	\$0	0
4	<i>Incentive pricing</i>	\$0	0
5	<i>Line or pipe canals/install reservoirs</i>	\$0	0
6	<i>Increase delivery flexibility</i>	\$0	0
7	<i>District spill/tailwater recovery systems</i>	\$0	0
8	<i>Measure outflow</i>	\$0	0
9	<i>Optimize conjunctive use</i>	\$0	0
10	<i>Automate canal structures</i>	\$0	0
11	<i>Customer pump testing</i>	\$0	0
12	<i>Mapping</i>	\$0	0
	<i>Total</i>	\$0	0

2. Projected budget summary for the next year.

<u>Year 2018 or Year 2</u>		<i>Budgeted Expenditure</i>	
<i>BMP #</i>	<i>BMP Name</i>	<i>(not including staff time)</i>	<i>Staff Hours</i>
A 1	<i>Measurement</i>	\$0	0
2	<i>Conservation staff</i>	\$0	0
3	<i>On-farm evaluations/water delivery info</i>	\$0	0
	<i>Irrigation Scheduling</i>	\$0	0
	<i>Water quality</i>	\$0	0

	<i>Agricultural Education Program</i>	\$0	0
4	<i>Quantity pricing</i>	\$0	0
5	<i>Contractor's pumps</i>	\$0	0
<i>B</i>	<i>1 Alternative land use</i>	\$0	0
	<i>2 Urban recycled water use</i>	\$0	0
	<i>3 Financing of on-farm improvements</i>	\$0	0
	<i>4 Incentive pricing</i>	\$0	0
	<i>5 Line or pipe canals/install reservoirs</i>	\$0	0
	<i>6 Increase delivery flexibility</i>	\$0	0
	<i>7 District spill/tailwater recovery systems</i>	\$0	0
	<i>8 Measure outflow</i>	\$0	0
	<i>9 Optimize conjunctive use</i>	\$0	0
	<i>10 Automate canal structures</i>	\$0	0
	<i>11 Customer pump testing</i>	\$0	0
	<i>12 Mapping</i>	\$0	0
	<i>Total</i>	\$0	0

3. Projected budget summary for 3rd year.

Year <u>2019</u> or <u>Year 3</u>		<i>Budgeted Expenditure</i>	
<i>BMP #</i>	<i>BMP Name</i>	<i>(not including staff time)</i>	<i>Staff Hours</i>
<i>A</i>	<i>1 Measurement</i>	\$0	0
	<i>2 Conservation staff</i>	\$0	0
	<i>3 On-farm evaluations/water delivery info</i>	\$0	0
	<i>Irrigation Scheduling</i>	\$0	0
	<i>Water quality</i>	\$0	0
	<i>Agricultural Education Program</i>	\$0	0
4	<i>Quantity pricing</i>	\$0	0
5	<i>Contractor's pumps</i>	\$0	0
<i>B</i>	<i>1 Alternative land use</i>	\$0	0
	<i>2 Urban recycled water use</i>	\$0	0
	<i>3 Financing of on-farm improvements</i>	\$0	0
	<i>4 Incentive pricing</i>	\$0	0
	<i>5 Line or pipe canals/install reservoirs</i>	\$0	0
	<i>6 Increase delivery flexibility</i>	\$0	0
	<i>7 District spill/tailwater recovery systems</i>	\$0	0
	<i>8 Measure outflow</i>	\$0	0
	<i>9 Optimize conjunctive use</i>	\$0	0
	<i>10 Automate canal structures</i>	\$0	0
	<i>11 Customer pump testing</i>	\$0	0
	<i>12 Mapping</i>	\$0	0
	<i>Total</i>	\$0	0

4. Projected budget summary for 4th year.

Year <u>2020</u> or <u>Year 4</u>		<i>Budgeted Expenditure</i>	
<i>BMP #</i>	<i>BMP Name</i>	<i>(not including staff time)</i>	<i>Staff Hours</i>
<i>A</i>	<i>1 Measurement</i>	\$0	0

	2	Conservation staff	\$0	0
	3	On-farm evaluations/water delivery info	\$0	0
		Irrigation Scheduling	\$0	0
		Water quality	\$0	0
		Agricultural Education Program	\$0	0
	4	Quantity pricing	\$0	0
	5	Contractor's pumps	\$0	0
B	1	Alternative land use	\$0	0
	2	Urban recycled water use	\$0	0
	3	Financing of on-farm improvements	\$0	0
	4	Incentive pricing	\$0	0
	5	Line or pipe canals/install reservoirs	\$0	0
	6	Increase delivery flexibility	\$0	0
	7	District spill/tailwater recovery systems	\$0	0
	8	Measure outflow	\$0	0
	9	Optimize conjunctive use	\$0	0
	10	Automate canal structures	\$0	0
	11	Customer pump testing	\$0	0
	12	Mapping	\$0	0
		Total	\$0	0

5. Projected budget summary for 5th year.

Year <u>2021</u> or <u>Year 5</u>		Budgeted Expenditure		
BMP #	BMP Name	(not including staff time)	Staff Hours	
A	1	Measurement	\$0	0
	2	Conservation staff	\$0	0
	3	On-farm evaluations/water delivery info	\$0	0
		Irrigation Scheduling	\$0	0
		Water quality	\$0	0
		Agricultural Education Program	\$0	0
	4	Quantity pricing	\$0	0
	5	Contractor's pumps	\$0	0
B	1	Alternative land use	\$0	0
	2	Urban recycled water use	\$0	0
	3	Financing of on-farm improvements	\$0	0
	4	Incentive pricing	\$0	0
	5	Line or pipe canals/install reservoirs	\$0	0
	6	Increase delivery flexibility	\$0	0
	7	District spill/tailwater recovery systems	\$0	0
	8	Measure outflow	\$0	0
	9	Optimize conjunctive use	\$0	0
	10	Automate canal structures	\$0	0
	11	Customer pump testing	\$0	0
	12	Mapping	\$0	0
		Total	\$0	0

Section IV: Best Management Practices for Urban Contractors

A. Urban BMPs

Foundational BMPs

1. Utility Operations Programs

1.1. Operations Practices

A.1) Conservation Coordinator

The Water Conservation Supervisor is responsible for implementing the Urban BMPs. Contact Information:

Madeline Ward, Water Conservation Supervisor

(805) 897-2672

MaWard@SantaBarbaraCA.gov

A.2) Water Waste Prevention

- The City has had a prohibition on water waste since 1963. The current municipal code prohibits unnecessary runoff beyond the boundaries of any property as served by its meter and any failure to repair as soon as reasonably possible any leak or rupture in any water pipes, faucets, valves, plumbing fixtures or other water service appliances. The enforcement process includes a warning, a fine on the water bill, and may lead to a flow restrictor or shut off of water meter if the waste is not corrected.
- The City has had Landscape Design Standards for development projects since 1989. These standards have been revised over time to reflect the progress in irrigation technology and sustainable landscaping practices and are more restrictive than the state Model Water Efficient Landscape Ordinance.
- The City coordinates with the County of Santa Barbara for development projects within the County's jurisdiction that receive City water. Those projects are reviewed by the City for our Landscape Design Standards.
- The City adopted and enforces the minimum indoor water use requirements of the California Green Building Standards Code.
- The City's Legislative Platform includes support of water efficiency related legislation.

A.3) Wholesale agency assistance programs

N/A

1.2. Water Loss Control

Annually, the City completes the standard water audit and balance using the AWWA Water Loss software and will submit the completed AWWA Standard Water Audit and Water Balance worksheets in the California Water Efficiency Partnership (CalWEP) BMP reporting database every reporting period.

- City staff is enrolled in the AWWA Water Loss Technical Assistance Program, which trains staff to complete AWWA Water Loss Audits.
- For each reporting period, the City will keep and make available validation for any data reported.

- The City will maintain in-house records of audit results, methodologies, and worksheets for each completed audit period.
- In lieu of component analysis, the City runs a water main replacement program, which replaces 1% of City water mains annually. The program has been temporarily suspended during the drought to conserve the water used to flush and disinfect new water mains. The City; however, continues to accrue program funds, design replacement projects, and is planning a large post-drought replacement project.
- The City keeps records of interventions performed, the number of leaks repaired, the economic value assigned to real losses, the cost of intervention, the linear feet of pipe renewal/rehabilitation, and prepares a yearly summary of this information for submission to CalWEP.

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

Annually, the City will provide in the CalWEP reporting database confirmation that all new service connections are metered and are being billed by volume of use and provide all data requested for compliance with BMP 1.3.

- The City meters all customers and has an inclining block rate structure.
- The City has undertaken a feasibility study examining incentive programs to move landscape water uses on mixed-use meters to dedicated landscape meters and has provided this study to CalWEP.

1.4. Retail Conservation Pricing

Annually the City will provide in the CalWEP reporting database the rate structure in effect for each customer class for the reporting period.

- We provide the annual revenue derived from volumetric and fixed service charges for each retail customer class, as defined in Section 1.
- We also provide the annual revenue derived from volumetric sewer charges and monthly fixed sewer service charges for each retail customer class.
- The City completes the Option 3 matrix for BMP 1.4 annually.

2. Education Programs

2.1. Public Information Programs

Annually the City will provide in the California Water Efficiency Partnership (CalWEP) reporting database the required reporting documentation for the City's Public Information Programs which include the following:

- The City's Water Conservation Program website is SantaBarbaraCA.gov/WaterWise. Additionally, the City promotes the regional water conservation program website, WaterWiseSB.org.
- Our Water Conservation Hotline handles the incoming calls for the Water Conservation Program. Hotline staff schedule Water Checkups, rebate appointments, and disseminate conservation information and resources.
- Brochures, fliers, and booklets are distributed in English and Spanish at Water Checkup appointments, during public events, and at public locations such as libraries and gardens (See Attachment I for some examples of public information provided to customers).
- We have active Facebook, Twitter, and YouTube accounts that we keep updated with resources, sharable information, and actions to save water.

- Several marketing campaigns are promoted throughout the year, often with our partners in the Regional Water Efficiency Program (RWEF). The RWEF is comprised of the water providers of Santa Barbara County.
- Outreach to customers includes messages printed on the bill that are tailored to customer type and water usage level, as well as bill insert information and bill snipes (i.e., envelope messages).
- The Water Wise Gardening for Santa Barbara County CD and Website is a free extensive database with searchable information on over 1,000 water wise plants, and local garden tours and garden galleries. It contains helpful facts, resources, and guidance on garden design and practices as well as links to other useful sustainable gardening resources.
- The Garden Wise TV Show is a thirty-minute television show about designing and maintaining sustainable landscapes. The quarterly show is produced by City TV and funded by several RWEF members.
- We have partnered with many agencies to design and install demonstration gardens. These gardens include the Alice Keck Park Memorial Garden, the Firescape Garden, the El Estero Recycled Water Garden, the Santa Barbara Association of Realtors Rainwater Garden, the Spencer Adams Park Ocean Friendly Garden, and the Santa Barbara Botanic Garden Water Wise Home Garden. Signage, plant lists, and brochures are available at gardens to educate the public on design and plant palette.
- A Water Hero is selected and awarded each year as an individual, business, or organization that has gone above and beyond in their water conservation efforts and serves as an example of resource efficiency in our community.
- We participate in national public information campaigns such as Fix a Leak Week, Water Awareness Month, and Smart Irrigation Month.
- In 2010 we conducted a survey of our medium and high water use single family residential customers and created a Water Conservation Strategic and Tactical Marketing Plan.
- We have a regional water conservation brand that is “WaterWise in Santa Barbara County” with each water provider branded under that umbrella brand, such as “WaterWise City of Santa Barbara.”
- We partner with local organizations such as California Landscape Contractors Association, Santa Barbara Built Green, Santa Barbara County Master Gardeners, Santa Barbara City College, Santa Barbara Botanic Garden, and Sweetwater Collaborative.

2.2. School Education Programs

Annually the City will provide in the CalWEP reporting database the required reporting documentation for the City’s School Education Programs which include the following:

- The City provides free in-class water education presentations to K-6 schools as well as summer and after school camps. The presentations cover our water supply sources, how water is delivered and treated, the water cycle, water conservation, and drought impacts. They are aligned with California Content Standards, the Education and the Environment Initiative, and the Next Generation Science Standards.
- Guided tours to water facilities are available to school groups of all ages.

- Materials distributed to students include coloring books, posters, and take home kits with aerators and dye tabs.
- We fund the 6th grade “Living Wise” kit with the Southern California Gas Company and the Southern California Edison Company for students and their families to make resource efficient retrofits at home and track their usage.
- We sponsor and judge a special WaterWise Award for the Santa Barbara County Science Fair along with other RWEP members.
- The City sponsors and judges the WaterWise High School Video Contest along with other RWEP members. 30 second TV commercials addressing water conservation are created by students Countywide.
- The City has an intern position for undergrad or graduate students to gain practical experience in water conservation and water supply management.
- Water education presentations are given in approximately 90 classes and summer camps per year. Water education materials are provided to schools. Tours of the City’s water treatment facilities with free bus transportation are provided. The City participates in the Annual Water Awareness High School Video Contest.

Programmatic BMPs

3. Residential

A.1) Residential assistance program

The City has a very popular free Water Checkup program that is available for all our customers. Upon request, Water Resources Specialists evaluate all water uses on the property, provide recommendations to the customer for improved efficiency, educate the customer on how to read their meter and identify common leaks, and provide resources and potential rebate opportunities.

A.2) Landscape water survey

The City also offers free Irrigation Evaluations for customers who suspect they may have an irrigation leak, or who want to optimize their irrigation efficiency. City staff reviews the irrigation schedule with the customer (or landscaper), does a test run of the station(s) to look for needed repairs or adjustments, and makes recommendations for improved efficiency.

A.3) High-efficiency clothes washers (HECWs)

A \$150 high efficiency clothes washer rebate is available through the City and is administrated through CalWEP.

A.4) WaterSense Specification (WSS) toilets

Rebates for high efficiency toilets were offered up until 2014 when the plumbing code changed. The City has completed a market saturation study to demonstrate the City has exceeded a 75% market saturation of ultra low flow and high efficiency toilets.

A.5) WaterSense Specifications for residential development

The City adopted and enforces the minimum indoor water use requirements of the California Green Building Standards Code. Additionally, our Landscape Design Standards require efficient irrigation and climate-appropriate plants and are more restrictive than the state Model Water Efficient Landscape Ordinance. The City coordinates with the County of Santa Barbara for development projects within the County’s jurisdiction that receive City water. Those projects are reviewed by the City for our Landscape Design Standards.

4. Commercial, Industrial, and Institutional (CII)

Annually the City will provide in the CalWEP reporting database the required reporting documentation for the City's Commercial Programs which include the following:

- The City's Commercial, Industrial, and Institutional Survey and Incentive Program (CII Program) consists of a site evaluation and incentive funding for recommended projects. The City offers indoor and outdoor water use surveys free of charge. We conduct a comprehensive water survey, looking at current and historic water use, provide a cost-benefit analysis of recommended projects, calculate water, energy, and sewer savings, and a detailed description of water efficient measures eligible for monetary incentives from the City.
- Free hotel linen tents and towel rack hangers are distributed to the lodging industry to encourage patrons to conserve water during their stay. Free restaurant table tents are provided which inform restaurant customers that water will be served upon request.

5. Landscape

Annually the City will provide in the CUWCC reporting database the required reporting documentation for the City's landscape programs which include the following:

- California Landscape Budgets Program. This program provides monthly water use reports via www.landscapebudgets.com for the properties served by dedicated irrigation meters and compares the usage to a weather-based water allocation calculation. The goal is to provide education to the customers, as well as monthly reporting, identifying ways to help customers irrigate more efficiently. Currently, all City dedicated landscape irrigation meters are billed based on a water budget calculated from historical evapotranspiration data, irrigated area, and plant palette.
- The Smart Landscape Rebate Program offers rebates to increase water efficiency in both commercial and residential landscapes. Rebates on approved irrigation equipment and landscape materials are up to 50% of material costs. Rebates are available for up to \$1,000 for single family homes and up to \$2,000 per account serving irrigated area (\$4,000 per site) for commercial, multi-family, and HOAs. Rebate covers: drip irrigation parts, sprinkler system efficiency retrofits, and rotating sprinkler nozzles; water-wise plants and mulch; laundry to landscape graywater system; and smart irrigation controller.
- The City of Santa Barbara, the Santa Barbara County Water Agency, and the Santa Barbara City College Continuing Education Division, along with several partnering agencies and businesses, hold the Green Gardener Certification Program each spring and fall. The Program trains gardeners in resource efficiency and pollution prevention landscape maintenance practices. In order to be a Green Gardener, gardeners attend a fifteen-week training session (two and half hour class per week) taught in both English and Spanish covering topics including water efficiency, pollution reduction, fertilizing, mulching, integrated pest management, low impact design, and reduction of air pollution emissions and green waste. A test covering training material is required for Green Gardener status plus annual ongoing educational requirements. This program includes promotion of the Green Gardeners through advertising and a list of gardeners distributed by partnering agencies and on www.greengardener.org.
- Two California Irrigation Management Information System (CIMIS) weather stations owned by the California Department of Water Resources (DWR) are located on the City's Golf Course and the Vic Trace Reservoir. City staff assists in maintenance of the stations. CIMIS

is a network of weather stations that automatically read and collect information on wind speed and run, average vapor pressure, air temperature, relative humidity, dew point, solar radiation, soil temperature, and precipitation. The information is transmitted to a central computer data base in Sacramento which gives daily evapotranspiration rates that can be accessed on DWR's website. The City uses this data to update the Watering % Adjust, as described below.

- The City updates the Watering % Adjust number on the website and on Twitter each week. Many irrigation controllers have a feature called “water budget”, or seasonal adjust, which can easily adjust the watering schedule as the weather changes. Over the course of the year, the % Adjust changes to reflect the landscape's changing need for water as climatic conditions change. As new values are published weekly, the controller's water budget feature should be changed to match the current value.
- Another helpful online tool the City promotes is the Landscape Watering Calculator: This easy-to-use web-based tool estimates the right amount of water to give a landscape in the format of a weekly irrigation schedule. Information needed is zip code of the site, the type of plants watered by a particular station on the irrigation system, the soil type, and the sprinkler type.
- The City provides outreach on the use of graywater with handouts, fact sheet, sample plan sheet, Graywater 101 classes, hands-on workshops, rebates, and information on the City's website. City promotes use of graywater in accordance with the California Plumbing Code Chapter 16A.
- City water customers can receive a free rain shut-off sensor during an Irrigation Evaluation. These sensors automatically shut off the sprinkler timer during and immediately after it rains. A brief training is given and a link to our webpage with more detailed information on how to install and use a rain sensor.
- Free mulch deliveries are also available to City customers twice per year. Mulch reduces evaporation and increases soil tilth, health, and permeability.
- The City participates and contribute funding to the Free Sprinkler Nozzle program through the Western Municipal Water District. Customers receive a voucher and online training to retrofit inefficient pop up spray nozzles to low-precipitation nozzles.

B. Provide a 5-Year Budget for Expenditures and Staff Effort for BMPs

1. Amount actually spent during current year

Note: the expenditures below for “Water Loss Control” for all years include the cost of intervention for breaks and leaks as well as our Main Replacement Program. The Main Replacement Program is projected to begin again in FY18 with an annual budget of \$5 million.

Fiscal Year 2017		<i>Projected Expenditures</i>	
<i>BMP #</i>	<i>BMP Name</i>	<i>(not including staff hours)</i>	<i>Staff Hours</i>
<i>1. Utilities Operations</i>			
	<i>1.1 Operations Practices</i>	\$4,629	0
	<i>1.2 Water Loss Control</i>	\$665,662	0

1.3 Metering	\$584,437	0
1.4 Retail Conservation Pricing	\$70,955	0
2. Education Programs		
2.1 Public Information Programs	\$207,711	0
2.2 School Education Programs	\$13,641	0
3. Residential	\$8,468	0
4. CII	\$13,090	0
5. Landscape	\$262,929	0
	<u>Total \$1,831,522</u>	<u>0</u>

2. Projected budget summary for 2nd year.

Fiscal Year 2018		Projected Expenditures	
BMP #	BMP Name	(not including staff hours)	Staff Hours
1. Utilities Operations			
1.1	Operations Practices	\$4,000	0
1.2	Water Loss Control	\$5,200,000	0
1.3	Metering	\$450,000	0
1.4	Retail Conservation Pricing	\$80,000	0
2. Education Programs			
2.1	Public Information Programs	\$235,000	0
2.2	School Education Programs	\$15,000	0
3.	Residential	\$15,000	0
4.	CII	\$35,000	0
5.	Landscape	\$270,000	0
	<u>Total \$6,304,000</u>	<u>0</u>	

3. Projected budget summary for 3rd year.

Fiscal Year 2019		Projected Expenditures	
BMP #	BMP Name	(not including staff hours)	Staff Hours
1. Utilities Operations			
1.1	Operations Practices	\$4,000	0
1.2	Water Loss Control	\$5,200,000	0
1.3	Metering	\$450,000	0
1.4	Retail Conservation Pricing	\$80,000	0

2. <i>Education Programs</i>		
2.1 <i>Public Information Programs</i>	\$235,000	0
2.2 <i>School Education Programs</i>	\$15,000	0
3. <i>Residential</i>	\$15,000	0
4. <i>CII</i>	\$35,000	0
5. <i>Landscape</i>	\$270,000	0
	<u>Total \$6,304,000</u>	<u>0</u>

Note: Our current water rate model assumes that the drought ends by FY20. Therefore, the budget for FY20 and FY21 does not include drought expenditures. By FY20 we also expect that the majority of our meter replacement program will be complete (about 85%).

4. *Projected budget summary for 4th year.*

Fiscal Year 2020		Projected Expenditures	
BMP #	BMP Name	(not including staff hours)	Staff Hours
<i>1. Utilities Operations</i>			
	<i>1.1 Operations Practices</i>	\$4,000	0
	<i>1.2 Water Loss Control</i>	\$5,200,000	0
	<i>1.3 Metering</i>	\$50,000	0
	<i>1.4 Retail Conservation Pricing</i>	\$80,000	0
<i>2. Education Programs</i>			
	<i>2.1 Public Information Programs</i>	\$125,000	0
	<i>2.2 School Education Programs</i>	\$15,000	0
3.	<i>Residential</i>	\$15,000	0
4.	<i>CII</i>	\$35,000	0
5.	<i>Landscape</i>	\$120,000	0
	<u>Total \$5,644,000</u>	<u>0</u>	

5. *Projected budget summary for 5th year.*

Fiscal Year 2021		Projected Expenditures	
BMP #	BMP Name	(not including staff hours)	Staff Hours
<i>1. Utilities Operations</i>			
	<i>1.1 Operations Practices</i>	\$4,000	0
	<i>1.2 Water Loss Control</i>	\$5,200,000	0
	<i>1.3 Metering</i>	\$50,000	0

Attachment 1

Plan Format

<i>1.4 Retail Conservation Pricing</i>	<i>\$80,000</i>	<i>0</i>
<i>2. Education Programs</i>		
<i>2.1 Public Information Programs</i>	<i>\$125,000</i>	<i>0</i>
<i>2.2 School Education Programs</i>	<i>\$15,000</i>	<i>0</i>
<i>3. Residential</i>	<i>\$15,000</i>	<i>0</i>
<i>4. CII</i>	<i>\$35,000</i>	<i>0</i>
<i>5. Landscape</i>	<i>\$120,000</i>	<i>0</i>
	<hr/> <i>Total \$5,644,000</i>	<i>0</i>