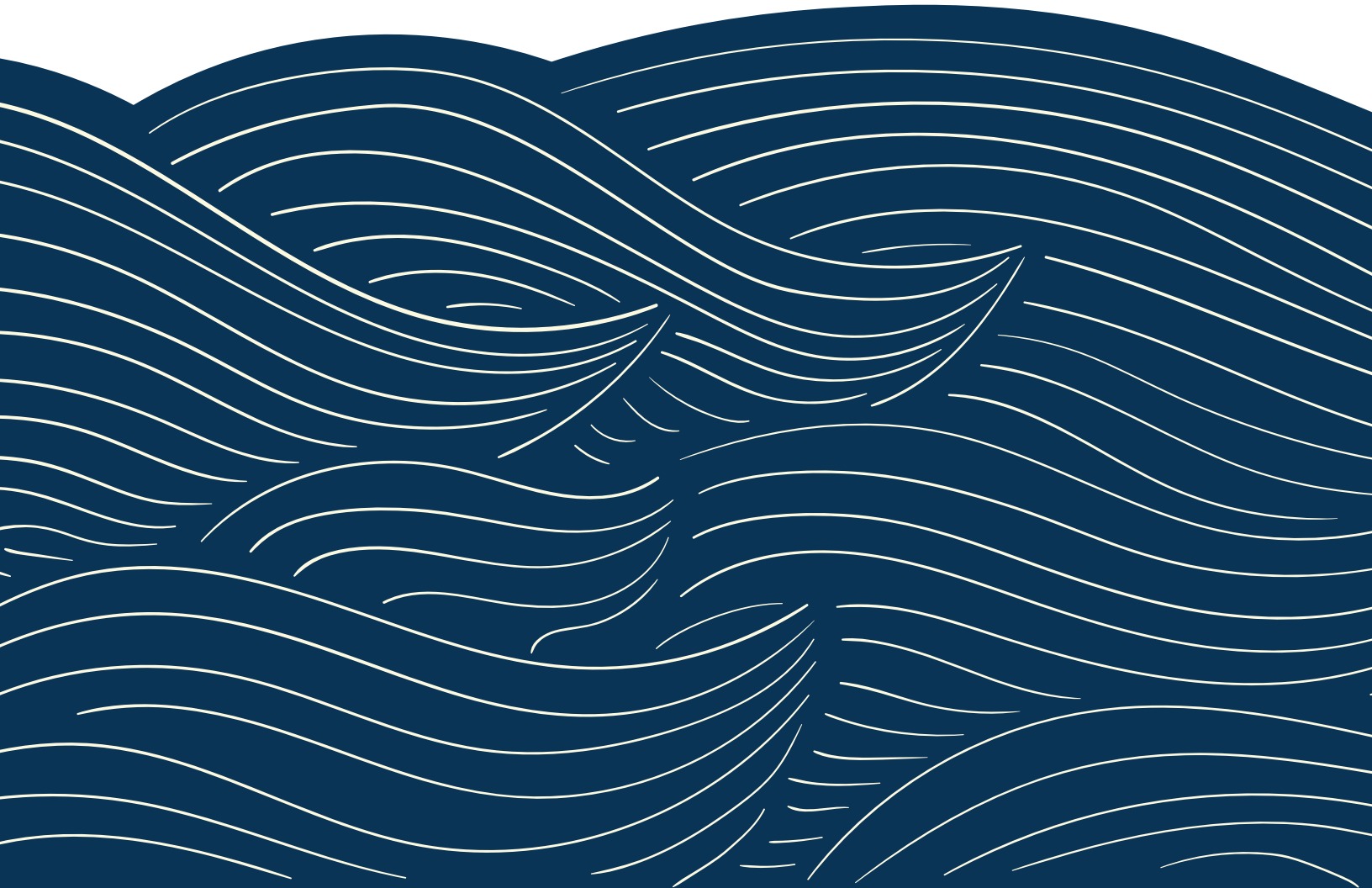
2020

PART 4: UWMP AGENCY SUPPORTING INFORMATION

UPPER SANTA ANA RIVER WATERSHED

INTEGRATED REGIONAL URBAN WATER MANAGEMENT PLAN



H

2020 IRUWMP Part 4
San Bernardino Municipal Water Department
Appendix H

H-1: UWMP Compliance Checklist

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Part 2 Chapter 8 Part 1 Chapter 3
Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Part 2 Chapter 8 Executive Summary
Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Part 2 Chapter 8
Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Part 1 Chapter 1
Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Part 4 Appendix H-2
Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	Part 1 Chapter 5
Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	N/A
Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Part 2 Chapter 8 Section 1

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Part 1 Chapter 2
Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Part 2 Chapter 8 Section 1.1
Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Part 1 Chapter 2
Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Part 2 Chapter 8 Section 1.1
Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Part 2 Chapter 8 Section 1.2
Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Part 2 Chapter 8 Section 2
Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Part 2 Chapter 8 Section 2.1.2
Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	Part 2 Chapter 8 Section 2.2.1
Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Part 2 Chapter 8 Section 2.2
Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Part 2 Chapter 8 Section 2.1.2
Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Part 2 Chapter 8 Section 2.3
Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Part 2 Chapter 8 Section 2.4 Part 1 Chapter 5
Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Part 2 Chapter 8 Section 3

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Part 2 Chapter 8 Section 3.2
Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	N/A
Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	N/A
Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Part 4 Appendix H-7
Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Part 4 Appendix H-7
Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Part 2 Chapter 8 Section 4 Part 2 Chapter 8 Section 5.3 Part 1 Chapter 5
Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	Part 2 Chapter 8 Section 5.3 Part 1 Chapter 5
Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Part 2 Chapter 8 Section 4 Part 1 Chapter 3
Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Part 2 Chapter 8 Section 4.7 Part 1 Chapter 3

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Part 2 Chapter 8 Section 4.8 Part 1 Chapter 5
Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Part 2 Chapter 8 Section 4.2
Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Part 2 Chapter 8 Section 4.2 Part 1 Chapter 3
Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Part 2 Chapter 8 Section 4.2 Part 1 Chapter 3
Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Part 1 Chapter 3 Part 3 Appendix A
Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Part 1 Chapter 3
Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Part 2 Chapter 8 Section 4.2
Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Part 2 Chapter 8 Section 4.8
Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Part 2 Chapter 8 Section 4.6
Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Part 2 Chapter 8 Section 4.5

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Part 2 Chapter 8 Section 4.5.1
Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Part 2 Chapter 8 Section 4.5 Part 1 Chapter 3
Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Part 2 Chapter 8 Section 4.5 Part 1 Chapter 3 Part 4 Appendix H-6
Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Part 1 Chapter 3
Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Part 1 Chapter 3
Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Part 1 Chapter 3 Section 7
Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier’s service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Part 2 Chapter 8 Section 4.5
Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Part 2 Chapter 8 Section 4.7 Part 1 Chapter 7 Part 3 Appendix G
Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Part 2 Chapter 8 Section 4.9 Part 4 Appendix H-6
Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 4 Part 1 Chapter 3

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
		affects water management strategies and supply reliability		
Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Part 1 Chapter 3
Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 5.3 Part 1 Chapter 5
Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 6
Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 6 Part 1 Chapter 5
Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 6 Part 1 Chapter 5
Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 6 Part 1 Chapter 5
Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Part 2 Chapter 8 Section 5.1 Part 1 Chapter 5
Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Part 4 Appendix H-9
Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 1.0

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Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 10.0
Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 2.0
Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 2.0
Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 3.0
Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 3.0
Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 4.1
Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 4.2
Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 4.3
Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 4.3

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
		to state-mandated prohibitions are appropriate to local conditions.		
Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 4.6
Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Part 4 Appendix H-9 Section 4.4&4.5
Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 5.0
Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 5.0
Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 6.0
Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 7.0
Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 7.1
Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 7.2
Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 8.0
Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 8.0
Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 8.0

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 9.0
Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 4.0
Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Part 4 Appendix H-9 Section 11.0
Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Part 4 Appendix H-9 Section 11.0
Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	N/A
Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Part 2 Chapter 8 Section 8
Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9 Part 4 Appendix H-6 DWR Tables

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
		changes to the plan. Reported in Table 10-1.		
Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9 Part 4 Appendix H-2 Public Outreach
Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9

2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9
Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Part 2 Chapter 8 Section 9

H-2: Public Outreach

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

380 East Vanderbilt Way
San Bernardino, CA 92408
phone: 909.387.9200
fax: 909.387.9247
www.sbvmwd.com

March 23, 2021

Delivered via Email

Subject: 2020 Integrated Regional Urban Water Management Plan for the Upper Santa Ana River Watershed

Dear Regional Stakeholder:

Notice is hereby given that the San Bernardino Valley Municipal Water District (Valley District) and its partners (Participating Agencies) are in the process of preparing the 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan (2020 IRUWMP). The 2020 IRUWMP updates and merges the 2015 Upper Santa Ana River Watershed Integrated Regional Water Management Plan (2015 IRWMP) and the 2015 San Bernardino Valley Regional Urban Water Management Plan (2015 RUWMP) into a single comprehensive document for guiding water resource management for the Upper Santa Ana River Watershed, the first of its kind in California.

The 2020 IRUWMP is being developed in compliance with the Urban Water Management Planning Act, the Integrated Regional Water Management Planning Act, and other applicable laws and regulations. All of the agencies participating in the development of the 2020 IRUWMP are listed in the table on the following page, along with an indication of whether the 2020 IRUWMP serves as that agency's 2020 UWMP.

Water Code section 10621(b) requires an urban water supplier updating its UWMP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing. This letter serves as notice that the Participating Agencies that are using the 2020 IRUWMP as their 2020 Urban Water Management Plan (referred to hereafter as Participating UWMP Agencies), plan to adopt and submit the 2020 IRUWMP to the California Department of Water Resources by the July 1, 2021 deadline. The Participating UWMP Agencies will also be adopting their respective updated Water Shortage Contingency Plans (WSCPs) as part of the 2020 IRUWMP.

A draft of the 2020 IRUWMP, which will include the WSCPs for each of the Participating UWMP Agencies, will be available for public review on the Participating UWMP Agencies websites starting in May 2021 and each one will hold an individual public hearing on their respective chapters of the 2020 IRUWMP and WSCP, in advance of their adoption in May or June 2021. The public hearings will be noticed and announced by each Participating UWMP Agency's public meeting agenda; each agency's web site address is shown in the table on the following page.

Participating Agency	2020 IRUWMP serves as Agency 2020 UWMP?	Agency Website
Big Bear City Community Services District	No	www.bbccsd.org
City of Big Bear Lake Department of Water	No	www.bbldwp.com
City of Colton	**Yes**	www.ci.colton.ca.us
City of Loma Linda	**Yes**	www.lomalinda-ca.gov
City of Redlands	**Yes**	www.cityofredlands.org
City of Rialto	**Yes**	www.rialtoca.gov
City of San Bernardino Municipal Water Department	**Yes**	www.sbmwd.org
East Valley Water District	**Yes**	www.eastvalley.org
Elsinore Valley Municipal Water District	No	www.evmwd.com
Fontana Water Company	No	www.fontanawater.com
Riverside Highland Water Company	**Yes**	www.rhwco.com
Riverside Public Utilities	No	www.riversideca.gov/utilities
San Bernardino County Flood Control District	UWMP not required	cms.sbcounty.gov/dpw
San Bernardino Valley Municipal Water District	**Yes**	www.sbvmwd.com
San Bernardino Valley Water Conservation District	UWMP not required	www.sbvwcd.org
San Gorgonio Pass Water Agency	No	www.sgpwa.com
South Mesa Water Company	**Yes**	southmesawater.com
West Valley Water District	**Yes**	www.wvwd.org
Western Municipal Water District	No	www.wmwd.com
Yucaipa Valley Water District	**Yes;** separate notice also provided	www.yvwd.dst.ca.us

Valley District and our regional partners invite you to submit comments and consult with Valley District or any of the agencies regarding the preparation of the 2020 IRUWMP. If you have any input for the 2020 IRUWMP or require additional information, please contact me directly at (909) 387-9230 or by email at matth@sbvmwd.com.

Sincerely,

Matthew Howard

Matthew Howard
Water Resources Senior Project Manager
San Bernardino Valley Municipal Water District

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

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June 1, 2021

Delivered via Email

Subject: Notice of Public Hearings for the 2020 Integrated Regional Urban Water Management Plan for the Upper Santa Ana River Watershed

Dear Regional Stakeholder:

Notice is hereby given that the San Bernardino Valley Municipal Water District (Valley District) and its partners (Participating Agencies) are in the process of preparing the 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan (2020 IRUWMP). The 2020 IRUWMP updates and merges the 2015 Upper Santa Ana River Watershed Integrated Regional Water Management Plan (2015 IRWMP) and the 2015 San Bernardino Valley Regional Urban Water Management Plan (2015 RUWMP) into a single comprehensive document for guiding water resource management for the Upper Santa Ana River Watershed, the first of its kind in California. The 2020 IRUWMP is being developed in compliance with the Urban Water Management Planning Act, the Integrated Regional Water Management Planning Act, and other applicable laws and regulations.

This letter serves as notice that the Participating Agencies that are using the 2020 IRUWMP as their 2020 Urban Water Management Plan (referred to hereafter as Participating UWMP Agencies), plan to adopt and submit their respective portions of the 2020 IRUWMP to the California Department of Water Resources by the July 1, 2021 deadline. The Participating UWMP Agencies will also be adopting their respective updated Water Shortage Contingency Plans (WSCPs) as part of the 2020 IRUWMP.

A draft of the 2020 IRUWMP, which includes the WSCPs for each of the Participating UWMP Agencies, is available for review at **www.IRUWMP2020.com** and on the websites of each Participating UWMP Agency.

Each Participating UWMP Agency will hold an individual public hearing on their respective portions of the 2020 IRUWMP and their WSCP, in advance of their adoption. The dates, times and locations of the public hearings are shown in the table on the following page.

Participating UWMP Agency	Agency Website	Public Hearing Date and Time	Public Hearing Location
City of Colton	www.ci.colton.ca.us	June 15, 2021 at 6 pm	Virtual (see website for access information)
City of Loma Linda	www.lomalinda-ca.gov	June 29, 2021 at 7 pm	25541 Barton Road Loma Linda, California
City of Redlands	www.cityofredlands.org	June 15, 2021 at 6 pm	City Council Chambers 35 Cajon Street Redlands, California
City of Rialto	www.rialtoca.gov	June 22, 2021 at 6:30 pm	150 S. Palm Ave Rialto, California and virtual (see website for access information)
City of San Bernardino Municipal Water Department	www.sbmwd.org	June 22, 2021 at 9:30 am	Virtual (see website for access information)
East Valley Water District	www.eastvalley.org	June 23, 2021 at 5:30 pm	Virtual (see website for access information)
Riverside Highland Water Company	www.rhwco.com	June 24, 2021 at 9 am	Virtual (see website for access information)
San Bernardino Valley Municipal Water District	www.sbvmwd.com	June 15, 2021 at 2 pm	Virtual (see website for access information)
South Mesa Water Company	southmesawater.com	June 18, 2021 at 9am	391 W. Avenue L Calimesa, California
West Valley Water District	www.wvwd.org	June 17, 2021 at 7 pm	Virtual (see website for access information)
Yucaipa Valley Water District	www.yvwd.dst.ca.us	June 22, 2021 at 4 pm	Virtual (see website for access information)

Valley District and our regional partners invite you to submit comments and consult with Valley District or any of the agencies regarding the preparation of the 2020 IRUWMP. If you have any input for the 2020 IRUWMP or require additional information, please contact me directly at (909) 387-9230 or by email at matth@sbvmwd.com.

Sincerely,

Matthew Howard

Matthew Howard
Water Resources Senior Project Manager
San Bernardino Valley Municipal Water District

Agency	Prefix	First Name	Last Name	Title	E-mail address
BBCCSD		Mary	Reeves	General Manager	mreeves@bbccsd.org
BBCCSD		Jerry	Griffith		jgriffith@bbccsd.org
BBLDWP		Sierra	Orr		sorr@bbldwp.com
BBLDWP		Reggie	Lamson	General Manager	RLamson@bbldwp.com
Bear Valley Mutual Water Company	Mr.	Bob	Martin	General Manager	remartinpe@gmail.com
Beaumont-Cherry Valley Water District	Mr.	Dan	Jaggers	General Manager	dan.jaggers@bcvwd.org
Big Bear Area Regional Wastewater Agency		David	Lawrence	General Manager	dlawrence@bbarwa.org
Big Bear Municipal Water District		Mike	Stephenson	General Manager	mstephenson@bbmwd.net
Cal. State San Bernardino/Water Resources Institute	Ms.	Suzie	Earp	Interim Director	earps@csusb.edu
California Regional Water Quality Control Board, Santa Ana Region	Ms.	Hope	Smythe	Executive Officer	Hope.Smythe@waterboards.ca.gov
California State Water Resources Control Board, Division of Drinking Water	Mr.	Sean	McCarthy	Chief	Sean.McCarthy@waterboards.ca.gov
City of Banning	Mr.	Art	Vela	Public Works Director	avela@ci.banning.ca.us
City of Beaumont	Ms.	Elizabeth	Gibbs	City Manager	egibbs@beaumontcares.com
City of Big Bear Lake	Ms.	Susan	O'Strander	Director of Planning & Inspections	sostrander@citybigbearlake.com
City of Calimesa	Ms.	Bonnie	Johnson	City Manager	bjohnson@cityofcalimesa.net
City of Colton	Mr.	Mike	Cory	Water Utility Manager	mcory@ci.colton.ca.us
City of Colton	Mr.	Mark	Tomich	Development Services Director	mtomich@ci.colton.ca.us
City of Colton		Jessica	Sutorus		jsutorus@ci.colton.ca.us
City of Colton		Robert	DeLoach		rdeloach@coltonca.gov
City of Corona	Ms.	Joanne	Coletta	Community Development Director	Joanne.Coletta@ci.corona.ca.us
City of Eastvale	Mr.	Gustavo	Gonzalez	Planning Manager	ggonzalez@eastvaleca.gov
City of Fontana	Mr.	Orlando	Hernandez	Planning Manager	ohernandez@fontana.org
City of Grand Terrace	Mr.	Craig	Bradshaw	Public Works Director	cbradshaw@grandterrace-ca.gov
City of Highland	Mr.	Lawrence	Mainez	Community Development Director	lmainez@cityofhighland.org
City of Jurupa Valley	Mr.	Gary	Thompson	City Manager	gthompson@jurupavalley.org
City of Jurupa Valley	Mr.	Thomas	Merrell	Planning Director	tmerrell@jurupavalley.org
City of Lake Elsinore	Mr.	Grant	Taylor	Community Development Director	gtaylor@lake-elsinore.org
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City of Loma Linda	Mr.	Konrad	Bolowich	Assistant City Manager	kbolowich@lomalinda-ca.gov
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County of Riverside	Mr.	Steve	Weiss	Planning Director	sweiss@rctlma.org
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County of San Bernardino		Terri	Rahhal	Director, Land Use Services Department	Terri.Rahhal@lus.sbcounty.gov
County of San Bernardino	Mr.	Kevin	Blakeslee	Chief Public Works Engineer	kblakeslee@dpw.sbcounty.gov
Crafton Hills College	Mr.	Kevin	Horan	President	khoran@sbccd.cc.ca.us
East Valley Water District	Mr.	John	Mura	General Manager	jmura@eastvalley.org
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East Valley Water District		Jason	Wolf		jwolf@eastvalley.org
East Valley Water District		Nathan	Carlson		ncarlson@eastvalley.org
Elsinore Valley Municipal Water District	Mr.	Greg	Thomas	General Manager	gthomas@evmwd.net
Elsinore Valley Municipal Water District		Jesus	Gastelum		jgastelum@evmwd.net
Fontana Water Company	Mr.	Josh	Swift	General Manager	jmswift@fontanawater.com
Fontana Water Company		Cris	Fealy		cifealy@fontanawater.com
Inland Empire Resources Conservation District	Ms.	Mandy	Parkes	District Manager	info@iercd.org
Jurupa Community Services District	Mr.	Chris	Berch	General Manager	cberch@JCSD.US
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Metropolitan Water District of Southern California	Mr.	Edgar	Fandialan	Water Resources Management Group	efandialan@mwdh2o.com

Agency	Prefix	First Name	Last Name	Title	E-mail address
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Riverside Highland Water Co.		Jennifer	Gimpel		jgimpel@rhwco.com
Riverside Highland Water Company	Mr.	Don	Hough	General Manager	dhough@rhwco.com
Riverside Local Agency Formation Commission (LAFCO)	Mr.	Gary	Thompson	Executive Officer	gthompson@lafco.org
Riverside Public Utilities	Mr.	Todd	Corbin	General Manager	tcorbin@riversideca.gov
Riverside Public Utilities	Mr.	Todd	Jorgenson	Assistant General Manager - Water	tjorgenson@riversideca.gov
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Riverside Public Utilities		Michael	Plinski		MPlinski@riversideca.gov
Riverside Public Utilities		Greg	Herzog		GHerzog@riversideca.gov
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San Bernardino County Flood Control District		Alan	Frost		Alan.Frost@dpw.sbcounty.gov
San Bernardino County Local Agency Fomation Commission (LAFCO)	Mr.	Samuel	Martinez	Executive Officer	smartinez@lafco.sbcounty.gov
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San Bernardino Municipal Water Department		Jonathon	Schoenen		jonathon.schoenen@sbmwd.org
San Bernardino Municipal Water Department		Warren	Huang		warren.huang@sbmwd.org
San Bernardino Valley Municipal Water District	Mr.	Adekunle	Ojo	Water Resource Manager	AdekunleO@sbvmwd.com
San Bernardino Valley Municipal Water District		Matt	Howard		matth@sbvmwd.com
San Bernardino Valley Municipal Water District		Bob	Tincher		bobt@sbvmwd.com
San Bernardino Valley Water Conservation District	Mr.	Daniel	Cozad	General Manager	DCozad@sbvwcd.org
San Bernardino Valley Water Conservation District		Katelyn	Scholte		KScholte@sbvwcd.org
San Gorgonio Pass Water Agency	Mr.	Lance	Eckhart	General Manager	leckhart@sgpwa.com
San Gorgonio Pass Water Agency		Cheryle	Stiff		cstiff@sgpwa.com
Santa Ana Watershed Project Authority	Mr.	Jeff	Mosher	General Manager	jmosher@sawpa.org
South Mesa Water Company	Mr.	David	Armstrong	General Manager	darmstrong@southmesawater.com
Terrace Water Company	Mr.	Toby	Ritarita	General Manager	tobiterracewater@gmail.com

Agency	Prefix	First Name	Last Name	Title	E-mail address
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United States Forest Service	Ms	Ellen	Shaw	Forest Supervisor, San Bernardino National Forest	ellen.shaw@usda.gov
West Valley Water District	Mr.	Shamindra	Manbahal	Acting General Manager	smanbahal@wvwd.org
West Valley Water District		Linda	Jadeski		ljadeski@wvwd.org
West Valley Water District		Daniel	Guerra		dguerra@wvwd.org
Western Heights Mutual Water Company	Mr.	Mark	Iverson	General Manager	m.iverson@westernheightswater.org
Western Municipal Water District	Mr.	Ryan	Shaw	Director of Water Resources	rshaw@wmwd.com
WMWD		Jason	Pivovaroff		jpivovaroff@wmwd.com
WMWD		Melissa	Matlock		mmatlock@wmwd.com
Yucaipa Valley Water District	Mr.	Joseph	Zoba	General Manager	jzoba@yvwd.dst.ca.us
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Yucaipa Valley Water District		Madeline	Blua		mblua@yvwd.us
Yucaipa Valley Water District		Ashley	Gibson		agibson@yvwd.us
Yucaipa Valley Water District		Mike	Kostelecky		mkostelecky@yvwd.us
Yucaipa-Calimesa Joint Unified School District	Ms.	Cali	Binks	Superintendent	cali_binks@ycjusd.us
San Manuel Band of Mission Indians		Alexander	Sephton		alexander.sephton@sanmanuel-nsn.gov
San Manuel Band of Mission Indians		Peter	Mateo		peter.mateo@sanmanuel-nsn.gov

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3474029	Notice of Public Hearing	PRECINCT REPORTER, CA	06/03/2021	06/10/2021	2	SALLY DURAN [SBMWD1]	-	-
3474030	Notice of Public Hearing	SAN BERNARDINO COUNTY SUN, CA	06/03/2021	06/10/2021	2	SALLY DURAN [SBMWD1]	-	-

City of San Bernardino Municipal Water Department
Public Hearing Notice
2020 Integrated Regional Urban Water Management Plan and Water Shortage Contingency Plan

Notice is hereby given that at 9:30 a.m. on Tuesday, June 22, 2021, via web-conference and livestream, accessible via YouTube at: https://bit.ly/YouTubeSBWater, the SBMWD's Water Board will conduct a public hearing to receive public comments and consider adoption of the Draft 2020 Upper Santa Ana Watershed Integrated Regional Urban Water Management Plan (2020 IRUWMP) and Draft Water Shortage Contingency Plan (WSCP). Following the public hearing, the SBMWD's Water Board may adopt the Draft 2020 IRUWMP and Draft WSCP with recommended modifications, if required resulting from public comment.

The Draft 2020 IRUWMP provides a comprehensive guide for water resource management for the Upper Santa Ana River Watershed and documents SBMWD's plans to ensure adequate water supplies to meet existing and future demands under a range of water supply conditions, including water shortages. The Draft WSCP documents SBMWD's plans to manage and mitigate an actual water shortage condition, should one occur because of drought or other impacts on water supplies.

A copy of the Draft 2020 IRUWMP and Draft WSCP will be available for public review beginning in June 2021 and can be downloaded at www.sbmwd.org/196/Engineering-Reports-and-Plans or viewed at the SBMWD's Engineering Customer Counter located at 397 Chandler Place, San Bernardino between 9:00 a.m. and 3:00 p.m. Monday through Friday. Please contact the SBMWD if you require special accommodations.

Please provide written comments on the Draft 2020 IRUWMP documents to Francisco Jimenez at Francisco.Jimenez@sbmwd.org prior to June 18, 2021.

If you have any questions regarding SBMWD's 2020 IRUWMP or WSCP or public hearing meeting, please contact Francisco Jimenez at (909) 453-6175 or Francisco.Jimenez@sbmwd.org.

Date: <Date of Publication>
San Bernardino Municipal Water Department

H-3: Resolutions

RESOLUTION NO. 2021-006

RESOLUTION OF THE WATER BOARD OF THE CITY OF SAN BERNARDINO, CALIFORNIA, ADOPTING THE 2020 UPPER SANTA ANA RIVER WATERSHED INTEGRATED REGIONAL URBAN WATER MANAGEMENT PLAN

WHEREAS, in accordance with Section 603 of the City Charter, the Water Board is responsible for oversight and management of the City's water supply, recycled water, wastewater collection and treatment functions; and

WHEREAS, the San Bernardino Municipal Water Department and other water managers in the upper Santa Ana River watershed have long recognized the importance of regional collaboration and integration of single purpose efforts and regularly work across jurisdictional boundaries to implement regional multi-benefit projects and programs that address multiple water resource management issues, including local and imported water supplies, recycled water, stormwater management, groundwater management, water use efficiency, habitat and open space management, and many others; and

WHEREAS, the State lawmakers created the Integrated Regional Water Management Planning Act (IRWMP Act) in 2002 to encourage integrated, regional strategies for managing water resources; and

WHEREAS, in 2005, 16 agencies in the upper Santa Ana River watershed decided to develop the region's first IRWM Plan (IRWMP) to collaborate on regional water management issues; and

WHEREAS, the Upper Santa Ana River Watershed IRWMP was completed in 2007 and updated in 2015; and

WHEREAS, the San Bernardino Municipal Water Department participated in the development of the 2007 and 2015 IRWMPs and adopted the 2007 and 2015 IRWMPs; and

WHEREAS, the IRWMP established an update schedule of every five years and is due to be updated; and

WHEREAS, the California Department of Water Resources (DWR) has established Program Guidelines for the IRWM Program, which were most recently updated in 2016 (2016 IRWM Guidelines); and

WHEREAS, The California Urban Water Management Planning Act, Water Code Section 10610 et seq. (UWMP Act), mandates that every urban supplier of water providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (UWMP); and

WHEREAS, San Bernardino Municipal Water Department meets the definition of an urban water supplier for purposes of the UWMP Act; and

WHEREAS, the UWMP Act requires that said UWMP be updated and adopted at least once every five years on or before July 1, in years ending in six and one; and

WHEREAS, the UWMP Act allows for water suppliers to work together to develop a cooperative regional UWMP and in 2010 and 2015, the San Bernardino Valley Regional UWMP (RUWMP) was prepared by ten different water suppliers to collectively meet the requirements of the UWMP Act; and

WHEREAS, the San Bernardino Municipal Water Department participated in the 2010 and 2015 RUWMP; and

WHEREAS, both the IRWMP and RUWMP are both due to be updated; and

WHEREAS, the San Bernardino Municipal Water Department and nineteen other water suppliers and water management organizations in the upper Santa Ana River watershed decided to combine the IRWMP and the RUWMP into a single comprehensive planning document known as the 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan (IRUWMP) which is the first of its kind in California; and

WHEREAS, valuable synergies are realized by combining these two documents into one, including reduced preparation costs, a single integrated dataset, a consolidated reference document, enhanced collaboration, and more robust integrated planning and decision-making; and

WHEREAS, the 2020 IRUWMP document is organized into four parts: Part 1 – Regional Context, Part 2 – Individual Agency UWMPs, Part 3 – Regional Supporting Information and Part 4 – Individual Agency Supporting Information; and

WHEREAS, as a participant in the 2020 IRUWMP, the San Bernardino Municipal Water Department has prepared those portions of the IRUWMP applicable to the San Bernardino Municipal Water Department to meet the requirements of the IRWMP Act, the UWMP Act and other applicable laws and regulations which include Part 1, Part 2 Chapter 8: San Bernardino Municipal Water Department UWMP, Part 3, and Part 4 Appendix H: San Bernardino Municipal Water Department Supporting Information; and

WHEREAS, in accordance with applicable legal requirements, the San Bernardino Municipal Water Department has undertaken certain coordination, notice, public involvement, public comment, and other procedures in relation to the 2020 IRUWMP; and

WHEREAS, in accordance with the UWMP Act, the San Bernardino Municipal Water Department has prepared the 2020 IRUWMP with staff from its own agency, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its 2020 IRUWMP, and has also utilized the DWR Guidebook for Urban Water Suppliers to Prepare 2020 Urban Water Management Plans, including its related appendices and the 2016 IRWM Guidelines; and

WHEREAS, in accordance with applicable law, a Notice of a Public Hearing regarding the San Bernardino Municipal Water Department's adoption of Part 1, Part 2 Chapter 8, Part 3,

and Part 4 Appendix H of the 2020 IRUWMP was published within the jurisdiction of the San Bernardino Municipal Water Department on June 3, 2021 and June 10, 2021; and

WHEREAS, in accordance with applicable law, including but not limited to Water Code sections 10608.26 and 10642, a public hearing was held on June 22, 2021 at 9:30 AM, or soon thereafter, via web-conference and livestream accessible via YouTube at https://bit.ly/YouTubeSBWater, in order to provide members of the public and other interested entities with the opportunity to be heard in connection with proposed adoption of the 2020 IRUWMP and issues related thereto; and

WHEREAS, pursuant to said public hearing on the 2020 IRUWMP, the San Bernardino Municipal Water Department, among other things, encouraged the active involvement of diverse social, cultural, and economic members of the community within the San Bernardino Municipal Water Department's service area with regard to the preparation of the Plan, encouraged community input regarding the 2020 IRUWMP; and

WHEREAS, the Water Board has reviewed and considered the purposes and requirements of the IRWMP Act and the UWMP Act, the contents of the 2020 IRUWMP, and the documentation contained in the administrative record in support of the 2020 IRUWMP, and has determined that the factual analyses and conclusions set forth in the 2020 IRUWMP are legally sufficient; and

WHEREAS, the Water Board desires to adopt Part 1, Part 2 Chapter 8, Part 3, and Part 4 Appendix H of the 2020 IRUWMP in order to comply with the IRWMP Act and UWMP Act.

BE IT RESOLVED BY THE WATER BOARD OF THE CITY OF SAN BERNARDINO AS FOLLOWS:

SECTION 1. The above recitals are true and correct and are incorporated herein by this reference.

SECTION 2. Part 1, Part 2 Chapter 8, Part 3, and Part 4 Appendix H of the 2020 IRUWMP is hereby adopted as amended by changes incorporated by the Water Board as a result of input received (if any) at the public hearing and ordered filed with the Secretary of the Water Board;

SECTION 3. CEQA. The Water Board finds this Resolution is not subject to the California Environmental Quality Act (CEQA) in that the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty, as in this case, that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

SECTION 4. The General Manager is hereby authorized and directed to include a copy of this Resolution in the San Bernardino Municipal Water Department's 2020 IRUWMP;

SECTION 5. The General Manager is hereby authorized and directed, in accordance with Water Code sections 10621(d) and 10644(a)(1)-(2), to electronically submit a copy of the San

Bernardino Municipal Water Department portions of the 2020 IRUWMP to DWR no later than July 1, 2021;

SECTION 6. The General Manager is hereby authorized and directed, in accordance with Water Code section 10644(a), to submit a copy of the 2020 IRUWMP to the California State Library, and any city or county within which the San Bernardino Municipal Water Department provides water supplies no later than thirty (30) days after this adoption date;

SECTION 7. The General Manager is hereby authorized and directed, in accordance with Water Code section 10645, to make the 2020 IRUWMP available for public review at the San Bernardino Municipal Water Department offices during normal business hours and on the San Bernardino Municipal Water Department website no later than thirty (30) days after filing a copy of the 2020 IRUWMP with DWR;

SECTION 8. The General Manager is hereby authorized and directed, in accordance with Water Code Section 10635(b), to provide that portion of the 2020 IRUWMP prepared pursuant to Water Code Section 10635(a) to any city or county within which the San Bernardino Municipal Water Department provides water supplies no later than sixty (60) days after submitting a copy to DWR;

SECTION 9. The General Manager is hereby authorized and directed to implement the 2020 Plan in accordance with the IRWMP Act and UWMP Act and to provide recommendations to the Water Board regarding the necessary budgets, procedures, rules, regulations, or further actions to carry out the effective and equitable implementation of the 2020 IRUWMP in collaboration with the regional partners.

SECTION 10. Severability. If any provision of this Resolution or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications, and to this end the provisions of this Resolution are declared to be severable.

SECTION 11. Effective Date. This Resolution shall become effective immediately.

APPROVED and **ADOPTED** by the Water Board and signed by the President of the Water Board and attested by the Deputy City Clerk & Ex Officio Secretary of the Water Board this 22nd day of June, 2021.

Toni Callicott, President
City of San Bernardino Water Board

Attest:

Robin L Ohama
Robin L Ohama (Jun 22, 2021 11:40 PDT)

Robin Ohama
Deputy City Clerk & Ex Officio Secretary of the Water Board

CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF SAN BERNARDINO)

I, Robin Ohama, Deputy City Clerk & Ex Officio Secretary of the Water Board, hereby certify that the attached is a true copy of Resolution No. adopted at a regular meeting held on the 22nd day of June 2021 by the following vote:

Council Members:	**AYES**	**NAYS**	**ABSTAIN**	**ABSENT**
CALLICOTT	X			
HENDRIX	X			
MLYNARSKI	X			
BRICKLEY				X
JOHNSON	X			

WITNESS my hand and official seal of the City of San Bernardino this 22nd day of June, 2021.

Robin L Ohama
Robin L Ohama (Jun 22, 2021 11:40 PDT)

Robin Ohama
Deputy City Clerk & Ex Officio Secretary of the Water Board

H-4: Agreements

Settlement Agreement

This Settlement Agreement ("**Agreement**") is entered into and effective this 21st day of November, 2017 by and among the City of San Bernardino ("**City**"), the City of San Bernardino Municipal Water Department ("**SB Water**"), East Valley Water District ("**East Valley**") and San Bernardino Valley Municipal Water District ("**Valley District**"). The City, East Valley and Valley District are each sometimes referred to herein as a "**Party**" and are collectively referred to herein as the "**Parties.**"

Recitals

A. On March 15, 2016, Valley District certified the Final Environmental Impact Report ("**SNRC EIR**") under the provisions of the California Environmental Quality Act ("**CEQA**") for the Sterling Natural Resource Project ("**SNRC Project**") and approved the SNRC Project.

B. On April 14, 2016, the City filed suit (the "**CEQA Lawsuit**") challenging the validity of Valley District's certification of the SNRC EIR as violating the provisions of CEQA.

C. On June 1, 2016, the City filed a second lawsuit (the "**LAFCo Lawsuit**") challenging East Valley's actions in connection with the SNRC Project and alleging such actions violated the Cortese-Knox-Hertzberg Act ("**LAFCo Law**"). Valley District and East Valley filed a cross-complaint in that action.

D. On March 7, 2017, SB Water certified the Final Environmental Impact Report ("**CWF EIR**") under the provisions of CEQA for the Clean Water Factory Project ("**CWF Project**") and approved the CWF Project.

E. On June 6, 2017, the Superior Court for the County of San Diego entered judgment in favor of Valley District and East Valley in connection with the CEQA Lawsuit. The City has filed a timely appeal of that decision.

F. By means of tolling agreements and stipulations the Parties have: (i) tolled the dates for filing the appendix on appeal and briefs in CEQA Lawsuit in the Court of Appeal, (ii) tolled all discovery and the hearing on the City's motion for a writ of mandate in the LAFCo Lawsuit (including discovery undertaken in connection with the cross-complaint filed by Valley District and East Valley), (iii) tolled the deadline for the City to file a motion to tax costs in the CEQA Lawsuit, and (iv) tolled the statute of limitations on potential legal challenges by East Valley and Valley District to the CWF Project.

G. The Parties now wish to enter into a comprehensive settlement that will accomplish a number of different purposes, all of which are of equal importance.

- The Parties wish to enter into arrangements that will allow East Valley and Valley District to construct and operate the SNRC Project and that will allow the City to construct and operate the CWF Project.

- The Parties wish to enter into arrangements that will ensure that the SNRC Project and the CWF Project are operated in a manner that is consistent with the recovery of threatened and endangered fish populations in the Santa Ana River that may depend on the discharge of treated wastewater into the Santa Ana River.

- The Parties wish to enter into arrangements that will replenish the San Bernardino Basin Area ("**SBBA**") and thereby enhance water supply reliability for their respective ratepayers.

- The Parties wish to enter into arrangements that will allow East Valley to provide wastewater treatment and disposal services to its ratepayers in compliance with the LAFCo Law, and without adversely affecting the ratepayers within the City.

- The Parties wish to further enhance water supply reliability (and thereby lessen the demands for the extraction of groundwater from the SBBA) by engaging in a number of water efficient landscape improvements located within the City.

- The Parties wish to conclude all of the foregoing litigation on a mutually agreeable basis and move on from the conflict associated with litigation to collaborative efforts that will best serve the interests of their respective ratepayers.

H. The Parties wish to memorialize their mutual agreements and understandings by means of this Agreement.

Agreements

1. *Construction and Operation of Facilities*

a. *Status of Existing JPA Agreement.* At present, the City provides wastewater treatment and disposal services to East Valley pursuant to a Joint Powers Authority agreement dated January 7, 1958, as amended most recently in April 1984 ("**JPA Agreement**"). The Parties intend to continue to operate under the terms of the JPA Agreement solely as it pertains to wastewater treatment and disposal services until termination of the JPA Agreement as provided for in subparagraph 1(b) below. Not later than ninety (90) days after the date upon which the San Bernardino Local Agency Formation Commission ("**LAFCo**") may approve the activation of East Valley's latent authority for wastewater

treatment and disposal services, all remaining JPA obligations imposed upon the Parties including, but not limited to, East Valley's obligation to collect connection fees for the benefit of the City and the expansion fees described in section 3(c) of this Agreement shall terminate. The Parties shall, within one hundred eighty (180) days of the execution of this Agreement, agree upon amendments to the JPA Agreement to effectuate this Agreement.

b. *Termination of JPA Agreement.* Prior to completion of the SNRC Project, East Valley shall provide notice of anticipated completion to the other Parties and identify a date, at least six (6) months in the future, when East Valley will begin to provide wastewater treatment and disposal services to its customers. Upon SNRC Project completion, East Valley shall provide notice of completion to all Parties.

(1) The City shall, within thirty days of the date of East Valley's notice of completion, provide the other Parties with final invoicing, consistent with the City's prior invoicing practices, showing all charges incurred or that will be incurred for the operation of the City's facilities through the date on which East Valley will provide wastewater treatment services.

(2) East Valley shall, within thirty (30) days of receiving the City's final invoicing, either agree with that invoicing or begin the dispute resolution process described in paragraph 6(b) below. Such disputes shall be limited to invoice items that exceed one percent (1%) of the total invoiced amount.

(3) The JPA Agreement shall terminate on the date that East Valley begins to provide wastewater treatment services to its customers (the "**Service Date**") notwithstanding any dispute among the parties relating to the invoicing provided by the City. Such disputes will be addressed through procedures described in paragraph 6(b) below.

c. *SNRC Project.* The Parties agree to cooperate to enable East Valley and Valley District to construct the SNRC Project and place that project into operation at the earliest possible date, as follows:

(1) *General Provisions*

(a) The Parties agree that the SNRC Project will divert and treat all wastewater flows that are generated within East Valley's service area, which are currently approximately 6 million gallons/day, that would have been treated by SB Water pursuant to the JPA Agreement.

(b) Upon execution of this Agreement, the City and SB Water shall send a letter to the State Water Resources Control Board supporting the use of State Revolving Fund ("**SRF**") grant and loan funds, at the lowest available rate of interest, to fund the SNRC Project. Such letter shall be approved in advance by East Valley. If requested by East Valley and/or Valley District, representatives of the City and/or SB Water shall participate in a teleconference with the State Water Resources Control Board or its staff to state that SRF grant or loan funds be issued to East Valley for the construction of the SNRC Project.

(c) After execution of this Agreement and upon request of East Valley and/or Valley District, the City and/or SB Water shall provide similar letter(s) supporting the SNRC Project to local, state or federal administrative or regulatory agencies, private financial institutions, or other entities with oversight or control over the SNRC Project or its financing.

(2) *East Trunk Sewer Line.* The Parties shall negotiate and execute the appropriate legal instruments through which the City and SB Water shall convey by means of grant deed all right, title and interest in a 20,800 linear foot portion of the East Trunk Sewer Line as shown on Exhibit A attached hereto, which is incorporated herein by reference, together with any associated appurtenances, easements, operating agreements and the like necessary for the safe operation of that portion of the East Trunk Sewer Line, to East Valley. Such conveyance shall become effective on the date upon which LAFCo may approve activation of East Valley's latent authority to provide wastewater treatment services. This portion of the East Trunk Sewer Line is needed by East Valley so as to allow East Valley to collect and transport wastewater flows to the SNRC Project. The City, SB Water and East Valley shall cooperate in drawing up the necessary documentation and obtaining any regulatory permits for such transfer. All costs incurred by any Party associated with the conveyance and transfer of this portion of the East Trunk Sewer Line shall be the sole responsibility of East Valley, and East Valley shall reimburse the other Parties for any such costs incurred by them. After the date of the transfer, East Valley shall be responsible for all operation and maintenance costs associated with the portion of the East Trunk Sewer Line that has been transferred to East Valley from the City and SB Water.

(3) *Commingling/Exchange of Flows.* East Valley, the City and SB Water further understand and agree that implementing the transfer of a portion of

the East Trunk Sewer Line, both while the SNRC Project is being constructed and after the SNRC Project commences operation, will require an exchange/commingling of wastewater flows originating within the service areas of the City/SB Water and East Valley in roughly equal quantities so as to ensure the efficient operation of the regional wastewater system and thereby avoid increasing the cost of wastewater treatment to East Valley's ratepayers. The City/SB Water and East Valley agree that, within one hundred eighty (180) days of the effective date of this Agreement, they will enter into the necessary agreements for such exchange/commingling of wastewater flows, and that they will cooperate fully in obtaining any regulatory approvals needed for the transfer of the portion of the East Trunk Sewer Line to East Valley. To the extent that additional physical facilities are needed to accomplish the transfer, the costs associated with the permitting, construction and operation of those new physical facilities shall be the sole responsibility of East Valley, and East Valley shall reimburse the other Parties for any such costs incurred by them.

d. *CWF Project.* The Parties agree to support the construction and operation of a new recycled water plant project by the City (known as the "**CWF Project**").

(1) SB Water and Valley District hereby reaffirm their respective commitments pursuant to the February 22, 2011 Memorandum of Understanding ("**MOU**") that withdrew protests to Wastewater Change Petition No. WW0059 for the CWF Project.

(2) After execution of this Agreement and upon request of the City, Valley District and/or East Valley shall appear at public meetings to support the CWF Project and/or take such other actions (including but not limited to resolutions of their respective governing boards) to support the CWF Project. After execution of this Agreement and upon request of the City or SB Water, East Valley and/or Valley District shall provide similar letter(s) supporting the CWF Project to local, state or federal administrative or regulatory agencies, private financial institutions, or other entities with oversight or control over the CWF Project or its financing.

(3) The Parties agree that the CWF Project will not be inconsistent with the provisions of the Upper Santa Ana River Habitat Conservation Plan, if such plan is approved by the United States Fish & Wildlife Service ("**USFWS**").

(a) The City and Valley District, together with their partners under said MOU, may seek to obtain the regulatory permits necessary for

the CWF Project in advance of the completion of the Upper Santa Ana River Habitat Conservation Plan, *provided that* the provisions associated with the CWF Project are subsequently included in the Upper Santa Ana River Habitat Conservation Plan.

(b) If the USFWS does not approve the Upper Santa Ana River Habitat Conservation Plan by January 1, 2020, then the City and Valley District may seek to obtain separate regulatory permits for the CWF Project.

(4) After execution of this Agreement, after submittal of any SRF grant/loan application for the CWF Project, and upon request of the City or SB Water, Valley District and East Valley shall send a letter to the State Water Resources Control Board supporting the use of SRF grant and loan funds, at the lowest available rate of interest, to fund the CWF Project. Such letter shall be approved in advance by the City or SB Water. If requested by the City or SB Water, representatives of East Valley and/or Valley District shall participate in a teleconference with the State Water Resources Control Board or its staff to state that SRF grant or loan funds be issued to the City or SB Water for the construction of the CWF Project.

e. *Treatment and Management of Solids*

(1) *Prior to the Completion of the SNRC Project.* Until the completion of the SNRC Project, East Valley and City/SB Water will work cooperatively to enable the City/SB Water to treat solids originating within East Valley's service area in the same manner as at present. The Parties shall also work cooperatively: (i) to develop cost-effective plans and specifications for any additional pipelines or new equipment/facilities that may be necessary to effectuate the solids handling agreement described in paragraph 1(e)(2) below; (ii) in the acquisition and construction of such equipment/facilities; and (iii) in securing any needed regulatory permits or approvals. East Valley shall be responsible for all cost associated with such pipelines or new equipment/facilities as may be determined in the agreement described in paragraph 1(e)(2) below.

(2) *After Completion of the SNRC Project.* Within thirty (30) days of the effective date of this Agreement, East Valley and the City/SB Water will enter into negotiations for the handling of solids after the completion of the SNRC Project, with the goal of entering into a definitive agreement for the cost-effective handling of solids originating within East Valley's service area by the City/SB Water no later than one hundred eighty (180) days from the effective date of this Agreement.

(a) The initial term of the solids handing agreement shall be for ten (10) years, with two optional five (5) year renewal periods. The solids handling agreement shall commence on the Service Date. The solids handling agreement shall include an "evergreen" term that provides that the agreement shall be renewed for subsequent terms unless either party provides written notice of termination at least two years before the termination of the then-current term.

(b) The solids handling agreement shall provide for a service charge to be paid by East Valley to the City/SB Water, which charge shall be set so as to enable the City/SB Water to recover the actual costs of providing solids handling and treatment of the solids handling process liquid product, together with reasonable overhead not to exceed forty percent (40%) of the actual cost of service, *provided that* overhead shall not be charged on electricity costs charged by a third party utility provider and associated with the provision of solids handling.

(c) In the event that the City/SB Water and East Valley are unable to agree on the design, construction, or installation for the equipment/facilities that would enable SB Water to continue to provide solids handling services to East Valley after the Service Date by one hundred eighty (180) days after the effective date of this Agreement, East Valley shall, not later than thirty (30) days after the Service Date and on the anniversary of the Service Date thereafter for nine (9) years, pay SB Water the sum of seven hundred thousand dollars ($700,000) each year, for a total payment to SB Water of seven million dollars ($7,000,000). In the alternative, and subject to the prior written consent of SB Water and SB Water's concurrence on the value of the replenishment water, East Valley may replenish the SBBA with water that has an equivalent value as the payment to be made in any given year.

f. *Installation of Water Efficient Landscaping.* Not later than ninety (90) days after the date upon which LAFCo may approve the activation of East Valley's latent authority for wastewater treatment and disposal services, East Valley shall pay five hundred thousand dollars ($500,000) and Valley District shall agree to reimburse the City for up to five hundred thousand dollars ($500,000) to SB Water for the purpose of enabling SB Water to install water efficient landscape improvements in areas to be determined by the City and SB Water. During that same period of time, SB Water shall contribute an additional five hundred thousand dollars ($500,000) to that account, to bring the total contributions to the

account to one million five hundred thousand dollars ($1,500,000). The City and SB Water, after consulting East Valley and Valley District, shall develop a plan for the installation of water efficient landscape improvements using the $1.5 million, within one (1) year of the execution of this Agreement. The City and SB Water shall install such water efficient landscape improvements within three (3) years of the date of execution of this Agreement.

g. *Replenishment of the SBBA.* Beginning in the fiscal year of the Service Date or fiscal year 2021/22, whichever is later, Valley District shall deliver to the City/SB Water a total of thirty thousand (30,000) acre-feet of State Water Project Water, at Valley District's sole cost, for direct diversion and/or groundwater replenishment at the City/SB Water's direction. City/SB Water expects to use and Valley District expects to deliver three thousand (3,000) acre-feet of such water each year, but if Valley District is not able to deliver three thousand (3,000) acre-feet in a given year, it shall use its best efforts to deliver the undelivered water in the following fiscal years, provided that such water is available in any given year pursuant to Valley District's contract with the California Department of Water Resources. The unavailability of such water in any given year does not excuse Valley District's overall obligation under this Agreement to deliver thirty thousand (30,000) acre-feet of such water to the City/SB Water.

h. *Upper Santa Ana River Habitat Conservation Plan and the CWF Project.* Valley District shall use its best efforts to develop, in conjunction with USFWS and California Department of Fish and Wildlife ("**CDFW**") (collectively, the "**Wildlife Agencies**") and through the Wildlife Agencies' permitting processes, a habitat conservation plan for the Upper Santa Ana River that provides for take coverage for a new recycled water plant project on the part of the City/SB Water that would reduce the current discharge of treated wastewater into the Santa Ana River by five (5) million gallons/day.

(1) In the event that the final habitat conservation plan, or as provided in paragraphs 1(d)(3) and 1(h) above, the Wildlife Agencies' permitting processes, does not authorize the City/SB Water to reduce its discharge of treated wastewater to the Santa Ana River by five (5) million gallons/day, Valley District shall deliver to the City/SB Water up to three thousand (3,000) acre-feet per year of State Water Project Water, at Valley District's sole cost, for direct diversion and/or groundwater replenishment at the City/SB Water's direction.

(2) The annual amount of such water delivered by Valley District will be the difference between five (5) million gallons/day and the amount of treated wastewater discharge that SB Water is allowed to reduce from its current discharge amount. Valley District will provide this annual amount until

the City/SB Water can reduce its discharge by five (5) million gallons per day from its current discharge amount for its recycled water project, *provided that* prior to the construction of the City/SB Water's new recycled water plant, the City/SB Water has installed and is properly maintaining automatic back-up power for the RIXES Well Rehabilitation/Santa Ana Sucker Habitat Maintenance/Restoration Project at the City/SB Water's wastewater treatment plant(s).

(3) The Parties agree and acknowledge that future growth within the service areas of SB Water and East Valley may allow SB Water and East Valley to increase the quantity of recycled water generated from wastewater flows within their respective service areas. The Parties agree that they will support increases in the quantity of recycled water as part of both the SNRC Project and the CWF Project *provided that* the increase in recycled water for either project is derived from growth within that Party's service area *and provided further* that such increased use of recycled water does not diminish the quantity of treated wastewater that will be discharged into the Santa Ana River pursuant to the Upper Santa Ana River Habitat Conservation Plan.

2. *Application to San Bernardino County Local Agency Formation Commission to Activate Wastewater Treatment Authority.* Within 60 days of the execution of this Agreement, East Valley shall begin the process to submit to LAFCo an application to activate its latent wastewater treatment and disposal authority. East Valley agrees that it will pursue the application to a final decision by LAFCo, either in favor of the activation of the latent authority or to deny activation of that authority. At least 45 days prior to the submission of the application, East Valley shall provide a draft of the proposed application to the other Parties to this Agreement for review and comment. The provisions of the application shall be consistent with the terms of this Agreement and shall fully comply with all of the applicable requirements of LAFCo Law. No later than five (5) days after the date on which East Valley submits the application to LAFCo, the City/SB Water and Valley District shall submit letters supporting that application to LAFCo. The Parties understand that East Valley will request that LAFCo expedite processing of the application so that East Valley's latent wastewater treatment authority can be activated no later than December 31, 2018. The City/SB Water and Valley District, upon request by East Valley, shall appear at public meetings to support East Valley's application and/or take such other actions (including but not limited to resolutions of their respective governing boards) to support that application.

3. *Transfers of Property and Other Assets.* The Parties will negotiate and execute definitive agreements for the following transfers of property and assets, which will become effective on the date that LAFCo approves the activation of East Valley's latent authority to treat and dispose of wastewater.

a. The transfer, in fee title and without encumbrances or liens, from East Valley to the City/SB Water of approximately 22 acres of land located at the intersection of Sterling and 3rd Street (APNs 1192-231-01 and 1192-241-01), save for the existing well portion of the property, as shown on Exhibit B, which is attached hereto and incorporated herein by reference.

b. The transfer from the City/SB Water to East Valley of the balance of the East Trunk Sewer Line Replacement Fund, which is currently estimated to be approximately $8 million, which funds have been collected by the City/SB Water from East Valley's ratepayers since 1984 for the purpose of expanding the capacity of the East Trunk Sewer Line to meet the needs of future growth. Not later than ninety (90) days after the date upon which LAFCo may approve the activation of East Valley's latent authority for wastewater treatment and disposal services, the East Trunk Sewer Line funds will no longer be collected by the City/SB Water. East Valley shall use the transferred funds in compliance with all applicable laws, including but not limited to Proposition 218.

c. The transfer under subparagraph 3(a) is made by East Valley to the City/SB Water in consideration of the transfer from the City/SB Water to East Valley under subparagraph 3(b).

4. *Dismissal/Prevention of Litigation.* The Parties agree that this Agreement represents a comprehensive settlement of all current litigation between the Parties. Not later than ten (10) days after the execution of this Agreement, the City shall dismiss its appeal in the CEQA Lawsuit with prejudice, and the City, East Valley, and Valley District shall dismiss their respective complaints in the LAFCo Lawsuit with prejudice. Valley District and East Valley shall, also within ten (10) days after the execution of this Agreement, withdraw their pending Bill of Costs filed in the CEQA Lawsuit, and all Parties shall bear their own costs and fees incurred in said litigation. Valley District and East Valley agree that they will not file any administrative or judicial challenges to the CWF Project.

5. *Indemnification*

a. *General Indemnification.* Each Party shall indemnify, defend and hold harmless each of the other Parties and their respective directors, officers, employees and agents from and against all damages, liabilities, claims, actions, demands, costs and expenses (including, but not limited to, costs of investigations, lawsuits and any other proceedings whether in law or in equity, settlement costs, attorneys' fees and costs), and penalties or violations of any kind, which arise out of, result from, or are related to the Party's performance of its obligations under this Agreement.

b. *Indemnification Procedures.* Any Party that is an indemnified party (the "**Indemnified Party**") that has a claim for indemnification against the other Party (the "**Indemnifying Party**") under this Agreement, shall promptly notify the Indemnifying Party in writing, *provided, however,* that no delay on the part of the Indemnified Party in notifying the Indemnifying Party shall relieve the Indemnifying Party from any obligation unless (and then solely to the extent) the Indemnifying Party is prejudiced. Further, the Indemnified Party shall promptly notify the Indemnifying Party of the existence of any claim, demand, or other matter to which the indemnification obligations would apply, and shall give the Indemnifying Party a reasonable opportunity to defend the same at its own expense and with counsel of its own selection, *provided* that the Indemnified Party shall at all times also have the right to fully participate in the disputed matter at its own expense. If the Indemnifying Party, within a reasonable time after notice from the Indemnified Party, fails to defend a claim, demand or other matter to which the indemnification obligations would apply, the Indemnified Party shall have the right, but not the obligation, to undertake the defense of, and to compromise or settle (exercising reasonable business judgment), the claim or other matter, on behalf, or for the account, and at the risk, of the Indemnifying Party. If the claim is one that cannot by its nature be defended solely by the Indemnifying Party, then the Indemnified Party shall make available all information and assistance to the Indemnifying Party that the Indemnifying Party may reasonably request.

6. *Administration of Agreement*

a. *Books and Records.* Each Party shall have access to and the right to examine any of the other Parties' pertinent books, documents, papers or other records (including, without limitation, records contained on electronic media) relating to the performance of that Party's obligations pursuant to this Agreement.

(1) *Retention of Records; Preservation of Privilege.* Each Party shall retain all such books, documents, papers or other records to facilitate such

review in accordance with that Party's record retention policy. Access to each Party's books and records shall be during normal business hours only. Nothing in this paragraph shall be construed to operate as a waiver of any applicable privileges.

(2) *Outside Auditors.* Any Party may, at any time and at its sole cost, hire an auditor to examine the accounting for work performed pursuant to this Agreement. The Parties may also agree to retain an independent auditor to review the accounting for work performed pursuant to this Agreement. The costs of such an auditor will be shared equally among the Parties.

b. *Disputes.* The Parties recognize that there may be disputes regarding the obligations of the Parties or the interpretation of this Agreement. The Parties agree that they may attempt to resolve disputes as follows:

(1) *Statement Describing Alleged Violation or Interruption of Agreement.* A Party alleging a violation or interruption of this Agreement (the "**Initiating Party**") shall provide a written statement describing all facts that it believes constitute a violation or interruption of this Agreement to the Party alleged to have violated or interrupted the terms of this Agreement (the "**Responding Party**").

(2) *Response to Statement of Alleged Violation or Interruption.* The Responding Party shall have sixty (60) days from the date of the written statement to prepare a written response to the allegation of a violation or interruption of this Agreement and serve that response on the Initiating Party or to cure the alleged violation or interruption to the reasonable satisfaction of the Initiating Party. The Initiating Party and the Responding Party shall then meet within thirty (30) days of the date of the response to attempt to resolve the dispute amicably.

(3) *Mediation of Dispute.* If the Initiating Party and the Responding Party cannot resolve the dispute within ninety (90) days of the date of the written response, they shall engage a mediator, experienced in water-related disputes, to attempt to resolve the dispute. Each Party shall ensure that it is represented at the mediation by a Director. These representatives of the Initiating Party and the Responding Party may consult with staff and/or technical consultants during the mediation and such staff and/or technical consultants may be present during the mediation. The costs of the mediator shall be divided evenly between the Initiating Party and the Responding Party or Parties.

(4) *Prior to Claims Under California Tort Claims Act.* The Parties agree that the procedure described in this paragraph 6(b) represents an effort to resolve disputes without the need for a formal claim under the California Tort Claims Act or other applicable law. The period of time for the presentation of a claim by one Party against another shall be tolled for the period from the date on which the Initiating Party files a written statement until the date upon which the mediator renders a decision.

(5) *Reservation of Rights.* Nothing in this paragraph 6(b) shall require a Party to comply with a decision of the mediator and, after the completion of the mediation process described above, each Party shall retain and may exercise at any time all legal and equitable rights and remedies it may have to enforce the terms of this Agreement; provided, that prior to commencing litigation, a Party shall provide at least five (5) calendar days' written notice of its intent to sue to the other Party.

7. *General Provisions.*

a. *Authority.* Each signatory of this Agreement represents that s/he is authorized to execute this Agreement on behalf of the Party for which s/he signs. Each Party represents that it has legal authority to enter into this Agreement and to perform all obligations under this Agreement.

b. *Amendment.* This Agreement may be amended or modified only by a written instrument executed by each of the Parties to this Agreement.

c. *Jurisdiction and Venue.* This Agreement shall be governed by and construed in accordance with the laws of the State of California, except for its conflicts of law rules. Any suit, action, or proceeding brought under the scope of this Agreement shall be brought and maintained to the extent allowed by law in the County of San Bernardino, California.

d. *Headings.* The paragraph headings used in this Agreement are intended for convenience only and shall not be used in interpreting this Agreement or in determining any of the rights or obligations of the Parties to this Agreement.

e. *Construction and Interpretation.* This Agreement has been arrived at through negotiations and each Party has had a full and fair opportunity to revise the terms of this Agreement. As a result, the normal rule of construction that any ambiguities are to be resolved against the drafting Party shall not apply in the construction or interpretation of this Agreement.

f. *Entire Agreement.* This Agreement constitutes the entire agreement of the Parties with respect to the subject matter of this Agreement and, save as expressly provided in this Agreement, supersedes any prior oral or written agreement, understanding, or representation relating to the subject matter of this Agreement.

g. *Partial Invalidity.* If, after the date of execution of this Agreement, any provision of this Agreement is held to be illegal, invalid, or unenforceable under present or future laws effective during the term of this Agreement, such provision shall be fully severable. However, in lieu thereof, there shall be added a provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and be legal, valid and enforceable.

h. *Successors and Assigns.* This Agreement shall be binding on and inure to the benefit of the successors and assigns of the respective Parties to this Agreement. No Party may assign its interests in or obligations under this Agreement without the written consent of the other Parties, which consent shall not be unreasonably withheld or delayed.

i. *Waivers.* Waiver of any breach or default hereunder shall not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this Agreement and forbearance to enforce one or more of the rights or remedies provided in this Agreement shall not be deemed to be a waiver of that right or remedy.

j. *Attorneys' Fees and Costs.* The prevailing Party in any litigation or other action to enforce or interpret this Agreement shall be entitled to reasonable attorneys' fees, expert witnesses' fees, costs of suit, and other and necessary disbursements in addition to any other relief deemed appropriate by a court of competent jurisdiction.

k. *Necessary Actions.* Each Party agrees to execute and deliver additional documents and instruments and to take any additional actions as may be reasonably required to carry out the purposes of this Agreement.

l. *Compliance with Law.* In performing their respective obligations under this Agreement, the Parties shall comply with and conform to all applicable laws, rules, regulations and ordinances.

m. *Third Party Beneficiaries.* This Agreement shall not create any right or interest in any non-Party or in any member of the public as a third party beneficiary.

n. *Counterparts.* This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute but one and the same instrument.

o. *Notices.* All notices, requests, demands or other communications required or permitted under this Agreement shall be in writing unless provided otherwise in this Agreement and shall be deemed to have been duly given and received on: (i) the date of service if served personally, served by facsimile transmission, or served via electronic mail on the Party to whom notice is to be given at the address(es) provided below, (ii) on the first day after mailing, if mailed by Federal Express, U.S. Express Mail, or other similar overnight courier service, postage prepaid, and addressed as provided below, or (iii) on the third day after mailing if mailed to the Party to whom notice is to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

Notice to San Bernardino Valley Municipal Water District

Douglas Headrick, General Manager
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
380 East Vanderbilt Way, San Bernardino, CA 92408
Phone: (909) 820-3701
Email: douglash@sbvmwd.com

David R.E. Aladjem
DOWNEY BRAND LLP
621 Capitol Mall, Sacramento, CA 95814
Phone: (916) 520-5361
Email: daladjem@downeybrand.com

Notice to East Valley Water District

John Mura, General Manager/CEO
EAST VALLEY WATER DISTRICT
31111 Greenspot Rd., Highland, CA 92346
Phone: 909-889-9501
Email: john@eastvalley.org

Jean Cihigoyenetche
JC LAW FIRM
5871 Pine Ave., Suite 200, Chino Hills, CA 91709
Phone: 909-941-3382
E-mail: jean@thejclawfirm.com

Notice to the City of San Bernardino and the City of San Bernardino Municipal Water Department

Andrea M. Miller, City Manager
CITY OF SAN BERNARDINO
290 North "D" Street
San Bernardino, CA 92418
Phone: (909) 384-5122
E-mail: Miller_an@sbcity.org

Gary D. Saenz
City Attorney
Office of the City Attorney
290 North "D" Street, 3rd Floor
San Bernardino, CA 92401
Phone: (909) 384-5355
E-mail: Saenz_Ga@sbcity.org

Andrew M. Hitchings
Somach Simmons & Dunn
500 Capitol Mall, Suite 1000
Sacramento, CA 95814
Phone: (916) 446-7979
E-mail: ahitchings@somachlaw.com

IN WITNESS HEREOF, the Parties have executed this Agreement on the dates set forth below:

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

By: _____ Dated: 11/21/17

Susan Longville
President, Board of Directors

By: _____ Dated: 11/21/17

Steve Copelan, Secretary

APPROVED AS TO FORM

By: _____ Dated: 11/21/17

David R.E. Aladjem
Downey Brand, LLP
Counsel for **San Bernardino Valley Municipal Water District**

EAST VALLEY WATER DISTRICT

By: _____ Dated: 11-21-17

Ronald L. Coats
Chairman of the Board

By: _____ Dated: 11-21-17

John Mura, General Manager/CEO

APPROVED AS TO FORM

By: _____ Dated: 11-21-17

Jean Cihigoyenetche
JC Law Firm
Counsel for **East Valley Water District**

CITY OF SAN BERNARDINO

By: R. Carey Davis Dated: 11/29/2017

R. Carey Davis
Mayor

By: Andrea M. Miller Dated: 11/29/17 amm

Andrea Miller
City Manager

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

By: Dated: 11-30-17

Toni Callicott
President

APPROVED AS TO FORM

By: Dated: 11/28/17

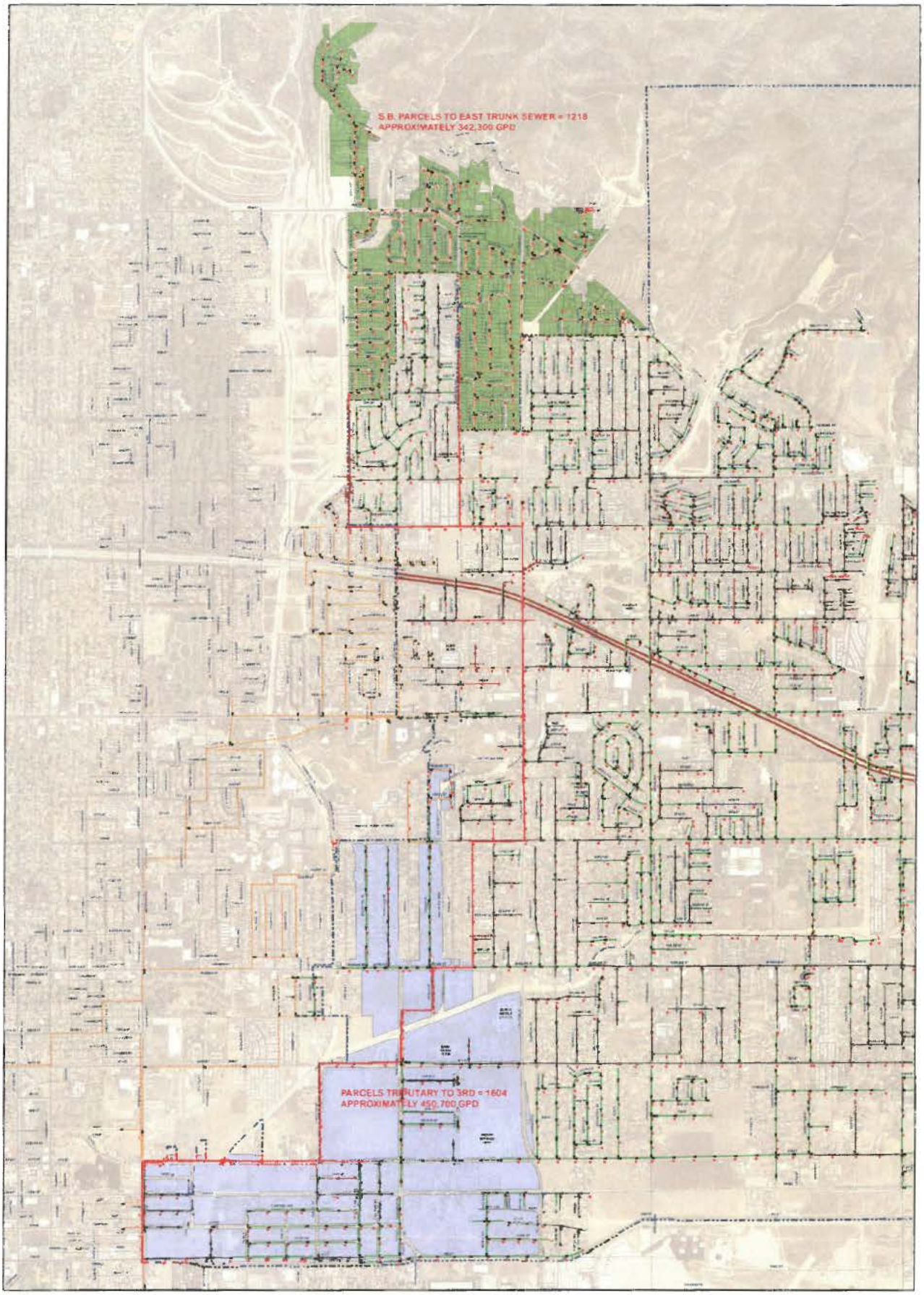
Gary D. Saenz, City Attorney

By: Dated: 11/30/17

Andrew M. Hitchings
Somach Simmons & Dunn
Special Counsel for **City of San Bernardino**

Exhibit A: Map: EVWD and San Bernardino Tributary to 3rd Sewer Study
Exhibit B: Map: Sterling Properties

Exhibit A



SEWER

MANHOLE

SAN BERNARDINO CUSTOMER INSIDE EVWD BOUNDARY

SAN BERNARDINO CUSTOMERS OUTSIDE EVWD DISTRICT SERVED BY EVWD

EVWD CUSTOMERS SERVED BY SAN BERNARDINO

EVWD AND SAN BERNARDINO TRIBUTARY TO 3RD SEWER STUDY

EAST VALLEY WATER DISTRICT

Exhibit B

STERLING PROPERTIES

0 125 250 500 750 1,000 Feet

EMERGENCY WATER SUPPLY AGREEMENT
BETWEEN THE CITY OF SAN BERNARDINO MUNICIPAL
WATER DEPARTMENT AND THE DEVORE MUTUAL WATER COMPANY

This agreement ("Agreement"), by and between the City of San Bernardino Municipal Water Department ("Department") and the Devore Mutual Water Company ("Devore"), is entered into and effective from November 3, 2015

Recitals

A. Devore desires to take delivery of water from the Department to supplement its water supply in an emergency. Devore is willing to purchase said water at the current rate determined by Rule and Regulation No. 21

B. The Department, a municipal agency, and Devore, a mutual water company ("Party or Parties"), are both water providers.

C. The service areas of the two respective Parties are contiguous and the Department is willing to deliver water to Devore subject to the hydraulic limitations of the Devore/Meyers pressure zone.

Agreements

The Parties therefore, agree as follows:

1. "Emergency" means a condition of disaster or calamity arising within the area of operation of the parties, caused by fire, drought, flood, storm, earthquake, civil disturbance, or other condition which is likely to be beyond the control of the Party requesting assistance.

2. The Department hereby agrees to furnish the following service connection for Devore's use in the case of emergencies: One (1) - four (4) inch standby service, located at the intersection of Devore Road and Cajon Blvd. in the County of San Bernardino. The standby service to be provided by the Department is limited to the extent that it is not a guaranteed service and is dependent on the Department's ability to first provide full service to the Department's customers. The service referenced will be installed at the Department's expense and will be the Department's property.

3. Devore hereby agrees to furnish and install a four (4) inch backflow device, backflow device vandal cage, and all downstream plumbing from the Department installed four (4) inch service to the Devore production facility located approximately 1,200 feet to the south. The expense for the facilities mentioned above shall be the responsibility of Devore and will remain Devore's property.

4. Devore shall notify the Department of its need for delivery and shall provide an estimate of duration of delivery. Devore will pay the standard rates, published and established by the Department, for any water served through the Department's service connection.

5. Either Party may terminate this Agreement upon sixty (60) days written notice. Alternatively, if either Party materially breaches this Agreement, the Agreement shall terminate immediately upon notice to the breaching Party by the other Party.

6. This Agreement may only be modified in writing and only with the express approval of both Parties.

7. The Parties acknowledge that nothing in this Agreement creates any claim, vested right, property right or water right, and that the delivery and sale of water by the Department creates no claim, vested right, property right or water right by Devore. Each Party acknowledges that the interest created herein is a contingent right to purchase and that such interest is terminable as provided in this Agreement. This Agreement does not convey any title, either to water or distribution facilities, to either Party.

8. This Agreement becomes effective upon execution by both Parties and its Primary Term will run from that date until ten (10) years after. Upon expiration of the Primary Term, the Agreement will automatically extend until such time as either Party provides notice of termination.

9. Nothing contained in this Agreement shall create any rights, duties or obligations as to other parties and there is no intent in execution of this Agreement to create third Party beneficiaries to this Agreement.

10. All notices, requests, demands or other communications required or permitted under this Agreement shall be in writing unless provided otherwise in this Agreement and shall be deemed to have been duly given and received on: (i) the date of service if served personally (ii) on the first day after mailing, if mailed or dispatched by Federal Express, U.S. Express Mail, or other similar overnight courier service, (iii) on the third (3rd) business day after mailing if mailed to the Party to whom notice is to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

To Devore: Devore Mutual Water Company
18185 Kenwood Avenue
Devore, CA 92407
(909) 887-3310

To Department: San Bernardino Municipal Water Department
397 Chandler Place
San Bernardino, CA 92408
(909) 384-5091
(909) 384-5215 (FAX)
Attn: General Manager

DEVORE

Devore Mutual Water Company

By: _____ Date: 10-20-2015

By: _____ Date: 10-22-15

DEPARTMENT

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

By: _____ Date: 11-3-15

Tom Callicott
President, Board of Water Commissioners

ATTEST:

_____

Robin Ohama
Deputy City Clerk
Ex-Officio Secretary

Board Mtg.
11/3/15

CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT

BOARD OF WATER COMMISSIONERS
STAFF REPORT

TO: Stacey R. Aldstadt, General Manager

FROM: Miguel J. Guerrero, P.E., Director of Water Utility

SUBJECT: **APPROVAL OF EMERGENCY WATER SUPPLY AGREEMENT BETWEEN THE CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT AND DEVORE MUTUAL WATER COMPANY**

DATE: October 23, 2015

COPIES: Robin Ohama (w/o attach), Terri Willoughby (w/o attach), Greg Gage (w/attach) Tim Connor (w/attach), Sally Duran (w/attach)

BACKGROUND:

Devore Mutual Water Company (Devore Mutual) is a relatively small water agency servicing over 1,000 residents in the Devore area. Like many water agencies throughout California, Devore Mutual is contending with the extreme drought condition in the state and the water supply issues that result from it. In Devore Mutual's case, declining groundwater levels are affecting production and supply redundancies.

Staff has met with Devore Mutual to discuss the company's need for an emergency water supply in the event that their water supply is reduced or interrupted. Similar to agreements that the Department has made with other neighboring water agencies, staff has negotiated the terms of an Emergency Water Supply Agreement (Agreement) with Devore Mutual.

The Agreement provides that the Department will furnish one service connection through which it can provide water supply to Devore Mutual. "Emergency" is narrowly defined so that it does not create an obligation for delivery without substantial need. No water rights are transferred through the Agreement.

RECOMMENDATION:

Staff recommends that the Board of Water Commissioners make the following motion:

Approve the Emergency Water Supply Agreement between the City of San Bernardino Municipal Water Department and Devore Mutual Water Company and authorize the President to execute the Agreement.

Agenda Item _____

SUBJECT: APPROVAL OF EMERGENCY WATER SUPPLY AGREEMENT BETWEEN THE CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT AND DEVORE MUTUAL WATER COMPANY

Respectfully submitted,

Miguel J. Guerrero, P.E.
Director of Water Utility

MJG:swd
Attach.

H-5: DWR Population Tool Output

WUEdata - San Bernardino City Of

Sign Out

Please print this page to a PDF and include as part of your UWMP submittal.

Confirmation Information

Generated By	Water Supplier Name	Confirmation #	Generated On
Aaron Morland	San Bernardino City Of	5848096549	3/19/2021 12:08:58 PM

Boundary Information

Census Year	Boundary Filename	Internal Boundary ID
1990	San Bernardino City.kml	684
2000	San Bernardino City.kml	684
2010	San Bernardino City.kml	684
1990	San Bernardino City.kml	684
2000	San Bernardino City.kml	684
2010	San Bernardino City.kml	684
1990	San Bernardino City.kml	684
2000	San Bernardino City.kml	684
2010	San Bernardino City.kml	684
1990	San Bernardino City.kml	684
2000	San Bernardino City.kml	684
2010	San Bernardino City.kml	684

Baseline Period Ranges

10 to 15-year baseline period

Number of years in baseline period: 10

Year beginning baseline period range: 1999

Year ending baseline period range[1]: 2008

5-year baseline period

Year beginning baseline period range: 2003

Year ending baseline period range[2]: 2007

[1] The ending year must be between December 31, 2004 and December 31, 2010.

[2] The ending year must be between December 31, 2007 and December 31, 2010.

Persons-Per-SF Connection and Persons-Per-MF/GQ Connection

	Census Block Group Level	Census Block Level						
Year	% Population in SF Housing	Service Area Population	Population in SF Housing (calculated)	Population in MF/GQ Housing (calculated)	# SF Connections	# MF/GQ Connections	Persons per SF Connection	Persons per MF/GQ Connection
1990	68.78%	151,071	103,914	47,157			3.22	12.75
1991	-	-	-	-	-	-	3.25	13.00
1992	-	-	-	-	-	-	3.29	13.25
1993	-	-	-	-	-	-	3.32	13.50
1994	-	-	-	-	-	-	3.35	13.74
1995	-	-	-	-	-	-	3.39	13.99
1996	-	-	-	-	-	-	3.42	14.24
1997	-	-	-	-	-	-	3.46	14.49
1998	-	-	-	-	-	-	3.49	14.74
1999	-	-	-	-	-	-	3.52	14.98
2000	72.63%	165,347	120,094	45,253	33757	2971	3.56	15.23
2001	-	-	-	-	-	-	3.59	15.48
2002	-	-	-	-	-	-	3.63	15.73
2003	-	-	-	-	-	-	3.66	15.97
2004	-	-	-	-	-	-	3.70	16.22
2005	-	-	-	-	-	-	3.73	16.47
2006	-	-	-	-	-	-	3.76	16.72
2007	-	-	-	-	-	-	3.80	16.97
2008	-	-	-	-	-	-	3.83	17.21
2009	-	-	-	-	-	-	3.87	17.46
2010	73.03%	186,066	135,893	50,173	34886	2833	3.90	17.71
2011	-	-	-	-	-	-	3.56	15.23
2012	-	-	-	-	-	-	3.56	15.23
2013	-	-	-	-	-	-	3.56	15.23
2014	-	-	-	-	-	-	3.56	15.23
2015	-	-	-	-	-	-	3.56	15.23
2020	-	-	-	-	-	-	4.23 *	20.19 *

Population Using Persons-Per-SF Connection and Persons-Per-MF/GQ Connection

Year		# SF Connections	# MF/GQ Connections	Persons per SF Connection	Persons per MF/GQ Connection	SF Population	MF/GQ Population	Total Population
10 to 15 Year Baseline Population Calculations								
Year 1	1999			3.52	14.98			
Year 2	2000	33757	2971	3.56	15.23	120,094	45,253	165,347
Year 3	2001	34123	2965	3.59	15.48	122,638	45,892	168,530
Year 4	2002	33610	2849	3.63	15.73	121,937	44,803	166,740
Year 5	2003	33745	2905	3.66	15.97	123,574	46,404	169,979
Year 6	2004	34389	2926	3.70	16.22	127,102	47,466	174,567
Year 7	2005	34697	2927	3.73	16.47	129,420	48,208	177,628
Year 8	2006	35853	2952	3.76	16.72	134,951	49,352	184,302
Year 9	2007	35360	2927	3.80	16.97	134,297	49,659	183,957
Year 10	2008	35127	2856	3.83	17.21	134,607	49,163	183,770
5 Year Baseline Population Calculations								
Year 1	2003	33745	2905	3.66	15.97	123,574	46,404	169,979
Year 2	2004	34389	2926	3.70	16.22	127,102	47,466	174,567
Year 3	2005	34697	2927	3.73	16.47	129,420	48,208	177,628
Year 4	2006	35853	2952	3.76	16.72	134,951	49,352	184,302
Year 5	2007	35360	2927	3.80	16.97	134,297	49,659	183,957
2020 Compliance Year Population Calculations								
2020		35952	2917	4.23 *	20.19 *	151,934	58,896	210,830

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QUESTIONS / ISSUES? CONTACT THE WUEDATA HELP DESK
MWELO QUESTIONS / ISSUES? CONTACT THE MWELO HELP DESK

H-6: DWR Tables

2-1R | Public Water Systems

STATUS: Published

NOTES: -

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA3610039	SAN BERNARDINO CITY	45,413	42,182
	Total:	**45,413**	**42,182**

2-2 | Public Water Systems

STATUS: Published

NOTES: -

Type of Plan	Member of RUWMP	Member of Regional Alliance	Name of RUWMP or Regional Alliance
Regional UWMP (RUWMP)			Upper Santa Ana River Integrated Regional Urban Water Management Plan

2-3 | Agency Identification

STATUS: Published

NOTES: -

Type of Supplier	Year Type	First Day of Year		Unit Type
		DD	MM	
Retailer	Calendar Years			Acre Feet (AF)

Conversion to Gallons: *325851*
Conversion to Gallons per Day: *892.7425*

2-4R | Water Supplier Information Exchange

STATUS: Published

NOTES: -

Wholesale Water Supplier Name
San Bernardino Valley Municipal Water District

3-1R | Current & Projected Population

STATUS: Published

NOTES: -

Population Served	2020	2025	2030	2035	2040	2045
Total	210,830	217,221	223,806	230,591	236,206	241,958
Total	**210,830**	**217,221**	**223,806**	**230,591**	**236,206**	**241,958**

4-1R | Actual Demands for Water

STATUS: Published

NOTES: -

Use Type	Additional Description	Level of Treatment When Delivered	2020 Volume
Single Family	Residential-Single Family	Drinking Water	18,159
Multi-Family	Residential-Multi-Family	Drinking Water	5,661
Industrial	Commercial/Institutional+ Municipal	Drinking Water	6,142
Landscape	Landscape Irrigation	Drinking Water	5,962
Other	Fire Service	Drinking Water	27
Losses	Nonrevenue	Drinking Water	4,155
Sales/Transfers/Exchanges to Other Agencies	Sales to Other Agencies	Drinking Water	2
Landscape	WRP Dewatering Wells	Raw Water	2,075
		Total:	**42,182**

4-2R | Projected Demands for Water

STATUS: Published

NOTES: -

Use Type	Additional Description	Projected Water Use				
		2025	2030	2035	2040	2045
Single Family	Residential-Single Family	18,710	19,260	19,811	20,253	20,695
Multi-Family	Residential-Multi-Family	5,832	6,004	6,175	6,313	6,451
Commercial	Commercial/Institutional+Municipal	6,328	6,514	6,701	6,850	7,000
Landscape	Landscape Irrigation	6,143	6,323	6,504	6,649	6,795
Other	Fire Service	28	28	29	30	30
Losses	Nonrevenue	4,074	4,194	4,314	4,411	4,507
Landscape	WRP Dewatering Wells	-	-	-	-	-
	Total:	**41,115**	**42,325**	**43,534**	**44,506**	**45,478**

4-3R | Total Gross Water Use

STATUS: Published

NOTES: -

	2020	2025	2030	2035	2040	2045
Potable and Raw Water From Table 4-1R and 4-2R	42,182	41,115	42,325	43,534	44,506	45,478
Recycled Water Demand* From Table 6-4R	-	1,133	1,133	1,133	1,133	1,133
Total Water Use:	**42,182**	**42,248**	**43,458**	**44,667**	**45,639**	**46,611**

4-4R | 12 Month Water Loss Audit Reporting

STATUS: Published

NOTES: -

Report Period Start Date		Volume of Water Loss*
MM	**YYYY**	
1	2016	3,492
1	2017	4,056
1	2018	3,821
1	2019	3,507
1	2020	4,155 (Estimate)

4-5R | Inclusion in Water Use Projections

STATUS: Published

NOTES: -

Are Future Water Savings Included in Projections? Refer to Appendix K of UWMP Guidebook.	No
Are Lower Income Residential Demands Included in Projections?	Yes

5-1R | Baselines & Targets Summary

STATUS: Published

NOTES: -

Baseline Period	Start Year	End Year	Average Baseline GPCD*	Confirmed 2020 Target *
10-15 Year	1999	2008	252	203
5 Year	2003	2007	255	

*All values are in Gallons per Capita per Day (GPCD)

5-2R | 2020 Compliance

STATUS: Published

NOTES: -

Actual 2020 GPCD*	Optional Adjustments to 2020 GPCD					2020 GPCD* (Adjusted if applicable)	Supplier Achieved Targeted Reduction in 2020
	Extraordinary Events*	Economic Adjustment*	Weather Normalization*	Total Adjustments*	Adjusted 2020 GPCD*		
179	0	0	0	0	0	0	Yes

*All values are in Gallons per Capita per Day (GPCD)

6-1R | Groundwater Volume Pumped

STATUS: Published

NOTES: -

Select One						
Groundwater Type	**Location or Basin Name**	**2016**	**2017**	**2018**	**2019**	**2020**
Alluvial Basin	Bunker Hill	37,276	39,331	38,897	37,840	42,182
	Total:	**37,276**	**39,331**	**38,897**	**37,840**	**42,182**

6-2R | Wastewater Collected within Service Area in 2020

STATUS: Published

NOTES: -

The supplier will complete the table.

Percentage of 2020 service area covered by wastewater collection system (optional):	
Percentage of 2020 service area population covered by wastewater collection system (optional):	

Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	**Wastewater Volume Metered or Estimated**	**Wastewater Volume Collected from UWMP Service Area in 2020**	**Name of Wastewater Agency Receiving Collected Wastewater**	**Wastewater Treatment Plant Name**	**Wastewater Treatment Plant Located within UWMP Area**	**WWTP Operation Contracted to a Third Party**
City of San Bernardino	Metered	14,415	**City of San Bernardino**	San Bernardino Water Reclamation Plant (WRP)	Yes	No
	Total:	**14,415**				

6-3R | Wastewater Treatment & Discharge Within Service Area in 2020

STATUS: Published

NOTES: -

The supplier will complete the table.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number	Method of Disposal	Plant Treats Wastewater Generated Outside the Service Area	Treatment Level	2020 Volumes				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
San Bernardino Water Reclamation Plant	Rapid Infiltration/Extraction (RIX) Plant	Flow to RIX		Other	Yes	Secondary, Disinfected - 23	23,763	23,763	-	-	-
						Total:	**23,763**	**23,763**	**-**	**-**	**-**

6-4R | Recycled Water Direct Beneficial Uses Within Service Area

STATUS: Published

NOTES:

The supplier will complete the table.										
Name of Supplier Producing (Treating) the Recycled Water:			City of San Bernardino Municipal Water Department							
Name of Supplier Operating the Recycled Water Distribution System:			City of San Bernardino Municipal Water Department							
Supplemental Volume of Water Added in 2020:										0%
Source of 2020 Supplemental Water:										0%
Beneficial Use Type	**Potential Beneficial Uses of Recycled Water**	**Amount of Potential Uses of Recycled Water**	**General Description of 2020 Uses**	**Level of Treatment**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**
Landscape Irrigation (excludes golf courses)				Tertiary		1,133	1,133	1,133	1,133	1,133
Golf Course Irrigation										
Commercial Use										
Industrial Use										
Geothermal and Other Energy Production										
Seawater Intrusion Barrier										
Recreational Impoundment										
Wetlands or Wildlife Habitat										
Groundwater Recharge (IPR)*										
Surface Water Augmentation (IPR)*										
Direct Potable Reuse										
				Total:	**-**	**1,133**	**1,133**	**1,133**	**1,133**	**1,133**
Groundwater Recharge (IPR)*	Bunker Hill - Recycled Water Recharge			Advanced	-	4,472	4,472	6,714	8,956	8,956

*IPR - Indirect Potable Reuse

6-5R | 2015 Recycled Water Use Projection Compared to 2020 Actual

STATUS: Published

NOTES: 2015 water budget projected 2800 afy of recycled water sales, which is shown as Other, and 2800 afy of recycled water for landscape

The supplier will complete the table.

Use Type	2015 Projection for 2020	2020 Actual Use
Agricultural Irrigation		
Landscape Irrigation (excludes golf courses)	2,800	-
Golf Course Irrigation		
Commercial Use		
Industrial Use		
Geothermal and Other Energy Production		
Seawater Intrusion Barrier		
Recreational Impoundment		
Wetlands or Wildlife Habitat		
Groundwater Recharge (IPR)*		
Surface Water Augmentation (IPR)*		
Direct Potable Reuse		
Other	2,800	-
Total:	**5,600**	**-**

6-6R | Methods to Expand Future Recycled Water Use

STATUS: Published

NOTES: Gradual increase from 2 MGD to 9 MGD by 2040, per RW data provided by SBMWD on Teams

The supplier will complete the table below.

Name of Action	Description	Planned Implementation Year	Expected Increase of Recycled Water Use
Water Reclamation Plant Upgrade	Water reclamation facility upgrade and expansion	2022	2,242
Water Reclamation Plant Upgrade	Water reclamation facility upgrade and expansion	2025	3,363
Water Reclamation Plant Upgrade	Water reclamation facility upgrade and expansion	2035	2,242
Water Reclamation Plant Upgrade	Water reclamation facility upgrade and expansion	2040	2,242
		Total:	**10,089**

6-7R | Expected Future Water Supply Projects or Programs

STATUS: Published

NOTES: -

The supplier will complete the table.

Name of Future Projects or Programs	Joint Project with Other Suppliers	Agency Name	Description	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Supplier
Water Reclamation Plant Upgrade	Yes	City of Colton, City of Loma Linda	Water reclamation facility upgrade and expansion	2022	All Year Types	2,242
Water Reclamation Plant Upgrade	Yes	City of Colton, City of Loma Linda	Water reclamation facility upgrade and expansion	2025	All Year Types	3,363
Water Reclamation Plant Upgrade	Yes	City of Colton, City of Loma Linda	Water reclamation facility upgrade and expansion	2035	All Year Types	2,242
Water Reclamation Plant Upgrade	Yes	City of Colton, City of Loma Linda	Water reclamation facility upgrade and expansion	2040	All Year Types	2,242

6-8R | Actual Water Supplies

STATUS: Published

NOTES: -

Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality	Total Right or Safe Yield
Groundwater (not desalinated)	Bunker Hill	40,107	Drinking Water	
Groundwater (not desalinated)	Bunker Hill	2,075	Other Non-Potable Water	
	Total:	**42,182**		**-**

6-8DS | Source Water Desalination

STATUS: Published

NOTES: -

Neither groundwater nor surface water are reduced in salinity prior to distribution. The supplier will not complete the table.

6-9R | Projected Water Supplies

STATUS: Published

NOTES: -

Water Supply	Additional Detail on Water Supply	Projected Water Supply									
		2025		2030		2035		2040		2045	
		Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield	Reasonably Available Volume	Total Right or Safe Yield
Groundwater (not desalinated)	Bunker Hill	42,980		44,371		43,521		42,396		43,514	
Recycled Water	Bunker Hill - Recycled Water Recharge	4,472		4,472		6,714		8,956		8,956	
Recycled Water	Recycled Water - Direct	1,133		1,133		1,133		1,133		1,133	
	Total:	**48,585**	**-**	**49,976**	**-**	**51,368**	**-**	**52,485**	**-**	**53,603**	**-**

7-1R | Basis of Water Year Data (Reliability Assessment)

STATUS: Published

NOTES: -

Quantification of available supplies is provided in this table as either volume only, percent only, or both.

Year Type	Base Year	Available Supply if Year Type Repeats	
		Volume Available	Percent of Average Supply
Average Year	2020		100%
Single-Dry Year	2020		110%
Consecutive Dry Years 1st Year	2020		110%
Consecutive Dry Years 2nd Year	2020		110%
Consecutive Dry Years 3rd Year	2020		110%
Consecutive Dry Years 4th Year	2020		110%
Consecutive Dry Years 5th Year	2020		110%

7-2R | Normal Year Supply and Demand Comparison

STATUS: Published

NOTES: -

	2025	2030	2035	2040	2045
Supply Totals From Table 6-9R	48,585	49,976	51,368	52,485	53,603
Demand Totals From Table 4-3R	42,248	43,458	44,667	45,639	46,611
Difference:	**6,337**	**6,519**	**6,700**	**6,846**	**6,992**

7-3R | Single Dry Year Supply & Demand Comparison

STATUS: Published

NOTES: -

	2025	2030	2035	2040	2045
Supply Totals	53,444	54,974	56,504	57,734	58,963
Demand Totals	46,473	47,803	49,134	50,203	51,272
Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**

7-4R | Multiple Dry Years Supply & Demand Comparison

STATUS: Published

NOTES: -

		2025	2030	2035	2040	2045
First Year	**Supply Totals**	53,444	54,974	56,504	57,734	58,963
	Demand Totals	46,473	47,803	49,134	50,203	51,272
	Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**
Second Year	**Supply Totals**	53,444	54,974	56,504	57,734	58,963
	Demand Totals	46,473	47,803	49,134	50,203	51,272
	Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**
Third Year	**Supply Totals**	53,444	54,974	56,504	57,734	58,963
	Demand Totals	46,473	47,803	49,134	50,203	51,272
	Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**
Fourth Year	**Supply Totals**	53,444	54,974	56,504	57,734	58,963
	Demand Totals	46,473	47,803	49,134	50,203	51,272
	Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**
Fifth Year	**Supply Totals**	53,444	54,974	56,504	57,734	58,963
	Demand Totals	46,473	47,803	49,134	50,203	51,272
	Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**
Sixth Year	**Supply Totals**	53,444	54,974	56,504	57,734	58,963
	Demand Totals	46,473	47,803	49,134	50,203	51,272
	Difference:	**6,971**	**7,171**	**7,370**	**7,530**	**7,691**

7-5 | Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b)

STATUS: Published

NOTES: -

2021	**Gross Water Use**	47,807
	Total Supplies	54,978
	Surplus/Shortfall without WSCP Action	**7,171**
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	**7,171**
	Resulting Percent Use Reduction from WSCP Action	**0%**
2022	**Gross Water Use**	49,216
	Total Supplies	56,599
	Surplus/Shortfall without WSCP Action	**7,382**
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	**7,382**
	Resulting Percent Use Reduction from WSCP Action	**0%**
2023	**Gross Water Use**	50,625
	Total Supplies	58,219
	Surplus/Shortfall without WSCP Action	**7,594**
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	**7,594**
	Resulting Percent Use Reduction from WSCP Action	**0%**
2024	**Gross Water Use**	52,035
	Total Supplies	59,840
	Surplus/Shortfall without WSCP Action	**7,805**
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	**7,805**
	Resulting Percent Use Reduction from WSCP Action	**0%**
2025	**Gross Water Use**	53,444
	Total Supplies	61,460
	Surplus/Shortfall without WSCP Action	**8,017**
	Planned WSCP Actions (Use Reduction and Supply Augmentation)	
	WSCP (Supply Augmentation Benefit)	
	WSCP (Use Reduction Savings Benefit)	
	Revised Surplus/Shortfall	**8,017**
	Resulting Percent Use Reduction from WSCP Action	**0%**

8-1 | Water Shortage Contingency Plan Levels

STATUS: Published

NOTES: -

Shortage Level	Percent Shortage Range[1] (Numerical Value as a Percent)	Water Shortage Condition
1	Up to 10%	Normal Conditions (SBMWD Stage 1) - Incurs no financial penalties but requires commitment to a water conservation program.
2	Up to 20%	Mandatory Restrictions (SBMWD Stage 2) - Will impose a five percent reduction in water usage and assess financial penalties on usage in excess of those amounts.
3	Up to 30%	Extreme Mandatory Restrictions (SBMWD Stage 2A) - Will impose a fifteen percent reduction in water usage and assess financial penalties on usage in excess of those amounts.
4	Up to 40%	Water shortage Emergency (SBMWD Stage 3) - Will impose up to a fifty percent reduction in water usage and assess financial penalties on usage in excess of those amounts.
5	Up to 50%	Water shortage Emergency (SBMWD Stage 3) - Will impose up to a fifty percent reduction in water usage and assess financial penalties on usage in excess of those amounts.
6	>50%	Water shortage Emergency (SBMWD Stage 3) - Will impose up to a fifty percent reduction in water usage and assess financial penalties on usage in excess of those amounts.

[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.

8-2 | Demand Reduction Actions

STATUS: Published

NOTES: -

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement
1	Expand Public Information Campaign	0-20%	Provide reminder notices regarding noted water waste and offer community outreach programs	No
2	Expand Public Information Campaign	0-20%	Increase advertisement of conservation measures; Maintain a message center for reporting water waste; Determine course of action to remediate reported water waste	No
2	Other	0-1%	Commercial and industrial facility education on water use.	No
2	Implement or Modify Drought Rate Structure or Surcharge	0-5%	10 percent rate increase on customers that don't fulfill 5 percent reduction	Yes
2	CII - Other CII restriction or prohibition	0-1%	Large water use commercial and industrial facilities shall, upon request of the General Manager, provide the SBMWD with a plan to conserve water at their facilities. The SBMWD will provide these facilities with information regarding the average monthly water use by the facility for the last two year period. The facility will be expected to provide the SBMWD with a plan to conserve or reduce the amount of water used by that percentage deemed by the SBMWD to be necessary under the circumstances.	Yes
2	Landscape - Limit landscape irrigation to specific days	0-5%	Irrigation shall be limited to four days per week on Mondays, Wednesdays, Fridays, and Sundays only	Yes
2	Landscape - Limit landscape irrigation to specific times	0-5%	Irrigation shall be only allowed between the off-peak hours of 6:00 pm through 8:00 am	Yes
2	Landscape - Restrict or prohibit runoff from landscape irrigation	0-5%	No water of outdoor landscapes that cause excessive runoff	Yes

2	Other - Prohibit use of potable water for washing hard surfaces	0-1%	No washing down driveways, sidewalks, or other hardscapes	Yes
2	Other - Require automatic shut of hoses	0-1%	The washing of cars, trucks or other vehicles is not permitted except with a hose equipped with an automatic shut-off device, or a commercial facility so designated for vehicle washing purposes.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	All leaks shall be corrected within seventy-two (72) hours of Department notification	Yes
2	Other water feature or swimming pool restriction	0-1%	No use of fountains that use potable water, unless the water is recirculated	Yes
2A	Implement or Modify Drought Rate Structure or Surcharge	0-15%	20 percent rate increase on customers that don't fulfill 15 percent reduction	Yes
2A	Expand Public Information Campaign	0-20%	Increase advertisement of conservation measures; Maintain a message center for reporting water waste; Determine course of action to remediate reported water waste	Yes
2A	Landscape - Limit landscape irrigation to specific days	0-5%	Irrigation shall be limited to three days per week; Mondays, Wednesdays, and Fridays only	Yes
2A	Landscape - Other landscape restriction or prohibition	0-5%	Maximum irrigation time of 15 minutes per station per designated irrigation day	Yes
2A	Landscape - Other landscape restriction or prohibition	0-5%	Irrigation of ornamental turn on public street medians is prohibited	Yes
2A	Landscape - Other landscape restriction or prohibition	0-5%	Irrigation is prohibited for a full 48 hours after a significant precipitation event (rainfall in excess of 1/8”) as measured by SBMWD’s rain gauge	Yes
2A	Other - Prohibit use of potable water for construction and dust control	0-1%	Use of potable water outside of new residential home and commercial/industrial construction that is not delivered by drip or micro-spray systems is prohibited	Yes
2A	CII - Restaurants may only serve water upon request	0-1%	The serving of drinking water other than upon request is prohibited, in eating or drinking establishments including but not limited to restaurants, hotels, cafes, cafeterias, bars, or any other public place where food or drink are served	Yes

2A	CII - Lodging establishment must offer opt out of linen service	0-1%	All hotels/motels shall provide their guests with the option of choosing not to have towels and linens laundered daily. The hotel/motel must prominently display notice of this option in each bathroom using clear and easy language.	Yes
3	Implement or Modify Drought Rate Structure or Surcharge	0-50%	100 percent rate increase on customers that don't fulfill 50 percent reduction	Yes
3	Expand Public Information Campaign	0-20%	Increase advertisement of conservation measures; Maintain a message center for reporting water waste; Determine course of action to remediate reported water waste	No
3	Landscape - Prohibit certain types of landscape irrigation	0-5%	Commercial nurseries shall discontinue all watering and irrigation. Watering of livestock is permitted as necessary.	Yes
3	Other - Prohibit use of potable water for construction and dust control	0-1%	No new construction meter permits shall be issued by SBMWD. All existing construction meters shall be removed and/or locked out of service.	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	0-1%	Washing of vehicles, except when done by commercial car wash establishments using only recycled or reclaimed water may be prohibited.	Yes
3	Landscape - Limit landscape irrigation to specific times	0-5%	Irrigation shall be allowed only between the off-peak hours of 8:00 pm through 6:00 am; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency	Yes
3	Landscape - Limit landscape irrigation to specific days	5-20%	Irrigation shall be limited to two days per week, on Mondays and Thursdays; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency	Yes

8-3R | Supply Augmentation & Other Actions

STATUS: Published

NOTES: -

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference
3	Exchanges	0-100%	SBMWD has water exchange and transfer agreements with several of the surrounding agencies on an as-needed basis.

10-1R | Notification to Cities & Counties

STATUS: Published

NOTES: -

City	60 Day Notice	Notice of Public Hearing	Other
City of San Bernardino	Yes	Yes	
County	**60 Day Notice**	**Notice of Public Hearing**	**Other**
San Bernardino County	Yes	Yes	
Other	**60 Day Notice**	**Notice of Public Hearing**	**Other**

O-1B | Recommended Energy Intensity - Total Utility Approach

Urban Water Supplier	San Bernardino Municipal Water Department			**Reporting Period Start Date**	1/1/2020
Water Delievery Product	Retail Potable Deliveries			**Reporting Period End Date**	12/30/2020
	Urban Water Supplier Operational Control				
	Sum of all Water Management Process			**Non-Consequential Hydropower**	
	Total Utility			**Hydropower**	**Net Utility**
Volume of Water Entering Process (AF)	42182			0	**42182**
Energy Consumed (kWh)	33348243			0	**33348243**
Energy Intensity (kWh/AF)	**790.6**			**0.0**	**790.6**
Data Quality	Metered Data		**Quantity of Self-Generated Renewable Energy**		**0.0** **kWh**
Data Quality Narrative	**Energy is quatified monthly by meters from EPA accounts, SBWD accounts, and MT. Vernon locations.**				
Water Supply Narrative	**San Bernardino Municipal Water Department relies soley on groundwaer from wells in the SBBA.**				

H-7: SBX7-7 Forms

SB X7-1 | Baseline Period Ranges

STATUS: Published

NOTES: -

Baseline	Parameter	Value	Units
10- to 15-year baseline period	**2008 total water deliveries**	49,911	Acre Feet (AF)
	2008 total volume of delivered recycled water	0	Acre Feet (AF)
	2008 recycled water as a percent of total deliveries	0	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range[3]	2008	
5-year baseline period	**Number of years in baseline period**	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	

[1]If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.

[2]The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

[3]The ending year must be between December 31, 2004 and December 31, 2010.

[4]The ending year must be between December 31, 2007 and December 31, 2010.

SB X7-2 | Method for Population Estimates

STATUS:	Published
NOTES:	-

Method for Population Estimates	
No	**1. Department of Finance (DOF)** DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2010 - 2020) when available
No	**2. Persons-per-Connection Method**
Yes	**3. DWR Population Tool**
No	**4. Other** DWR recommends pre-review

SB X7-3 | Service Area Population

STATUS: Published

NOTES: -

Year		Population
10 to 15 Year Baseline Population		
Year 1	1999	163,861
Year 2	2000	165,347
Year 3	2001	168,530
Year 4	2002	166,740
Year 5	2003	169,979
Year 6	2004	174,567
Year 7	2005	177,628
Year 8	2006	184,302
Year 9	2007	183,957
Year 10	2008	183,942
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	169,979
Year 2	2004	174,567
Year 3	2005	177,628
Year 4	2006	184,302
Year 5	2007	183,957
2020 Compliance Year Population		
2020		210,830

SB X7-4 | Annual Gross Water Use

STATUS: Published

NOTES: -

Baseline Year *From SB X7-3*		Volume Into Distribution System *From SB X7-4A*	Deductions					Annual Gross Water Use
			Exported Water	Change in Distribution System Storage (+/-)	Indirect Recycled Water *From SB X7-4B*	Water Delivered for Agricultural Use	Process Water *From SB X7-4D*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	**1,999**	**48,939**			**0**		**-**	**48,939**
Year 2	**2,000**	**48,223**	1,730		**0**		**-**	**46,493**
Year 3	**2,001**	**46,456**	1,837		**0**		**-**	**44,619**
Year 4	**2,002**	**48,504**	1,252		**0**		**-**	**47,252**
Year 5	**2,003**	**48,522**	622		**0**		**-**	**47,900**
Year 6	**2,004**	**50,223**	159		**0**		**-**	**50,064**
Year 7	**2,005**	**48,138**	159		**0**		**-**	**47,979**
Year 8	**2,006**	**57,392**	1,199		**0**		**-**	**56,193**
Year 9	**2,007**	**59,594**	7,674		**0**		**-**	**51,920**
Year 10	**2,008**	**57,237**	7,326		**0**		**-**	**49,911**
Year 11	**0**	**0**			**0**		**-**	**0**
Year 12	**0**	**0**			**0**		**-**	**0**
Year 13	**0**	**0**			**0**		**-**	**0**
Year 14	**0**	**0**			**0**		**-**	**0**
Year 15	**0**	**0**			**0**		**-**	**0**
							10 - 15 year baseline average gross water use:	**49,127**
5 Year Baseline - Gross Water Use								
Year 1	**2,003**	**48,522**	622		**0**		**-**	**47,900**
Year 2	**2,004**	**50,223**	159		**0**		**-**	**50,064**
Year 3	**2,005**	**48,138**	159		**0**		**-**	**47,979**
Year 4	**2,006**	**57,392**	1,199		**0**		**-**	**56,193**
Year 5	**2,007**	**59,594**	7,674		**0**		**-**	**51,920**
							5 year baseline average gross water use:	**50,811**
2020 Compliance Year - Gross Water Use								
2020		**42,182**			**0**		**-**	**42,182**

SB X7-4A | Volume Entering the Distribution System(s)

STATUS: Published

NOTES: -

The supplier's own water source				
Name of Source:		**BunkerHill/SBBA**		
Baseline Year *From SB X7-3*		**Volume Entering Distribution System**	**Meter Error Adjustment (+/-)**	**Corrected Volume Entering Distribution System**
10 to 15 Year Baseline - Water into Distribution System				
Year 1	**1,999**	48,939		**48,939**
Year 2	**2,000**	48,223		**48,223**
Year 3	**2,001**	46,456		**46,456**
Year 4	**2,002**	48504		**48,504**
Year 5	**2,003**	48,522		**48,522**
Year 6	**2,004**	50,223		**50,223**
Year 7	**2,005**	48,138		**48,138**
Year 8	**2,006**	57,392		**57,392**
Year 9	**2,007**	59,594		**59,594**
Year 10	**2,008**	57,237		**57,237**
Year 11	**0**			**0**
Year 12	**0**			**0**
Year 13	**0**			**0**
Year 14	**0**			**0**
Year 15	**0**			**0**
5 Year Baseline - Water into Distribution System				
Year 1	**2,003**	48,522		**48,522**
Year 2	**2,004**	50,223		**50,223**
Year 3	**2,005**	48,138		**48,138**
Year 4	**2,006**	57,392		**57,392**
Year 5	**2,007**	59,594		**59,594**
2020 Compliance Year - Water into Distribution System				
2020		42,182		**42,182**

SB X7-5 | Gallons Per Capita Per Day (GPCD)

STATUS: Not Started

NOTES: -

Baseline Year From SB X7-3		**Service Area Population** From SB X7-3	**Annual Gross Water Use** From SB X7-4	**Daily Per Capita Water Use (GPCD)**
10 to 15 Year Baseline GPCD				
Year 1	**1999**	**163,861**	**48,939**	**267**
Year 2	**2000**	**165,347**	**46,493**	**251**
Year 3	**2001**	**168,530**	**44,619**	**236**
Year 4	**2002**	**166,740**	**47,252**	**253**
Year 5	**2003**	**169,979**	**47,900**	**252**
Year 6	**2004**	**174,567**	**50,064**	**256**
Year 7	**2005**	**177,628**	**47,979**	**241**
Year 8	**2006**	**184,302**	**56,193**	**272**
Year 9	**2007**	**183,957**	**51,920**	**252**
Year 10	**2008**	**183,942**	**49,911**	**242**
Year 11	**0**	**0**	**0**	**-**
Year 12	**0**	**0**	**0**	**-**
Year 13	**0**	**0**	**0**	**-**
Year 14	**0**	**0**	**0**	**-**
Year 15	**0**	**0**	**0**	**-**
			10-15 Year Average Baseline GPCD:	**252**
5 Year Baseline GPCD				
Year 1	**2003**	**169,979**	**47,900**	**252**
Year 2	**2004**	**174,567**	**50,064**	**256**
Year 3	**2005**	**177,628**	**47,979**	**241**
Year 4	**2006**	**184,302**	**56,193**	**272**
Year 5	**2007**	**183,957**	**51,920**	**252**
			5 Year Average Baseline GPCD:	**255**
2020 Compliance Year GPCD				
2020		**210,830**	**42,182**	**179**

SB X7-6 | Gallons per Capita per Day

STATUS:	Published
NOTES:	-

Summary from Table SB X7-7 Table 5	
10-15 Year Baseline GPCD	252
5 Year Baseline GPCD	255
2020 Compliance Year GPCD	179

SB X7-7 | 2020 Target Method

STATUS: Published

NOTES: -

Select Only One	
No	**Method 1.** Complete SB X7-7A below.
No	**Method 2.** Complete SB X7-7B,SB X7-7C, and SB X7-7D below.
No	**Method 3.** Complete SB X7-E below.
Yes	**Method 4.** Complete Method 4 Calculator below.

SB X7-7A | 2020 Target Method 1

20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
252	**202**

SB X7-7E | 2020 Target Method 3

Select All that Apply	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets
		North Coast	137
		North Lahontan	173
		Sacramento River	176
		San Francisco Bay	131
		San Joaquin River	174
		Central Coast	123
		Tulare Lake	188
		South Lahontan	170
		South Coast	149
		Colorado River	211
Target (If more than one region is selected, this value is calculated.)			

SB X7-7F | Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD From SB X7-5	**Maximum 2020 Target**[1]	**Calculated 2020 Target**[2]	**Confirmed 2020 Target**
255	**242**	203	**203**

[1]Maximum 2020 Target is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.
[2]2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.

SB X7-8 | 2015 Interim Target GPCD

STATUS: Published

NOTES: -

Confirmed 2020 Target From SB X7-7-F	**10-15 year Baseline GPCD** From SB X7-5	**2015 Interim Target GPCD**
203	**252**	**228**

SB X7-9 | 2020 Compliance

STATUS: Published

NOTES: -

Actual 2020 GPCD	2020 Interim Target GPCD	Optional Adjustments (in GPCD)					2020 GPCD (Adjusted if applicable)	Did Supplier Achieve Targeted Reduction for 2020?
		Extraordinary Events	Weather Normalization	Economic Adjustment	Total Adjustments	Adjusted 2020 GPCD		
179	203				0	179	179	YES

H-8: AWWA Water Audits

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: San Bernardino Municipal Water Department (3610039)
Reporting Year: 2016 1/2016 - 12/2016

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ----------> Pcnt: Value:

Volume from own sources:	+ ?	6	36,302.946	acre-ft/yr	+ ?	3			acre-ft/yr
Water imported:	+ ?	n/a	0.000	acre-ft/yr	+ ?				acre-ft/yr
Water exported:	+ ?	n/a	0.000	acre-ft/yr	+ ?				acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 36,302.946 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

Pcnt: Value:

Billed metered:	+ ?	7	32,654.495	acre-ft/yr			
Billed unmetered:	+ ?	n/a	0.000	acre-ft/yr			
Unbilled metered:	+ ?	n/a	0.000	acre-ft/yr			
Unbilled unmetered:	+ ?	6	156.000	acre-ft/yr		156.000	acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

AUTHORIZED CONSUMPTION: ? 32,810.495 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

3,492.451 acre-ft/yr

Apparent Losses

Pcnt: Value:

Unauthorized consumption:	+ ?		90.757	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	2	1,009.933	acre-ft/yr	3.00%		acre-ft/yr
Systematic data handling errors:	+ ?		81.636	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 1,182.326 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 2,310.125 acre-ft/yr

WATER LOSSES: 3,492.451 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 3,648.451 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	8	753.1	miles
Number of active AND inactive service connections:	+ ?	7	47,935	
Service connection density:	?		64	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 4 79.4 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	$32,241,215	$/Year	
Customer retail unit cost (applied to Apparent Losses):	+ ?	4	$1.28	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	+ ?	4	$118.42	$/acre-ft	☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 57 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Customer retail unit cost (applied to Apparent Losses)

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: San Bernardino Municipal Water Department (3610039)
Reporting Year: 2017 1/2017 - 12/2017

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

						Pcnt:	Value:	
Volume from own sources:	6	38,477.991	acre-ft/yr	3	0.00%			acre-ft/yr
Water imported:	n/a	0.000	acre-ft/yr					acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr					acre-ft/yr
WATER SUPPLIED:		**38,477.991**	acre-ft/yr					

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	7	34,326.159	acre-ft/yr			
Billed unmetered:	n/a	0.000	acre-ft/yr			
Unbilled metered:	n/a	0.000	acre-ft/yr			
Unbilled unmetered:	5	96.195	acre-ft/yr		96.195	acre-ft/yr
AUTHORIZED CONSUMPTION:		**34,422.354**	acre-ft/yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

4,055.637 acre-ft/yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		96.195	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	1,061.634	acre-ft/yr	3.00%		acre-ft/yr
Systematic data handling errors:	5	85.815	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **1,243.644** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **2,811.993** acre-ft/yr

WATER LOSSES: **4,055.637** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: **4,151.832** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	755.0	miles
Number of active AND inactive service connections:	8	48,162	
Service connection density:		64	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	6	79.4	psi

COST DATA

Total annual cost of operating water system:	10	$34,131,179	$/Year	
Customer retail unit cost (applied to Apparent Losses):	8	$1.47	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$202.82	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 63 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Variable production cost (applied to Real Losses)

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: San Bernardino Municipal Water Department
Reporting Year: 2018 1/2018 - 12/2018

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

						Master Meter and Supply Error Adjustments	
						Pcnt:	Value:
Volume from own sources:	7	38,766.970	acre-ft/yr	3	-0.89%		acre-ft/yr
Water imported:	n/a	0.000	acre-ft/yr				acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr				acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 39,115.094 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:
Billed metered:	5	35,196.752	acre-ft/yr		
Billed unmetered:	n/a	0.000	acre-ft/yr		
Unbilled metered:	n/a	0.000	acre-ft/yr		
Unbilled unmetered:	5	97.788	acre-ft/yr		97.788 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

AUTHORIZED CONSUMPTION: 35,294.539 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) 3,820.555 acre-ft/yr

Apparent Losses

				Pcnt:	Value:
Unauthorized consumption:		97.788	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	5	1,088.559	acre-ft/yr	3.00%	acre-ft/yr
Systematic data handling errors:	5	87.992	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 1,274.339 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 2,546.216 acre-ft/yr

WATER LOSSES: 3,820.555 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 3,918.343 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	759.3	miles
Number of active AND inactive service connections:	7	47,649	
Service connection density:		63	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	6	82.2	psi	

COST DATA

Total annual cost of operating water system:	10	$29,086,462	$/Year	
Customer retail unit cost (applied to Apparent Losses):	8	$1.50	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	6	$154.18	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 66 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: San Bernardino Municipal Water Department
Reporting Year: 2019 (1/2019 - 12/2019)

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

					Master Meter and Supply Error Adjustments	
					Pcnt:	Value:
Volume from own sources:	7	35,968.783	acre-ft/yr	3	-1.34%	acre-ft/yr
Water imported:	n/a	0.000	acre-ft/yr			acre-ft/yr
Water exported:	5	1.510	acre-ft/yr	n/a		acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 36,455.801 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:
Billed metered:	7	32,493.240	acre-ft/yr		
Billed unmetered:	n/a	0.000	acre-ft/yr		
Unbilled metered:	n/a	0.000	acre-ft/yr		
Unbilled unmetered:	5	455.698	acre-ft/yr	1.25%	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 32,948.938 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 3,506.863 acre-ft/yr

Apparent Losses

				Pcnt:	Value:
Unauthorized consumption:		91.140	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	3	1,004.946	acre-ft/yr	3.00%	acre-ft/yr
Systematic data handling errors:	5	81.233	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 1,177.318 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 2,329.545 acre-ft/yr

WATER LOSSES: 3,506.863 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 3,962.561 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	728.0	miles
Number of active AND inactive service connections:	7	46,183	
Service connection density:		63	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	6	82.2	psi

COST DATA

Total annual cost of operating water system:	10	$28,387,193	$/Year	
Customer retail unit cost (applied to Apparent Losses):	8	$1.50	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	6	$157.88	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 67 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

H-9: Water Shortage Contingency Plan

This appendix includes the current Water Shortage Contingency Plan (WSCP) at the time of adoption of the 2020 IRWUMP, however the WSCP may be amended separately in the future. Contact SBMWD to obtain the most current version of the WSCP.

San Bernardino Municipal Water Department Water Shortage Contingency Plan

JUNE 2021 | San Bernardino Municipal Water Department

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

Water Shortage Contingency Plan

San Bernardino Municipal Water Department

JUNE 2021

Prepared by Water Systems Consulting, Inc.

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ACRONYMS & ABBREVIATIONS

AWIA	American Water Infrastructure Association
BTAC	Basin Technical Advisory Committee
CWC	California Water Code
CII	Commercial, Industrial, and Institutional
DWR	California Department of Water Resources
DRA	Drought Risk Assessment
ERP	Emergency Response Plan
GW	Groundwater
IRUWMP	Integrated Regional Urban Water Management Plan
LHMP	Local Hazard Mitigation Plan
RRA	Risk and Resilience Assessment
SBMWD	San Bernardino Municipal Water Department
SWP	State Water Project
UWWP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan

WATER SHORTAGE CONTINGENCY PLAN

San Bernardino Municipal Water Department

This Water Shortage Contingency Plan is a strategic plan that the San Bernardino Municipal Water Department uses to prepare for and respond to water shortages.

The Water Shortage Contingency Plan (WSCP) is a strategic plan that San Bernardino Municipal Water Department (SBMWD) uses to prepare for and respond to foreseeable and unforeseeable water shortages. A water shortage occurs when water supply available is insufficient to meet the normally expected customer water use at a given point in time. A shortage may occur due to a number of reasons, such as water supply quality changes, climate change, drought, regional power outage, and catastrophic events (e.g., earthquake). Additionally, the State may declare a statewide drought emergency and mandate that water suppliers reduce demands, as occurred in 2014. The WSCP serves as the operating manual that SBMWD will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages. This WSCP provides a process for an annual water supply and demand assessment and structured steps designed to respond to actual conditions. This level of detailed planning and preparation provide accountability and predictability and will help SBMWD maintain reliable supplies and reduce the impacts of any supply shortages and/or interruptions.

This WSCP was prepared in conjunction with SBMWD's 2020 UWMP, which is included in the 2020 Upper Santa Ana River Watershed Integrated Urban Water Management Plan (2020 IRUWMP) and is a standalone document that can be modified as needed. This document is compliant with the California Water Code (CWC) Section 10632 and incorporated guidance from the State of California Department of Water Resources (DWR) UWMP Guidebook.

IN THIS SECTION

The WSCP describes the following:

1. **Water Service Reliability Analysis:** Summarizes SBMWD's water supply analysis and reliability and identifies any key issues that may trigger a shortage condition.
2. **Annual Water Supply and Demand Assessment Procedures:** Describes the key data inputs, evaluation criteria, and methodology for assessing the system's reliability for the coming year and the steps to formally declare any water shortage stages and response actions.
3. **Water Shortage Stages:** Establishes water shortage stages to clearly identify and prepare for shortages.
4. **Shortage Response Actions:** Describes the response actions that may be implemented or considered for each stage to reduce gaps between supply and demand.
5. **Communication Protocols:** Describes communication protocols under each stage to ensure customers, the public, and government agencies are informed of shortage conditions and requirements.
6. **Compliance and Enforcement:** Defines compliance and enforcement actions available to administer demand reductions.
7. **Legal Authority:** Lists the legal documents that grant SBMWD the authority to declare a water shortage and implement and enforce response actions.
8. **Financial Consequences of WSCP Implementation:** Describes the anticipated financial impact of implementing water shortage stages and identifies mitigation strategies to offset financial burdens.
9. **Monitoring and Reporting:** Summarizes the monitoring and reporting techniques to evaluate the effectiveness of shortage response actions and overall WSCP implementation. Results are used to determine if additional shortage response actions should be adjusted.
10. **WSCP Refinement Procedures:** Describes the factors that may trigger updates to the WSCP and outlines how to complete an update.
11. **Plan Adoption, Submittal, and Availability:** Describes the process for the WSCP adoption, submittal, and availability after each revision.

1.0 Water Service Reliability Analysis

As part of the 2020 IRUWMP, SBMWD completed a water supply reliability analysis for normal, single-dry, and five-year consecutive dry year periods from 2025-2045. A Drought Risk Assessment (DRA) was also performed to analyze supply reliability under five consecutive years of drought from 2021-2025. As described in **Chapter 3** of the 2020 IRUWMP, the effects of a local drought are not immediately recognized since the region uses the local groundwater basins to simulate a large reservoir for long term storage. SBMWD is able to pump additional groundwater to meet increased demands in dry years and participates in efforts to replenish the basins with imported and local water through regional recharge programs. Additionally, SBMWD implements several ongoing water conservation measures. Regional recharge programs and conservation help to optimize and enhance the use of regional water resources. **Based on the 2020 IRUWMP analysis, SBMWD's water supply is reliable and not expected to see impactful change under drought conditions.**

Even though localized drought conditions should not affect supply, other shortages may occur due to a number of reasons, such as water supply quality changes, regional power outage, State mandates for water use efficiency standards, and catastrophic events (e.g., earthquake). Therefore, SBMWD will use this WSCP as appropriate to address shortages and other supply emergencies.

2.0 Annual Water Supply and Demand Assessment

As an urban water supplier, SBMWD must prepare and submit an Annual Water Supply and Demand Assessment (Annual Assessment). Starting in 2022, the Annual Assessment will be due by July 1 of every year, as indicated by CWC Section 10632.1. The Annual Assessment is an evaluation of the near-term outlook for supplies and demands to determine whether the potential for a supply shortage exists and whether there is a need to trigger a WSCP shortage stage and response actions in the current calendar year to maintain supply reliability. This process will take place at the same time each year based on known circumstances and information available to SBMWD at the time of analysis and can be updated or revised at any time if circumstances change.

SBMWD will establish and convene an internal WSCP Team to conduct the Annual Assessment each year. The WSCP may include the following staff:

- **General Manager**
- **Director of Water Utility**
- **Operations Manager**
- **Water Utility Operations Superintendent**
- **Engineering**
- **Water Conservation Coordinator**
- **Finance Division**

The Annual Assessment procedure, including key data inputs and evaluation criteria, is summarized in **Table 1.** The Annual Assessment procedure and timeline, along with how it integrates with the annual assessment that will be conducted on a regional basis in parallel, is shown graphically in **Figure 1.**

Table 1. Annual Assessment Procedure

TIMING	ASSESSMENT ACTIVITIES	PROCEDURE, KEY DATA INPUTS, EVALUATION CRITERIA AND OTHER CONSIDERATIONS	STAFF RESPONSIBLE
JAN - FEB	Estimate unconstrained demands for coming year	Demands will be estimated based on water sales forecasts from annual budget or prior year demands plus any anticipated changes	Water Conservation Coordinator, Finance Division
JAN - FEB	Estimate available supplies for the year, considering the following year will be dry	The BTAC evaluates change in groundwater storage each year and discusses allocation of available supplies. The SBBA is sustainably managed to provide long term supply reliability and is not anticipated to be impacted in dry years. In the unlikely event that local supplies are reduced, SBMWD will coordinate with the BTAC to identify available supplies for the coming year.	General Manager, Director of Water Utility
JAN - FEB	Consider potential constraints that may impact supply delivery	Identify any known regional or SBMWD infrastructure issues that may pertain to near-term water supply reliability, including repairs, construction, and environmental mitigation measures that may temporarily constrain capabilities, as well as any new projects that may add to system capacity. Identify any facilities out of service due to water quality problems, equipment failure, etc. that may impact normal water deliveries. Identify any potential or emerging impacts to groundwater quality, such as emerging regulatory constraints that may limit use of available supplies for potable needs.	Director of Water Utility, Water Utility Operations Superintendent
FEB	Convene WSCP Team to conduct Annual Assessment	Compare supplies and demands and discuss any constraints that may impact supply delivery. If the potential for a shortage exists, determine which shortage response stage and actions are recommended to reduce/eliminate the shortage. Additionally, if the State declares a drought state of emergency and requires demand reductions, the WSCP Team will determine which water shortage stage and response actions are needed to comply with the State mandate.	WSCP Team

TIMING	ASSESSMENT ACTIVITIES	PROCEDURE, KEY DATA INPUTS, EVALUATION CRITERIA AND OTHER CONSIDERATIONS	STAFF RESPONSIBLE
JUNE	Board of Directors	If the potential for a shortage exists or the State has mandated demand reductions, the results of the Annual Assessment will be presented to the SBMWD Water Board, including the recommended shortage stage and response actions. The Water Board may order the implementation of a shortage stage and will adopt a resolution declaring the applicable water shortage stage.	General Manager Water Board
ON-GOING	Implement WSCP actions, if needed	Relevant members of SBMWD staff will implement shortage response actions associated with the declared water shortage stage	WSCP Team, Customer Relations, Information Technology
BY JULY 1	Submit Retail Annual Assessment	Send Final Retail Annual Assessment to DWR	WSCP Team

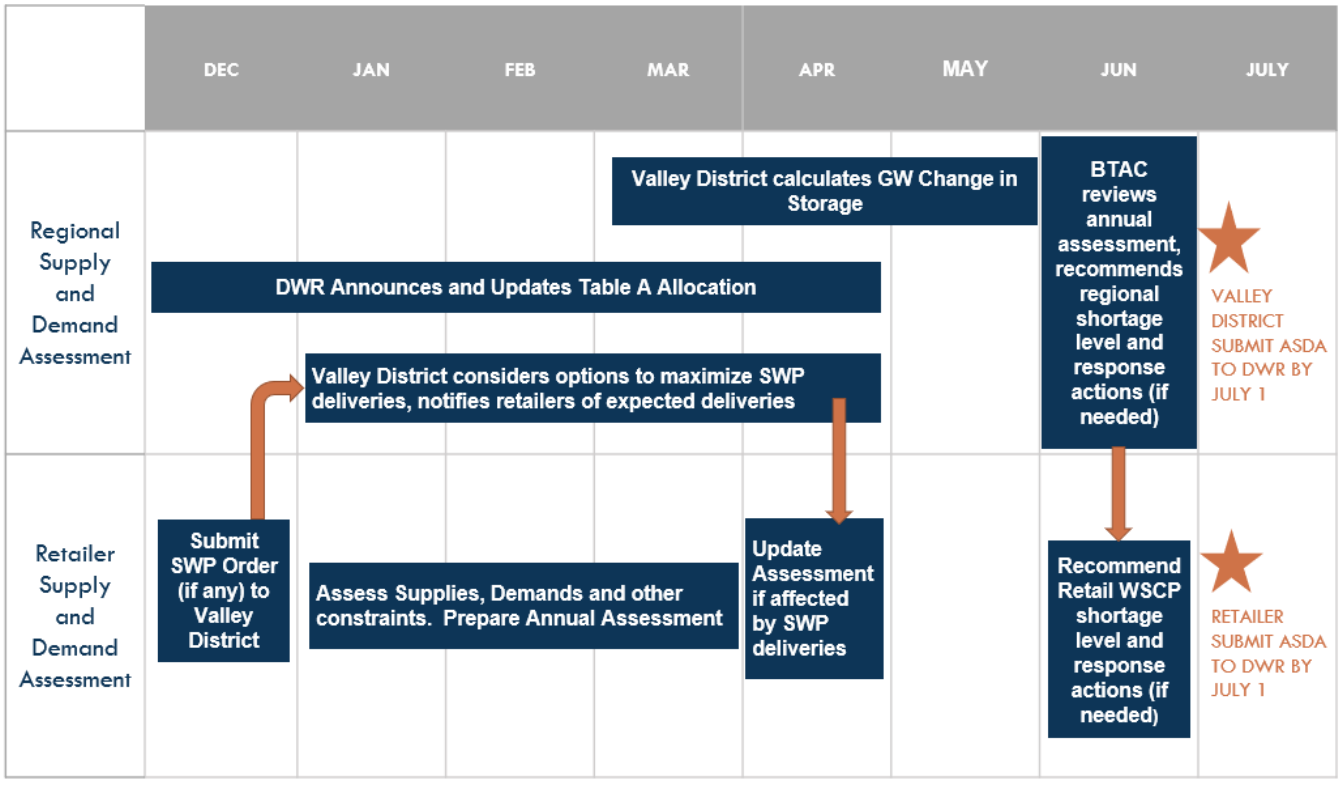

Figure 1. Regional and Retail Agency Annual Assessment Process and Timeline

3.0 Water Shortage Stages

With the exception of a catastrophic failure of infrastructure, SBMWD does not foresee imposing a water shortage stage except under the State's direction, as occurred in 2014. If a potential water supply shortage is identified in the Annual Assessment, this section provides information on the water shortage stages and response actions that SBMWD may implement.

SBMWD uses four (4) shortage stages to identify and respond to water shortage emergencies. At a minimum, SBMWD encourages baseline conservation efforts year-round, regardless of a shortage emergency.

Stage I: (Normal Conditions-Voluntary Restrictions):

Incurs no financial penalties but requires commitment to a water conservation program.

Stage II: (Mandatory Restrictions)

Will impose a five percent reduction in water usage and assess financial penalties on usage in excess of those amounts.

Stage IIA: (Extreme Mandatory Restrictions)

Will impose a fifteen percent reduction in water usage and assess financial penalties on usage in excess of those amounts.

Stage III: (Water Shortage Emergency)

Will impose up to a fifty percent reduction in water usage and assess financial penalties on usage in excess of those amounts.

The CWC outlines six standard water shortage stages that correspond to a gap in supply compared to normal year availability. The six standard water shortage stages correspond to progressively increasing estimated shortage conditions (up to 10-, 20-, 30-, 40-, 50-percent, and greater than 50-percent shortage compared to the normal reliability condition) and align with the response actions that a water supplier would implement to meet the severity of the impending shortages.

The CWC allows suppliers with an existing WSCP that uses different water shortage stages to comply with the six standard stages by developing and including a cross-reference relating its existing shortage categories to the six standard water shortage stages. SBMWD is maintaining the current four shortage stages for this WSCP. A crosswalk defines how SBMWD's current water shortage stages will align with the DWR's standardized 6 stages of shortage. A visual representation of this alignment is shown in **Figure 2.**

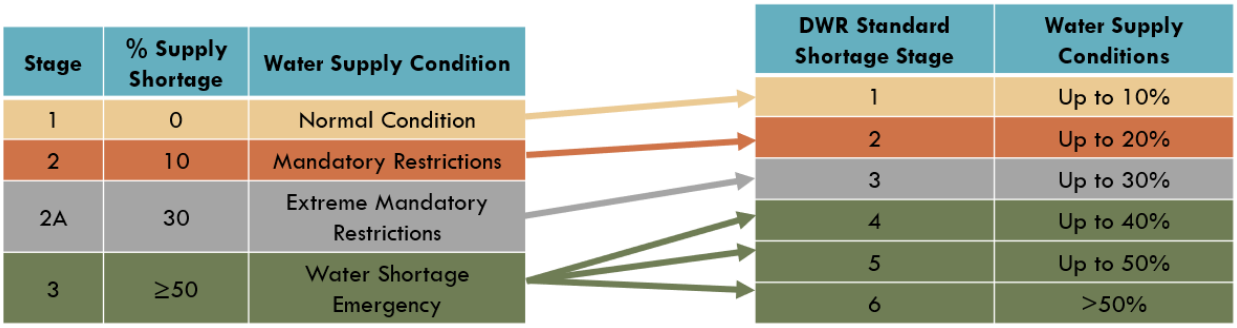

Figure 2. Crosswalk to DWR Six Standard Stages

Table 2: DWR 8-1 Water Shortage Contingency Plan Stages

SHORTAGE STAGE	PERCENT SHORTAGE RANGE[1] (NUMERICAL VALUE AS A PERCENT)	WATER SHORTAGE CONDITION
1	Up to 10%	Normal Conditions (SBMWD Stage 1)
2	Up to 20%	Mandatory Restrictions (SBMWD Stage 2)
3	Up to 30%	Extreme Mandatory Restrictions (SBMWD Stage 2A)
4	Up to 40%	Water shortage Emergency (SBMWD Stage 3)
5	Up to 50%	Water shortage Emergency (SBMWD Stage 3)
6	>50%	Water shortage Emergency (SBMWD Stage 3)

[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.

4.0 Shortage Response Actions

This section was completed pursuant to CWC Section 10632(a)(4) and 10632.5(a) and describes the response actions that must be implemented or considered for each stage to minimize social and economic impacts to the community.

In accordance with CWC 10632(b) SBMWD analyzes and defines water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.

4.1 Supply Augmentation

Table 3 identifies the supply augmentation actions SBMWD can take in the event of a water shortage condition. SBMWD has water exchange and transfer agreements with several of the surrounding agencies on an as-needed basis. During water shortage emergencies, SBMWD may be able to obtain supplemental water supply through these connections, if available.

Table 3: DWR 8-3R Supply Augmentation & Other Actions

SHORTAGE STAGE	SUPPLY AUGMENTATION METHODS AND OTHER ACTIONS BY WATER SUPPLIER	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE
3	Exchanges	0-100%	SBMWD has water exchange and transfer agreements with several of the surrounding agencies on an as-needed basis.

4.2 Demand Reduction

In addition to prohibitions on end uses, SBMWD offers various rebates to encourage conservation (i.e. turf removal, efficient irrigation, ultra-low flush toilet replacements, etc.). SBMWD has a water rate structure that promotes water efficiency. The reduction goal is to balance supply and demand. Table 4 summarizes these efforts and end use prohibitions.

Table 4: DWR 8-2 Demand Reduction Actions

SHORTAGE STAGE	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
1	Expand Public Information Campaign	0-20%	Provide reminder notices regarding noted water waste and offer community outreach programs	No
2	Expand Public Information Campaign	0-20%	Increase advertisement of conservation measures; Maintain a message center for reporting water waste; Determine course of action to remediate reported water waste	No
2	Other	0-1%	Commercial and industrial facility education on water use.	No
2	Implement or Modify Drought Rate Structure or Surcharge	0-5%	10 percent rate increase on customers that don't fulfill 5 percent reduction	Yes
2	CII - Other CII restriction or prohibition	0-1%	Large water use commercial and industrial facilities shall, upon request of the General Manager, provide the SBMWD with a plan to conserve water at their facilities. The SBMWD will provide these facilities with information regarding the average monthly water use by	Yes

SHORTAGE STAGE	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
			the facility for the last two-year period. The facility will be expected to provide the SBMWD with a plan to conserve or reduce the amount of water used by that percentage deemed by the SBMWD to be necessary under the circumstances.	
2	Landscape - Limit landscape irrigation to specific days	0-5%	Irrigation shall be limited to four days per week on Mondays, Wednesdays, Fridays, and Sundays only	Yes
2	Landscape - Limit landscape irrigation to specific times	0-5%	Irrigation shall be only allowed between the off-peak hours of 6:00 pm through 8:00 am	Yes
2	Landscape - Restrict or prohibit runoff from landscape irrigation	0-5%	No watering of outdoor landscapes that causes excessive runoff	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	0-1%	No washing down driveways, sidewalks, or other hardscapes	Yes
2	Other - Require automatic shut of hoses	0-1%	The washing of cars, trucks or other vehicles is not permitted except with a hose equipped with an automatic shut-off device, or a commercial facility so designated for vehicle washing purposes.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0-1%	All leaks shall be corrected within seventy-two (72) hours of Department notification	Yes
2	Other water feature or swimming pool restriction	0-1%	No use of fountains that use potable water, unless the water is recirculated	Yes
2A	Implement or Modify Drought Rate Structure or Surcharge	0-15%	20 percent rate increase on customers that don't fulfill 15 percent reduction	Yes

SHORTAGE STAGE	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
2A	Expand Public Information Campaign	0-20%	Increase advertisement of conservation measures; Maintain a message center for reporting water waste; Determine course of action to remediate reported water waste	Yes
2A	Landscape - Limit landscape irrigation to specific days	0-5%	Irrigation shall be limited to three days per week; Mondays, Wednesdays, and Fridays only	Yes
2A	Landscape - Other landscape restriction or prohibition	0-5%	Maximum irrigation time of 15 minutes per station per designated irrigation day	Yes
2A	Landscape - Other landscape restriction or prohibition	0-5%	Irrigation of ornamental turf on public street medians is prohibited	Yes
2A	Landscape - Other landscape restriction or prohibition	0-5%	Irrigation is prohibited for a full 48 hours after a significant precipitation event (rainfall in excess of 1/8") as measured by SBMWD's rain gauge	Yes
2A	Other - Prohibit use of potable water for construction and dust control	0-1%	Use of potable water outside of new residential home and commercial/industrial construction that is not delivered by drip or micro-spray systems is prohibited	Yes
2A	CII - Restaurants may only serve water upon request	0-1%	The serving of drinking water other than upon request is prohibited, in eating or drinking establishments including but not limited to restaurants, hotels, cafes, cafeterias, bars, or any other public place where food or drink are served	Yes
2A	CII - Lodging establishment must offer opt out of linen service	0-1%	All hotels/motels shall provide their guests with the option of choosing not to have towels and linens laundered daily. The hotel/motel must prominently display notice of this option in each bathroom	Yes

SHORTAGE STAGE	DEMAND REDUCTION ACTIONS	HOW MUCH IS THIS GOING TO REDUCE THE SHORTAGE GAP?	ADDITIONAL EXPLANATION OR REFERENCE	PENALTY, CHARGE, OR OTHER ENFORCEMENT
			using clear and easy language.	
3	Implement or Modify Drought Rate Structure or Surcharge	0-50%	100 percent rate increase on customers that don't fulfill 50 percent reduction	Yes
3	Expand Public Information Campaign	0-20%	Increase advertisement of conservation measures; Maintain a message center for reporting water waste; Determine course of action to remediate reported water waste	No
3	Landscape - Prohibit certain types of landscape irrigation	0-5%	Commercial nurseries shall discontinue all watering and irrigation. Watering of livestock is permitted as necessary.	Yes
3	Other - Prohibit use of potable water for construction and dust control	0-1%	No new construction meter permits shall be issued by SBMWD. All existing construction meters shall be removed and/or locked out of service.	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	0-1%	Washing of vehicles, except when done by commercial car wash establishments using only recycled or reclaimed water may be prohibited.	Yes
3	Landscape - Limit landscape irrigation to specific times	0-5%	Irrigation shall be allowed only between the off-peak hours of 8:00 pm through 6:00 am; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency	Yes
3	Landscape - Limit landscape irrigation to specific days	5-20%	Irrigation shall be limited to two days per week, on Mondays and Thursdays; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency	Yes

4.3 Operational Changes and Additional Mandatory Restrictions

During shortage conditions, operations may be affected by supply augmentation or demand reduction responses. SBMWD will consider their operational procedures when it completes its Annual Assessment. Any additional mandatory restrictions implemented in response to the declaration of a shortage response stage, beyond the actions listed in **Table 3** and **Table 4**, are listed in SBMWD's Rule and Regulation No. 21 provided in **Attachment 1.**

4.4 Emergency Response Plan

In 2020, SBMWD completed a Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) in accordance with America's Water Infrastructure Act (AWIA) of 2018. The purpose of the RRA and ERP is to meet the AWIA compliance requirements and plan for long-term resilience of SBMWD's infrastructure. The RRA will assess SBMWD's water system to identify critical assets and processes that may be vulnerable to human and natural hazards, and to identify measures that can be taken to reduce risk and enhance resilience from service disruption for the benefit of customers. The RRA identifies and characterizes both infrastructure-specific and system-wide vulnerabilities and threats, and quantifies the consequences of disruption. The RRA also identifies various options (and constraints) in addressing and mitigating risk. The RRA, in conjunction with the Emergency Response Plan (ERP), charts a course for water system resilience. The RRA also provided various recommendations to increase reliability of SBMWD's system. Since critical pieces of infrastructure and specific vulnerabilities are detailed in the RRA and ERP, the contents of the document are confidential and for use by SBMWD's staff only. However, SBMWD can confirm that these plans meet the requirements set forth by AWIA and evaluate seismic risks and mitigation actions to SBMWD's infrastructure.

In the event of a water shortage emergency resulting from equipment failure, power outage, or other catastrophe, SBMWD is prepared to purchase emergency water supplies from nearby agencies while repairs or other remedial actions are underway. SBMWD may also implement its four-stage plan for conservation, as described above, with either voluntary or mandatory reductions depending on the severity of the shortage. For severe disasters (Stage 4), mandatory water use reductions are specified.

4.5 Seismic Risk Assessment and Mitigation Plan

Disasters, such as earthquakes, can and will occur without notice. In addition to the AWIA RRA and ERP, SBMWD has a 2019 Local Hazard Mitigation Plan (LHMP) that includes an assessment of seismic risk and mitigation for water facilities. The LHMP is included as **Attachment 2**.

The LHMP ranked SBMWD's facilities by their importance to the SBMWD's production and delivery of drinking water, and then using this ranking the team developed an estimate of potential economic impacts that could be caused by the high priority hazards. The LHMP also identified a set of hazard mitigation actions that are intended to reduce the impact of hazard, including:

- Design new facilities and upgrade existing facilities to withstand an 8.0 earthquake.
- Adopt cost-effective codes and standards to protect life, properties, and critical infrastructure.

4.6 Shortage Response Action Effectiveness

SBMWD has estimated the effectiveness of shortage response actions in **Table 3** and **Table 4** when data pertaining to such actions is available. It is expected that response actions effectiveness is also a result of successful communication and outreach efforts.

5.0 Communication Protocols

SBMWD prioritizes effective communication, especially in times of a water shortage emergency. SBMWD routinely communicates to customers about details on when a stage is announced. Communication actions may include bill inserts, handouts, informative flyers, and direct mail pieces, news releases, community presentations, email notifications, social media outreach, and website content. SBMWD continues to provide reminders about shortage stages and encourages conservation at all times.

6.0 Compliance and Enforcement

Violations – a violation of any water use restrictions of Rule and Regulation No. 21 currently in effect may result in the imposition of fines, water use restrictions, and/or termination of water service as set forth below:

1. **Step 1:** 1st Violation warning letter to customer/owner describing the water waste issue and notice of potential fines for continuing waste, providing a SBMWD customer service contact for conservation information and assistance. Provides customer/owner seven (7) calendar days to remedy the water waste situation and comply with conservation restrictions.
2. **Step 2:** 2nd Violation, customer/owner site visit or phone call to discuss nature of the water waste and potential solutions. A second Notice of Violation letter allowing seven calendar days to remedy the water waste situation and comply with the conservation restrictions.
3. **Step 3**: 3rd Violation: Third Notice of Violation letter informing customer/owner of financial penalty and allowing seven calendar days to remedy water waste situation and comply with conservation measures. One hundred dollars ($100.00) penalty assessed.
4. **Step 4:** Subsequent Violation(s): Additional penalties increasing incrementally by one hundred dollars ($100.00) per incident. Customer/owner shall receive a separate notice per each subsequent violation and will have seven (7) calendar days after each notification to remedy the water waste situation and comply with conservation restrictions.
5. **Step 5:** The Department may restrict the amount of water supplied to any customer/owner failing to comply with conservation standards. The provisions of this section shall be applied at the discretion of the Department.

7.0 Legal Authorities

A Drought Contingency Plan and Water Conservation Policy were originally adopted by SBMWD in 1991. More recently, on June 1, 2015, the City of San Bernardino Board of Water Commissioners passed Resolution 763, which amended the general water service rates, water conservation measures, and water waste penalties as set forth in Rule and Regulation No. 21.

7.1 Water Shortage Emergency Declaration

In accordance with CWC Section Division 1, Section 350 – SBMWD shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

7.2 Local/Regional Emergency Declaration

If a water shortage is approaching, SBMWD shall coordinate with any of the cities and counties in its service area for the possible proclamation of a local emergency.

8.0 Financial Consequences of WSCP

To ensure SBMWD's customers comply with Rule and Regulation No. 21 and CWC Chapter 3.3 (Excessive Residential Water Use During Drought), additional costs may be incurred to monitor and enforce response actions. The incurred cost may vary depending on the shortage stage and duration of the water shortage emergency.

The projected impact on water sales for a one-year period under a Stage 2 water shortage condition would result in an overall decrease in water sales revenue of approximately 10 percent. A decrease in water sales revenue of this magnitude would not adversely impact the financial operations of SBMWD.

Under Stage 2A, SBMWD is seeking to achieve a 15-percent reduction in water usage and assess financial penalties on usage in excess of those amounts. If customers do achieve the target reductions, the reduction in revenue to SBMWD would be between 5 and 15 percent.

A one-year period under a Stage 3 water shortage condition would reduce sales revenue by approximately 25 percent given the current rate structure. Adequate reserves are available to cover both shortage scenarios described above. However, a 25 percent reduction in water sales revenue would necessitate a water rate increase if the Stage 3 condition continued beyond the initial one-year period.

9.0 Monitoring and Reporting

The water savings from implementation of the WSCP will be determined based on monthly production reports which are reviewed and compared to production reports and pumping statistics from prior months and the same period of the prior year. Under shortage conditions, these production reports could be prepared as often as daily. At first, the cumulative consumption for the various sectors (e.g., residential, commercial, etc.) will be evaluated for reaching the target level. Then if needed, individual accounts will be monitored. Weather and other possible influences may be accounted for in the evaluation.

10.0 WSCP Refinement Procedures

The WSCP is best prepared and implemented as an adaptive management plan. SBMWD will use results obtained from their monitoring and reporting program to evaluate any needs for revisions. Potential changes to the WSCP that would warrant an update include, but are not limited to, any changes to trigger conditions, changes to the shortage stage structure, and/or changes to customer reduction actions.

Any prospective changes to the WSCP would need to be presented to the SBMWD Water Board for discretionary approval. Once discretionary approval has been granted, SBMWD will hold a public hearing, obtain any comments and adopt the updated WSCP. Notices for refinement and the public hearing date will be published in the local newspaper in advance of any public meetings.

11.0 Plan Adoption, Submittal and Availability

SBMWD adopted this WSCP with the 2020 IRUWMP. The 2020 IRUWMP and WSCP were made available for public review in June 2021 and a public hearing was held on **June 22, 2021** to receive public input on the draft 2020 IRUWMP and the WSCP.

The SBMWD Water Board adopted the 2020 IRUWMP and the WSCP at a public meeting on **June 22, 2021.** The resolution of adoption is included as an attachment.

This WSCP was submitted to DWR through the WUEData portal before the deadline of **July 1, 2021**.

This WSCP will be available to the public on SBMWD's web site.

If SBMWD identifies the need to amend this WSCP, it will follow the same procedures for notification to cities, counties and the public as used for the 2020 IRUWMP and for initial adoption of the WSCP.

References

California Department of Water Resources. (2021). *Urban Water Management Plan Guidebook 2020.* Sacramento: California Department of Water Resources.

Texas Living Waters Project. (2018). *Water Conservation by the Yard: A Statewide Analysis of Outdoor Water Savings Potential.* Austin: Texas Living Waters Project, Sierra Club, National Wildlife Federation. Retrieved from Texas Living Waters Project.

United States Environmental Protection Agency, Office of Water. (2002). *Cases in Water Conservation: How Efficiency Programs Help Water Utilities Save Water and Avoid Costs.* United States Environmental Protection Agency.

Attachment 1: SBMWD's Rule and Regulation No. 21

Exhibit "A"

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

300 North "D" Street
San Bernardino, CA 92401

RULE AND REGULATION NO. 21
GENERAL WATER SERVICE/WATER RATES

The following rates shall be charged for all water furnished for domestic, commercial, industrial, and municipal water use within the City of San Bernardino, and for any other purpose for which no rate is specified.

A. MINIMUM MONTHLY CHARGE All users will be assessed a minimum monthly charge to recover fixed costs, such as meter replacement, customer service, mailing costs, bill payment and debt service. The rates will be as follows:

Meter Size	February 1, 2010	January 1, 2011	January 1, 2012
½ inch or ⅝ inch	$ 10.55	$ 12.20	$ 12.90
¾ inch	$ 13.00	$ 15.15	$ 16.15
1 inch	$ 17.90	$ 21.00	$ 22.60
1½ inch	$ 30.15	$ 35.75	$ 38.80
2 inch	$ 44.85	$ 53.45	$ 58.20
3 inch	$ 79.15	$ 94.75	$ 103.50
4 inch	$ 128.15	$ 153.70	$ 168.20
6 inch	$ 250.70	$ 301.15	$ 330.00
8 inch	$ 397.75	$ 478.10	$ 524.15
10 inch	$ 569.30	$ 684.55	$ 750.65

B. COMMODITY CHARGE: This charge recovers water production and treatment costs, as well as associated variable costs of the Department. This rate is charged per hundred cubic feet (hcf) of water sold.

Commodity Charge per hcf	February 1, 2010	January 1, 2011	January 1, 2012
	$1.05	$1.10	$1.15

C. REPLENISHMENT CHARGE: This charge recovers the cost of water purchased to replenish the local basin and may be adjusted up or down, depending upon the amount of replenishment required. This rate is charged per hundred cubic feet (hcf) of water sold.

Replenishment Charge per hcf	February 1, 2010	January 1, 2011	January 1, 2012
	$0.09	$0.09	$ 0.09

D. ELEVATION CHARGE: This charge recovers electrical costs to transport water through the system and is specific to each zone. The electric cost incurred at plant facilities within each elevation level is distributed across water usage within that zone. This rate is charged per hundred cubic feet (hcf) of water sold.

Elevation zone	February 1, 2010	January 1, 2011	January 1, 2012
Zone 1	$0.09	$0.10	$0.11
Zone 2	$0.17	$0.18	$0.19
Zone 3	$0.15	$0.16	$0.17
Zone 4	$0.12	$0.13	$0.14
Zone 5	$0.21	$0.22	$0.23
Zone 6	$0.21	$0.22	$0.23

Note: the Energy Surcharge previously collected is now included in this Elevation Charge.

E. CONSERVATION CHARGE AND TIERS: To encourage conservation, customer accounts placing a greater demand on the water system will be assessed a higher cost. Initially, customers using in excess of their class average by service size listed below will pay a higher rate for water usage that falls in the second tier. To encourage greater conservation over a longer period of time, each tier and charge will adjust annually. This rate is charged per hundred cubic feet (hcf) only on that usage above the level defined in the tier table below. Revenues recovered from these charge will fund conservation programs sponsored by the Department.

Conservation Charge per hcf	January 1, 2012
	$0.35

All usage in hundred cubic feet (hcf) in excess of that listed below, by class, is billed the conservation charge. *As an example:* As of July 1, 2012, residential use equal to or below 32 hcf in a monthly billing period will not be assessed an additional conservation charge. However, each hcf billed above 32 will be assessed an additional 35¢ per hcf. The table below indicates the hcf cutoff for each customer class by meter size.

Conservation Tiers	January 1, 2012
Residential	32
MDU (2)	42
MDU (2+) per unit	17
Non-residential ⅝"	24
Non-residential ¾"	36
Non-residential 1"	65
Non-residential 1½"	150
Non-residential 2"	250
Non-residential 3"	740
Commercial ⅝"	42
Commercial ¾"	55
Commercial 1"	130
Commercial 1½"	275
Commercial 2"	445
Commercial 3"	875
Commercial 4"	2,400
Commercial 6"	9,000

F. ASSESSMENT DISTRICT CHARGE: Water furnished to the City for landscape assessment districts or funded from other than the City's General fund will be charged the following rate per hundred cubic feet (hcf) of water sold.

Assessment District Charge per hcf	**February 1, 2010**	**January 1, 2011**	**January 1, 2012**
	\$0.37	\$0.40	\$0.45

G. UNMETERED CHARGE: A "jumper" may be substituted for a water meter during single or multi-family housing construction at a charge of \$50 per month for a maximum of 120 calendar days or until the lot landscaping begins. Thereafter, a water meter shall be installed subject to all fees and charges as listed above prior to the issuance of a certificate of occupancy. Water used for tract grading and jetting of trenches is not covered in the above charge and is subject to the fees and charges listed in Rule and Regulation No. 16.

H. SURCHARGE – OUTSIDE CITY LIMITS: Any service installed outside the incorporated territory of the City after February 1, 1991 may be billed the meter charge and all required consumption related charges as set forth in this rule and regulation, multiplied by 1.5.

I. WATER SUPPLY SHORTAGE RATES: To comply with State of California mandates, the City of San Bernardino Municipal Water Department shall implement the following procedure in response to drought or water supply shortage declarations or similar service interruptions in the delivery of water to its customers.

During any drought or water supply shortage condition, the Department's General Manager may declare any one of three shortage level responses with ratification by the Board of Water Commissioners (Board) within three calendar days. A declaration of a water supply shortage may result from:

- Interruption of service through major plant failure;
- Interruption of replenishment water from various resources;
- Rainfall level at twenty-five percent (25%) or more below normal levels for at least six months;
- A natural disaster or other emergency event;
- Emergency regulations by the State Water Resources Control Board (SWRCB) and/or Executive Order(s) from the Governor's office.

Stage I (Voluntary Restrictions) incurs no financial penalties but requires an ongoing commitment to a water conservation program. During Stage I, the Department shall:

- Offer educational resources and landscaping classes;
- Offer rebate programs for water smart appliances and other water saving devices;
- Encourage voluntary conservation through continued media announcements;
- Request the City Manager to direct city parks, facilities and golf courses to restrict landscape watering to off-peak hours to reduce demand on the water system and eliminate the 60% evaporation rate during daytime watering.

- Provide reminder notices regarding noted water waste; and
- Offer community outreach programs.

Due to the continuous conservation efforts required to preserve San Bernardino's water supply in the region's arid climate, Stage I will be maintained at all times.

Stage II (Mandatory Restrictions) will impose a five percent (5%) reduction in water usage and assess financial penalties on usage in excess of those amounts.

A base allowance for each customer will be established based upon their 2013 calendar year's water usage. A ten percent (10%) surcharge will be applied to each billing unit that exceeds the (5%) required reduction in base allowance. Where the customer does not have consumption history from 2013, then the Department shall use the customer's rate/class consumption average, by meter size, as the benchmark.

As an example: A customer used 20 billing units in August 2013. During a Stage II five percent (5%) usage reduction, the customer is permitted 19 billing units during the August 2014 billing period.

20 hcf x 5% = 1 hcf
20 hcf – 1 hcf = 19 hcf August 2014 Baseline

If that customer utilizes 19 or less billing units, no financial penalty is assessed. However, should that customer utilize 25 billing units, a ten percent (10%) surcharge will be assessed for each billing unit in excess of 19:

25 hcf – 19 hcf = 6 hcf x 10% x $1.15 (Commodity Rate) = $.69 Surcharge

Additionally, during Stage II, the Department mandates the following:

- Irrigation shall only be allowed between the off-peak hours of 6:00 pm through 8:00 am;
- Irrigation shall be limited to four days per week on Mondays, Wednesdays, Fridays and Sundays only;
- No watering of outdoor landscapes that cause excessive runoff;
- No washing down driveways, sidewalks, or other hardscapes;
- The washing of cars, trucks, or other vehicles is not permitted except with an automatic shut-off device, or at a commercial car washing facility designated for vehicle washing;
- No use of fountains that use potable water, unless the water is recirculated;
- Increase advertisement of conservation measures;
- Maintain a message center for reporting water waste;
- Determine course of action to remediate reported water waste;
- Request the City Manager to direct Parks and Recreation, City Facilities and all golf courses to limit outdoor watering for irrigation to four days per week, and also only between the hours of 6:00 pm through 8:00 am.
- All leaks shall be corrected within seventy two (72) hours of Department notification.

The Board of Water Commissioners reserves the right to declare additional Stage II mandatory restrictions and prohibitions in the future if required by the State of California.

Stage IIA (Extreme Mandatory Restrictions) will impose a twenty-eight percent (28%) reduction in water usage and assess financial penalties on usage in excess of those amounts.

A base allowance for each customer will be established based upon their 2013 calendar year's water usage. A twenty percent (20%) surcharge will be applied to each billing unit that exceeds the (28%) required reduction in base allowance. Where the customer does not have consumption history from 2013, then the Department shall use the customer's rate/class consumption average, by meter size, as the benchmark.

As an example: A customer used 20 billing units in August 2013. During a Stage IIA twenty-eight percent (28%) usage reduction, the customer is permitted 14.4 billing units during the August 2015 billing period.

20 hcf x 28% = 5.6 hcf
20 hcf – 5.6 hcf = 14.4 hcf August 2015 Baseline

If that customer utilizes 14.4 or less billing units, no financial penalty is assessed. However, should that customer utilize 25 billing units, a twenty percent (20%) surcharge will be assessed for each billing unit in excess of 14.4 hcf. Assuming the commodity rate is $1.15 per hcf:

25 hcf – 14.4 hcf = 10.6 hcf x 20% x commodity rate.

Surcharge = 10.6 hcf x 0.2 x $1.15 = $2.44

Additionally, during Stage IIA, the Department mandates the following:

- Irrigation shall only be allowed between the off-peak hours of 6:00 pm through 8:00 am;
- Irrigation shall be limited to three days per week; Mondays, Wednesdays and Fridays only;
- Maximum irrigation time of 15 minutes per station per designated irrigation day;
- Irrigation will be prohibited for a full 48 hours after a significant precipitation event (rainfall in excess of 1/8" as measured at the Department's Mill and D rain gauge) has occurred over the City of San Bernardino. Department will maintain website notification when this restriction will be in place;
- No watering of outdoor landscapes that cause excessive runoff;
- No washing down driveways, sidewalks, or other hardscapes;
- The washing of cars, trucks, or other vehicles is not permitted except with an automatic shut-off device, or at a commercial car washing facility designated for vehicle washing;
- No use of fountains that use potable water, unless the water is recirculated;
- Increase advertisement of conservation measures;
- Maintain a message center for reporting water waste;
- Determine course of action to remediate reported water waste;

- Request the City Manager to direct Parks and Recreation, City Facilities and all golf courses to limit outdoor watering for irrigation to three days per week, and also only between the hours of 8:00 pm through 6:00 am.
- Irrigation of ornamental turf on public street medians is prohibited.
- Use of potable water outside of new residential home and commercial/industrial construction that is not delivered by drip or micro-spray systems is prohibited.
- The serving of drinking water other than upon request is prohibited, in eating or drinking establishments including but not limited to restaurants, hotels, cafes, cafeterias, bars or any other public place where food or drink are served.
- All hotels/motels shall provide their guests with the option of choosing not to have towels and linens laundered daily. The hotel/motel must prominently display notice of this option in each bathroom using clear and easy language.
- All leaks shall be corrected within seventy two (72) hours of Department notification.

The Board of Water Commissioners reserves the right to declare additional mandatory restrictions and prohibitions in the future if required by the State of California.

Stage III ***(Water Shortage Emergency)*** will impose a fifty percent (50%) reduction in water usage and assess financial penalties on usage in excess of those amounts. A Stage III water supply shortage condition shall be declared if a catastrophic interruption of water supply or distribution facility occurs as the result of drought, earthquake, wildfire, extended power outage or any other disaster in which the Department may be prevented from meeting the water demands of its customers. Prior to the Board of Water Commissioners taking action on the Stage III declaration, notice will be given to the Mayor and the City Manager of the mandatory restrictions that will be placed into effect.

A base allowance for each customer will be established based upon their 2013 calendar year water usage. A one hundred percent (100%) surcharge will be applied to each billing unit that exceeds the fifty percent (50%) required reduction in base allowance. Where the customer does not have consumption history from 2013, then the Department shall use the customer's rate/class consumption average, by meter size, as the benchmark.

As an example: A customer used 20 billing units in August 2013. During a Stage III fifty percent (50%) usage reduction, the customer is permitted 10 billing units during the August 2015 billing period.

20 hcf x 50% = 10 hcf
20 hcf – 10 hcf = 10 hcf August 2015 Baseline

If that customer utilizes 10 or less billing units, no financial penalty will be assessed. However, should that customer utilize 25 billing units, a one hundred percent (100%) surcharge will be assessed for each billing unit in excess of 10: Assuming the commodity rate is $1.15 per hcf:

25 hcf – 10 hcf = 15 hcf x 100% x $1.15 (commodity rate.) = $17.25 Surcharge

Additionally, during Stage III, the Department shall:

- Irrigation shall be allowed only between the off-peak hours of 8:00 pm through 6:00 am; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency.
- Irrigation shall be limited to two days per week, on Mondays and Thursdays; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency;
- No watering of outdoor landscapes that cause excessive runoff;
- No washing down driveways, sidewalks, or other hardscapes;
- No washing of vehicles except at commercial vehicle washing facilities;
- No use of fountains that use potable water, unless the water is recirculated;
- Increase advertisement of conservation measures;
- Maintain a message center for reporting water waste;
- Determine course of action to remediate reported water waste;
- Request the City Manager to direct parks, facilities and golf courses to limit outdoor watering for irrigation to two days per week, and also only between the off-peak hours of 8:00 pm through 6:00 am; however, the Department reserves the right to prohibit all outdoor irrigation at any time depending on the severity of the emergency;
- The serving of drinking water other than upon request is prohibited, in eating or drinking establishments including but not limited to restaurants, hotels, cafes, cafeterias, bars or any other public place where food or drink are served.
- All hotels/motels shall provide their guests with the option of choosing not to have towels and linens laundered daily. The hotel/motel must prominently display notice of this option in each bathroom using clear and easy language.
- All leaks shall be corrected within seventy-two (72) hours of Department notice;
- Deny all new construction meter requests;
- Remove or lock out all existing construction meters in service.

Notices of Violation:

- Step 1: 1st Violation warning letter to the customer/owner describing the water waste issue and notice of potential fines for continuing water waste, providing a Department customer service contact for conservation information and assistance. Provides customer/owner seven calendar days to remedy the water waste situation and comply with conservation restrictions.

- Step 2: 2nd Violation, customer/owner site visit or phone call to discuss nature of the water waste and potential solutions. A second Notice of Violation letter allowing seven calendar days to remedy the water waste situation and comply with conservation restrictions.

- Step 3: 3rd Violation: Third Notice of Violation letter informing customer/owner of financial penalty and allowing seven calendar days to remedy water waste situation and comply with conservation restrictions. One hundred dollars ($100.00) penalty assessed.

- Step 4: Subsequent Violation(s): Additional penalties increasing incrementally by one hundred dollars ($100.00) per occurrence, up to a limit of five hundred dollars ($500.00) per incident. Customer/owner shall receive a separate notice per each subsequent violation and will have seven (7) calendar days after each notification to remedy the water waste situation and comply with conservation restrictions;

- Step 5: The Department may restrict the amount of water supplied to any customer/owner failing to comply with conservation standards. The provisions of this section shall be applied in addition to any other penalties provided in this rule and shall be applied at the discretion of the Department.

  Exceptions: The restrictions of water consumption outlined herein are not applicable to water usage necessary for public health and safety or for essential governmental services, such as police, fire, and emergency services. The Department reserves the right to waive any water restriction penalty when, in its discretion, such consumption is required in order to maintain an adequate level of public health and safety.

Payment of Surcharges and Penalties:

All surcharges and penalties imposed under this rule and regulation shall be added to customer's water bills or as a lien on the owner's property and become payable at the same time and in the same manner as such bills or by such other method of collection and payment as established by the Department.

Right to Hearing:

Any customer/owner shall have a right to a hearing with the General Manager of the Department, or his/her designee, on a notice of violation, the assessment of a surcharge or penalty, or the denial and/or lock out of a construction meter, upon written request to the Department. Customer/owner's written request for a hearing must be received by the Department within ten (10) calendar days from the date of notice of violation, or customer/owner's right to a hearing shall be deemed waived.

Customer/owner shall be deemed notified of a violation, surcharge, penalty, or denial and/or lockout of a construction meter upon (1) the personal delivery of the notice to customer or (2) the date of lock out and/or denial of construction meter. If personal delivery is not given, the date on which the notice is placed in the regular mail shall be deemed the date of notification.

Customer/owner's timely written request for a hearing shall automatically stay the imposition of a penalty until the General Manager or his/her designee renders a decision; except that denial of a construction meter request or lock out of an existing construction meter shall remain in effect until the General Manager or his/her designee renders a decision.

The decision of the General Manager or his/her designee may be appealed to the Board of Water Commissioners, provided that the customer files a written notice of appeal with the Department within five calendar days of notification of the decision.

The decision of the General Manager, his/her designee, or the Board (if an appeal is timely filed) shall be final and conclusive and shall not be subject to appeal to the Mayor and Common Council. Once the decision becomes final as provided in this rule and regulation, the time in which judicial review of the decision must be sought shall be governed by California Code of Civil Procedure Section 1094.6, or other applicable State law.

Other Water Conservation Measures:

The Board may order implementation of other water conservation measures in addition to those set forth in this rule and regulation. Such additional water shortage measures shall be implemented in the manner provided in this rule.

Conclusion of a Water Supply Shortage Condition:

The General Manager shall notify the Board when the water supply shortage condition stage level should be reduced. The Board may ratify the General Manager's reduction of stage level. All bills issued after the Board's ratification date shall not include water supply shortage surcharges.

Use of Surcharge Funds:

Any surcharges and fines will be segregated into a restricted cash account managed by the Department to supplement the conservation efforts of the Department.

Approved by BOWC:	May 19, 2015
Effective:	June 1, 2015
Supersedes:	August 19, 2014

Attachment 2: 2019 Local Hazard Mitigation Plan

City of San Bernardino Municipal Water

SBMWD

Local Hazard Mitigation Plan (LHMP)

San Bernardino, California

City of San Bernardino Municipal Water (SBMWD)
Water Board

Adoption Date: May 14, 2019
Approved by CalOES: March 30, 2019
Revised: 3-21-19
Approved by FEMA: April 3, 2019

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SECTION 1: INTRODUCTION

1.1 Purpose of the Plan

Emergencies and disasters can leave people injured or displaced, result in fatalities, cause significant damage to our communities, businesses, public infrastructure and our environment and cost tremendous amounts in terms of response and recovery dollars and economic loss. Hazard mitigation reduces the risk of personal damages, loss of life, and property damages caused by emergencies and disasters.

Repairs and reconstruction after disasters are often completed to simply restore infrastructure to pre-disaster conditions. Such efforts expedite a return to normalcy; however, merely replicating pre-disaster conditions results in a cycle of damage, reconstruction, and repeated damage. Hazard mitigation attempts to break this cycle by reducing hazard vulnerability.

While we cannot prevent disasters from happening, their effects can be reduced or minimized through preparedness and mitigation. For those hazards that cannot be fully mitigated, the community must be prepared to provide efficient and effective response and recovery to emergencies. This can be accomplished through a well-organized public education and awareness effort.

The purpose of this Local Hazard Mitigation Plan (LHMP) is to identify potential hazards to the City of San Bernardino Municipal Water Department (SBMWD) and formulate mitigation measures for future protection of the SBMWD critical infrastructure and the community's safety with respect to the SBMWD facilities and services. Approval of this LHMP by the California Office of Emergency Services (CalOES) will also allow the SBMWD to become eligible to receive federal funding assistance under the Local Hazard Mitigation Grant Program or the Pre-Disaster Mitigation program.

As required by the Department of Homeland Security's Federal Emergency Management Administration (FEMA), the LHMP must be updated, adopted, and approved every five (5) years. This LHMP is an updated plan. The first LHMP was approved by FEMA in 2005 and again in 2010. The current plan has expired. The 2010 plan was undertaken under a grant from San Bernardino County OES and was completed along with 33 water agencies in the County and rolled up under the San Bernardino Counties HMP. Therefor this is the first stand alone plan the Department has developed. The 2010 HMP was completed and approved.

In late 2018, the Department came under new leadership. There was a new General Manager (G.M.) appointed. The new G.M. was a member of the LHMP planning team. Mr. Miguel J. Guerrero, Professional Engineer (P.E.) is a believer in mitigation and this undated plan will be at the center of Hazard Mitigation and capital improvement plan in the Department.

1.2 Authority

Created as a municipal utility under Article 9 of the City of San Bernardino Charter, SBMWD was established on January 6, 1905. SBMWD is governed by a Water Board appointed by the Mayor and subject to confirmation by the City Council. The first Water Board was appointed in May 1905, and the initial water distribution system covered approximately one square mile and served a population of only about 6,000 people. Since then, the service area has experienced years of steady population growth and has expanded at a fast rate to provide service to most of the City of San Bernardino and portions of the unincorporated area of San Bernardino County. SBMWD also provides services to the City of Highland and Loma Linda.

The SBMWD's service area receives its water supply from an underground aquifer called Bunker Hill Groundwater Basin, which is concentrated at the northeastern end of the city. The water contained in the Bunker Hill Groundwater Basin is replenished with rain and snowmelt that filters through the local San Bernardino Mountains. This local water supply ensures the customers of the San Bernardino Municipal Water Department receive high quality, inexpensive water as compared to other communities. SBMWD also receives water from the State of California Water Project. State project water does not feed directly into SBMWD water system and is only used to help replenish the Bunker Hill Basin. Many communities of Southern California must import their water supplies from remote locations via the Colorado River and Northern California pipelines and aqueducts. Many water supplies imported from distant locations can be impacted by certain man-made and natural contaminants as the water is transported to the customer. SBMWD also operates two wastewater treatment plants.

1.3 Community Profile

SBMWD has a service area of approximately 55 square miles and provides water service to customers within the City of San Bernardino, with a small percentage of out-of-city accounts. Given the high percentage of service to City parcels, the land use as defined by the City of San Bernardino's General Plan is used as the primary basis for development in the SBMWD's service area. In addition to the City's General Plan, the SBMWD's water system billing database (HTE) and information from the County's General Plan are used to classify land uses for undeveloped and unincorporated areas that fall within the SBMWD's service boundaries.

The City of San Bernardino currently has a population of approximately 215,000 people. Since 2001, water use within the SBMWD's service area has ranged from a low of 41,844 acre-feet (AF) to as high as 55,135 AF. Typically, the annual fluctuations are found to be primarily in response to factors such as weather conditions, economy, or unemployment. Following the downturn in the California economy, water demands declined to approximately 41,844 AF in 2013, showing a downward trend since 2008.

SBMWD relies solely on water extracted from the underlying aquifer, the Bunker Hill Groundwater Basin to meet its demands. This water is distributed via SBMWD's water distribution system consisting of pipelines, storage reservoirs, pumping stations, hydroelectric generating stations, manual and automatic control valves, fire hydrants, and water meters located throughout 23 individual pressure zones.

The SBMWD provides water service to approximately 44,000 active service connections within its 55 square-mile service area in the City of San Bernardino and surrounding areas. The SBMWD operates and maintains 38 storage tanks, 53 water wells, and nearly 750 miles of water pipelines. In addition, the SBMWD has recently taken ownership of the City of San Bernardino's wastewater collection system. The SBMWD has owned and operated the wastewater treatment system for over 60 years but didn't own or operate the wastewater collection system. The collection system was owned and operated by the City of San Bernardino, Public Works Department. As the city emerged from bankruptcy in 2017, the city turned over ownership, maintenance, and control of the collections system. The collection system had not been updated in many years. The SBMWD now operates 466 miles of wastewater pipelines and has 64,342 customer wastewater laterals within the city and county areas. The wastewater system treats on average 22 million gallons of wastewater daily.

1.3.1 Physical Setting

The City of San Bernardino lies at the base of the San Bernardino Mountains and is approximately-60 miles east of the City of Los Angeles. The city has three major freeways that run through it, and those freeways are: : Interstate 10, Interstate 215, and Interstate 210. The city is also home to California State University, San Bernardino and San Bernardino International Airport.

The SBMWD's service area is bounded on the north by the San Bernardino National Forest, on the east by the East Valley Water District and Redlands Municipal Utilities, on the south by the cities of Loma Linda and Colton, and on the west by the West Valley Water District, the City of Rialto, and the Muscoy Mutual Water Company. Elevations within the SBMWD's service area range from approximately 1,000 feet above sea level at the southern boundary, to an elevation more than 2,300 feet above sea level at its northern-most boundary.

The geographical features include the San Bernardino National Forest, which is located to the north of the city's boundaries. Cajon Pass is located at the northwest section of the city. The Arrowhead Springs are located within the city boundaries. City Creek, San Timoteo Creek, Twin Creek, and Warm Creek feed into the Santa Ana River, which encompasses most of the city's southern border.

San Bernardino is unique from most Southern California cities because of the vast amounts of water found in the basin. Most of the city sits on the underground aquifer named the Bunker Hill Basin. The city's downtown area was built on top of the Bunker Hill Basin. The downtown area still rests in that location. This accounts for the historical high-water table in the city. In past years the water table was so high, the city installed super wells to pump water from the basin into the Santa Ana River in attempts to lower the water table and stop the flooding of the United States Central Post Office basement as well as basements of other government offices and businesses located in the southwestern and western sides of the city. Pumping water out of the basin was also an attempt to lower the danger of liquefaction during earthquakes. These wells were turned off during the recent drought as the water table was well below levels that interfered with buildings.

1.3.2 History

City of San Bernardino Municipal Water Department (SBMWD)

The SBMWD and the Water Board were established on May 8, 1905, by the Mayor and Common Council of San Bernardino in accordance with the provisions specified in the City Charter. "The Water Board assembled for the first time on May 16, 1905, to meet the water supply needs of the community by providing trusted, quality service to our customers." This service has grown through the years to include: water supply, water reclamation, geothermal heating supply, and administrative support for our growing community.

The first water distribution system of San Bernardino included water supply for approximately six thousand citizens within a one-square-mile service area. In contrast, the water supply distribution network now encompasses over 44,000 service connections including 750 miles of water mains. Although the number of connections has increased during the past one hundred years, the commitment to trusted, quality service remains intact.

City of San Bernardino

San Bernardino is a city located in the Riverside-San Bernardino metropolitan area, sometimes referred to as the Inland Empire. The City was founded in 1869, and the city serves as the county seat of San Bernardino County. As one of the anchor cities, San Bernardino spans 55 square miles on the floor of the San Bernardino Valley and has a population of 215,000 people as of the 2010 census. San Bernardino is the 19th largest city in California and the 100th largest city in the United States. The governments of Guatemala and Mexico have established their consulates in the downtown area of the City. California State University, San Bernardino is located in the northwest part of the city.

In August of 2012, San Bernardino became the largest city to file for protection under Chapter 9 of the U.S. Bankruptcy Code. On December 2, 2015, a terrorist attack left 14 people dead and 22 people seriously injured within the City.

County of San Bernardino

The County of San Bernardino has a population of more than 2,000,000 people as of the 2010 census, which is up from the reported 1,709,434 in the 2000 census. With an area of 20,105 square miles, San Bernardino County is the largest county in the United States by area. It is larger than nine States, including New Jersey, Massachusetts, and Maryland.

Located in the southeast section of California, thinly populated deserts and mountains cover most of this vast county. The bulk of the County's population resides in two Census County Divisions, where approximately 1,400,000 people live as of the 2010 Census. San Bernardino County is bordered by the Colorado River on the east, Riverside County on the south, Los Angeles, Orange and Kern Counties on the west, and Inyo County on the north.

1.3.3 Demographics

The SBMWD serves approximately 44,000 potable water service connections and a population of approximately 215,000 customers. The SBMWD operates a wastewater system that includes 468 miles of wastewater collections and 64,342 wastewater lateral connections in the city and county area. The SBMWD treats on average 22 million gallons of wastewater a day. There are 50,283 households, out of 29,675 have children under the age of 18 living in them. 25,700 are opposite sex married couples. 13,518 are single female head of household with no wife present and 5,198 male head of household with no wife present. The average household size is 3.42 people. The average family size is 3.89.

1.3.4 Existing Land Use

The existing land use is housing, commercial, and light industry. The City of San Bernardino is responsible for designating land use. The City of San Bernardino and the County of San Bernardino regulate incorporated areas. The SBMWD does not have authority to regulate land use.

1.3.5 Development Trends

Development in the City of San Bernardino was reduced significantly during the housing industry crash of 2008. San Bernardino is seeing some new housing developments that started in 2015, 2017 and 2018. The area is expected to see an increase in the housing market, which will increase the number of water and wastewater service connections to the SBMWD's water and wastewater systems. The biggest developing area's in the City is housing. The majority of the new housing is being built in the Cities north west end, along the Cajon pass corridor. This development means there are more pipelines, sewer mains, reservoirs and wells needed to supply services to the area. This area is also located in a high fire area and is vulnerable to earthquakes and intense high winds during the Santa Ana events.

SECTION 2: PLAN ADOPTION

2.1 Adoption by Local Governing Body

The completed Local Hazard Mitigation Plan will be presented to the SBMWD's governing body, the Water Board, for adoption after CalOES and FEMA has reviewed it, and all additions or deletions have been completed. The plan will then be forwarded to CalOES and then to FEMA for approval. If any sections of the plan are changed during the process, the document will be sent back to the SBMWD's Water Board for final adoption by resolution.

2.2 Promulgation Authority

This Local Hazard Mitigation Plan was reviewed and approved by the Board of Water Commissioners of the City of San Bernardino Municipal Water Department's Water Board:

Ms. Toni Callicott
Board President
Description of Involvement: President, City of San Bernardino Municipal Water Department (SBMWD), Water Board

Mr. David E. Mlynarski

Commissioner
Description of Involvement: Commissioner, City of San Bernardino Municipal Water Department (SBMWD), Water Board

Rikke V. Johnson
Commissioner
Description of Involvement: Commissioner, City of San Bernardino Municipal Water Department (SBMWD), Water Board

Thomas Brickley
Commissioner
Description of Involvement: Commissioner, City of San Bernardino Municipal Water Department (SBMWD), Water Board

Mr. Wayne Hendrix
Commissioner
Description of Involvement: Commissioner, City of San Bernardino Municipal Water Department (SBMWD), Water Board

Mr. Miguel J. Guerrero P.E.
General Manager
Description of Involvement: General Manager, City of San Bernardino Municipal Water Department (SBMWD)

2.3 Primary Point of Contact

The Point of Contact for information regarding this plan is:

BEFORE FEMA APPROVAL

Gary Sturdivan
Sturdivan Emergency Management Consulting, LLC
gsturdivan@me.com
909-658-5974

AFTER FEMA APPROVAL

Francisco Salazar
SBMWD Safety Manager
Francisco.Salazar@sbmwd.org
909-453-6025

SECTION 3: PLANNING PROCESS

This section documents the planning process used to review and compile information that leads to an effective LHMP. A comprehensive description of the planning process informs citizens and other readers how the plan was developed and provides a permanent record of how decisions were reached. These decisions can be understood, reconsidered, replicated, or modified in future plan updates. An integral part of the planning process is the documentation of how the public was engaged throughout the process.

This LHMP was completed with the coordination and involvement of the City of San Bernardino Municipal Water Department staff and representatives from other local agencies. These team members have a vested interest in the performance and resiliency of the SBMWD.

San Bernardino County Office of Emergency Services reviewed the plan and the contents of this plan for items that should be included from the San Bernardino County LHMP and items that should be included in the next County plan. San Bernardino County Fire Office of Emergency Services supplied the SBMWD with the hazard maps included in this document.

This section includes a list of the Planning Team Members, a summary of the meetings held, coordination efforts with the surrounding communities and groups, and public outreach efforts.

3.1 Preparing for the Plan

The Planning Team reviewed FEMA's "Hazard Mitigation Plan Crosswalk" and information on past events that affected the SBMWD's service area as provided by the San Bernardino County Office of Emergency Services.

The San Bernardino County Office of Emergency Services completed a FEMA Hazard Profile of the area. The Hazard Profile Maps provided by the County were used in the planning meetings to show flood areas, earthquakes, flash floods, and other disasters that have affected the area. Other written documentation of past events was also reviewed. The team discussed the different events that have occurred in the community; such as flash floods, earthquakes, windstorms, power outages, and freezing events. Members of the Planning Team are longtime residents of the community and have lived through many of these emergency events.

The planning process consisted of:

- Documenting past events
- Incorporating data
- Engaging the Planning Team
- Posting the meeting agendas, meeting minutes, and draft LHMP onto the SBMWD's website and asking for public input and comments on the planning process
- Sharing information at the biweekly Board of Directors' meetings
- Conducting public outreach

During the planning process the Planning Team utilized the following plans for information on the hazards that face the area and the mitigation goals of the City of San Bernardino and the County of San Bernardino.

- California HMP 2013
- San Bernardino County HMP
- City of San Bernardino Municipal Water SBMWD 2010 LHMP
- City of San Bernardino Municipal Water SBMWD Water Master Plan
- San Bernardino County Flood Control Plan
- USGS Golden Guardian Shake Out Exercise 2008
- FEMA Flood Insurance Study for San Bernardino County

Table 1
Plans Reviewed by the Planning Team

Study Plan	Key Information
City of San Bernardino Municipal Water Department's expired 2010 HMP	Hazards and Mitigation
California HMP 2013	Goals for the State of California
San Bernardino County HMP	Mitigation Measures and Goals, Hazards,
San Bernardino MWD's 2010 LHMP	Hazard Identification and, Mitigation Measures
San Bernardino MWD Water Master Plan	Land Use, and Future Projects
Dam inundation report	Flooding Inundation from Dam Failure
USGS Golden Guardian 2008	Earthquakes, Effects and, Planning
FEMA Flood Insurance Study for San Bernardino County	Flood History

Table 2
Financial Resources for Future Mitigation Projects

Local	Revenues	Amount
Budgets and Financial Planning Documents	Water Sales, New Construction	Varies from Year to Year
FEMA Grants	None	None
State Revolving Funds	Sewer Project Funding	142 Million
Prop. 84 Funding	Water Pipeline Replacement, Phase One	7.2 Million
FEMA Mitigation Grants	SBMWD has not applied for FEMA Mitigation Grant funding in the past	As Funding and Approval are Obtained
Future Budget Funds Considerations	Water Sales	Varies as Funding is Available Each Year

3.2 Planning Team

The Planning Team compiled information and reviewed this LHMP under the authorization of the SBMWD's Water Board. The Planning Team members included eleven (11) members from the SBMWD as follows:

Mr. Gary Sturdivan, **LHMP Consultant**
Description of Involvement: Planning Team Lead

Gary Sturdivan, as a consultant to the SBMWD, is the team leader for the LHMP. Mr. Sturdivan develops the agendas for each LHMP meeting, leads the discussions, compiles the meeting minutes and other information for public comment, and prepares draft text for the LHMP. Mr. Sturdivan provides informational updates to the SBMWD's Water Board and incorporates the Board's comments into the planning process and LHMP. Mr. Sturdivan has extensive knowledge of Mitigation Planning, Grant Funding, and Emergency Management. Mr. Sturdivan worked in the water industry for 25 years, with 8 years as the Commissioner of Safety/Regulatory Affairs/Emergency Management and Grants. Mr. Sturdivan is the owner and CEO of Sturdivan Emergency Management Consulting, LLC.

Mr. Miguel J. Guerrero, P.E. General Manager
Description of Involvement: Internal Planning Team Member

Miguel Guerrero is the General Manager of the Water Department. He is responsible for managing the activities of the Department and oversight of all Department divisions including, Administrative Services, Environmental and Regulatory Compliance, Finance, Water Utility, and Water Reclamation.

Mr. Steve Miller, Director of Water Utility
Description of Involvement: Internal Planning Team Member

Steve Miller is the Director of Water Utility. He oversees the operation, maintenance, water quality, and construction of facilities associated with the San Bernardino Municipal Water Department's water distribution system, geothermal system, and water production/treatment facilities. Mr. Miller is responsible for maintaining compliance with the State of California issued Water Supply Permit.

Mr. Kevin T. Stewart, P.E. Director of Water Reclamation
Description of Involvement: Internal Planning Team Member

Kevin Stewart is the Director of Water Reclamation. He oversees the sections that make up the Water Reclamation Division: Administration; Operations; Maintenance; Electrical, Instrumentation & Supervisory Control and Data Acquisition (SCADA) system; RIX Facility;

and Sewer Collections. Mr. Stewart is responsible for maintaining compliance with the methods and procedures for the pretreatment protection, collection, treatment, and processing of wastewater to conform to federal, state, and local requirements.

Ms. Jennifer Shepardson, **Director of Environmental and Regulatory Compliance**
Description of Involvement: Internal Planning Team Member

Jennifer Shepardson is the Director of Environmental and Regulatory Compliance. She is responsible for ensuring the Department adheres to local, state, and federal regulations where applicable. Ms. Shepardson also oversees the Department's Environmental Control, Water Quality, safety and risk management functions.

Mr. Frank Salazar, Safety Manager
Description of Involvement: Internal Planning Team Member

Frank Salazar is the Safety Manager in the Environmental and Regulatory Compliance section. He plans and coordinates the Accident Prevention Program; ensures a Comprehensive Safety Education and Loss Control Program is in place with all Department sections; conducts accident investigations involving Department employees, equipment, structures, and facilities on behalf of and against the Department. Mr. Salazar performs field audits of Department facilities, identifying safety hazards, security problems, and public liability.

Mr. Mike Garland, Water Utility Operations Superintendent
Description of Involvement: Internal Planning Team Member

Mike Garland is the Water Utility Operations Superintendent. He is responsible for managing and coordinating the operation of the Department's production and treatment facilities. Mr. Garland plans, organizes, implements and controls installation, maintenance, operation and repair of water treatment equipment and infrastructure, including pumps, boosters, pressure regulating devices, hydro-generation, geothermal, and chlorinating equipment.

Ms. Julie Abinto, GIS Manager
Description of Involvement: Internal Planning Team Member

Julie Abinto manages all aspects of the GIS program, including Computer Aided Design (CAD) and other spatial data. She performs spatial analysis and solves GIS-related issues using Arc GIS or CAD. Ms. Abinto is the GIS Databases Administrator and designs and produces maps for presentations and reports.

Ms. Ashleigh Adame, **Regulatory Analyst**
Description of Involvement: Internal Planning Team Member

Ashleigh Adame is a Safety Regulatory Analyst in the Environmental and Regulatory Compliance section. She ensures all City of San Bernardino Municipal Water employees work in a safe and healthful workplace by enforcing Occupational Safety and Health Administration (OSHA) standards. Ms. Adame responds to Department incidents and accidents, including but not limited to: workplace injuries, damaged SBMWD property, vandalism, illegal dumping, burglaries and theft. She maintains the Loss Control Program and works closely with the San Bernardino Police Department to minimize the risk of losses.

Ms. Marissa Flores-Acosta, Environmental Supervisor
Description of Involvement: Internal Planning Team Member

Marissa Flores-Acosta is the Environmental Supervisor in the Environmental and Regulatory Compliance section at SBMWD. In this capacity, Ms. Flores-Acosta is responsible for Department adherence to local, state, and federal regulations under the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program, South Coast Air Quality Management District (SCAQMD) and California Air Resources Control Board, as well as any other federal, state or local regulations.

Mr. Carl D. Jones, Regulatory Analyst
Description of Involvement: Internal Planning Team Member

Carl Jones is a Safety Regulatory Analyst in the Environmental and Regulatory Compliance section. He plans and coordinates hazardous materials management and disposal, trains Department employees on all aspects of Cal OSHA and Federal rules and regulations. Mr. Jones completes job site and facility safety evaluations and assists in accident response and investigations.

3.3 Coordination with Other Jurisdictions, Agencies, and Organizations

SBMWD staff invited the City of San Bernardino and San Bernardino County Office of Emergency Services, and residents of the community to participate in the LHMP planning process. The County of San Bernardino OES declined to participate on the Planning Team and was unable to attend meetings, but, County OES reviewed the plan as it was developed. The City was contacted by email and phone call, by Mr. Salazar. The City gave the team a clean copy of the City's LHMP for review. The County OES was contacted by Mr. Sturdivan, by a phone call to Miles Wagner.

The Planning Team participated in monthly meetings to coordinate efforts, provide input, and receive support for the LHMP. The support included receiving technical expertise, resource materials and tools. The support facilitated the LHMP process and provided sufficient information to be in compliance with FEMA requirements for the program. The tools, resource materials, and other project related information are maintained on a project portal on the SBMWD's website (www.sbcity.org/water) to allow access of the information to all participants and the public.

3.4 Public Involvement/Outreach

SBMWD staff invited residents of the community to participate in the LHMP planning process. The 2018 board meeting agendas, meeting minutes, and sections of the LHMP were posted on the SBMWDs website as the LHMP was written. Requests for public review and comments were printed on the customer's monthly bills, asking for customers to review the documents and direct comments or concerns to Mr. Sturdivan at gsturdivan@me.com or by calling Mr. Sturdivan at 909-658-5974. The public could also attend the Water Board meetings each month to voice comments or concerns. No public comments were received for the LHMP. Mr. Sturdivan received several calls from the public, with water or wastewater concerns. These calls were referred to the Department staff.

See Appendix B for the details of the public involvement process: meeting dates, purpose, agendas, sign-in sheets, minutes, and public comments.

3.5 Assess the Hazards

A critical component of the LHMP process is to assess the likely hazards that may impact the SBMWD's facilities and operations. It is important to have a thorough understanding of these hazards without overanalyzing remote or highly unlikely hazards.

This LHMP has been developed through an extensive review of available information on hazards the SBMWD has faced in the past and most likely will face in the future. The Planning Team reviewed and discussed items that have happened in the State of California as well as disasters that have happened in other areas of the United States. The Planning Team reviewed documents such as engineering drawings, photographs, and available geotechnical and geologic data both

from the Internet and outside sources for example: FEMA Hazard Mapping, San Bernardino County hazard maps, and documents from the SBMWD on past events.

The Planning Team completed the assessment of various hazards in a group setting. The team members have many years of personal experience working in the local area and many working in a water utility. Team members know the history of past hazardous or emergency events, such as the 2003 Old Fire that severely impacted the water system in the City of San Bernardino and the San Bernardino Mountain communities. This fire started five (5) miles north of the City. Within 5 days raging fires and high Santa Ana winds devastated the area.

3.6 Set Mitigation Goals

Mitigation goals are set based on the likelihood and the potential damages for a particular hazard. The process of identifying mitigation goals began with a review and validation of damages caused by specific hazards at similar utilities in the surrounding area. Damages to other utilities outside the area were also considered.

The Planning Team set the goals for the 2018 LHMP. The team members understand and know the issues facing the SBMWD. The Water SBMWD's mission is: "*To provide a safe, reliable water supply and wastewater reclamation system for the customers of the City of San Bernardino Municipal Water (SBMWD) in an efficient and financially responsible manner."* In addition, the Planning Team developed estimated damages using engineering budget estimates for anticipated response and replacement costs. The Planning Team completed an assessment of the likelihood of damages for each identified hazard and discussed whether each of the mitigation goals was valid. This discussion led to the opportunity to identify new goals and objectives for mitigation in the LHMP. From this, the Planning Team determined the best mitigation goals are to reduce or avoid long-term vulnerabilities.

3.7 Review and Propose Mitigation Measures

Meetings were held with the Planning Team to review the identified hazards and solicit input on appropriate mitigation measures for each hazard identified in the LHMP. The Team identified mitigation measures for each critical piece of infrastructure. Each meeting focused on specific hazards of the SBMWD's facilities, operations, and included risk assessment and mitigation strategy.

3.8 Draft the Hazard Mitigation Plan

The SBMWD's consultant prepared the draft LHMP with input from the Planning Team, the Water Board, and the public. The Planning Team members reviewed and commented on the draft LHMP and subsequent changes were made before the LHMP was finalized and adopted by the Water Board.

The LHMP was reviewed in comparison to the FEMA designed Crosswalk. The Crosswalk links the Federal Requirements and identifies the sections in the LHMP where the information can be found. This provides a rating as to the level of compliance with the Federal Regulations.

3.9 Adoption of the Plan

The draft LHMP was posted on the SBMWD's website for 30 days, and comments were requested from the public. Notifications of the meetings were posted on monthly bills. The public was able to comment by e-mail or telephone, as Mr. Sturdivan's contact information was listed on the website. There were no public comments received, other than requests for water service, re-connections after lock-off, and one customer wanting a line of credit from the SBMWD; all requests were sent to Frank Salazar.

The LHMP will be adopted by SBMWD's Board of Water Commissioners for adoption after incorporating any final comments. The LHMP will be adopted at SBMWD's regularly scheduled Water Board meetings and sent to the FEMA for final approval.

SECTION 4: RISK ASSESSMENT

The goal of mitigation is to reduce the future impacts of a hazard including property damage, disruption to local and regional economies, and the amount of public and private funds spent for recovery. Mitigation decisions are based on risk assessments where the probability of an event is evaluated with respect to the anticipated damages caused by such an event.

The purpose of this section is to understand the hazards and their risks in the SBMWD's service area. There are generally four steps in this process: 1) hazard identification, 2) vulnerability analysis, 3) risk analysis and 4) performing a vulnerability assessment, including an estimation of potential losses. Technically, these are four different items, but the terms are sometimes used interchangeably.

4.1 Hazard Identification

The Planning Team discussed potential hazards and evaluated their probability of occurrence. The following subsections describe this process and the results.

4.1.1 Hazard Screening Criteria

The intent of screening the hazards is to prioritize which hazards create the greatest concern to the SBMWD. A list of the natural hazards to consider was obtained from FEMA State and Local Mitigation Planning How-to Guide: Understanding Your Risks (FEMA 386-1). The Planning Team used the Stafford Act and the California Emergency Service Act and guidance from the American Water Works Association Standards G-440 and J-100 RAMCAP. Each hazard was given a number from one to four, with one having the highest probability and four having the lowest probability. The Planning Team reviewed each hazard on the list using their experience with the hazards and developed the following list:

Potential Hazards:

- Earthquake = 1
- Flooding = 2
- Wildfire = 2
- Terrorist Event = 3
- Climate Change/Drought = 3
- Windstorm = 3

The following hazards were considered not to affect or are low risk to the SBMWD:

- Volcanoes: Not a concern in this area
- Tsunami: Not in a tsunami zone
- High Groundwater/Liquefaction

Volcanoes were not included since there are no active or inactive volcanoes in the area.

Tsunami were not considered, since the Department is approximately 80-miles inland from the Pacific Ocean.

High Ground Water Liquefaction was not included as a hazard, as the ground water is no longer at 50 feet or less below the surface. Ground water tables are shown below. There is only one area in the City where high ground water still exists. This is in the Lytle Creek, where there are no buildings. The water table in the downtown area and southwest San Bernardino range from 278 feet to over 900 feet below the surface.

A location map of the sites is not included, as this information is private to a water system. The Water Department sound wells once a year. Sounding is a way of measuring the water table under-ground. This is important to ensure the level of water in the underground aquifer and to make determinations on how far underground the water table is. The chart below shows the level of the aquifer known as the Bunker Hill Basin. As shown on this chart, the water table is far below the surface and will not cause liquefaction to the community's buildings and infrastructure in the foreseeable future.

Table 3
San Bernardino Municipal Water Department wells with water levels

SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
WELLS WITH WATER LEVELS

Label	Facility Name	Water Level*		Label	Facility Name	Water Level*
1	10TH & J ST WELL	278		32	EPA 007	211.1
2	16TH & SIERRA WAY WELL	265.2		33	EPA 108	311.3
3	17TH & SIERRA WAY 2 WELL	9999		34	EPA 108S	279.7
4	19TH ST WELL 1	365.67		35	EPA 109	374
5	19TH ST WELL 2	406.34		36	EPA 110	374.7
6	25TH & NORTH E ST WELL	314.01		37	EPA 111	402.1
7	27TH & ACACIA WELL	303.88		38	EPA 112	469.8
8	30TH ST WELL	333.13		39	GILBERT ST WELL.	301.07
9	31ST ST & MT. VIEW WELL	338.11		40	INTER CITY MUTUAL 08	164.8
10	40TH & VALENCIA WELL	289.42		41	IVDA 11 WELL	244.15
11	7TH STREET WELL	212.05		42	KENWOOD 1 WELL	118.88
12	ANTIL 5 WELL	9999		43	KENWOOD 2 WELL	122.15
13	ANTIL 6 WELL	193.1		44	LEROY WELL	320
14	BASELINE & CALIFORNIA WELL	374.84		45	LYNWOOD WELL	316.72
15	CAJON 2 WELL	201		46	LYTLE CREEK 2 WELL	9999
16	CAJON 3 WELL	205		47	LYTLE CREEK 3-1 WELL	9999
17	CAJON 4 WELL	202		48	MALLORY NO.3 WELL	405
18	CAJON CANYON WELL	76.03		49	MEEKS & DALEY GEO WELL	9999
19	DEVIL CANYON 1	175		50	MILL & ARROWHEAD	9999
20	DEVIL CANYON 2	167.7		51	MILL & D GEO WELL	158.3
21	DEVIL CANYON 3	24.4		52	MILL & D WELL	163.3
22	DEVIL CANYON 4	43.3		53	MT VERNON WATER CO WELL	401.25
23	DEVIL CANYON 5	173.6		54	NEWMARK 1 WELL	211.33
24	DEVIL CANYON 6	24.54		55	NEWMARK 2 WELL	206.94
25	DEVIL CANYON 7	21		56	NEWMARK 3 WELL	212
26	EPA 001	277.5		57	NEWMARK 4 WELL	208.5
27	EPA 002	254.5		58	OLIVE & GARNER WELL	349
28	EPA 003	283.3		59	PERRIS HILL 4 WELL	283.7
29	EPA 004	248		60	PERRIS HILL 5 WELL	282.6
30	EPA 005	231		61	VINCENT WELL	82.2
31	EPA 006	216.4		62	WATERMAN AVE. WELL	322

WATER LEVELS RECORDED DECEMBER 2018

4.1.2 Hazard Assessment Matrix

The SBMWD used a qualitative ranking system for the hazard screening process consisting of generating a high/medium/low style rating for the probability and impact of each screened hazard.

- For **Probability,** the ratings are: Highly Likely, Likely, or Somewhat Likely
- For **Impact**, the ratings are: Catastrophic, Critical, or Limited

The Screening Assessment Matrix, shown in Table 4 below, was used for the SBMWD's hazards. The hazards were placed in the appropriate cell based on the Planning Team's collective experience. A subset of this group of hazards was used for the prioritization of the hazards in the following section.

- (1) Highly Likely = 100% likely to happen in the next five years
- (2) Likely = 75%, wildfire and flooding happen hand in hand, every 5-7 years
- (3) Somewhat Likely = 65% Drought 5 to 7 years, windstorms yearly,
- Catastrophic = 100% of the SBMWD is impacted
- Critical = 50 % of the SBMWD is impacted
- Limited = less than 50% of the SBMWD is impacted

Table 4
Screening Assessment Matrix

		Impact		
		Catastrophic	**Critical**	**Limited**
Probability	**Highly Likely (1) 100%**	Earthquake Southern San Andreas 157 years overdue		Windstorm Windstorms are yearly
	Likely (2) 75% to 100%	Flooding Wildfire Yearly to 5 year.		
	Somewhat Likely (2) 65%		Terrorist Event Has happened three times in the past 5 years	Climate Change/Drought Drought 5 to 7 years. Climate ongoing

4.1.3 Hazard Prioritization

Using the hazard screening criteria and assessment matrix, the Planning Team identified the following hazards to be the most likely to affect the SBMWD. The team of water professionals from the Department reviewed the FEMA shake map, 100-500 flood map and the fire map. The team reviewed history of hazards and concerns for the service area. The team discussed the information and reviewed internal documents as well as the agency's Vulnerability Assessment for risk. All team members, outside reviewers and the public agreed to the prioritization of hazards and to remove those hazards that are not considered to be a threat any longer from the ranking.

Earthquake (Highly Likely, Catastrophic): There are many faults running though the SBMWD's service area. The 1992 Landers earthquake caused little damage to the SBMWD's distribution system, wells, and reservoirs. The biggest concern for the agency is the San Andreas and San Jacinto faults, as the San Andreas runs though the north section of the Department and the San Jacinto fault runs though the west boundaries and somewhat the south boundaries of the City. Liquefication during earthquakes was a major issue for the Department and City in the past. In the 1950's though the 1980's the underground water table was 50 feet or less. However, as the population of the valley increased, so did the pumping of water from the Bunker Hill Basin. Today the water level is more than 150 feet and up to 999 feet below the surface. Therefore, the water experts at the Water Department, removed liquefaction form the hazard list. Appendix H contains a chart of the current water table within SBMWD's service area. The last earthquake of any size that was felt in San Bernardino was the 1992 Landers Earthquake and the 1992 Big Bear Earthquake.

Flooding (Likely, Catastrophic): Flash flooding is very common in San Bernardino County and happens almost yearly. The most recent major flooding event was in 2017, and prior to that, 2015 and 2011. These events uncover pipelines installed within roadways, destroy bridges, undermine tanks and reservoirs, down power lines, contaminate water wells and overload sewerage collection systems and sewage treatment facilities. Flooding and debris flow is something that is very common after there has been a wildfire in the San Bernardino Mountains, as the wildfires normally happen in the fall during Santa Ana winds. Rainstorms start in the winter months, which bring all the debris and loose soil down from the fire scarred mountains into the valley causing major damage to the pipelines of the water and wastewater system facilities. A large portion of SBMWD's service area is in the 100-500 year flood plain, making flooding a serious concern.

Wildfire (Likely, Catastrophic): Wildfires are common in California, primarily occurring in the fall "Fire Season" and are related to Santa Ana winds. The vegetation in the mountains and foothills grow at a rapid rate in the winter, spring, and summer months. When fall arrives, the Santa Ana winds start to blow. These winds are very dry and hot. This action dries all of the plant life out, so when there is a spark or someone lights a fire in the dry grasses, a large uncontrollable fire erupts. Once a fire gets a strong hold, the fire is driven by the winds, either into the valley communities or into the mountains. The fires in California cost millions of dollars of property damage each year and claim lives when people cannot escape. The last major fire that affected the SBMWD was the Old Fire in 2003. This fire

erupted on October 25th 2003 and burned many homes down within the City of San Bernardino city limits. This fire caused approximately two (2) million dollars' worth of property damage to the SBMWD.

Terrorist Event (Somewhat Likely, Critical): The City and the surrounding area have been subject to several terrorist events in the past. San Bernardino was home to Norton Airforce Base. In 2007, there was an attack on the chlorine gas 1-ton tanks at three City of Riverside owned wells that are in the City of San Bernardino's boundaries. There was another attack on December 2, 2015, where 14 people were killed, and 22 people were injured. A major terrorist event on the water system could have a negative effect on the water supply or damage the infrastructure of the SBMWD, leaving the SBMWD with no power and no water in the system due to ruptured pipelines, contamination, or other damages. Since the terrorist attack in San Bernardino, most governmental agencies have had to rethink their precautions for buildings and infrastructure protection, as well as the protection of the public and staff.

Climate Change/Drought (Somewhat Likely, Limited): Climate change is altering California's water supply throughout the state. Northern California is experiencing warmer winters, less snow pack, and longer periods between wet seasons. This affects water supply throughout the Central Valley and urban Southern California. SBMWD depends on imported water from Northern California to recharge the underground aquifer. The SBMWD relies on groundwater and the impacts from climate change are long-term. Higher temperatures may increase water use and groundwater extraction, which will lower the groundwater table. Increased storm events will increase flash flood risks and will decrease groundwater recharge because the water will runoff instead of infiltrating to groundwater. Over time the SBMWD could experience increased pumping costs and water supply wells may become too shallow and have to be replaced with deeper wells. Climate change also increases the likelihood of fire risk.

Currently, the State is not in a prolonged drought; however, the recent 2015 to 2017 drought declared by Governor Jerry Brown demonstrated the need for water conservation.

Windstorm (Somewhat Likely, Limited): Santa Ana winds are part of Southern California life and occur several times a year. The winds can reach gusts of over 150 mph and happen in the fall and winter months. The winds occur when a high-pressure area develops over the Great Basin in Nevada and Utah; with a clockwise anticyclone wind flow of the high-pressure center, giving rise to a Santa Ana wind event as the air mass flows though the passes and canyons of Southern California, manifesting as a dry wind. The highest winds occur when a low-pressure area settles over the Southern California Coast and draws the winds out to the Pacific Ocean.

4.2 Hazard Profiles

This section looks at all of the hazards identified by the Planning Team. This section gives an overview of each hazard, the definition of each hazard, and a description of how each hazard affects the SBMWD using past examples and the hazards identified on the FEMA Website and

the FEMA computer program known as HAZUS, which contains models of natural disasters, and the effects the disasters can have on a region.

4.2.1 Earthquake

Probability: **Highly Likely**
Impact: **Catastrophic**

General Definition: An earthquake is a sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. For hundreds of millions of years, the forces of plate tectonics have shaped the earth as the huge plates that form the earth's surface move slowly over, under, and past each other. Sometimes the movement is gradual. Increased movement occurs when the plates become locked together, unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free causing the ground to shake. Most earthquakes occur at the boundaries where the plates meet. However, some earthquakes occur in the middle of plates.

Ground shaking from earthquakes can collapse buildings and bridges; disrupt gas, electric, water utilities, and phone service; and trigger landslides, avalanches, fires, and destructive ocean waves, including tsunamis. Buildings with foundations resting on unconsolidated landfill and other unstable soil, as well as homes not tied to their foundations, are at risk because they can be shaken off their mountings even during a mild earthquake. When an earthquake occurs in a populated area, it may cause deaths, injuries, and extensive property damage.

Earthquakes strike suddenly and without warning. Earthquakes can occur at any time of the year and at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. Estimates of losses from a future earthquake in the United States is approaching $200 billion.

There are 45 states and territories in the United States at moderate to very high risk from earthquakes, and they are in every region of the country. California experiences the most frequent damaging earthquakes; however, Alaska experiences the greatest number of large earthquakes, most located in uninhabited areas. The nearby southern section of the San Andreas Fault is ranked in the top five (5) most likely faults to cause major damage in the United States by United States Geological Survey (USGS).

The source for the earthquake profile is a report that describes a new earthquake rupture forecast for California developed by the 2007 Working Group on California Earthquake Probabilities (WGCEP 2007). The Earthquake Working Group was organized in September 2005 by the USGS, the California Geological Survey (CGS), and the Southern California Earthquake Center (SCEC) to better understand the locations of faults in California. The group produced a revised, time-independent forecast for California for the National Seismic Hazard Map. The last two earthquakes that did some damage to SBMWD infrastructure was the 1992 Landers Earthquake and the 1992 Big Bear Earthquake. The Hector Mine, Northridge and Corona earthquakes were felt in the service boundaries, but did no damage to the infrastructure

Description: There are several earthquake faults located within the SBMWD's service area. While there have been many earthquakes in and around the SBMWD's service area, there has not been a major earthquake in San Bernardino in many years. The two major earthquake faults in San Bernardino Valley are the southern section of the San Andreas Fault and the San Jacinto Fault. These two faults and their many sub-faults cover the northern and southern sections of the SBMWD's service area. See Table 5 below for the historical earthquake information.

Mitigation: Projects to help mitigate damage from earthquakes are installing seismic shut-off valves on all water reservoirs and flexible pipe joints at reservoirs, wells, and booster pumps. Flexible pipe joints can also be installed in sections of the water pipelines to allow the pipelines more flexibility during earth movement. Block walls can be installed around facilities to help control water that may escape from reservoirs and also provide the added benefit of increased security of critical facilities.

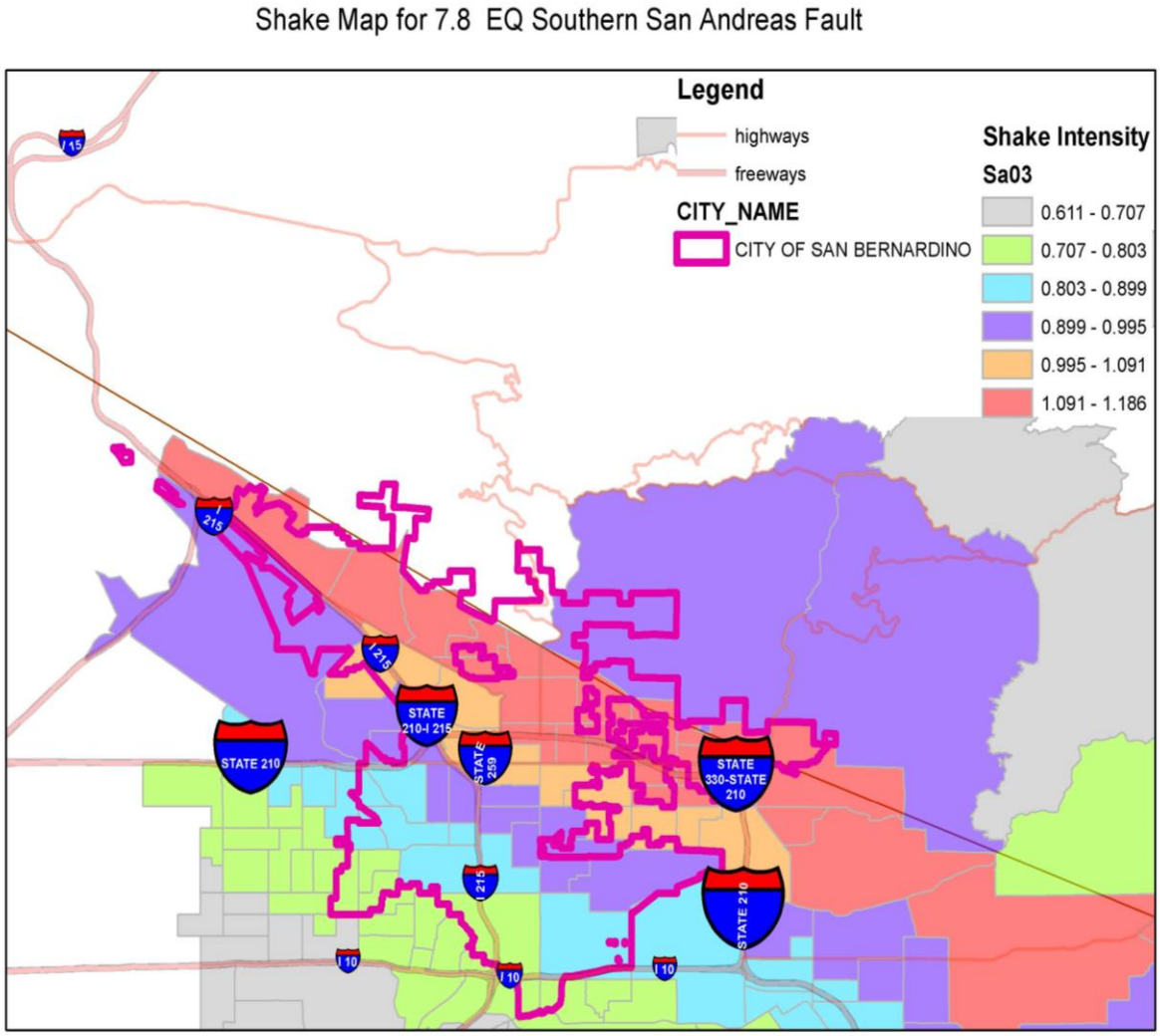


Figure 1
Shake Map for 7.8 Earthquake Intensity for City of San Bernardino

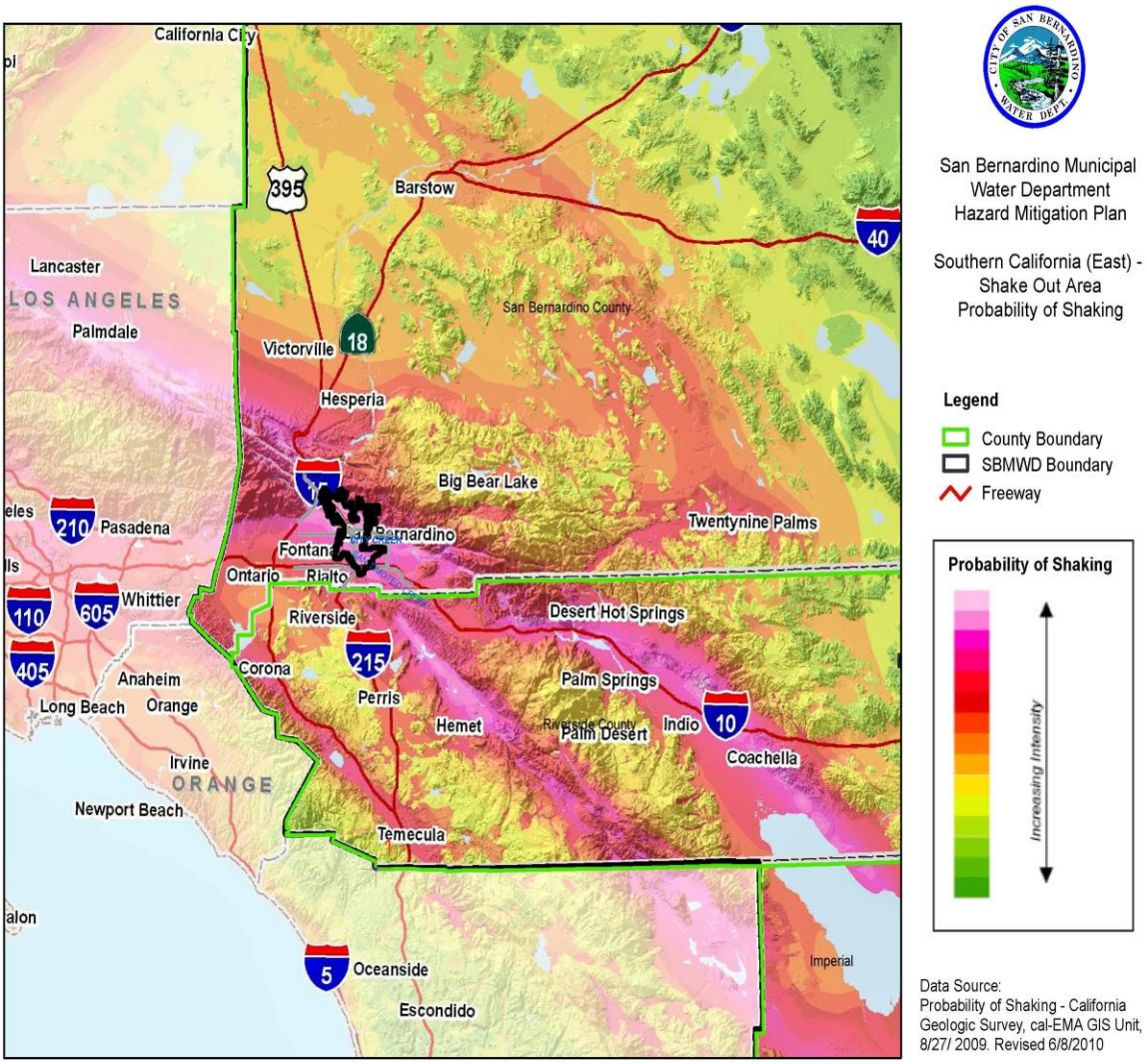


Figure 2
Southern California (East) Shake Out Area, Probability of Shaking

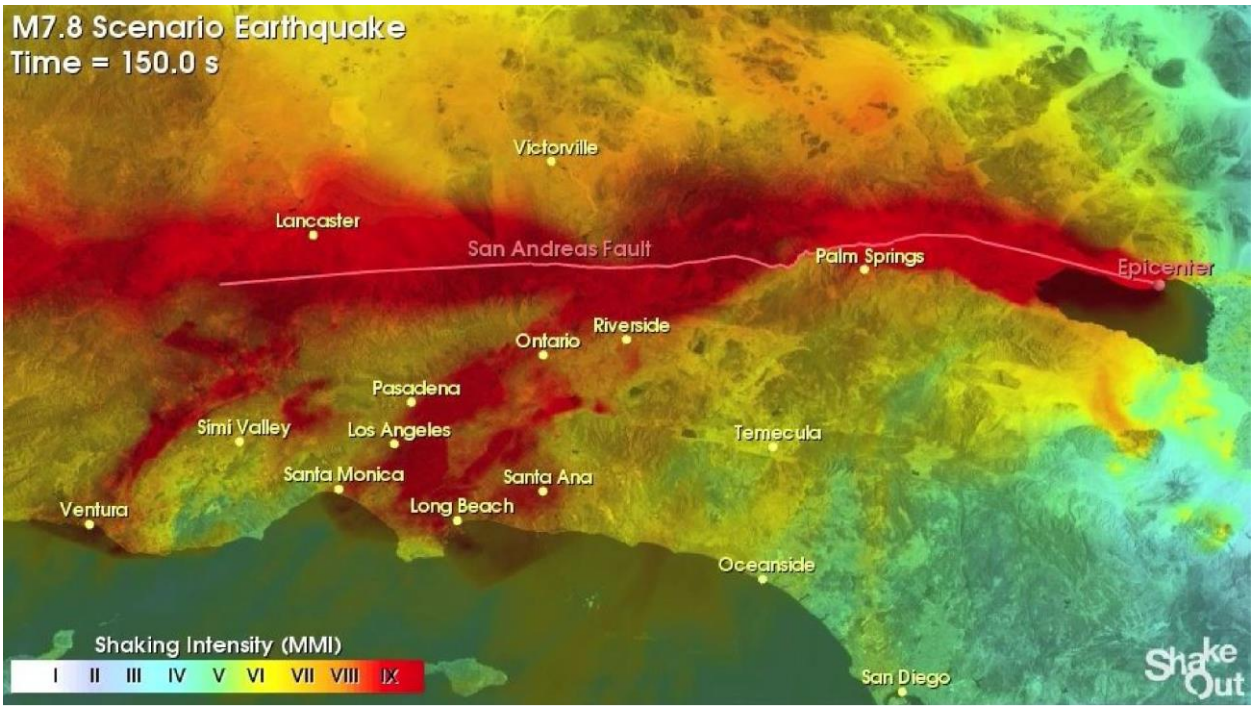
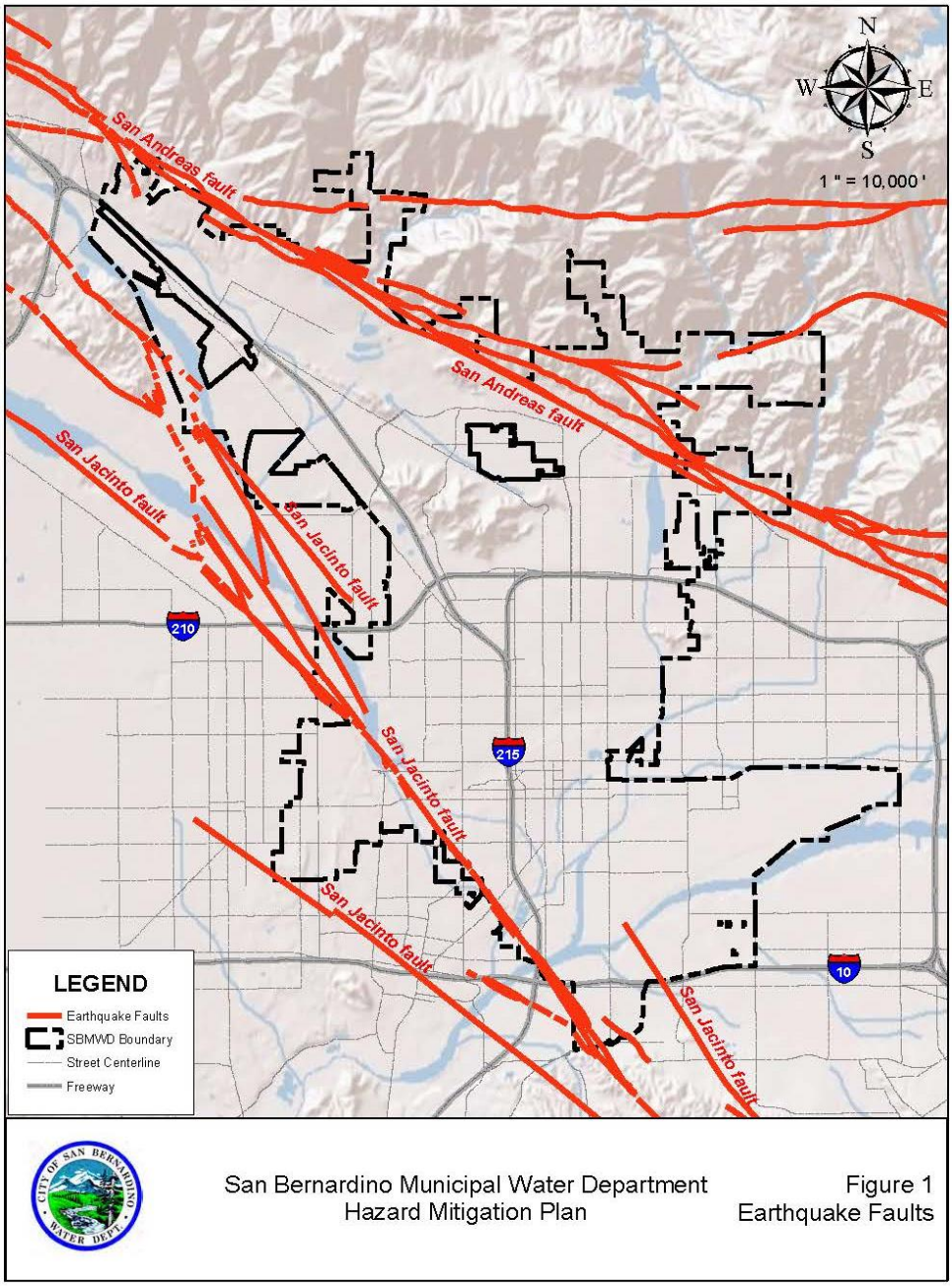


Figure 2 A
The Great ShakeOut Map



Quaternary Fault Data Source:
- U.S. Geological Survey and California Geological Survey, 2006,
Quaternary fault and fold database for the United States, accessed Jan 9, 2006, from USGS web site.

Figure 2 B
Earthquake Faults Lines in San Bernardino Valley

Table 5
Historic Southern California Earthquakes

Date	Area	Location	Mag	MI	Total damage / notes
3/28/2014	Los Angeles Area		5.1 M_w	VI	$10.8 million
5/13/2013	Eastern	Canyon Dam Earthquake	5.7 M_w	VIII	Damage at Canyon dam
7/29/2008	Los Angeles Area	Chino Hills Earthquake	5.5 M_w	VI	Limited
10/16/1999	Eastern	Hector Mine Earthquake	7.1 M_w	VII	Limited
1/17/1994	Los Angeles Area	Northridge Earthquake	6.7 M_w	IX	$13–$40 billion
6/28/1992	Inland Empire	Big Bear Earthquake	6.5 M_w	VIII	Moderate/Triggered
6/28/1992	Inland Empire	Landers Earthquake	7.3 M_w	IX	$92 million
4/22/1992	Inland Empire		6.3 M_s	VII	Light–moderate
6/28/1991	Los Angeles Area	Sierra Madre Earthquake	5.6 M_w	VII	$33.5–40 million
2/28/1990	Los Angeles Area	Upland Earthquake	5.7 M_w	VII	$12.7 million
11/24/1987	Imperial Valley		6.5 M_w	VII	Triggered
11/23/1987	Imperial Valley		6.1 M_w	VI	$3 million
10/1/1987	Los Angeles Area	Whittier Narrows Earthquake	5.9 M_w	VIII	$213–358 million
7/21/1986	Eastern	Chalfant Valley Earthquake	6.2 M_w	VI	$2.7 million / sequence
7/13/1986	South Coast		5.8 M_w	VI	$700,000
7/8/1986	Inland Empire	North Palm Springs Earthquake	6.0 M_w	VII	$4.5–6 million
4/26/1981	Imperial Valley		5.9 M_w	VII	$1–3 million
5/25/1980	Eastern		6.2 M_w	VII	$1.5 million/Swarm
10/15/1979	Imperial Valley	Imperial Valley Earthquake	6.4 M_w	IX	$30 million
2/21/1973	South Coast	Point Magu Earthquake	5.8 M_w	VII	$1 million
2/9/1971	Los Angeles Area	San Fernando Earthquake	6.5–6.7 M_w	XI	$505–553 million
4/8/1968	Imperial Valley		6.5 M_w	VII	Damage / rockslides
12/4/1948	Inland Empire	Desert Hotsprings Earthquake	6.4 M_w	VII	Minor
11/14/1941	Los Angeles Area		5.4 M_s	VIII	$1.1 million
6/30/1941	Central Coast		5.9 M_w	VIII	$100,000

5/18/1940	Imperial Valley	El Centro Earthquake	6.9 M_w	X	$6 million
3/10/1933	South Coast	Long Beach Earthquake	6.4 M_w	VIII	$40 million
6/21/1920	Los Angeles Area		4.9 M_L	VIII	More than $100,000
4/21/1918	Inland Empire	San Jacinto Earthquake	6.7 M_w	IX	$200,000
6/22/1915	Imperial Valley		5.5 M_w	VIII	$900,000
4/18/1906	Imperial Valley		6.3 M_w	VIII	Damage / triggered

Pictures below are from Hi-Desert WD and Bighorn Desert View Water Agencies

Figure 3
Examples of Earthquake Damage to Water Facilities in the 1992 Landers Earthquake

4.2.2 Flooding

Probability: **Likely**
Impact: **Catastrophic**

General Definition: An unusually heavy rain in a concentrated area, over a short or long period of time that collects on the ground in low areas of the land. Flooding occurs when there are large amounts of rainfall in areas were the water runs off to lower elevations. Typically, flooding happens in the valley when there are large tropical storms in the local mountains. The major concern is after there has been a major fire in the San Bernardino Mountains. Historically, major fires have happened in the fall or summer. The last major wildfire was in October 2003, which brought major flooding in December 2003 and again in January of 2004.

Description: Flooding can occur in the summer as well as the winter. Monsoon season is typically in June and July of each year. During monsoons, heavy rainstorms that form in the Gulf of Mexico move into Arizona, New Mexico, Texas, and the California deserts. These storms bring powerful winds and heavy rains within a short period of time and can produce two to five inches of rain within a half-hour period.

FEMA Flash Flooding and or Flood Inundation Mapping:

The FEMA 500-year flood map is included below in Figure 4. A 500-year flood is only in a small portion of the service area along the river bottom area, (pink and purple area) where most of the SBMWD's water supply wells are located. All of the well motors are installed on elevated concrete pads that raise the well motor to a height above the 500-year high water elevation.

Flooding only happens when water can collect in valleys or lower lying areas. The SBMWD is located in the valley and foothills, where water runs off from higher mountainous areas on its way to the dry lake area and dry riverbed on the desert floor. These waters are very dangerous, since the waters can come from many miles away at very fast speeds. These waters rage through the jurisdiction from the west to the east collecting in the wash area noted on the map. These washes run north to south through the SBMWD's service area.

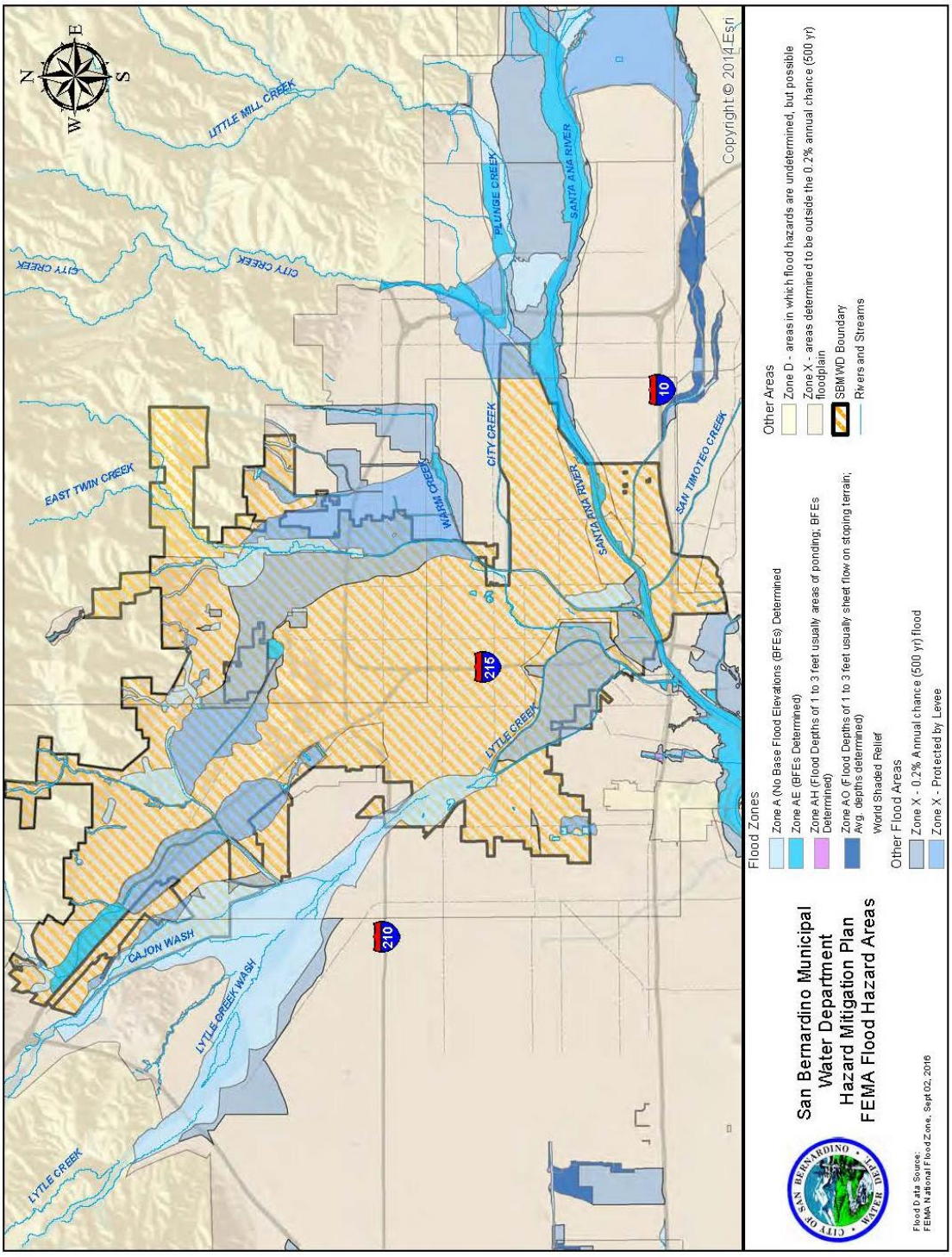


Figure 4
FEMA 500-Year Flood Map Showing Service Area

Table 6
USGS Flooding History

Date of event	Type of Damage	Amount of Damage	Statewide or Local
Dec-55	74 deaths	$200 M	State wide
Apr-58	13 deaths, several injuries	$20 M, plus $4 M agricultural	State wide
Fall 1965	Abnormally heavy and continuous rainfall.	Public- $5.8 M; private $16.0 M; Total $21.8 M	Riverside, San Bernardino, Ventura, San Diego Counties
Winter 1966	Abnormally heavy and continuous rainfall.	Public- $14.6 M; private $14.1M; Total $28.7 M	Various
Winter 1969	Storms, flooding, 47 dead, 161 injured. An alluvial flood and debris flow on Deer Creek in San Bernardino County killed 11 people.	Public $185 M, Private - $115 M; Total $300 M	Various
Sep-1976	High winds, heavy rains, and flooding	Public$65.7 M; private- $54.3 M; Total $120 M	Imperial, Riverside, San Bernardino, San Diego Counties
Winter 1978	14 dead, at least 21 injured	Public $73 M; private-$44 M; Total $117 M; 2,538 homes destroyed	Various
Jul-1979	No Deaths	Public $3.0 M; private- $22.9 M; Total $25.9 M	Riverside
Feb-1980	Rain, wind, mud slides, and flooding	18M to 20M	Various
Winter 1982-1983	Heavy rains, high winds, flooding, levee breaks	Public $151 M; private $159 M; agricultural $214 M; Total $524 M	Various
Aug-1983	High winds, storms, and flooding; 3 deaths	Public $10 M, private $15 M, agricultural $10 M; TOTAL $35 M	Inyo, Riverside, San Bernardino Counties
Feb-1992	Flash Flooding, rainstorms, mud slides; 5 deaths	Public-$95 M; private- $18.5 M; business $8.5 M, agricultural $1.5 M; TOTAL $123 M	Los Angeles, Ventura, Kern, Orange, San Bernardino Counties
Dec-1992	Snow, rain, and high winds, 20 deaths, 10 injuries	Total - $600 M	Various
Jan-1995	11 deaths	Public $299.6 M; individual $128.4 M; businesses $58.4 M; highways $158 M; ag- $97 M; TOTAL $741.4 M; damage to homes: major- 1,883; minor 4, 179; destroyed-370.	Various

Date of event	Type of Damage	Amount of Damage	Statewide or Local
Feb-1995	17 deaths	Public property $190.6 M; individual $122.4 M; business $46.9 M; highways $79 M; ag $651.6 M; TOTAL approximately $1.1 billion; damage to homes: major-1,322; minor-2,299; destroyed 267	57 counties (all except Del Norte)
Feb-1998	17 deaths	$550 M	Various
Dec. - 2003	15 deaths	$30 M	San Bernardino, Waterman Canyon, Lytle Creek
Jan. 2004	None	$20,000 public property	San Bernardino County High Desert
October 2010	None	$2.5 M	Flash flooding San Bernardino County High Desert
Dec. 2010 Jan. 2011	None	$18 M San Bernardino/Highland, High Desert, San Bernardino Mountains, Forest Falls	Various location in San Bernardino County
May 2012 March 2014	None	$50,000	S.B. County High Desert Various

Tropical Storms Cited in FEMA HAZUS (extracted without references and links)

Tropical Storm Norman, August – September 1978

A flash flood watch was issued for the mountainous terrain and the desert region from Kern County to the California-Mexico border by the US National Weather Service.

A large amount of rain was produced, with over 7.01 in. (178 mm) of rain occurred in the Sierra Nevada range at Lodgepole in Sequoia National Park. Rainfall was most intense on September 5 and September 6, with amounts exceeding 3 in (76 mm) in the mountains of Southern California. In addition, Norman produced waves up to 15 feet (4.6 m) high.

The extra tropical remains of Hurricane Norman also moved into Nevada and produced very significant amounts of rainfall in the extreme central to northern portion of the state. Power lines were knocked down and caused a brief power failure from Santa Barbara to San Diego, reported by the Los Angeles Department of Water and Power, Southern California Edison, and San Diego Gas and Electric. The high winds tossed about ships in local harbors and damaged agricultural crops, specifically raisin crops in Southern California. Damage to raisins was extensive throughout Kern, Tulare, and Stanislaus Counties. The rainfall also damaged grapes and 1,500 people had to be rescued due to high waves. A 25-foot US Navy cruiser was smashed and destroyed when surf washed it ashore with an approximately 150 foot wave, near Dana Point.

The storm also produced surging tides at the Los Angeles Harbor, and swept a 10,000-ton tanker from its moorings. The tropical cyclone had managed to cause $300 million (1978 USD) in damages.

Tropical Storm 1939 Long Beach tropical storm, El Cordonazo, The Lash of St. Francis, September 1939

The storm dropped heavy rain on California, with 5.66 inches (144 mm) falling in Los Angeles (5.24 inches in 24 hours) and 11.60 inches (295 mm) recorded at Mount Wilson, both September records. Over three hours, one thunderstorm dropped 7 inches (180 mm) of rain on Indio. 9.65 inches fell on Raywood Flat, and 1.51 inches (38 mm) on Palm Springs. 4.83 inches fell on Pasadena, a September record at the time. At the Citrus Belt near Anaheim, at least 4.63 inches of rain fell. The 11.60 inches (295 mm) at Mount Wilson is one of California's highest rainfall amounts from a tropical cyclone, although at least one system has a higher point maximum. The rains caused flooding 2 to 4 feet (1.2 m) deep in the Coachella Valley, although some of this may be attributable to a rainstorm dropping 6.45 inches (164 mm) the day before the storm hit. The Los Angeles River, which is usually low during September, became a raging torrent.

The flooding killed 45 people in Southern California, although some of these may be attributable to the rain immediately before the tropical storm. At sea, 48 were killed. The National Hurricane Center only attributes 45 deaths to this system. Six people caught on beaches drowned during the storm. Most other deaths were at sea, for example, 24 people died aboard a vessel called the Spray as it attempted to dock at Point Mugu. The two survivors, a man and a woman, swam ashore and then walked five miles (8 km) to Oxnard. Fifteen people from Ventura drowned aboard a fishing boat called th*e* Lur. Many other vessels were sunk, capsized, or blown ashore.

Many low-lying areas were flooded. The Hamilton Bowl overflowed, flooding the Signal Hill area. Along the shore from Malibu to Huntington Beach houses were flooded. Throughout the area thousands of people were stranded in their homes. Streets in Los Angeles proper were covered with water, flooding buildings and stalling cars. Flooding in Inglewood and Los Angeles reached a depth of 2 to 3 feet. The flooding stopped construction on a flood control project in the Los Angeles River's channel by the Army Corps of Engineers. In Long Beach windows throughout the city were smashed by the wind. At Belmont Shore waves undermined ten homes before washing them away. Debris was scattered throughout the coast. Agriculture was disrupted and it was estimated that 75% of crop damage occurred in the Coachella Valley.

Rains washed away a 150-foot (46 m) section of the Southern Pacific Railroad near Indio, and a stretch of the Santa Fe main line near Needles. Waters backing up from a storm drain under construction in the Santa Monica Valley blocked U.S. Route 66 California. The pier at Point Mugu was washed away. In Pasadena, 5,000 people were left without electricity and 2,000 telephones lost service. Communications throughout the affected area was disrupted or rendered impossible. The total amount of damage was $2 million (1939 USD, 26.2 million 2005 USD).

The tropical storm was credited with at least one beneficial effect: It ended a vicious heat wave that had lasted for over a week and killed at least 90 people.

People were caught unprepared by the storm, which was described as "sudden." Some people were still on the beach at Long Beach when the wind reached 40 miles per hour, at which time lifeguards closed the beach. Schools were also closed. At sea, the Coast Guard and Navy conducted rescue operations, saving dozens of people. In response to Californians' unpreparedness, the Weather Bureau established a forecast office for Southern California, which began operations in February 1940.

Mitigation: Install flood control walls to direct floodwaters away from facilities. Lower pipelines where needed. Install better drainage structures to remove floodwaters out of the facilities and improve drainage from facilities.

4.2.3 Wildfire

Probability: **Likely**

Impact: **Catastrophic**

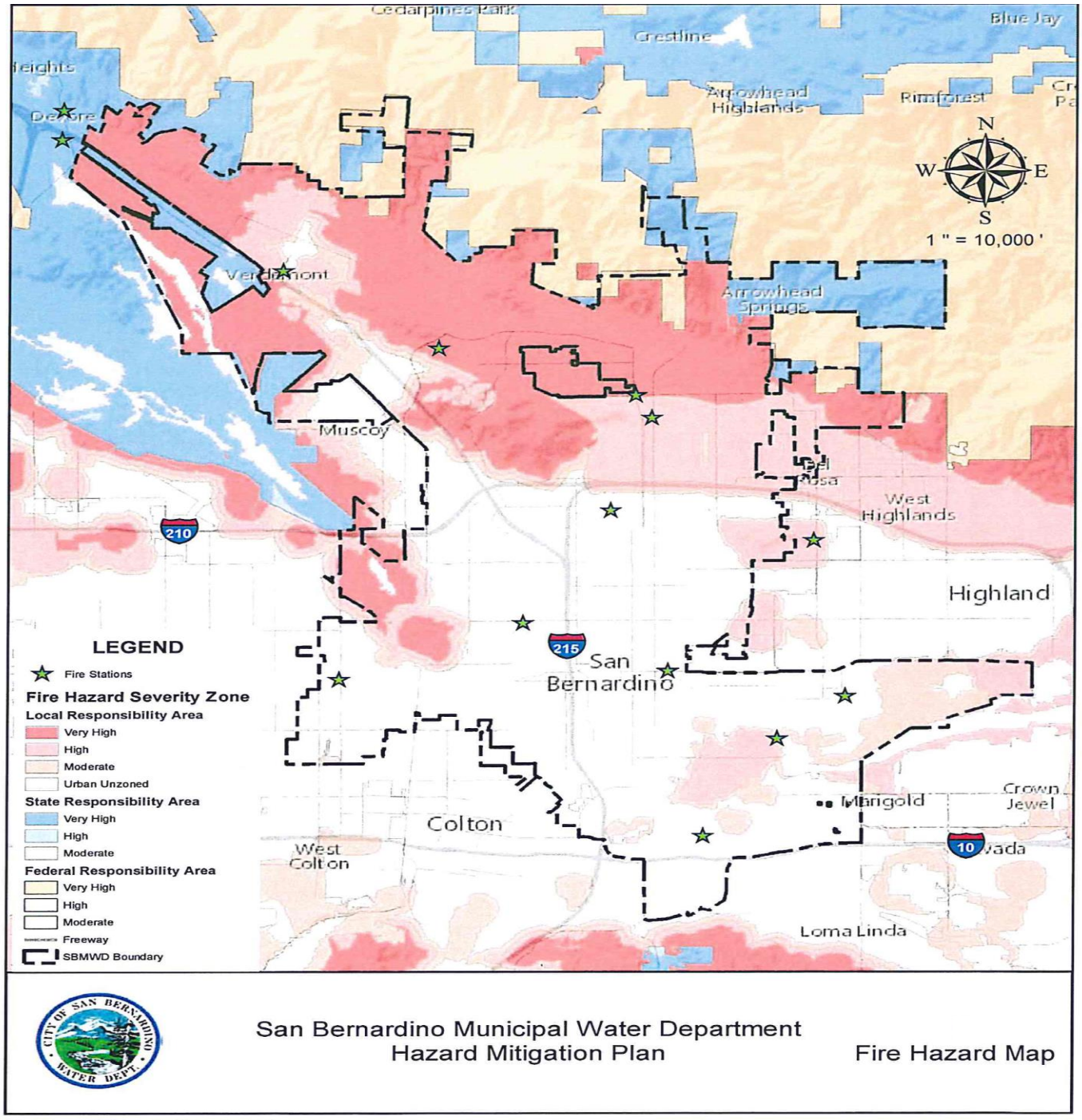
General Definition: California is very susceptible to wildfires, especially during the fall and summer months. Southern California experiences the Santa Ana winds that develop mostly in the late summer and fall. These winds are known for their high speeds and drying effect, which turn the natural grasses brown and dry. These winds are also capable of blowing down power lines that are known to start fires in the mountains and hills. The fires are driven by the high winds and the fires become large events that destroy large areas within cities and towns and cause loss of life and millions of dollars in damage to property. The last major wildfire in the San Bernardino area was the 2003 "Old Fire".

Description: Local facility fires are a significant concern. The SBMWD's office facilities, computer systems, SCADA system, and operating pump stations are susceptible to fire damage. The consequences include loss of life, buildings, equipment, and property damage.

Wildfires are not expected to directly affect the water infrastructure system because most of the infrastructure is underground and constructed of non-flammable materials. In addition, the local vegetation is such that wildfires are not expected to occur within the SBMWD boundaries.

There are other issues from wildfires that affect the SBMWD. During large wildfires, firefighting personnel may draw large amounts of water and strain the water supply system. The fires also burn though electrical power lines and the SBMWD can lose power in critical areas. Without power the SBMWD cannot pump groundwater from the aquifer or pump additional water to needed areas. The last major fire was the 2003 "Old Fire" which caused major damage to reservoir sites, well sits, booster stations and pipeline failures in the Departments service area.

Mitigation: Install backup generators. Improve communication between the SBMWD and the public, firefighting personnel, the City, and the County Offices of Emergency Services. Purchase water booster pumps to move water from one zone to another zone in the system. Set up a dedicated Emergency Operations Center in the SBMWD. Train staff in emergency operations and conduct emergency exercises.



Fire Hazard Severity Zone Data Source:
- Statewide GIS layer adopted fire hazard severity zone for State Responsibility Areas (SRA), 11/2007
- Recommended couty GIS layers of very high fire hazard severity zones in local responsibility areas (LRA), 5/2008

Figure 5
Fire Hazard Severity Zone Map Showing San Bernardino MWD Outline

4.2.4 Terrorist Event

Probability: **Somewhat Likely**

Impact: **Critical**

General Definition: When a person or group of people strike mayhem within a population by threatening the trust of a population. To kill or injure people to make a point to the terrorist cause and to cause fear within the population to further their cause.

Description: In the case of a public water system, to make the water non-drinkable by polluting the water or rendering the water in the system or the system infrastructure useless to serve water to the public.

Mitigation: This document will not discuss the mitigation measures determined by the Project Team due to the sensitive nature of this information, as this LHMP is a public document.

4.2.5 Climate Change/Drought

Probability: **Somewhat Likely**

Impact: **Limited**

Climate Change

General Definition: Climate Change is a change in the statistical distribution of weather patterns when that change lasts for an extended period of time (i.e., decades to millions of years). Climate change may refer to a change in average weather conditions, or in the time variation of weather around longer-term average conditions (i.e., more or fewer extreme weather events). Climate change is caused by factors such as biotic processes, variations in solar radiation received by the earth, plate tectonics, and volcanic eruptions. Certain human activities have also been identified as significant causes of recent climate change, often referred to as global warming.

Description: Climate change could increase water demands while lowering the groundwater table. This will result in increased pumping costs and may require installing deeper water supply wells. Extreme weather events will increase runoff and flash flooding while reducing the groundwater recharge.

Mitigation: Monitor groundwater levels and evaluate long-term trends. Study the long-term viability of the groundwater aquifer. Evaluate and possibly implement groundwater recharge projects, such as flood flow diversions to percolation basins.

Drought

General Definition: A drought is a period of below-average precipitation in a given region resulting in prolonged shortages in its water supply, surface water, or ground water. Droughts

occur when there are long periods of inadequate rainfall. The cycle of droughts and wet periods are in terms of El Nino and La Nina weather events. This is a growing concern in California, as the state has been in a drought for the last eight years. Northern California experienced some relief in the winter of 2016, although the El Nino effect that was expected to relieve the drought statewide did not materialize in Southern California. The lack of rain and most importantly the lack of snowfall in the Sierra Nevada mountain range severally impacted the residents of California.

Description: The desert communities in San Bernardino County are not as affected by drought because these communities, including the SBMWD, receive most of their water supply from groundwater. These communities are dependent on underground water aquifers. The SBMWD purchases water though the State Water provider (San Bernardino Valley Municipal Water District). The purchased water is used in percolation ponds that recharge the underground aquifer. The SBMWD's underground aquifers are not in overdraft. It is understood that another 8 to 10 years of little or no rain and no purchased water for recharging will be needed to make a significant impact to the SBMWD's water supply.

The National Integrated Drought Information System (NIDIS) is a tool that measures the drought-related risks in certain areas of the country. Figure 6 below shows that the San Bernardino area is currently in a moderate drought event and is moving to a severe drought event as Southern California moves into the summer months.

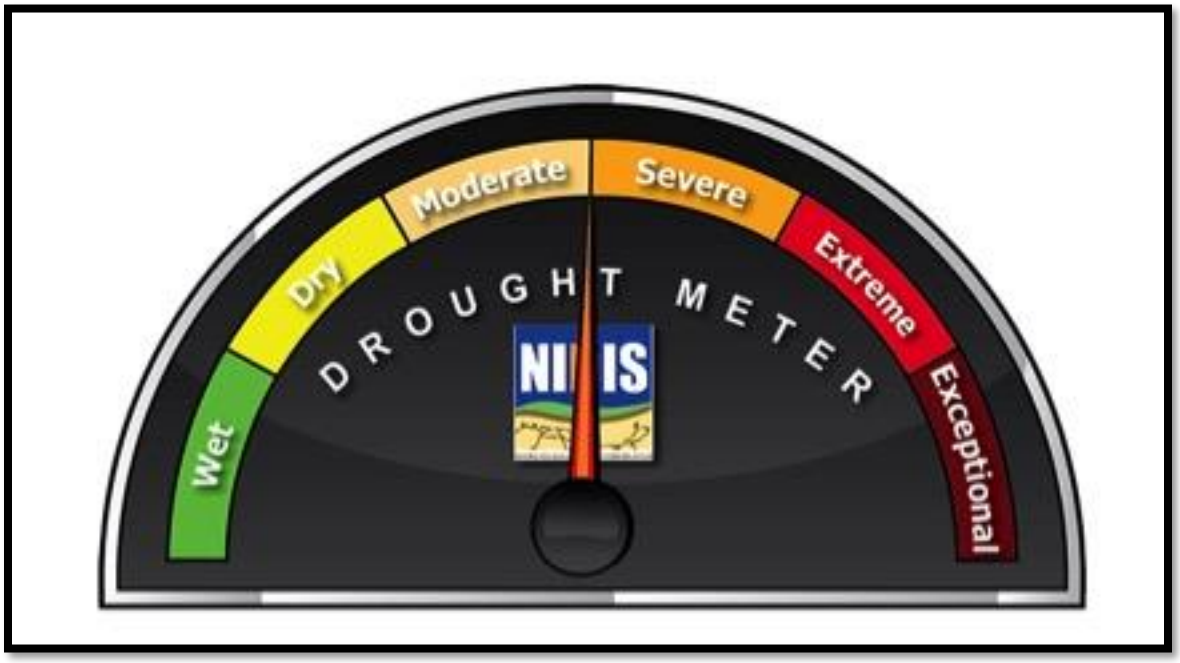


Figure 6
Current Drought Conditions in San Bernardino as of May 2018

Table 7
California Drought History
(extracted from USGS, California Drought History

1841	The drought was so bad that "a dry Sonoma was declared entirely unsuitable for agriculture"
1864	This drought was preceded by the torrential floods of 1861-1862, showing the fluctuation in climate back in the 1800s.
1924	This drought encouraged farmers to start using irrigation more regularly because of the fluctuation in California weather the need for consistent water availability was crucial for farmers.
1929–1934	This drought was during the infamous Dust Bowl period that ripped across the plains of the United States in the 1920s and 1930s. The Central Valley Project was started in the 1930s in response to drought.
1950s	The 1950s drought contributed to the creation of the State Water Project.
1976–1977	1977 had been the driest year in state history to date. According to the *Los Angeles Times*, "Drought in the 1970s spurred efforts at urban conservation and the state's Drought Emergency Water Bank came out of drought in the 1980s."
1986–1992	California endured one of its longest droughts ever observed from late 1986 through early 1992. Drought worsened in 1988 as much of the United States also suffered from severe drought. In California, the six-year drought ended in late 1992 as a significant El Niño event in the Pacific Ocean (and the eruption of Mount Pinatubo in June 1991) most likely caused unusual persistent heavy rains.
2007–2009	2007–2009 saw three years of drought conditions, the 12th worst drought period in the state's history, and the first drought for which a statewide proclamation of emergency was issued. The drought of 2007–2009 also saw greatly reduced water diversions from the State Water Project. The summer of 2007 saw some of the worst wildfires in Southern California history.
2011-2017	From December 2011 to March 2017, California experienced one of the worst droughts to occur in the region on record. The period between late 2011 and 2014 was the driest in California history since record keeping began.

Progression of the drought from December 2013 to July 2014
(extracted from USGS, California Drought History)

The period between late 2011 and 2014 was the driest in California history since record keeping began. In May 2015, a state resident poll conducted by Field Poll found that two out of three respondents agreed that it should be mandated for water agencies to reduce water consumption by 25%.

The 2015 prediction of El Niño to bring rains to California raised hopes of ending the drought. In the spring of 2015, the National Oceanic and Atmospheric Administration named the probability of the presence of El Niño conditions until the end of 2015 at 80%. Historically, sixteen winters between 1951 and 2015 had created El Niño. Six of those had below-average rainfall, five had average rainfall, and five had above-average rainfall. However, as of May 2015, drought conditions had worsened, and above average ocean temperatures had not resulted in large storms.

The drought led to Governor Jerry Brown's instituting mandatory 25% water restrictions in June 2015.

Many millions of California trees died from the drought - approximately 102 million, including 62 million in 2016 alone. By the end of 2016, 30% of California had emerged from the drought, mainly in the northern half of the state, while 40% of the state remained in the extreme or exceptional drought levels. Heavy rains in January 2017 were expected to have a significant benefit to the state's northern water reserves, despite widespread power outages and erosional damage in the wake of the deluge. Among the casualties of the rain was 1,000-year-old Pioneer Cabin Tree in Calaveras Big Trees State Park, which toppled on January 8, 2017.

The winter of 2016–17 turned out to be the wettest on record in Northern California, surpassing the previous record set in 1982–83. Floodwaters caused severe damage to Oroville Dam in early February, prompting the temporary evacuation of nearly 200,000 people north of Sacramento in response to the heavy precipitation, which flooded multiple rivers and filled most of the state's major reservoirs. Governor Brown declared an official end to the drought on April 7, 2017.

Mitigation: Construct more water storage capacity. Develop ways to capture rainwater from the higher mountains during flash flooding events and divert those waters to the percolation ponds to recharge the underground aquifer.

4.2.6 Windstorm

Probability: **Somewhat Likely**

Impact: **Limited**

General Definition: Santa Ana windstorms are common during the fall and winter months in Southern California. Winds are caused by a low-pressure system over the southern coastline and a high pressure over the Great Basin in Nevada. When the high-pressure turns counter clockwise the warm, dry air is pulled to the low-pressure zone and out to the Pacific Ocean. The hot dry air must be funneled through the mountain passes and canyons.

Description: Wind speeds can reach 100 mph during these events. A yearly event occurring during the fall and winter months drives the wildfires in California, causing electrical outages, downed power lines, fallen trees, fires, and risk to life and safety of the residents as well as catastrophic destruction to property as seen during the “Old-Fire” of 2003. The damages from high windstorms are loss of power, downed power lines, and roof damage on a water storage structures. Windstorm issues are a yearly event and downed power lines can cause wildfires.

Mitigation: Projects to help mitigate damage from windstorms are **t**o purchase potable water booster pumps, purchase more generators, and install generator switching panel and equipment at all sites. Replace roof materials that can stand up to high winds and are fire retardant.

4.3 Inventory Assets

This section provides an overview of the assets in the SBMWD and the hazards to which these facilities are susceptible.

4.3.1 Facilities Overview

As of August 2018, the SBMWD operates and maintains the following facilities:

- 23 pressure zones
- 38 existing reservoirs
- 51 existing wells with a total pumping maximum capacity of 2.25 MGD
- Two water treatment/blending facilities
- Approximately 300 miles of distribution and transmission facilities (pipe sizes of 2 inches to 42 inches in diameter).
- 468 miles of sewer collection pipes
- 12 sewer lift stations
- 1 Large Reservoir (Dam)

Figure 7 below illustrates how the facilities are arranged to provide potable drinking water to the residents and businesses of the service area. Water demands in the service area vary throughout the year with sales estimated at 10.5 billion gallons per year. The SBMWD relies entirely on groundwater for their raw water supply. The SBMWD utilizes the State Water Project to recharge the Bunker Hill underground aquifer.

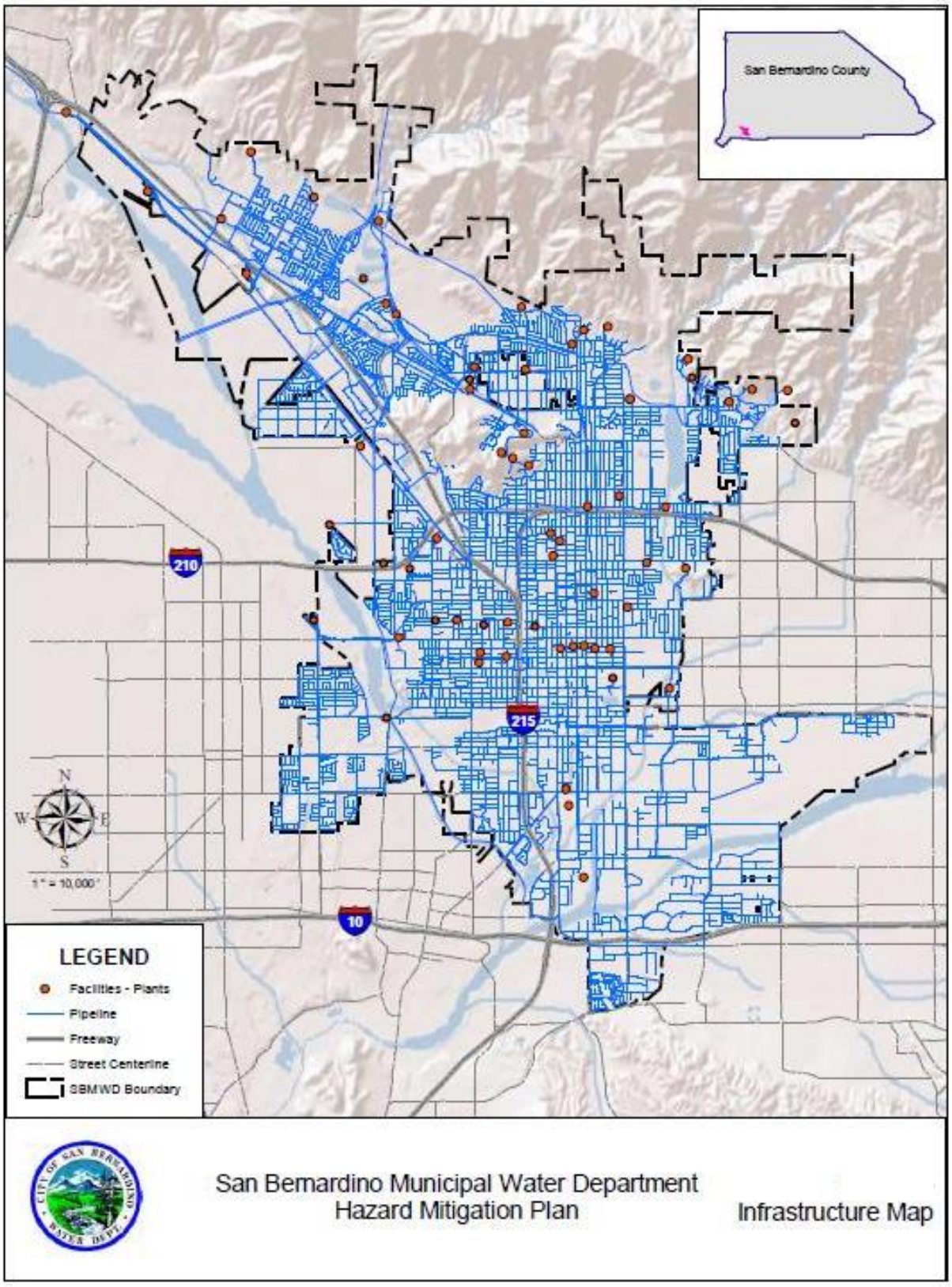


Figure 7
City of San Bernardino Water SBMWD Map

4.3.2 Critical Facilities List

This section provides a table of the SBMWD's facilities as developed by the Planning Team. This list **is not** in order of most critical to least critical.

Table 8
Critical Facilities

Facility Name	Site Information
10th & "J" St. Well	Well
17th Street Plant	108,000 gal reservoir, 3 wells; 2 boosters
19th Street Plant	258,000 gal reservoir; 2 wells; 4 boosters
27th & Acacia Plant	247,000 gal concrete reservoir; well; booster
30th & Mt. View Plant	Well
Administrative Offices	Building
Cajon Canyon Well & Vincent Well	Wells and buildings
Collections/Customer Services Building	Building
Daley Canyon Reservoir	1.5M gal concrete underground reservoir
Del Rosa #1 Plant	460,000 gal steel aboveground reservoir; 2 boosters
Del Rosa #2 Plant	190,000 gal steel reservoir; 2 boosters
Del Rosa #3 Reservoir	3M gal steel aboveground reservoir
Del Rosa Booster Station	3 boosters
Devils Canyon Well 2	Well
Devils Canyon Wells 1, 6, 7; Domestic Reservoir, and Devil Canyon Plant with 2 boosters	Well; 3 boosters, 10,000 gal steel aboveground reservoir; 220,000 gal concrete underground reservoir, and 2 boosters
Devore Plant	2M gal steel reservoir, well
Electric Drive Plant Reservoir	8M gal concrete reservoir; 3 boosters
EPA Well 1 - 112	12 wells (1,2,3,4,5,6,7,108,109,110,111,112)
Foothill Booster Station	Booster and well
Kenwood Wells 1 & 2	Well
Lynwood Plant	223,000 gal reservoir, well, 2 boosters

Lytle Creek Boosters	2 boosters
Lytle Creek Well	Well
Magnolia Booster Station	Meyers Boosters 3, 4, 5 and 6
Medical Center Plant; now Cocke Reservoir	12M gal concrete reservoir; well
Melvin Booster Station	Well; booster
Meyers Canyon Reservoir	2M gal concrete underground reservoir
Mill & "D" St. Plant	437,000 gal reservoir; well; 2 boosters
Mountain Plant	240,000 gal reservoir and 2M gal reservoir
Mt. Vernon Well	Well
Newmark Plant	7.5M gal water reservoir w/ pumps; 5.5M gal water reservoir, pump and generator; 8.9M gal water reservoir and booster
Ogden Plant	12M gal reservoir; 16,000 gal reservoir; booster
Olive & Garner St. Well	Well
Palm & Kendall Plant and Palm Booster Station	4M gal steel reservoir; 5M gal steel reservoir; 4 boosters; 2 hydro generators
Perris Hill Reservoir Dam	10M gal concrete aboveground reservoir (classified as a dam)
Quail Canyon Plant	400,000 gal steel aboveground reservoir
Ridgeline Plant & Ridgeline Booster Stations	100,000 gal steel aboveground reservoir; 2 boosters
Ridgeview Reservoir	330,000 gal steel aboveground reservoir; booster
Shandin Hills Booster Station	2 boosters
Shandin Hills Reservoir	219,000 gal concrete underground reservoir
Sycamore #1 Reservoir	2.5M gal steel aboveground reservoir; 3 boosters
Sycamore Plant 2 and 3	448,000 gal reservoir; 5M gal reservoir; well
Terrace Plant 2 and 3	1.1M gal reservoir; 1.2M gal reservoir
Water Reclamation Offices and Control Operations	Building
Water Reclamation Plant	Sewage treatment plant
Water Utility and Maintenance Yards	Offices, Warehouse, Garage & Shops
Waterman Plant	10M gal concrete underground reservoir; 2 wells; 4 boosters; 14 GAC vessels; 2 air striping towers

4.4 Vulnerability Assessment

The team reviewed pictures of each of the SBMWD's facilities. The pictures were presented with a map of the area to convey the location within the system as well as the site-specific characteristics of the facility. The Planning Team has a long history in the area and knowledge of the potential disasters and emergencies that can occur in and around the community. The Planning Team has the knowledge to assess the system and give valuable input into the assessment and vulnerabilities to the system.

4.4.1 Methodology

The Planning Team reviewed the SBMWD's facilities and applied their local and operational knowledge to evaluate how vulnerable each facility is to a potential hazard. The team ranked the facilities by their importance to the SBMWD's production and delivery of drinking water, and then using this ranking the team developed an estimate of potential economic impacts that could be caused by the high priority hazards. A percentage based on ranking was applied to the SBMWD's projected 2017-2018 annual water revenue ($7.8 million) to obtain the annual economic impact for each facility.

4.4.2 Earthquake Vulnerability Analysis

Population: Approximately 100% of SBMWD's population is vulnerable.

Critical Facilities: Approximately 100% of SBMWD's critical facilities are vulnerable.

All facilities are vulnerable in the event of a major earthquake within the SBMWD's boundaries. There are many nearby faults that could affect the SBMWD's facilities. They are Loma Linda, Middle Fork, Cleghorn, Arrowhead, Mill Creek, Grass Valley, Crafton Glen Helen, Big Bear, mighty San Andreas Fault and the San Jacinto. If any of these faults experience a rupture of 6.5 magnitude or more, it could have a negative effect on the SBMWD's facilities and pipelines.

Estimated Losses: The economic loss resulting from this hazard is approximately $5 billion. The loss from damage to structures and pipelines from this hazard is approximately $6.5 billion.

Losses are estimated assuming:

1. Lost revenue from water sales for 12 months based on the 2017-2018 projected City of San Bernardino Municipal Water Department (SBMWD) revenue
2. All the SBMWD's critical facilities are at risk, including 80% of the SBMWD's pipelines
3. Without the critical facilities, no revenue can be generated for the SBMWD

4.4.3 Flooding Vulnerability Analysis

Population: Approximately 40% of the SBMWD's population is vulnerable.

Critical Facilities: Approximately 40% of the SBMWD's critical facilities are vulnerable.

Flash flooding only happens when heavy and concentrated rains occur in steep basin areas where runoff is channeled through limited areas. The SBMWD is located in the foothills where water runs off from higher mountainous areas on its way to the dry lake areas on the desert floor. These waters are very dangerous because they can originate many miles away and travel at fast speeds. Flash flood waters rage through the service area from the west to east and collect in the wash area.

The SBMWD is not a member of the National Flood Insurance Program (NFIP). There is a dry river bed known as the Santa Ana River that runs thought the southern section of the City and the SBMWD's service area. The Santa Ana River has caused massive flooding in the past. The SBMWD has infrastructure in the Lytle Creek area, as well. This creek has also caused massive flooding in the past.

Estimated Losses: The economic loss resulting from this hazard is approximately $4 million. The loss from damage to structures from this hazard is approximately $3 million.

4.4.4 Wildfire Vulnerability Analysis

Population: Approximately 50% of the SBMWD's population is vulnerable.

Critical Facilities: Approximately 60% of the SBMWD's critical facilities are vulnerable.

Wildfires are a concern in California. California residents have seen the most devastating fire year in history, with millions of acres of land burned and hundreds of homes destroyed. The last major firestorm that affected the San Bernardino area was the Old Fire in 2003. This fire destroyed hundreds of homes within the City limits and caused major damage to the water system infrastructure.

Estimated Losses: The economic loss resulting from this hazard is approximately $10 million. The loss from damage to structures from this hazard is approximately $8 million.

4.4.5 Terrorist Event Vulnerability Analysis

Population: 100% of the SBMWD's critical facilities are vulnerable.

Critical Facilities: The City of San Bernardino has experienced two terrorist events in the recent past. The latest one was on April 10, 2017, at North Park Elementary School. The second was on December 2, 2015, were 14 people were killed and 22 people were injured. The SBMWD keeps security of its buildings and infrastructure in the forefront and has many security measures in place at all facilities. However, terrorist events could happen at any time. There have been other events in the city; however, this is a public document and past events will not be discussed in this document. Normally, terrorists are looking at making the biggest impact to the public. The types of events that can happen will not be discussed in this document, as this information is confidential to the SBMWD and will not be shared in a public forum.

Estimated Losses: The economic loss resulting from this hazard is approximately $52 million. The loss from damage to structures from this hazard is approximately $3 million.

4.4.6 Climate Change/Drought Vulnerability Analysis

Climate Change

Population: 100% of the SBMWD's population is vulnerable to climate change.

Critical Facilities: The groundwater aquifer is the most vulnerable component of the SBMWD's critical facilities (or resources). Without the aquifer, there is no water supply.

Climate change is an immediately sensitive issue in coastal communities, with increasing ocean waters, sea surges, tidal issues, and surging waves. Northern California and, in turn, the Central Valley are being affected by recent changes in weather patterns. In the inland desert regions of California, climate change is a long-term concern. As the weather becomes hotter and dryer in a changing climate, water will need to be captured during the rainy periods to recharge the underground aquifers, outdoor watering will be restricted, and other conservation measures will be needed.

As climate change results in more extreme weather patterns, the SBMWD will need to become more resilient in the management of groundwater resources. Planning for lower groundwater tables may include monitoring and studying the aquifer in greater detail, as well as installing deeper water supply wells. Enhanced groundwater recharge opportunities should also be explored and implemented.

Estimated Losses: The economic loss resulting from this hazard is approximately $5 million. The loss from damage to structures from this hazard is approximately $6.5 million.

Long Term Drought

Population: Approximately 100% of the SBMWD's population is vulnerable.

Critical Facilities: Approximately 100% of SBMWD's critical facilities are vulnerable.

The specific critical facilities vulnerable in the SBMWD are:

The wells are critical to drought because they supply groundwater for the SBMWD. During a long-term drought, the groundwater levels decline. During the current drought, the decrease in water level has not been significant, although pumping costs increased due to the greater lift required. It is also possible that wells and pumps may be too shallow if the groundwater level drops significantly. In this instance, the pump shaft and bowls may need to be lowered deeper into the well. In extreme cases a new and deeper well may be required.

Of the critical facilities listed, 51 are wells. Currently, all of these wells were operating without significant hardship during the recent drought. Reservoirs are not considered critical in a drought; however, pipelines can collapse if the system is left with no water.

California Governor Jerry Brown declared a Water State of Emergency for the entire state, mandating water conservation by all residents and reduction of water consumption by 25% in 2015.

The SBMWD adopted Stage IIA water conservation regulations due to the drought conditions that were required by the State Water Resources in 2015. The conservation regulations were lifted in 2017, and the SBMWD lifted the restrictions in January of 2018.

Estimated Losses: The economic loss resulting from this hazard is approximately $60,000 a month.

4.4.7 Windstorm Vulnerability Analysis

Population: Approximately 75% of SBMWD's population is vulnerable.

Critical Facilities: Approximately 100% of SBMWD's critical facilities are vulnerable.

All facilities are vulnerable in the event of a Santa Ana wind event within the SBMWD's boundaries. These events blow roofs off reservoirs, down power lines, and cause long-term power outages. When a potable water utility loses power during a long-term power outage and cannot maintain a system pressure of 25 psi, the water in the system is no longer potable. Wind can affect the entire service area. In 2017 wind took the roof off a reservoir in the north part of the service area.

Estimated Losses: The economic loss resulting from this hazard is approximately $5 million. The loss from damage to structures from this hazard is approximately $6.5 million.

4.4.8 Potential Loss Estimation

Replacement costs listed in this section were arrived by utilizing the SBMWD's insurance documentation. The Joint Powers Insurance Authority (JPIA) has listed the replacement cost value for each facility. The team has communicated with the JPIA on the values listed below and was assured that the estimated costs are accurate. Table 9 summarizes the economic impacts on the critical facilities within the SBMWD.

Table 9
Economic Impacts on Critical Facilities

Facility Name	Economic Value
10th & "J" St. Well	$150,000
17th Street Plant	$200,000
19th Street Plant	$575,000
27th & Acacia Plant	$200,000
30th & Mt. View Plant	$150,000
Administrative Offices	$3.5 million
Cajon Canyon Well & Vincent Well	$400,000
Collections/Customer Services Building	$1.1 million
Daley Canyon Reservoir	$4.5 million
Del Rosa #1 Plant	$575,000
Del Rosa #2 Plant	$175,000
Del Rosa #3 Reservoir	$6.0 million
Del Rosa Booster Station	$175,000
Devils Canyon Well 2	$150,000
Devils Canyon Wells 1, 6, 7; Domestic Reservoir, and Devil Canyon Plant with 2 boosters	$5.0 million
Devore Plant	$3.0 million
Electric Drive Plant Reservoir	$8.0 million
EPA Well 1 - 112	$1.8 million
Foothill Booster Station	$175,000
Kenwood Wells 1 & 2	$150,000
Lynwood Plant	$350,000
Lytle Creek Boosters	$135,000
Lytle Creek Well	$150,000
Magnolia Booster Station	$375,000
Medical Center Plant; now Cocke Reservoir	$12.0 million

Melvin Booster Station	$170,000
Meyers Canyon Reservoir	$3.5 million
Mill & "D" St. Plant	$4.5 million
Mountain Plant	$5.2 million
Mt. Vernon Well	$125,000
Newmark Plant	$15.0 million
Ogden Plant	$12.0 million
Olive & Garner St. Well	$125,000
Palm & Kendall Plant and Palm Booster Station	$12.0 million
Perris Hill Reservoir Dam	$11.8 million
Quail Canyon Plant	$4.2 million
Ridgeline Plant & Ridgeline Booster Stations	$1.1 million
Ridgeview Reservoir	$3.1 million
Shandin Hills Booster Station	$175,000
Shandin Hills Reservoir	$1.1 million
Sycamore #1 Reservoir	$4.4 million
Sycamore Plant 2 and 3	$1.1 million
Terrace Plant 2 and 3	$6.0 million
Water Reclamation Offices and Control Operations	$4.4 million
Water Reclamation Plant	$8 billion
Water Utility and Maintenance Yards	$20 million
Waterman Plant	$10 million

SECTION 5: COMMUNITY CAPABILITY ASSESSMENT

5.1 Agencies and People

The City of San Bernardino Municipal Water SBMWD provides water service to approximately 44,000 active service connections within its 55 square-mile service area in the City of San Bernardino and surrounding areas within the County of San Bernardino.

To help mitigate the potential impacts of disasters, the SBMWD joined the Emergency Response Network of the Inland Empire (ERNIE). This organization consists of water agencies within San Bernardino and Riverside counties. The ERNIE group of agencies coordinates mutual aid to help each member respond and recover from local emergency issues. The SBMWD is also a member of the California Water/Wastewater Response Network (CalWARN). CalWARN focuses on mutual aid throughout the State of California. The SBMWD staff attends quarterly meetings with the ERNIE group and also attends the twice-yearly CalWARN and Arizona WARN meetings at the American Water Works Association conferences.

The SBMWD employs 239 people. With the capabilities of ERNIE and CalWARN, the SBMWD has the potential of having hundreds of mutual aid workers at its disposal within hours of an emergency.

5.2 Existing Plans

The following emergency related plans apply, as appropriate:

- CalWARN Emergency Operations Plan
- SBMWD's Illness Injury Prevention Plan (IIPP)
- SBMWD's Water Master Plan
- Emergency Management Assistance Compact (EMAC)
- Dam No. 17.006 Inundation Report

In addition, the SBMWD has mutual aid agreements with San Bernardino, Riverside Counties and the State of California. As a Department within the City of San Bernardino, the SBMWD has the resources of the City. As a government entity SBMWD can access the Emergency Managers Mutual Aid (EMMA) and the Emergency Management Assistance Compact (EMAC) for national mutual aid and the National WARN System though the American Water Works Association (AWWA). SBMWD staff attends the San Bernardino County Office of Emergency Services quarterly meetings at various locations within the County of San Bernardino.

5.3 Regulations, Codes, Policies, and Ordinances

The Urban Water Management and Planning Act was passed in 2010 and requires water suppliers to estimate water demands and available water supplies. The SBMWD's updated Urban Water Management Plan (UWMP) was completed in January 2015. UWMPs are required to evaluate the adequacy of water supplies including projections of 5, 10, and 20 years. These

plans are also required to include water shortage contingency planning for dealing with water shortages, including a catastrophic supply interruption.

UWMPs are intended to be integrated with other urban planning requirements and management plans. Some of these plans include city and county General Plans, Water Master Plans, Recycled Water Master Plans, Integrated Resource Plans, Integrated Regional Water Management Plans, Groundwater Management Plans, Emergency Response Plans, and others. The SBMWD participates with other local area water agencies in preparing Water Master Plans that benefit all of the regional water agencies.

The SBMWD has an Emergency Response Plan that details how the SBMWD will respond to various emergencies and disasters. The SBMWD must be prepared to respond to a variety of threats that require emergency actions, including:

- Operational incidents, such as power failure or bacteriological contamination of water
- Outside or inside malevolent acts, such as threatened or intentional contamination of water, intentional damage/destruction of facilities, detection of an intruder or intruder alarm, bomb threat, or suspicious mail
- Natural disasters, such as earthquakes or floods
- Water conservation regulations

The SBMWD is also required to follow Standard Emergency Management System (SEMS), the National Incident Management System (NIMS) and the Incident Command System (ICS) protocol when responding to emergencies.

5.4 Mitigation Programs

The SBMWD has an ongoing program to seismic retrofit reservoirs and adopt best engineering practices to ensure new infrastructure is built to withstand natural disasters. The SBMWD budgets for safety and seismic retro-fits in its annual Capital Improvement Plan (CIP). The SBMWD is always looking for mitigation ideas and new techniques and attends workshops conducted by the County of San Bernardino OES, the American Water Works Association, vendor fairs, and meetings with other water organizations.

5.5 Fiscal Resources

Fiscal resources for the SBMWD include the following:

- Revenue from water sales
- Monthly Service Charge fees
- Water Availability Assessment (on Property Taxes)
- Meter Installation fees
- New Construction fees
- Local bond measures and property taxes
- Meter Stand-by fees
- Wastewater fees

- Land and site leases

Through the California Department of Water Resources, local grants and loans are available for water conservation, groundwater management, studies and activities to enhance local water supply quality, and reliability. Project eligibility depends on the type of organization applying and participating in the project, and the specific type of project. More than one grant or loan may be appropriate for a proposed activity. Completing the LHMP will facilitate obtaining grant funding in the future.

SECTION 6: MITIGATION STRATEGIES

6.1 Overview

The purpose of this analysis is to identify projects (actions) that help the SBMWD meet the goals and objectives for each priority hazard. The SBMWD has identified hazards in the community, assessed those hazards that pose the most significant risk, and identified projects to help reduce and/or eliminate those risks.

6.2 Mitigation Goals and Objectives

As discussed in Section 3.5 Hazard Assessment, the process of identifying goals began with a review and validation of the goals and objectives in the SBMWD and the San Bernardino County's 2015 Operational Area LHMP. Using the County's 2015 LHMP, the SBMWD's Planning Team completed an assessment of whether each of the goals was valid.

Overall, the primary goal is to protect lives and prevent damages to infrastructure that disrupts water and wastewater services. Global measures that apply across all hazards include:

- Continually improve the community's understanding of potential impacts due to hazards and the measures needed to protect lives and critical infrastructure
- Provide public outreach to inform the hazards associated with the drinking water system in emergencies: How to conserve water in the event of a disaster and how to obtain drinking water when water may not be available
- Continually provide State and local agencies with updated information about hazards, vulnerabilities, and mitigation measures
- Review local codes and standards to verify that they protect human life and SBMWD's facilities
- Review and verify that SBMWD's owned and operated infrastructure meet minimum standards for safety
- Review SBMWD facilities and development in high-risk areas to verify that these areas are appropriately protected for potential hazards
- Identify and mitigate imminent threats to life safety and facility damage

The six high profile hazards for the SBMWD are earthquake, flooding, wildfire, terrorist event, climate change/drought, and windstorm. SBMWD's priority and focus for the mitigation projects will be the six high profile hazards.

6.2.1 Earthquake, Impact Rating (Catastrophic)

Description: The SBMWD agrees that strengthening of buildings and fire codes are critical to the protection of property, life, and the reduction of seismic-caused damages. These codes and American Water Works Standards help water and wastewater utilities design and construct reservoirs, pump stations, groundwater wells, lift stations, treatments facilities, and pipelines to resist the forces of nature.

Objectives:

- Design new facilities and upgrade existing facilities to withstand an 8.0 earthquake
- Encourage property protection measures for structures located in the area
- Adopt cost-effective codes and standards to protect life, properties, and critical infrastructure
- Establish partnerships with other levels of government and the business community to improve and implement methods to protect property

Mitigation Projects:

- Install flexible pipe joints at wellheads, pump stations, and reservoirs
- Install seismic shut-off valves
- Bolt down reservoirs
- Tie down equipment
- Purchase and install generators and generator hook-ups
- Install additional booster pumps

6.2.2 Flooding, Flash Flooding Impact Rating (Catastrophic)

Description: A sudden, localized flood of great volume and short duration, typically caused by unusually heavy rain in a semiarid area. Flash flood can reach its peak volume in a matter of a few minutes and often carry large loads of mud and rock fragments. Flash flooding is common in the arid desert areas of California, Arizona, Nevada, and New Mexico.

Objectives:

- Prevent damage to water distribution and wastewater facilities
- Protect critical facilities
- Mitigate cost of damages during and after a flood
- Protect the wastewater treatment plant

Mitigation Projects:

- Install block or concrete diversion walls
- Flood proof facilities that are in the flood plain
- Raise well motors
- Install concrete protection of pipelines in washes, creeks, and rivers
- Protect pipelines running across bridges
- Purchase generators and generator hook-ups
- Purchase portable booster pumps

6.2.3 Wildfire, Impact Rating (Catastrophic)

Description: The SBMWD agrees that strengthening of buildings and fire codes are critical to the protection of property, life, and the reduction of seismic-caused damages. These codes help water utilities design and construct reservoirs, pump stations, groundwater wells, and pipelines to resist the forces of nature.

Objectives:

- Design new facilities and upgrade existing facilities to withstand wildfires
- Encourage property protection measures for structures located in the area
- Adopt cost-effective codes and standards to protect life properties and critical infrastructure
- Establish partnerships with other levels of government and the business community to improve and implement methods to protect property

Mitigation Projects:

- Purchase more portable generators
- Keep brush and trees clear from facilities
- Improve communication with local fire, police, and San Bernardino County OES
- Purchase water booster pumps
- Purchase additional stationary generators and generator hook-ups
- Redundant SCADA and communications equipment

6.2.4 Terrorist Event, Impact Rating (Critical)

Description: A person or group of persons willingly causes damage to people or property to forward their goals through intimidation or coercion of a civilian population, to influence the policy of a government either large or small, and to affect a government entity.

Objectives:

- Prevent damage to critical water facilities
- Educate the public on terrorism and measures to prevent events

- Enhance safety within the region
- Increase security measures at critical facilities, which may include patrols

Mitigation Projects:

- Train the public in "if you see something, say something."
- Improved SCADA controls
- Install and improve video cameras at critical facilities
- Build block walls around critical facilities for additional security
- Purchase generators and generator hook-ups

6.2.5 Climate Change/Drought, Impact Rating (Limited)

Description: Due to Global Warming, there are more extremes in the weather, which means the summers can be hotter, the winters colder, periods of rain can become less wet or more wet, causing flooding. Objectives and mitigation address expected greater fluctuations in weather patterns, including prolonged dry periods and drought, through mitigation over the long-term. The objectives listed below have been taken from the declaration of a Drought, State of Emergency for California, signed by Governor Jerry Brown in May of 2015. The past California Drought has not affected the operation of SBMWD instituted mandatory water conservation. SBMWD is also in the final planning stage of treatment for more wastewater to recharge the aquifer in the future.

Objectives:

- Increase water supply by creating innovative ways to generate new supplies
- Recycle water to recharge the Bunker Hill Groundwater Basin
- Improve operational efficiency
- Reduce water demand through water conservation, a viable long-term supply savings
- Encourage reduction of landscaping that requires heavy watering

Mitigation Projects:

- Increase public awareness of water conservation
- Monitor groundwater elevations and evaluate trends
- Increase water pumping capabilities
- Increase groundwater supplies
- Study system interties with other water systems in the area
- Purchase generators and generator hook-ups

6.2.6 Windstorms, Impact Rating (Limited)

Description: The SBMWD's biggest concern is the loss of power during a windstorm. The other concern is threat of wildfires driven by a windstorm. Windstorms cause loss of power, uproot trees, blow roofs off reservoirs, and cause SCADA controls to be damaged. Windstorms can be severe in San Bernardino, as the Santa Ana winds are a yearly occurrence.

Objectives:

- Design new facilities and upgrade existing facilities to withstand high winds
- Encourage property protection measures for structures located in the area
- Harden facilities to resist wind damage
- Establish partnerships with other levels of government and the business community to improve and implement methods to protect life and property.

Mitigation Projects:

- Install redundant SCADA controls
- Purchase generators and generator hook-ups
- Purchase water booster pumps
- Replace roofs with wind resistant material
- Remove trees and brush from around facilities

6.2.7 Mitigation at Critical Sites

Mitigation measures, estimated budget timelines are listed in Table 10 below.

Table 10
Mitigation Measures
A= All Hazard, F-Fire, E=Earthquake, T=Terrorist, FL=Flooding
All funding's will be either CPI or Grant Funding

Facility Name	Mitigation/Objective	Timeline (Approx.)	Budget	Type
10th & "J" St. Well	Seismic retrofit, flex lines, auto sprinkler system	1-2 years	$150,000	E, F
17th Street Plant	Seismic retrofit, flex lines, auto sprinkler system	1-2 years	$150,000	E, F
19th Street Plant	Seismic retrofit, flex lines, auto sprinkler system	1-3 years	$700,000	E, F
27th & Acacia Plant	Seismic retrofit buildings	1-3 years	$500,000	E
30th & Mt. View Plant	Seismic retrofit, flex lines, auto sprinkler system	1-2 years	$150,000	E, F
Administrative Offices	Security, earthquake retro fit	1-3 years	$1 million	T, E
Cajon Canyon Well & Vincent Well	Seismic retrofit, flex lines, auto sprinkler system, Block wall	1-2 years	$1 million	A
Collections/Customer Services Building	Security, earthquake retro fit	1-3 years	$500,000	T, E
Daley Canyon Reservoir	Underground seismic retrofit, flex piping, security and generator, Solar	1-3 years	$1 million	T, E
Del Rosa #1 Plant	Seismic retrofit, flex lines, remove trees from around the facility	1-3 years	$800,000	F, E
Del Rosa #2 Plant	Seismic retrofit, flex lines, auto sprinkler system	1-3 years	$500,000	E, F
Del Rosa #3 Reservoir	Power, Security, seismic retrofit	1-3 years	$800,000	E, F
Del Rosa Booster Station	Metal roof, security and block wall	1-3 years	$300,000	T, E
Devils Canyon Well 2	Metal roof, seismic retrofit building	1-3 years	$50,000	T, E
Devils Canyon Wells 1, 6, 7; Domestic Reservoir, and Devil Canyon Plant with 2 boosters	Security, diversion walls, metal roof, seismic retrofit reservoirs, solar power	1-3 years	$1 million	A
Devore Plant	Flex lines, seismic retrofit	1-2 years	$800,000	E
Electric Drive Plant Reservoir	Seismic retrofit, flex couplings, power, security	1-3 years	$1.1 million	A
EPA Well 1 - 112	Seismic retrofit buildings, flex piping	1-3 years	$1 million	E
Foothill Booster Station	Seismic retrofit, security, lighting	1-3 years	$35,000	E
Kenwood Wells 1 & 2	Seismic retrofit buildings, flex piping	1-3 years	$35,000	E
Lynwood Plant	Seismic retrofit buildings, flex piping	1-3 years	$100,000	E
Lytle Creek Boosters	Seismic retrofit	1-3 years	$75,000	E
Lytle Creek Well	Replace reservoir to include all seismic	1-3 years	$35,000	A

	upgrades			
Magnolia Booster Station	Seismic retrofit	1-3 years	$65,000	E
Medical Center Plant; now Cocke Reservoir	Flex couplings, seismic retrofits, security, block walls	1-3 years	$1.5 million	A
Melvin Booster Station	Seismic retrofit, security, lighting	1-3 years	$10,000	A
Meyers Canyon Reservoir	Seismic retrofit, security, lighting, block wall	1-3 years	$1 million	A
Mill & "D" St. Plant	Seismic retrofit, security, lighting, block wall	1-3 years	$800,000	A
Mountain Plant	Replace small reservoir, seismic retrofit, security, lighting cameras, block wall	1-3 years	$1.3 million	A
Mt. Vernon Well	Seismic retrofit, security, lighting, block wall	1-3 years	$100,000	A
Newmark Plant	Seismic retrofit of reservoir and stripping towers	1-3 years	$5 million	A
Ogden Plant	Seismic retrofit, security, lighting, block wall	1-3 years	$1.1 million	A
Olive & Garner St. Well	Flex couplings	1-3 years	$$75,000	E
Palm & Kendall Plant and Palm Booster Station	Block wall, seismic retrofit	1-3 years	$1.5 million	T, E
Perris Hill Reservoir Dam	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$3 million	A
Quail Canyon Plant	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$600,000	A
Ridgeline Plant & Ridgeline Booster Stations	Seismic retrofit, block wall, security	1-3 years	$300,000	T, E
Ridgeview Reservoir	Seismic retrofit, flex couplings, power, security, remove trees	1-3 years	$300,000	A
Shandin Hills Booster Station	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$75,000	T, E
Shandin Hills Reservoir	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$500,000	T, E
Sycamore #1 Reservoir	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$800,000	T, E
Sycamore Plant 2 and 3	Flood diversion walls, block walls, detention basin	1-3 years	$1 million	FL
Terrace Plant 2 and 3	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$1 million	A
Water Reclamation Offices and Control Operations	Seismic retrofit buildings	1-3 years	$1 million	E
Water Reclamation Plant	Seismic retrofit buildings, flex piping	1-3 years	$5 million	E
Water Utility and Maintenance Yards	Seismic retrofit, security, lighting, block wall	1-3 years	$8 million	T, E
Waterman Plant	Seismic retrofit, security, lighting, block wall, cameras	1-3 years	$3 million	T, E

6.3 Implementation Strategy

The implementation strategy is intended to successfully mitigate the hazards identified in this plan within a reasonable amount of time. SBMWD is currently operating within its annual budget and has been fortunate that the recession of the past 10 years did not cause major issues with the budget or revenue. The SBMWD's revenues have remained strong throughout the recession. Capital Improvement Projects have remained a priority and the General Manager has included mitigation as a priority and will be responsible for overseeing all mitigation activity. The new LHMP will be included in all engineering project and incorporated into all Capital Improvement projects. The Department has already included mitigation measures for earthquakes into three current reservoir improvement projects, by including bolting down the reservoir and adding seismic shut-off valves.

SBMWD staff will review the Mitigation Plan each year before obtaining the next year's Fiscal Budget. The plan will also be reviewed by the Water Board for items to be included in the new Fiscal Budget. SBMWD staff will also look for ways to obtain Hazard Mitigation Grants each year to offset the impacts to the Fiscal Budget and to show some relief for the residents of a disadvantaged community. The General Manager and all Department heads will review the HMP yearly. The General Manager or his/her designee and the Engineering Manager and his/her designee are to review the HMP before any site rehabilitation or construction is undertaken in the Departments service boundary. The Department will utilize and consider cost and benefit of each project to be funded by the Department or funded by grants.

Mitigation Projects Funding Source

There is currently no mitigation money in SBMWD's 2019/2020 budget. SBMWD will include mitigation into the budgeting process when funding becomes available and look at which mitigation projects could be funded in future budget cycles.

Once the LHMP is approved by FEMA; the SBMWD will actively pursue grant funding from FEMA and other sources as they become available.

Timeframe

Over the next five years, the SBMWD will incorporate mitigation into all capital improvement projects, where deemed necessary in the mitigation review phase. The SBMWD has a Capital Improvement Program. When funds are available for the projects, the SBMWD replaces outdated pipelines, reservoirs, wells, buildings, and equipment.

The SBMWD will apply for mitigation grants as the opportunities become available in the State of California, County of San Bernardino and/or through FEMA each year. SBMWD will consider all mitigation items during the annual budget workshops, conducted each spring.

SECTION 7: PLAN MAINTENANCE

7.1 Monitoring, Evaluating, and Updating the Plan

The LHMP will be monitored and evaluated by the General Manager or his/her designee. Progress will be reported as part of the annual budget workshop in the spring of each year. Annually, the General Manager or his/her designee and the Water Board will review funding and determine the Capital Improvement Projects to be included in the next fiscal year's budget.

The General Manager or his/her designee will include the LHMP in all budget workshops and grant planning meetings. This will allow open discussion, evaluation, and assessment of the plan at achieving goals, and allow for the addition and/or removal of mitigated items.

A full review of the plan will be performed at 4-year intervals by the General Manager or his/her designee. All FEMA and State guidelines will be followed in any update of the LHMP. Progress in reaching mitigation goals, assessment of new and existing hazards, development of new mitigation strategies, and goals will be tackled by a planning team that will include SBMWD staff and the community served by the SBMWD. The public will be asked to participate in the update process. The SBMWD's budget is a public document and is reviewed by the public before the Water Board adopts the updated LMHP.

It is the responsibility of the General Manager or his/her designee to review the LHMP each year to remove projects form the LHMP that have completed mitigation measures. This will give the Department a better understanding of how well the LHMP is being utilized in the future.

The General Manager or his/her assignee will review the plan yearly to update and log all completed mitigation projects in the water department. This list will be utilized every 5 years in order to help update the HMP.

7.2 Implementation through Existing Programs

Once the State of California OES and FEMA approve the LHMP, SBMWD will incorporate the LHMP into Capital Improvement Projects, Capital Replacement Programs, building design, and any updates or repairs to the water distribution system. The SBMWD will submit Notice of Intents to the State of California to help facilitate funding opportunities in obtaining FEMA and State funding to mitigate hazards within the service area.

SBMWD's General Manager or his/her appointee will be responsible for the review, implementation, revisions and budgeting of the LHMP. The General Manager and his/her appointee will also be responsible for ensuring the LHMP recommended goals and objectives are met. SBMWD will start the update process three and a half years before the expiration date on this document. The LHMP will be included in the Departments Water Master Plan, the Capital Improvement Plan and as a part of all budget planning and review. The LHMP will also, be included in the yearly budget workshops.

7.3 Continued Public Involvement

The approved LHMP will be posted on SBMWD's website with contact information provided for questions or concerns. In the spring of each year at the SBMWD's Water Board budget workshop, public comments will be taken in regard to the LHMP and projects will be considered that could possibly be included in the next year's budgeting process. As new facilities are incorporated into the SBMWD, the LHMP will be updated to include new facilities, as well as new hazards, if warranted. When the LHMP is rewritten and updated, a public committee will be utilized to review and concur on the changes in the document.

Attachment 3: Adoption Resolution

RESOLUTION NO. 2021-007

RESOLUTION OF THE WATER BOARD OF THE CITY OF SAN BERNARDINO, CALIFORNIA, ADOPTING THE WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, in accordance with Section 603 of the City Charter, the Water Board is responsible for oversight and management of the City's water supply, recycled water, wastewater collection and treatment functions; and

WHEREAS, the California Urban Water Management Planning Act, Water Code Section 10610 et seq. (the UWMP Act), mandates that every urban supplier of water providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000-acre feet of water annually, prepare and adopt, in accordance with prescribed requirements, a Water Shortage Contingency Plan (WSCP); and

WHEREAS, San Bernardino Municipal Water Department meets the definition of an urban water supplier for purposes of the UWMP Act; and

WHEREAS, the UWMP Act specifies the requirements and procedures for adopting such WSCPs; and

WHEREAS, pursuant to recent amendments to the UWMP Act, urban water suppliers are required to adopt and electronically submit their WSCPs to the California Department of Water Resources by July 1, 2021; and

WHEREAS, the San Bernardino Municipal Water Department has prepared a WSCP in accordance with the UWMP Act and SB X7-7, and in accordance with applicable legal requirements, has undertaken certain coordination, notice, public involvement, public comment, and other procedures in relation to its WSCP; and

WHEREAS, the WSCP references and incorporates the provisions of the San Bernardino Municipal Water Department's Rule and Regulation No. 21, General Water Service/Water Rates, Section I Water Shortage Supply Rates adopted on September 20, 2016; and

WHEREAS, in accordance with the UWMP Act, the San Bernardino Municipal Water Department has prepared its WSCP with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its WSCP, and has also utilized the California Department of Water Resources Guidebook for Urban Water Suppliers to Prepare 2020 Urban Water Management Plans, in preparing its WSCP; and

WHEREAS, in accordance with applicable law, including Water Code sections 10608.26 and 10642, and Government Code section 6066, a Notice of a Public Hearing regarding the San Bernardino Municipal Water Department's WSCP was published within the jurisdiction of the San Bernardino Municipal Water Department on June 3, 2021 and June 10, 2021; and

WHEREAS, in accordance with applicable law, including but not limited to Water Code sections 10608.26 and 10642, a public hearing was held on June 22, 2021 at 9:30 AM, or soon thereafter, via web-conference and livestream accessible via YouTube at https://bit.ly/YouTubeSBWater, in order to provide members of the public and other interested entities with the opportunity to be heard in connection with proposed adoption of the WSCP and issues related thereto; and

WHEREAS, pursuant to said public hearing on the WSCP, the San Bernardino Municipal Water Department, among other things, encouraged the active involvement of diverse social, cultural, and economic members of the community within the San Bernardino Municipal Water Department's service area with regard to the preparation of the WSCP, encouraged community input regarding San Bernardino Municipal Water Department's WSCP; and

WHEREAS, the Water Board has reviewed and considered the purposes and requirements of the UWMP Act, the contents of the WSCP, and the documentation contained in the administrative record in support of the WSCP, and has determined that the factual analyses and conclusions set forth in the WSCP are legally sufficient; and

WHEREAS, the Water Board desires to adopt the WSCP in order to comply with the UWMP Act.

BE IT RESOLVED BY THE WATER BOARD OF THE CITY OF SAN BERNARDINO AS FOLLOWS:

SECTION 1. The above recitals are true and correct and are incorporated herein by this reference.

SECTION 2. The Water Shortage Contingency Plan is hereby adopted as amended by changes incorporated by the Water Board as a result of input received (if any) at the public hearing and ordered filed with the Secretary of the Water Board;

SECTION 3. CEQA. The Water Board finds this Resolution is not subject to the California Environmental Quality Act (CEQA) in that the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty, as in this case, that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

SECTION 4. The General Manager is hereby authorized and directed to include a copy of this Resolution in San Bernardino Municipal Water Department's WSCP;

SECTION 5. The General Manager is hereby authorized and directed, in accordance with Water Code sections 10621(d) and 10644(a)(1)-(2), to electronically submit a copy of the WSCP to the California Department of Water Resources no later than July 1, 2021;

SECTION 6. The General Manager is hereby authorized and directed, in accordance with Water Code section 10644(a), to submit a copy of the WSCP to the California State Library, and

any city or county within which the San Bernardino Municipal Water Department provides water supplies no later than thirty (30) days after this adoption date;

SECTION 7. The General Manager is hereby authorized and directed, in accordance with Water Code section 10645, to make the WSCP available for public review at the San Bernardino Municipal Water Department's offices during normal business hours and on the San Bernardino Municipal Water Department's website no later than thirty (30) days after filing a copy of the WSCP with the California Department of Water Resources;

SECTION 8. The General Manager is hereby authorized and directed, in accordance with Water Code Section 10635(b), to provide that portion of the WSCP prepared pursuant to Water Code Section 10635(a) to any city or county within which the San Bernardino Municipal Water Department provides water supplies no later than sixty (60) days after submitting a copy of the WSCP with the California Department of Water Resources;

SECTION 9. The General Manager is hereby authorized and directed to implement the WSCP in accordance with the UWMP Act and to provide recommendations to the Water Board regarding the necessary budgets, procedures, rules, regulations or further actions to carry out the effective and equitable implementation of the WSCP.

SECTION 10. Severability. If any provision of this Resolution or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications, and to this end the provisions of this Resolution are declared to be severable.

SECTION 11. Effective Date. This Resolution shall become effective immediately.

APPROVED and **ADOPTED** by the Water Board and signed by the President of the Water Board and attested by the Deputy City Clerk & Ex Officio Secretary of the Water Board this 22nd day of June, 2021.

Toni Callicott, President
City of San Bernardino Water Board

Attest:

Robin L Ohama
Robin L Ohama (Jun 22, 2021 11:39 PDT)

Robin Ohama
Deputy City Clerk & Ex Officio Secretary of the Water Board

CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF SAN BERNARDINO)

I, Robin Ohama, Deputy City Clerk & Ex Officio Secretary of the Water Board, hereby certify that the attached is a true copy of Resolution No. adopted at a regular meeting held on the 22nd day of June, 2021 by the following vote:

Council Members:	**AYES**	**NAYS**	**ABSTAIN**	**ABSENT**
CALLICOTT	X			
HENDRIX	X			
MLYNARSKI	X			
BRICKLEY				X
JOHNSON	X			

WITNESS my hand and official seal of the City of San Bernardino this 22nd day of June, 2021.

Robin L Ohama
Robin L Ohama (Jun 22, 2021 11:39 PDT)

Robin Ohama
Deputy City Clerk & Ex Officio Secretary of the Water Board