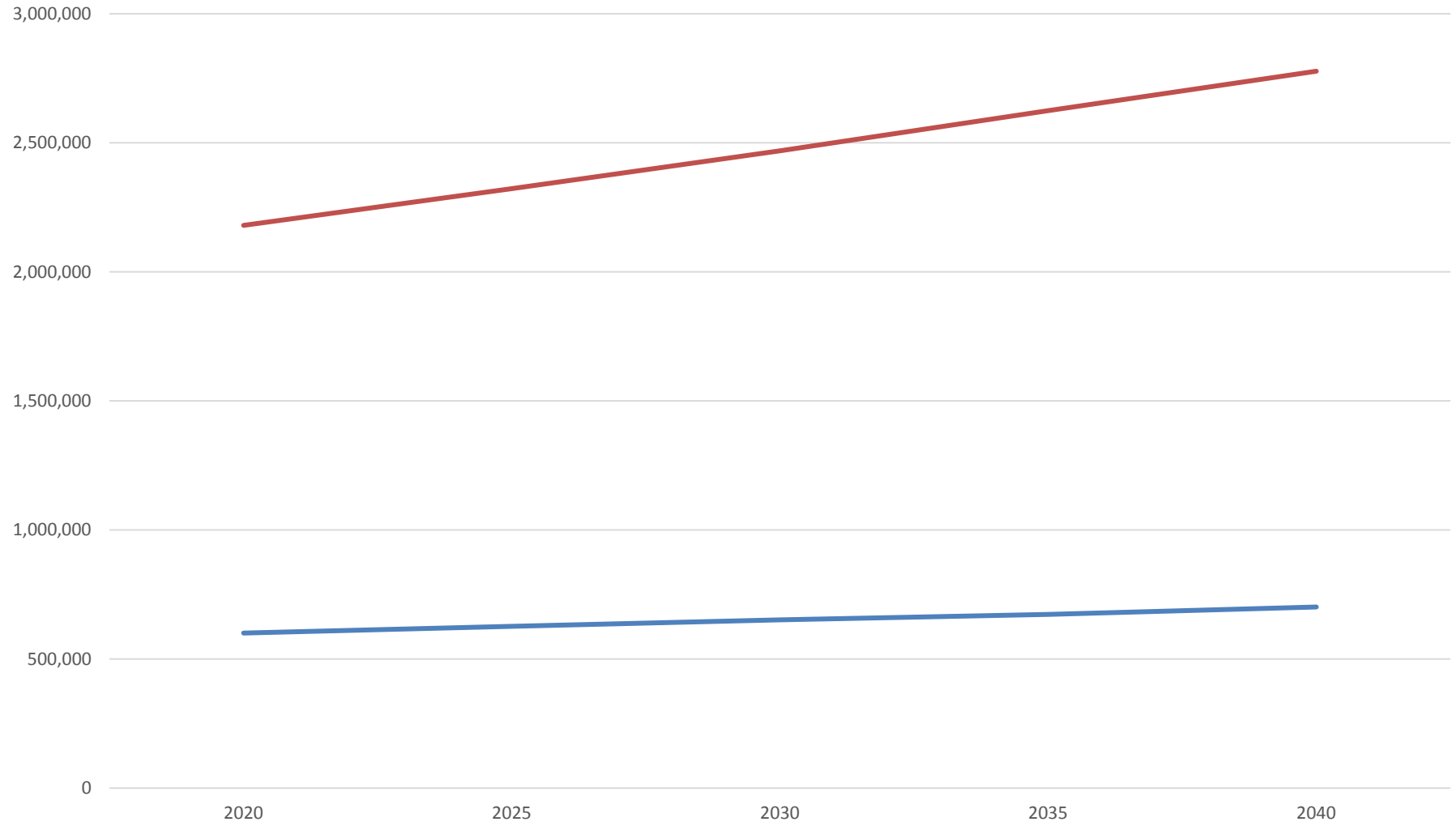


# Water Demand and Population San Bernardino County Water Element

— Demand — Population

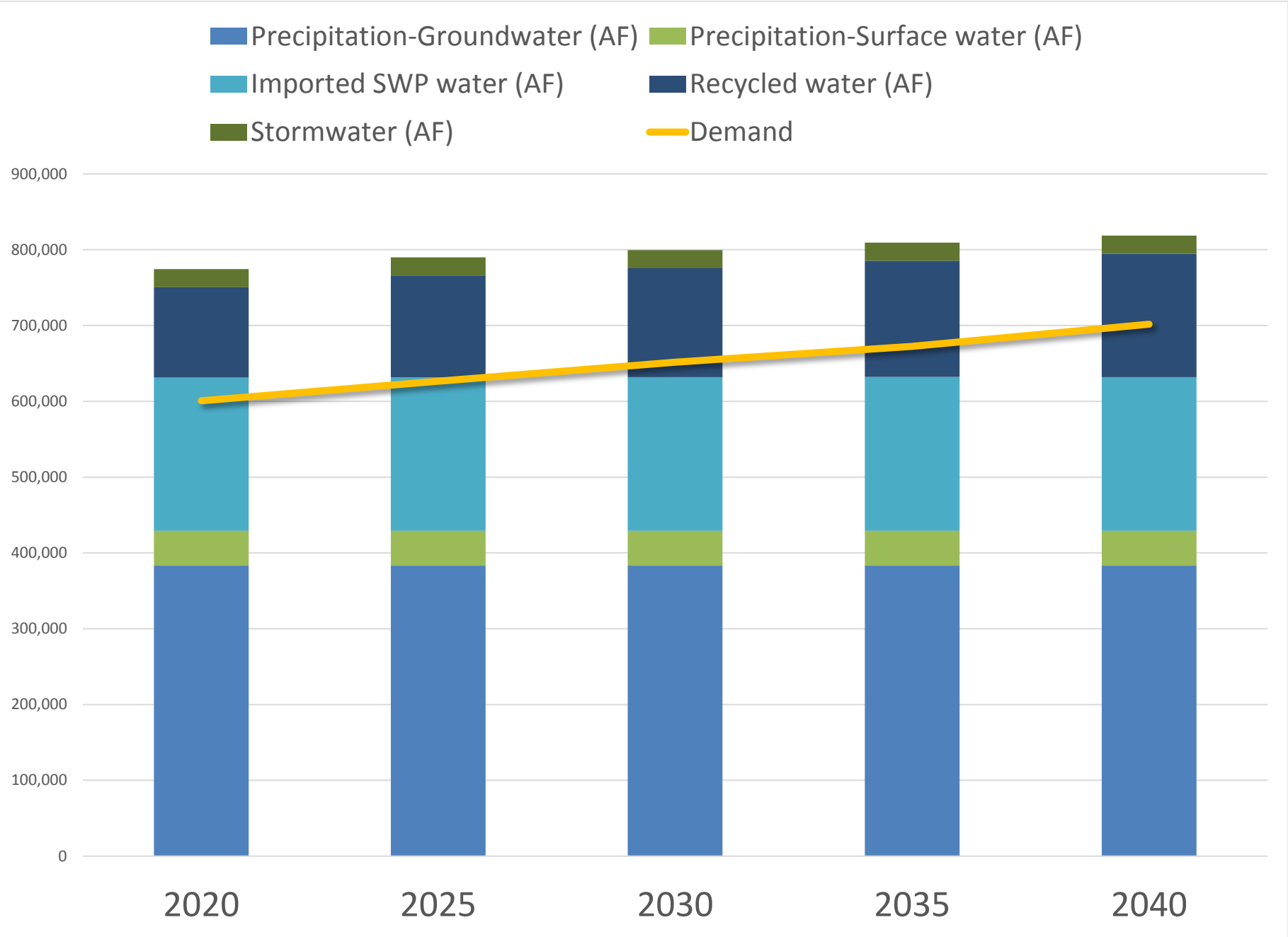


# San Bernardino County Countywide Water Inventory - 2018 Update

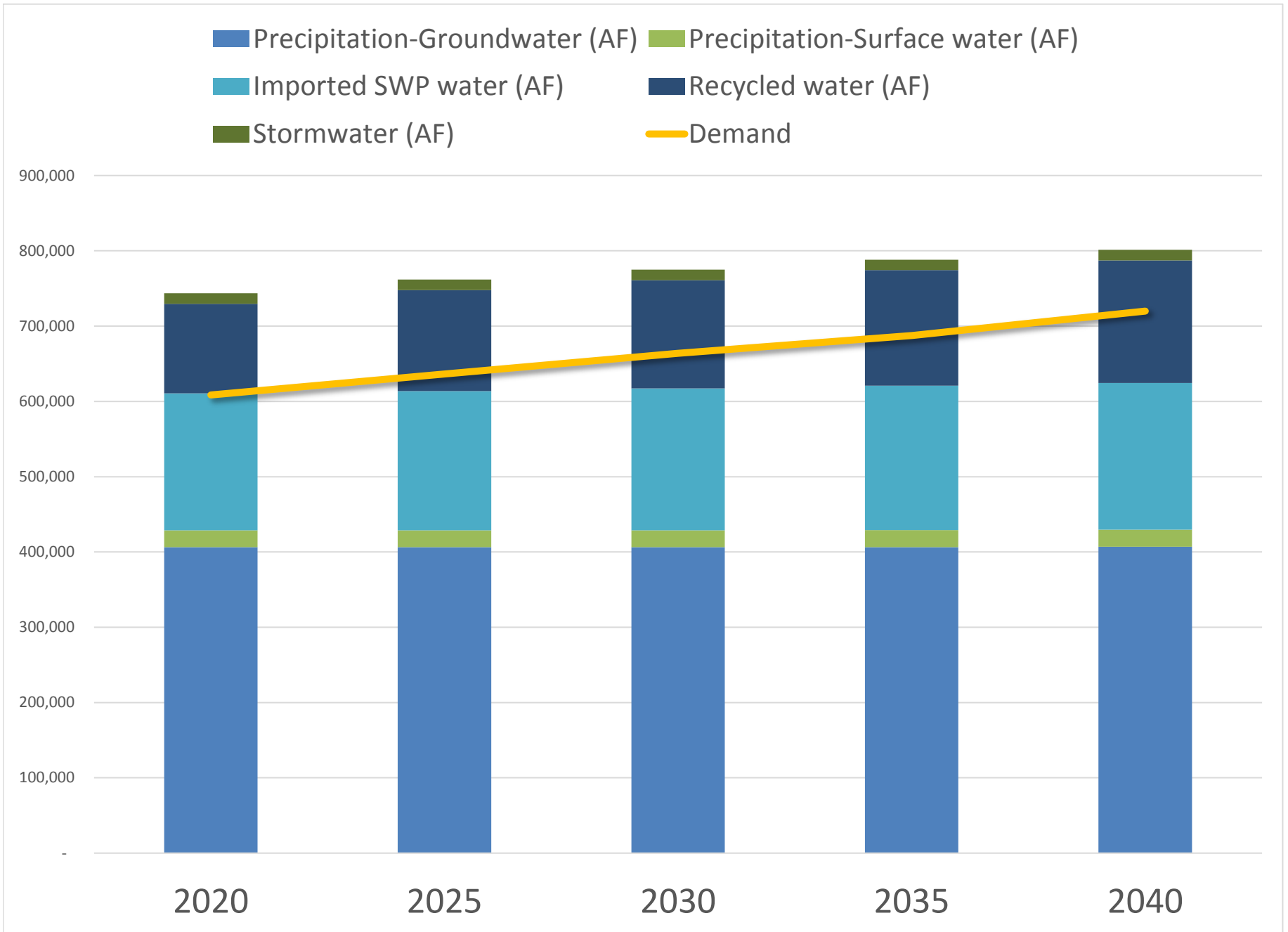
NORMAL											SUMMARY-GPCD						
SUMMARY-SUPPLY NORMAL						SUMMARY-DEMAND NORMAL (AF)					2020	2025	2030	2035	2040		
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	246	241	236	229	226	
Precipitation-Groundwater (AF)	383,453	383,453	383,453	383,453	383,453	Urban Demand	600,728	626,564	651,562	672,636	701,722						
Precipitation-Surface water (AF)	45,771	45,771	45,771	45,771	45,771												
Imported SWP water (AF)	202,207	202,488	202,621	202,889	202,657												
Recycled water (AF)	118,943	134,188	143,834	153,464	162,954												
Stormwater (AF)	23,907	23,907	23,907	23,907	23,907												
<b>Total (AF)</b>	<b>774,281</b>	<b>789,807</b>	<b>799,586</b>	<b>809,484</b>	<b>818,742</b>		2,180,228	2,322,954	2,469,511	2,624,950	2,777,489						
						AF→Gal					325851						
IEUA (Source: 2018 OWOW)						DEMAND NORMAL (AF)					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	131,097	131,097	131,097	131,097	131,097	Urban	200,800	213,939	225,475	232,151	250,215	200	200	199	194	199	
Precipitation-Surface water (AF)	11,651	11,651	11,651	11,651	11,651												
Imported SWP water (AF)	69,752	69,752	69,752	69,752	69,752												
Recycled water (AF)	41,836	47,657	47,657	47,657	47,657												
Groundwater Storage (AF)																	
Stormwater (AF)	6,400	6,400	6,400	6,400	6,400												
<b>Total (AF)</b>	<b>260,736</b>	<b>266,557</b>	<b>266,557</b>	<b>266,557</b>	<b>266,557</b>		896,533	955,569	1,009,349	1,067,946	1,125,203						
						POPULATION											
SBVMWD/Big Bear/CLAWA (SOURCE: 2018 OWOW)						DEMAND NORMAL (AF) - Includes an additional 10% Reliability Margin					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	188,012	188,012	188,012	188,012	188,012		250,027	260,542	270,746	281,697	289,820	294.06	292	289	287	281	
Precipitation-Surface water (AF)	34,120	34,120	34,120	34,120	34,120												
Imported SWP water (AF)	76,179	76,460	76,593	76,861	76,629												
Recycled water (AF)	21,951	29,260	36,320	43,280	50,340												
Stormwater (AF)	17,507	17,507	17,507	17,507	17,507												
<b>Total (AF)</b>	<b>337,769</b>	<b>345,359</b>	<b>352,552</b>	<b>359,780</b>	<b>366,608</b>		759,400	796,710	835,858	876,936	919,977						
						POPULATION											
MWA						DEMAND NORMAL (AF)					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	57,349	57,349	57,349	57,349	57,349	Urban Ag	109,566	114,386	120,279	126,364	131,900	259	241	225	210	199	
Precipitation-Surface water (AF)	0	0	0	0	0												
Imported SWP water (AF)	56,276	56,276	56,276	56,276	56,276			35,600	32,400	29,200	26,000	22,800					
Recycled Water (AF)	55,156	57,271	59,857	62,527	64,957												
Stormwater (AF)																	
<b>Total (AF)</b>	<b>168,781</b>	<b>170,896</b>	<b>173,482</b>	<b>176,152</b>	<b>178,582</b>		499,967	543,264	593,810	646,490	695,647						
						POPULATION											
29 Palms						DEMAND NORMAL (AF)					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	6,995	6,995	6,995	6,995	6,995		4,736	5,297	5,862	6,424	6,987	174	173	172	171	170	
Precipitation-Surface water (AF)	0	0	0	0	0												
Imported SWP water (AF)	0	0	0	0	0												
Recycled water (AF)	0	0	0	0	0												
<b>Total (AF)</b>	<b>6,995</b>	<b>6,995</b>	<b>6,995</b>	<b>6,995</b>	<b>6,995</b>		24,328	27,411	30,494	33,578	36,661						
						POPULATION											

## San Bernardino County Countywide Water Inventory - 2018 Update

KEY	
Normal'	Refers to normal precipitation conditions
Single Dry'	Refers to the first year of drought conditions
Multiple Dry'	Refers to a three year period of drought conditions
GPCD, Gallons per Capita per Day	This is a benchmark used by the state to determine overall urban water consumption. State Bill x7-7 (2009) required water agencies to reduce GPCD within their service areas 20% by 2020.
AF, or Acre-feet	Acre-feet is a common measurement in the water industry. It is the amount of water needed to fill one acre with one foot of water. One acre-foot is equal to 325,851 gallons.
Imported SWP, State Water Project	The SWP is capital water conveyance project that delivers water from Northern California to the Central and Southern California. It provides water for 25 million people and approximately 750,000 acres of farmland.
Banked SWP	Refers to various groundwater storage programs that store water outside of an agency's service area. These waters are released during water shortages and directed to the appropriate agency. The Central Valley, particularly Kern County, has developed a large groundwater storage program to store SWP water for southern agencies.
Groundwater Storage	Refers to water that has been stored underground, usually within an agency's service area. This water is generally used as a reserve for times of drought.
Recycled Water	Wastewater that has been treated to tertiary level of treatment that is either discharged to a water body, reused within the service area, or used for recharging groundwater.
Precipitation-Surface Water	Refers to the average amount of water that an agency can expect to withdraw from neighboring streams, lakes, or rivers in a normal year. Although based primarily on average precipitation, surface water is also constrained by water rights and drought.
Precipitation-Groundwater	Refers to the average amount of water expected to naturally recharge a groundwater basin in a normal year. This total is based on rainfall averages and measurements from groundwater basins. It is also referred to as the natural, or safe yield, of a groundwater basin.
Stormwater	Stormwater is also precipitation, but is granted a special category because this water was previously unavailable to water agencies. Formerly, runoff from rain events that entered urban and suburban storm drains was directed to local waterways and bypassed catchment areas. Now, water agencies are actively working to develop infrastructure and land use plans to capture this water and reuse within the service area.
CLAWA	Crestline-Lake Arrowhead Water Agency
IEUA	Inland Empire Utilities Agency
SBVMWD	San Bernardino Valley Municipal Water District
MWA	Mojave Water Agency
29 Palms	Twentynine Palms Water District
LACSD	Lake Arrowhead Community Services District
RSWD	Running Springs Water District



SUMMARY-SUPPLY SINGLE DRY						SUMMARY-DEMAND SINGLE DRY						SUMMARY-GPCD					
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	406,316	406,320	406,325	406,401	407,021	Urban Demand	608,550	636,296	663,912	687,595	719,914	249	245	240	234	231	
Precipitation-Surface water (AF)	22,583	22,579	22,574	22,569	22,569												
Imported SWP water (AF)	181,792	184,778	188,218	191,901	194,775												
Recycled water (AF)	118,943	134,188	143,834	153,464	162,954												
Stormwater (AF)	13,907	13,907	13,907	13,907	13,907												
<b>Total (AF)</b>	<b>743,541</b>	<b>761,772</b>	<b>774,858</b>	<b>788,242</b>	<b>801,226</b>		<b>2,180,228</b>	<b>#####</b>	<b>2,469,511</b>	<b>2,624,950</b>	<b>2,777,489</b>						
SUMMARY-POPULATION							2020	2025	2030	2035	2040						
							2,180,228	#####	2,469,511	2,624,950	2,777,489						
IEUA (Source: 2018 OWOW)						DEMAND SINGLE DRY						GPCD					
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	131,097	131,097	131,097	131,097	131,097	Urban	203,390	218,006	231,373	239,844	260,613	203	204	205	200	207	
Precipitation-Surface water (AF)	11,651	11,651	11,651	11,651	11,651												
Imported SWP water (AF)	69752	69752	69752	69752	69752												
Recycled water (AF)	41,836	47,657	47,657	47,657	47,657												
Groundwater Storage (AF)																	
Stormwater (AF)	6400	6400	6400	6400	6400												
<b>Total (AF)</b>	<b>260,736</b>	<b>266,557</b>	<b>266,557</b>	<b>266,557</b>	<b>266,557</b>		<b>896,533</b>	<b>955,569</b>	<b>1,009,349</b>	<b>1,067,946</b>	<b>1,125,203</b>						
							896,533	955,569	1,009,349	1,067,946	1,125,203						
SBVMWD/Big Bear/CLAWA (SOURCE: 2018 OWOW)						DEMAND SINGLE DRY (AF) - Includes an additional 10% Reliability Margin						GPCD					
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	210,875	210,879	210,884	210,889	210,889		254,785	265,677	276,613	288,321	296,914	299.66	298	296	294	288	
Precipitation-Surface water (AF)	10,932	10,928	10,923	10,918	10,918												
Imported SWP water (AF)	76,179	76,460	76,593	76,861	76,629												
Recycled water (AF)	21,951	29,260	36,320	43,280	50,340												
Stormwater (AF)	7,507	7,507	7,507	7,507	7,507												
<b>Total (AF)</b>	<b>327,444</b>	<b>335,034</b>	<b>342,227</b>	<b>349,455</b>	<b>356,283</b>		<b>759,400</b>	<b>796,710</b>	<b>835,858</b>	<b>876,936</b>	<b>919,977</b>						
							759,400	796,710	835,858	876,936	919,977						
MWA						DEMAND SINGLE DRY						GPCD					
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	57,349	57,349	57,349	57,349	57,349	Urban Ag	109,566	114,386	120,279	126,364	131,900	259	241	225	210	199	
Precipitation-Surface water (AF)	0	0	0	0	0												
Imported SWP water (AF)	9,878	9,878	9,878	9,878	9,878			35,600	32,400	29,200	26,000	22,800					
Recycled water (AF)	55,156	57,271	59,857	62,527	64,957												
Banked SWP water (AF)	25,983	28,688	31,995	35,410	38,516												
<b>Total</b>	<b>148,366</b>	<b>153,186</b>	<b>159,079</b>	<b>165,164</b>	<b>170,700</b>		<b>499,967</b>	<b>543,264</b>	<b>593,810</b>	<b>646,490</b>	<b>695,647</b>						
							499,967	543,264	593,810	646,490	695,647						
29 Palms						DEMAND SINGLE DRY						GPCD					
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	6,995	6,995	6,995	7,066	7,686		5,209	5,828	6,447	7,066	7,686	191	190	189	188	187	
Precipitation-Surface water (AF)	0	0	0	0	0												
Imported SWP water (AF)	0	0	0	0	0												
Recycled water (AF)	0	0	0	0	0												
Banked SWP water (AF)	0	0	0	0	0												
<b>Total (AF)</b>	<b>6,995</b>	<b>6,995</b>	<b>6,995</b>	<b>7,066</b>	<b>7,686</b>		<b>24,328</b>	<b>27,411</b>	<b>30,494</b>	<b>33,578</b>	<b>36,661</b>						
							24,328	27,411	30,494	33,578	36,661						



SUMMARY-MULTIPLE DRY YEAR						SUMMARY-DEMAND MULTIPLE DRY					SUMMARY-GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Groundwater-Precipitation (AF)	406,316	406,320	406,325	406,330	406,560	Urban Demand	601,797	629,983	657,863	681,861	715,640	246	242	238	232	230	
Surface water-Precipitation (AF)	22,583	22,579	22,574	22,569	22,569												
Imported SWP water (AF)	181,792	184,778	188,218	191,901	194,775												
Recycled water (AF)	118,943	134,188	143,834	153,464	162,954												
Stormwater (AF)	13,907	501,615	514,701	528,014	540,608												
<b>Total (AF)</b>	<b>743,541</b>	<b>1,249,480</b>	<b>1,275,652</b>	<b>1,302,278</b>	<b>1,327,466</b>		<b>2,180,228</b>	<b>2,322,954</b>	<b>2,469,511</b>	<b>2,624,950</b>	<b>2,777,489</b>						
						AF→Gal		325851									
IEUA (Source: 2018 OWOW)						DEMAND MULTIPLE DRY					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	131,097	131,097	131,097	131,097	131,097	Urban	204,906	220,491	234,772	244,225	266,840	204	206	208	204	212	
Precipitation-Surface water (AF)	11,651	11,651	11,651	11,651	11,651												
Imported SWP water (AF)	69752	69752	69752	69752	69752												
Recycled water (AF)	41,836	47,657	47,657	47,657	47,657												
Groundwater Storage (AF)																	
Stormwater (AF)	6400	6400	6400	6400	6400												
<b>Total (AF)</b>	<b>260,736</b>	<b>266,557</b>	<b>266,557</b>	<b>266,557</b>	<b>266,557</b>		<b>896,533</b>	<b>955,569</b>	<b>1,009,349</b>	<b>1,067,946</b>	<b>1,125,203</b>						
SBVMWD/Big Bear/CLAWA (SOURCE: 2018 OW)						DEMAND MULTIPLE DRY (AF) - Includes an additional 10% Reliability Margin					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	210,875	210,879	210,884	210,889	210,889		246,829	257,228	267,552	278,630	286,875	290.30	288	286	284	279	
Precipitation-Surface water (AF)	10,932	10,928	10,923	10,918	10,918												
Imported SWP water (AF)	76,179	76,460	76,593	76,861	76,629												
Recycled water (AF)	21,951	29,260	36,320	43,280	50,340												
Stormwater (AF)	7,507	7,507	7,507	7,507	7,507												
<b>Total (AF)</b>	<b>327,444</b>	<b>335,034</b>	<b>342,227</b>	<b>349,455</b>	<b>356,283</b>		<b>759,400</b>	<b>796,710</b>	<b>835,858</b>	<b>876,936</b>	<b>919,977</b>						
MWA						DEMAND MULTIPLE DRY					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	57,349	57,349	57,349	57,349	57,349	Urban-Dry Ag	109,566	114,386	120,279	126,364	131,900	259	241	225	210	199	
Precipitation-Surface water (AF)	0	0	0	0	0												
Imported SWP water (AF)	29,634	29,634	29,634	29,634	29,634			35,600	32,400	29,200	26,000	22,800					
Recycled water (AF)	55,156	57,271	59,857	62,527	64,957												
Banked SWP water (AF)	6,227	8,932	12,239	15,654	18,760												
<b>Total (AF)</b>	<b>148,366</b>	<b>153,186</b>	<b>159,079</b>	<b>165,164</b>	<b>170,700</b>		<b>499,967</b>	<b>543,264</b>	<b>593,810</b>	<b>646,490</b>	<b>695,647</b>						
29 Palms						DEMAND MULTIPLE DRY					GPCD						
	2020	2025	2030	2035	2040		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040	
Precipitation-Groundwater (AF)	6,995	6,995	6,995	6,995	7,225		4,896	5,478	6,060	6,642	7,225	180	178	177	177	176	
Precipitation-Surface water (AF)	0	0	0	0	0												
Imported SWP water (AF)	0	0	0	0	0												
Recycled water (AF)	0	0	0	0	0												
Banked SWP water (AF)	0	0	0	0	0												
<b>Total (AF)</b>	<b>6,995</b>	<b>6,995</b>	<b>6,995</b>	<b>6,995</b>	<b>7,225</b>		<b>24,328</b>	<b>27,411</b>	<b>30,494</b>	<b>33,578</b>	<b>36,661</b>						