

San Diego Integrated Regional Water Management

2014 IRWM Drought Solicitation Implementation Grant Proposal

Drought Impacts

Attachment 2 consists of the following items:

- ✓ **Drought Impacts and Funding Need.** This attachment includes a description of regional drought management impacts due to the 2014 Drought and any anticipated projected impacts if drought or dry year conditions continue into 2015.
- ✓ **Water Conservation Measures.** To demonstrate information about drought impacts on the region, this attachment contains a description of the water conservation measures or restrictions that have been implemented as a result of the 2014 Drought and anticipated actions that will be taken if drought or dry year conditions continue into 2015.

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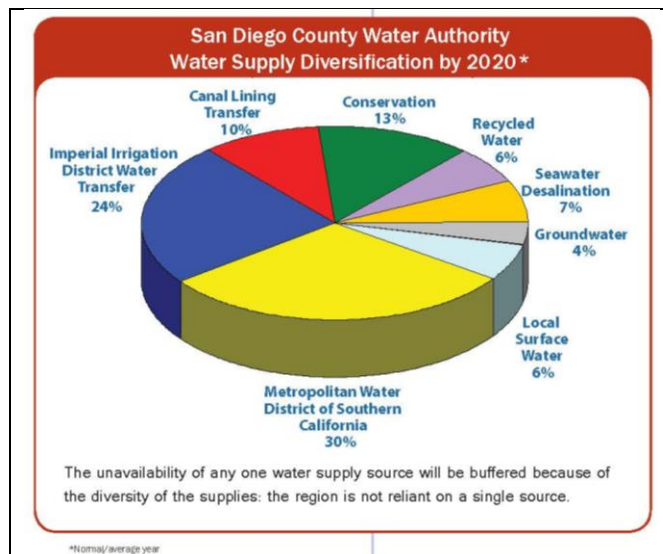
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Drought Impacts and Funding Need

Water Supply Challenges in the San Diego IRWM Region

The San Diego IRWM Region (Region) faces numerous challenges to providing a reliable water supply, such as increasing demands due to population and economic growth, uncertainties surrounding imported water supply reliability, and lack of local water resources. Local conditions have resulted in a high reliance on imported water sources. The five-year average of supply sources (2007-2013) for the Region shows that approximately 83% was from imported sources, with the 17% of local supplies split between 9% surface water, 3% groundwater, and 5% recycled water.¹

The Region is, therefore, highly reliant on imported sources from the State Water Project (SWP) and Colorado River, which jeopardizes the Region's resilience against droughts. The Region's wholesale water agency, the San Diego County Water Authority (SDCWA), purchases imported supplies through the Metropolitan Water District of Southern California (MWD) and is its largest customer. As noted in the *California Water Plan Update 2009* (CWP), environmental and hydrologic constraints, and climate change present challenges to the sustainability of SWP supplies, particularly during long-term droughts. The reliability and resilience of the Region's water supplies is predicated upon reducing reliance on SWP supplies through the development of local resources.



SDCWA's *2010 Urban Water Management Plan*² (UWMP) outlines a water supply diversification strategy to reduce reliance on imported water supplies. Under this strategy, the Region will receive 36% of its water from local supplies by 2020. The local supplies will include 13% conservation, 7% desalinated seawater, 6% surface water, 4% groundwater, and 6% recycled water (see inset above). The local supply development, demand management, and system intertie projects within this Proposal will directly contribute to the Region's supply diversification goals.

Drought Preparedness Efforts

Diversification Strategy. Consistent with the *2014 California Water Action Plan*³, since the 1987-1992 drought, the Region has invested in programs and projects that will reduce reliance on SWP supplies and make the Region's water supply more reliable and resilient in times of drought. As recommended in the *2010 California Drought Contingency Plan*⁴, the Region has begun implementing the resource management strategies identified in the CWP to diversify its water supply portfolio and promote drought resistance. During the 1987-1992 drought, the Region was 90% reliant on MWD and faced 50% cutbacks. Based on lessons learned from the drought, the Region has taken an aggressive strategy to diversify its supply portfolio, with an emphasis on water-use efficiency and local water production.

Since 1991, the Region has seen a population increase of approximately 700,000 people; however, current water use is approximately the same as it was in 1991. The Region has also invested local

¹ Pers.Comm. Dana Frieauf, SDCWA, Acting Water Resources Manager. June 18, 2014.

² SDCWA. 2011. *2010 Urban Water Management Plan*. Page 9-9.

³ California Natural Resources Agency, California Department of Food & Agriculture, and California Environmental Protection Agency. 2014. *California Water Action Plan*.

http://resources.ca.gov/california_water_action_plan/docs/Final_California_Water_Action_Plan.pdf

⁴ California Natural Resources Agency/Department of Water Resources. 2010. *California Drought Contingency Plan*. http://www.water.ca.gov/waterconditions/docs/Final_CA_Drought_Contingency_Plan-11-18-2010a.pdf

supplies such as water recycling and groundwater recovery projects. Despite these efforts, the Region still remains highly reliant on imported water supplies and recognizes that more must be done to develop local supplies immediately and in the long-term.

Drought Management. To be prepared for drought conditions, the *2006 Drought Management Plan*⁵ (Plan) was developed by SDCWA and its member agencies. The Plan identifies potential actions SDCWA can take to minimize or avoid impacts due to water shortages. The Plan takes an orderly, progressive approach to minimize economic hardship for residents and businesses in the Region and consists of three stages: 1) voluntary supply management, 2) supply enhancement, and 3) mandatory cutbacks. The Plan also contains an allocation methodology, utilized in Stage 3, which provides a method for SDCWA to allocate available supplies to its member agencies.

In addition, SDCWA and its member agencies developed a *Model Drought Response Conservation Program Ordinance* for use by member agencies in updating their existing ordinances. The member agencies are the retail entities that work directly with the residents and businesses on implementation of water-use restrictions. All of the member agencies updated their ordinances based on the model to have consistent conservation levels throughout the Region, with the use restrictions varying slightly.

In accordance with requirements under the Urban Water Management Planning Act (Act), SDCWA's and its member agencies' *2010 UWMPs* include water shortage contingency analyses to address supply shortages due to a catastrophe, drought, or other situations. SDCWA's contingency plan includes the Plan and an estimate of the minimum supplies available over three years following completion of the UWMP. The Plan also summarizes SDCWA's Integrated Contingency Plan (ICP) and Emergency Storage Program (ESP), which address catastrophic water shortages that could occur when a disaster, such as an earthquake or a prolonged, severe drought, results in insufficient water available to meet the Region's needs or eliminates access to imported water supplies. The member agencies' UWMPs also contain water shortage contingency plans that include drought response plans and measures the agencies are taking to manage shortages.

Drought Impacts

Ability to Meet Drinking Water Demands

If 2015 continues to be dry, the Region will be at risk of drinking water supply shortages. As stated in a 2014 MWD staff report to its Board, "Due to reduced storage reserves, MWD may need to implement its Water Supply Allocation Plan (WSAP) in 2015, if supply conditions continue to be critically dry next year." Due to the current drought, MWD plans to withdraw over 1.0 million acre-feet (AF) from storage in 2014 to meet demands; this amount is approximately 46% of available reserves. Due to the Region's reliance on imported water supplies from MWD, in multiple dry-year scenarios, when MWD allocates supplies to its member agencies, the Region will experience shortages in drinking water supplies⁶.

Water levels of surface water reservoirs within the Region have dropped to 38% of capacity as a result of the drought, the lowest since the end of 2004.⁷ Local reservoir levels have dropped steadily since 2007, when cumulative reservoir capacity was at approximately 70%. Sweetwater Authority, which serves southern portions of the Region, relies on 38% imported supplies in an average year. In 2014, Sweetwater estimated that demand for imported supplies will grow to 74%, due to lack of surface water supplies. If 2015 is dry, with little or no runoff into local reservoirs, and MWD implements allocation restrictions to its member agencies, the surface reservoirs in the Region will have no means to be replenished, further reducing the availability of local surface water supplies. In addition, carry-over supplies identified in the *2010 UWMP*⁸ multiple dry-year scenarios will not be available in 2015 due to delays in the construction and fill of SDCWA's San Vicente Dam Raise project. Even with the Carlsbad Seawater Desalination Project on-line in late 2015, the Region will still experience drinking water shortages in 2015 if MWD reduces deliveries to SDCWA.

⁵ SDCWA. 2006. *Drought Management Plan*. <http://www.sdcwa.org/sites/default/files/files/droughtresponseplan.pdf>

⁶ SDCWA. 2011. *2010 Urban Water Management Plan*. Page 6-3; 9-3 to 9-8.

⁷ SDCWA, Water Planning Committee Water Resources Reports. February 2005 – June 2014.

⁸ SDCWA. 2011. *2010 Urban Water Management Plan*. Page 9-3 to 9-8.

Ability to Meet Agricultural Water Demands

If 2015 is dry, the Region is also at risk of not meeting existing agricultural water demands. In fiscal year 2013, agricultural water use accounted for approximately 8% of total water use in the Region. A majority of agricultural customers in the Region voluntarily participate in SDCWA's Special Agricultural Water Rate program. The program provides a discounted agricultural water rate and in return the agricultural customers within the Region take a more severe cutback level than municipal and industrial (M&I) customers during supply shortages. During the last dry period, agricultural deliveries within the Region were reduced 56%, from 98,836 AF in 2007 to 43,610 AF in 2013.⁹ Cutbacks in imported water deliveries to the Region also have a greater impact on agricultural demands than M&I, because the five retail water agencies that take approximately 91% of agricultural deliveries in the Region have little or no local supplies to buffer shortages in imported supplies. Should MWD reduce deliveries to SDCWA in 2015, the Region will not be able to meet agricultural water demands.

Ability to Meet Ecosystem Water Demands

The current drought is impacting water quality throughout the Region, including within surface reservoirs. The 25 reservoirs in the Region support a great diversity of beneficial uses, including municipal and agricultural water supply, as well as providing habitat for sensitive species of fish and wildlife. Many of the Region's reservoirs are on the 303(d) list of impaired water bodies, which requires development of plans to improve water quality conditions. Ongoing drought conditions concentrate pollutants in the Region's reservoirs, affecting water quality and beneficial uses. During dry years, reduced inflow and warmer weather result in greater evaporation and concentration of nutrients, which can cause more frequent algal blooms and eutrophication. Eutrophication in turn leads to lower dissolved oxygen levels, which can affect the health of fish species within the reservoirs, even causing death. Should the drought continue into 2015, the Region may not be able to meet ecosystem demands due to low water levels and water quality issues within the reservoirs.

Drinking Water MCL Violations

The average of supply sources from 2007-2013 for the Region shows that approximately 83% was from imported sources, which includes SWP and Colorado River supplies. During dry years, the Region relies more heavily on Colorado River water to meet its supply needs. The total dissolved solids (TDS) in Colorado River water delivered to the Region averaged 650 mg/L over the past decade, which is higher than drinking water Maximum Contaminant Levels (MCLs) for most of the Region's reservoirs.¹⁰ Due to the drought, the current SWP allocation for 2014 is only 5%, which is the lowest municipal allocation in the history of the SWP. Therefore, the vast majority of the water imported into the Region in 2014 – and perhaps in 2015 as well – is from the Colorado River, resulting in higher TDS concentrations within the reservoirs and the Region's surface water bodies. Higher TDS concentrations impact agriculture in the Region, reducing production rates and requiring more water use to flush out higher salinity in the soils. In addition, higher levels of TDS require more extensive and costly treatment to meet drinking water MCLs. Algal blooms, which are exacerbated by drought conditions, can also potentially affect drinking water secondary MCLs for color, taste and odor. This results in a need for increased water treatment, and may lead to drinking water MCL violations in 2015 as the drought worsens.

The drought is also impacting the Region's groundwater quality in 2014. For example, within Yuima Municipal Water District, as groundwater levels have decreased due to the drought, concentrations of nitrates and perchlorate have increased to levels that exceed drinking water MCLs, requiring greater blending with imported water to meet applicable standards.¹¹ The result is greater use of imported water, but also increased treatment costs associated with blending well water with chlorinated water.

Groundwater Basin Overdraft

Although groundwater resources are limited in the Region, water users that are outside of municipal supply services, such as backcountry residents located in the eastern portion of the Region, rely on

⁹ SDCWA, Annual Reports (Water Source and Use table). FY2007 – FY2013.

¹⁰ RWMG. 2013. 2013 San Diego Integrated Regional Water Management Plan. September.

¹¹ Yuima MWD. 2014. Personal communication with Lori Johnson, Director of Finance. June 25, 2014.

groundwater wells for their primary, or in many cases only, source of water. Groundwater basins require recharge to provide sustainable yields. As recharge decreases during drought conditions due to reduction of basin inflows from stormwater and streamflows, increased pumping to meet increased demands exacerbates the risk of groundwater basin overdraft. As existing sources of supply become less reliable, more local agencies may consider groundwater production as a potential local, drought-proof supply, which would further increase the risk of overdraft.

The current drought has reduced groundwater yields within the Region in 2014. As an example, Yuima Municipal Water District's groundwater yields from municipal and private wells within its service area have decreased significantly as a consequence of a general lowering of the water table.¹² While groundwater constituted 33% of Yuima's supplies in May 2013, groundwater has dropped to only 7% in May 2014 due to drought conditions.¹³ Consequently, SDCWA's imported water deliveries to Yuima have increased by approximately 50% over the past year.¹⁴

Discharge Water TMDL Violations

Not applicable (N/A).

Increased Wildfire Risk

The risk of wildfires increases during drought, due to drier vegetation and soils. It is possible that these drier conditions and the drought itself are linked to climate change and that climate change will continue to increase wildfire risks within the Region. Intense fires require greater fire suppression efforts, and the heightened risk of wildfires across the State stretches suppression resources, including fire crews, fire retardants, and fire-suppression aircraft. Helicopters used to fight wildfires are capable of dropping 300-900 gallons at a time and air tankers up to 3,000 gallons at a time.¹⁵ Although water managers plan for emergency supplies for emergencies such as wildfires, in the event of a drought there may be more fires, which require an unknown amount of water for suppression efforts. In addition to water used by firefighters, residents use water during fires to wet down properties and reduce risk of burning.

The fire season began unusually early in San Diego County in 2014. Starting on May 14, 2014 nine fires burned in the Region simultaneously, covering over 26,000 acres, destroying an estimated 65 structures, and costing \$28.5 million for firefighting and at least \$29.8 million in projected private property damages.¹⁶ SDCWA estimates that several hundred acre feet of additional water use was attributable to the fires during that week, consistent with increases in water use observed in previous fires.

Economic Impacts of Drought

In 2010, the Region had a Gross Regional Product (GRP) exceeded \$155 billion. One and a half million workers supported the regional economy in 2008, with a projected increase of 33% by 2050.¹⁷ The four key sectors of the regional economy are manufacturing, tourism, military, and agriculture. Manufacturing directly contributes \$25 billion annually to the Region's economy. Tourism directly contributes \$7.5 billion. The defense industry directly accounts for \$12.3 billion.¹⁸ Agriculture adds an additional \$1.7 billion.¹⁹

Within the manufacturing sector, life science enterprises are seen as a growth area for the economy and an increasingly important contributor to GRP. The Region ranks third in the nation in JLL's economic index of life science clusters, defined as a combination of biomedical devices, biotechnology, and

¹² Yuima MWD. 2014. Email communication with General Manager. June 25, 2014.

¹³ SDCWA. 2014. Water Resources Report. June 18, 2014.

¹⁴ SDCWA. 2014. Water Resources Report. June 18, 2014.

¹⁵ KPBS. 2014. San Diego County's Water Use Soared During Last Weeks' Extreme Heat and Wildfires. May. <http://www.kpbs.org/news/2014/may/22/san-diego-countys-water-use-soars-during-last-week/>

¹⁶ County of San Diego. 2014. May 2014 San Diego Wildfires After Action Report. Page 2.

<http://readysandiego.org/aar/may-2014-san-diego-county-wildfires/May-2014-San-Diego-County-Wildfires.pdf>

¹⁷ San Diego Regional Water Management Group. 2013. 2013 San Diego IRWM Plan. Page 3-6.

¹⁸ San Diego Regional Economic Development Corporation. 2013. Research & Data – Defense.

<http://www.sandiegobusiness.org/research/ivltw>

¹⁹ County of San Diego Department of Agriculture, Weights and Measures. 2012. 2012 Crop Statistics and Annual Report. Page 1.

pharmaceuticals.²⁰ The direct economic impact from life sciences in the Region in 2012 was estimated at \$14.3 billion.²¹ Over 61,000 people were employed in life sciences and supporting industries in 2013, representing 5.8% of total private employment.²² In 2013, the Region received \$640.6 million in venture capital and \$785.6 million in NIH funding.²³ Biotechnology and pharmaceuticals are, however, consistently identified among the most water intensive industries.²⁴ Drought conditions can increase economic risks associated with location and discourage long-term investment. The consistent availability of a reliable regional water supply is critical to the biotechnology industry's ability to thrive in the Region.

Tourism is a major driver of the regional economy. With more than 70 miles of coastline, state-of-the-art hotel and convention spaces, and an array of entertainment options, the Region is one of the top visitor destinations in the world.²⁵ The tourism sector employs 165,000 people. In 2013, 33 million visitors spent \$8.4 billion dollars.²⁶ The Region is home to 90 golf courses and 350 to 357 "Golf Playable Days" are recorded per year, the most among any of the nation's recognized golfing communities.²⁷ The tourism industry affects water usage by both the number of visitors and demand generated by expanding hospitality-and recreation-related service industries and attractions, which tend to be larger outdoor water users. Tourism is primarily concentrated in the summer months and affects seasonal demands.²⁸ In turn, tourism is affected by high water prices and the potential for interrupted supply during drought events.

The Region had roughly 304,000 acres of agriculture in 2012, producing \$1.7 billion of GRP.²⁹ Agricultural revenues have increased steadily since 2008, despite an overall downward trend in acreage. Some of this overall decline in acreage can reasonably be attributed to the comparatively high price and interruptible supply of irrigation water in the Region.³⁰ Two of the most important regional crop categories are avocados and nursery products. California produces 90% of all domestic avocados, 60% of which are produced in San Diego County, making the Region the acknowledged avocado capital of the U.S.³¹ The 22,419 acres of avocado groves represent 7.4% of total agricultural acreage and the roughly \$158 million in revenues represents 9% of the sector total. Water accounts for roughly 65% of the total cost of avocado production, making this crop extremely sensitive to water price fluctuations.³²

In response to rising water prices, avocado farmers in Fallbrook have developed a nursery product sector.³³ San Diego is now the number one domestic producer of nursery crops, which accounted for nearly 60% of total agricultural revenue in 2012.³⁴ Growers received revenues equivalent to over \$116,000 dollars per acre. Stabilizing the overall water supply will improve the ability of growers to determine levels of investment, sustain their viability over multi-year droughts, and withstand fluctuations in market prices.

²⁰ Jones Lang LaSalle. 2014. *Life Sciences Cluster Report*. Page 30

²¹ BIOCOM. 2013. *Southern California Economic Impact Report 2013*. Page 13

²² Jones Lang LaSalle. 2014. *Life Sciences Cluster Report*. Page 65

²³ Jones Lang LaSalle. 2014. *Life Sciences Cluster Report*. Page 65

²⁴ Harling. 2009. Memo to Jacqueline Debets, Humboldt Bay Municipal Water District. RE: What industries/products are the most water-intensive within the United States? Page 2

²⁵ San Diego Regional Economic Development Corporation. 2013. Research & Data – Tourism. <http://www.sandiegobusiness.org/research/lvltw>

²⁶ San Diego Tourism Authority. 2014. San Diego County 2014 Visitor Industry General Facts. <http://www.sandiego.org/industry-research.aspx>

²⁷ Cunningham & Bruvold. 2010. *San Diego's Golf Economy*. Page 5

²⁸ San Diego County SDCWA. 2011. *2010 Urban Water Management Plan*. Page 2-2

²⁹ County of San Diego Department of Agriculture, Weights and Measures. 2012. *2012 Crop Statistics and Annual Report*. Page 1

³⁰ Bagley. 2009. Agriculture: Amid water crisis, local farmers adapt. <https://sdfarmbureau.org/News/Local-News/Farmers-Adapt.php>

³¹ California Avocado Commission, 2014 California Avocado History. <http://www.californiaavocado.com/california-avocado-history/>

³² Cook. 2009. Nurseries Have Advantages Over Avocado Farmers Production. <http://www.sdfarmbureau.org/News/Local-News/Nurseries-Avocado.php>

³³ Cook. 2009. Nurseries Have Advantages Over Avocado Farmers Production. <http://www.sdfarmbureau.org/News/Local-News/Nurseries-Avocado.php>

³⁴ County of San Diego Department of Agriculture, Weights and Measures. 2012. *2012 Crop Statistics and Annual Report*. Page 2

Water Conservation Measures

The San Diego IRWM Region conserves water as a way of life. Over time, per capita demand has decreased dramatically, and many jurisdictions implement on-going, permanent water use restrictions. Between FYs 2007 and 2013, per capita potable water use in SDCWA's service area decreased about 27%.³⁵ San Diego cities and water districts are already on pace to meet their state-mandated water-efficiency targets for 2020.

SDCWA and its partners offer a range of resources for increasing water conservation at homes, businesses, homeowner's associations and institutions. They include rebates for purchasing water-efficient appliances and devices, incentives for replacing lawns with low water use landscapes, WaterSmart landscape makeover classes, tips for trimming water use indoors and outdoors, and inspirational ideas for other water-wise improvements. Detailed information may be found on SDCWA's conservation website: *WaterSmartSD.org*.

Water Conservation Measures as a Result of 2014 Drought

In response to the January 2014 statewide drought emergency proclamation, in February 2014, SDCWA activated its *2006 Drought Management Plan*³⁶ and notified its member agencies of a Drought Response Level 1 Drought Watch Condition, calling for increased voluntary conservation throughout the Region (see **Appendix 2-1**). Under a Drought Watch, there is a reasonable probability of supply shortages and that a consumer demand reduction is required to ensure that sufficient supplies will be available to meet anticipated demands. SDCWA and its 24 member agencies have implemented the appropriate drought responses levels for their service areas, shown in **Table 2-1** below.

Although not yet enacted, on July 15, 2014 SDCWA staff recommended that the agency's Board of Directors declare a Level 2 Drought Alert. Under the Level 2 Drought Alert the conservation measures included in the Level 1 Drought Watch become mandatory; the actions included in the Level 2 Drought Alert are intended to achieve water savings of up to 20%. **Appendix 2-2** includes documentation in the form of a SDCWA meeting agenda that demonstrates the staff recommendation that will be made regarding this matter on July 24, 2014. **Appendix 2-3** includes documentation for the drought conservation measures that have been enacted by the local project sponsors as referenced in **Table 2-1**.

Model Drought Response Ordinance

During the previous statewide drought, SDCWA worked closely with its member agencies to update SDCWA's model drought response ordinance. In March 2008, the Board approved a *Model Drought Response Conservation Program Ordinance* (Model Drought Ordinance) for use by member agencies in updating their existing ordinances, many of which had not been updated since the major drought that ended in 1992. The Model Drought Ordinance is an important tool for SDCWA in implementing its *2006 Drought Management Plan*, and for coordinating member agency drought response on a regional level. The Model Drought Ordinance contains four distinct drought response levels that include water-use restrictions for each level, summarized below. The severity of restrictions increase progressively with each level as the water supply situation worsens and actions that cause economic harm are deferred to the later response levels.

The Model Drought Ordinance achieves consistency throughout the Region, and reduces confusion among the public and media on the current response level and water use restrictions in place to meet demand reductions. All the member agencies updated their ordinances based on SDCWA's model, with some slight modifications that primarily pertain to the water-use restrictions. During drought or other supply shortage situations, SDCWA identifies the applicable level based on supply conditions and provides notification to the member agencies. The Model Drought Ordinance levels are associated with consumer water use restrictions necessary to reduce water demands.

³⁵ SDCWA. Annual Reports (1: Water Source and Use table (total use and population), and 2: Water Supply Portfolio chart (recycled water use)). FY2007 – FY2013.

³⁶ SDCWA. *Drought Management Plan*. 2006. <http://www.sdcwa.org/sites/default/files/files/droughtresponseplan.pdf>

Table 2-1: Drought Response in San Diego IRWM Region

Agency	Current Drought Response Level or Stage*
SDCWA	Staff recommended Level 2 Drought Alert calling for mandatory water conservation measures to prevent water waste (see Appendix 2-2).
Camp Pendleton	Voluntary reductions – already reduced water use 39% by 2013 in response to Executive Order 13423
City of Del Mar	Stage 1 Drought Watch condition – Call for voluntary conservation
City of Escondido	Mandatory water waste restrictions always in effect (Municipal Code Section 31-230 and 31-231). On-going water use restrictions are consistent with “Drought Watch” measures. Has indicated possibility of escalating to Water Shortage Watch Condition if it will help avoid or lessen impact of impending water supply shortage.
City of Oceanside	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation. May move to Level 2 Drought Alert if there is a Declaration of an Emergency Water Shortage.
City of Poway	Level 1 Water Shortage Watch condition - increased public education and outreach efforts to increase voluntary conservation.
City of San Diego	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation. Mandatory water waste restrictions always in effect (Muni. Code Sec. 67.3803) (see Appendix 2-3).
Carlsbad MWD	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation. Mandatory water waste restrictions always in effect (see Appendix 2-3).
Fallbrook PUD	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation (see Appendix 2-3).
Helix Water District	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Lakeside Water District	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Olivenhain MWD	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Otay Water District	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Padre Dam MWD	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation. Mandatory water waste restrictions always in effect.
Rainbow MWD	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Ramona MWD	Encourages voluntary conservation through public outreach and information on incentive programs.
Rincon	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation (see Appendix 2-3).
San Dieguito Water District	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation. Mandatory water waste restrictions always in effect.
Santa Fe Irrigation District	Level 1 Drought Response - increased public education and outreach efforts to encourage conservation.
Sweetwater Authority	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation (see Appendix 2-3).
Vallecitos Water District	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Valley Center MWD	Level 1 Water Supply Shortage Watch Condition - increased public education and outreach efforts to encourage conservation.
Vista Irrigation District	Level 1 Drought Watch Condition - increased public education and outreach efforts to encourage conservation.
Yuima MWD	Board considering adoption of Level 1 Drought Watch Condition on July 30, 2014

***Note: All member agencies will likely take additional actions if a Level 2 Drought Alert is declared by SDCWA on July 24, 2014**

Table 2-2: SDCWA Model Drought Ordinance Levels

Levels	Use Restrictions	Trigger
1: Drought Watch	Voluntary	Applies when there is a probability of shortage and increased demand reductions are required in order to ensure sufficient supplies will be available.
2: Drought Alert	Mandatory (up to 20% cutback)	Applies when there are cutbacks to supplies and increased demand reductions are required in order to ensure sufficient supplies will be available.
3: Drought Critical	Mandatory (up to 40% cutback)	
4: Drought Emergency	Mandatory (more than 40% cutback)	

SDCWA activated its *2006 Drought Management Plan* and Model Drought Ordinance during the 2007-2011 statewide drought. As dry conditions progressed, SDCWA activated Level 1 under the Model Drought Ordinance and then moved to Level 2, calling for mandatory water use restrictions and cutbacks. SDCWA and its member agencies increased their public education and outreach, and the regional conservation savings achieved were significant, such that local cities and water districts were already on track to meet their state-mandated water-efficiency targets for 2020. Since this time, the Region has continued to conserve: per capita potable water use decreased about 27% between FYs 2007 and 2013.

On July 15, 2014 SDCWA staff recommended that the agency's Board of Directors declare a Level 2 Drought Alert, activating up to 20% mandatory conservation measures to respond to deepening drought conditions (see **Table 2-2**).³⁷ This recommendation will be considered by SDCWA's Board of Directors on July 24, 2014. If a Level 2 Drought Alert is enacted, SDCWA's member agencies will meet to consider activating mandatory water-use restrictions; while specific actions are up to the discretion of the member agencies, the Level 2 Drought Alert actions are intended to achieve water savings of up to 20%. For example, as a result of the Level 2 Drought Alert that was declared by SDCWA in July 2009 the Region reduced its water use by approximately 20% over a two-year time period.³⁸

Water Conservation Implemented by Project Proponents

SDCWA and its member agencies have activated their drought ordinances to achieve extraordinary conservation during the current drought. All of the project proponents have activated Level 1 under their drought ordinances and are implementing extraordinary conservation measures throughout their service areas, as summarized in **Table 2-3**. As described above, if SDCWA enacts a Level 2 Drought Alert, all of the project proponents are expected to activate mandatory water-use restrictions beyond what is listed in **Table 2-1**.

SDCWA: SDCWA activated its Model Drought Ordinance in February 2014, encouraging extraordinary conservation measures identified in **Table 2-2**. On July 15, 2015 SDCWA staff recommended that the Board of Directors declare a Level 2 drought, which would make conservation measures recommended in Level 1 mandatory. Level 2 mandatory conservation measures in the Model Drought Ordinance include:

- Limiting outdoor watering days and times
- Watering only during the late evening or early morning hours
- Eliminating runoff from irrigation systems
- Repairing all leaks within 72 hours
- Turning off water fountains and other water features unless they use recycled water
- Using hoses with shut-off valves for washing cars
- Serving water to restaurant patrons only upon request
- Offering hotel guests the option of not laundering towels and linens daily
- Using recycled or non-potable water for construction when available

In addition, on April 29, 2014, SDCWA unveiled a new regional campaign to encourage additional voluntary water conservation in response to statewide drought conditions. The campaign's theme – *When*

³⁷ SDCWA. News Release: Water Authority Recommends Mandatory Water-Use Restrictions. Available: <http://www.sdcwa.org/water-authority-recommends-mandatory-water-use-restrictions>

³⁸ SDCWA. News Release: Water Authority Recommends Mandatory Water-Use Restrictions. Available: <http://www.sdcwa.org/water-authority-recommends-mandatory-water-use-restrictions>

in Drought: Save every day, every way. – will continue to appear in ads, public service announcements, online communications and elsewhere in coming months. The campaign is located online at www.whenindrought.org as part of SDCWA's response to the Region's current Drought Watch. In addition to promoting more water conservation, the campaign is designed to provide a one-stop resource for drought-related information in San Diego County. The When in Drought campaign is coordinated with other local, regional and state initiatives to boost water-saving efforts through media appearances, community events, presentations to civic groups, and other outreach initiatives. SDCWA is supporting When in Drought with approximately \$300,000 in drought response grant funds from the State Department of Water Resources.

SDCWA also provides ongoing information on conservation through its conservation website, WaterSmartsd.org. It includes indoor and outdoor conservation incentives, tools, and more for San Diego County residents, businesses, homeowner associations, public agencies, and teachers and students, providing easy access to resources to develop and implement customized strategies for achieving water savings and controlling water costs.

Table 2-3: Summary of Project Proponent Conservation Measures Currently in Effect

Conservation Measures as of July 15, 2014 ³	SDCWA Model	Carlsbad MWD	City of San Diego	Fallbrook PUD	Rincon del Diablo MWD ¹	Sweetwater Authority ²
Wash paved surfaces only when necessary for health and safety	Yes	Yes	Yes	Yes	Yes	Yes
Eliminate inefficient landscape irrigation, such as runoff and overspray	Yes	Yes	Yes	Yes	Yes	Yes
Irrigate only during early morning and evening hours.	Yes	Yes	Yes	Yes	Yes	Yes
Irrigate 3 days or less per week	No	No	Yes	No	Yes	No
Repair leaks quickly	Yes	Yes	Yes	Yes	No	Yes
Offer hotel guests the option of not laundering their linens and towels daily	Yes	Yes	Yes	Yes	No	Yes
Serve and refill water in restaurants and other food service establishments only upon request	Yes	Yes	Yes	Yes	No	Yes
Use recycled or non-potable water for construction activities when possible	Yes	Yes	Yes	Yes	No	No
Use hoses with automatic shut-off for areas that aren't on automated irrigation systems	Yes	Yes	Yes	Yes	No	Yes
Wash vehicles at commercial site that re-circulates water on-site or using hoses with automatic shut-off valves	Yes	Yes	Yes	Yes	No	Yes
Use re-circulated water to operate ornamental fountains	Yes	Yes	Yes	Yes	No	Yes

1. Rincon del Diablo MWD is currently updating its drought ordinance.

2. Sweetwater Authority does not have recycled water available within its service unit.

3. All project proponents are anticipated to take additional actions to activate mandatory water use restrictions if SDCWA declares a Level 2 Drought Alert as recommended by staff.

City of San Diego: The City of San Diego declared a Drought Response Level 1 that took effect on July 1, 2014 under its drought ordinance. In addition, the City of San Diego's Municipal Code (Sec. 67.3803) requires ongoing mandatory water waste restrictions at all times, and outlines penalties for violations. More information on these permanent water waste restrictions is found on the City's website (<http://www.sandiego.gov/water/conservation/drought/prohibitions.shtml>). In addition to on-going restrictions, the City of San Diego has a dedicated Water Conservation website (<http://www.sandiego.gov/water/conservation/>) with resources and information available on ways to save water and eliminate water waste. The City includes conservation tips in mailers included with water bills, and conducts on-going public outreach.

Carlsbad MWD: Carlsbad MWD has declared a Drought Response Level 1 under its drought ordinance. In addition, the Carlsbad MWD has mandatory water use restrictions permanently in effect throughout the

service area to prevent water waste at all times. Its website includes information on resources and tips for customers to conserve (<http://web.carlsbadca.gov/services/departments/water/water-conservation/Pages/home-survey.aspx>).

Fallbrook PUD: Fallbrook PUD declared a Level 1 Drought Watch under its drought ordinance, implementing water use restrictions and calling for voluntary reductions in water use. It also has a drought webpage where customers can find more information on the conservation measures currently in place (<https://www.fpud.com/DroughtRestrictions.aspx>). Fallbrook PUD also provides conservation resources within its service area, such as a certified landscape irrigation auditor free to commercial customers; the auditor surveys customers who request the service and provides written recommendations for their property.

Rincon del Diablo MWD: Rincon has requested that costumers implement Level 1 Voluntary Water Conservation to further reduce water use. Furthermore, Rincon's Water Conservation Program, Administrative Code Sec. 4004, imposes on-going water use restrictions to prevent water waste, which are in effect even during normal times. In addition to calling for voluntary reduction in water use, Rincon has a Drought Update webpage that contains information on the drought, and provides resources for reducing water use, information on water efficiency rebates, and how to schedule a free residential water survey (<http://www.rinconwater.org/component/content/article?layout=edit&id=127>).

Sweetwater Authority: Sweetwater Authority has declared a Level 1 Drought Watch under its drought ordinance, and continues to encourage customers to use water wisely and efficiently. The communities of Chula Vista, National City, and Bonita have been placed under this Drought Watch, and Sweetwater Authority has increased its outreach and education efforts. Sweetwater provides information on conservation and water use efficiency resources available to its customers, including rebates, free water efficient landscape plans for single-family homes, and tools to calculate homeowner's water use.

Pending Water Conservation Actions and Additional Actions if Drought Persists

SDCWA and its member agencies are closely monitoring changing supply and demand conditions. SDCWA is in the process of conducting an analysis of supply, demand, and storage scenarios that will take into account the possibility that the drought will persist into 2015. **Table 2-4** summarizes the different levels and triggers in the Plan.

Due to deepening drought conditions, on July 15, 2014 SDCWA staff recommended that the SDCWA Board of Directors declare a Level 2 Drought Alert. Although SDCWA is not anticipating cutbacks to imported water supplies in 2014, the Level 2 Drought Alert is recommended in response to deepening drought conditions. It is highly likely that if the drought continues into 2015, SDCWA will continue mandatory cutbacks to the member agencies, and could even potentially increase to a Level 3 Drought Alert that would be intended to reduce water use by 40%. Considering the high costs and limited availability of dry year transfer supplies, SDCWA is likely to skip the Supply Enhancement Stage.

Table 2-4: Drought Levels and Triggers in 2006 Drought Management Plan

Stage	Potential Trigger
Voluntary Supply Management	MWD is experiencing shortages in its imported water supply (from either the Colorado River and/or the SWP) and is withdrawing water from multiple storage accounts due to dry conditions or long-term regulatory restrictions to meet normal demands.
SDCWA Supply Enhancement	There is a high likelihood of supply reduction from MWD, or MWD reduces deliveries and securing supplemental supplies is required to eliminate existing or potential supply cutbacks to member agencies.
Mandatory Cutbacks to Member Agencies	Both MWD and SDCWA Boards have exhausted all supply enhancement options, due to lack of supplies and/or increasing costs, and MWD is allocating supplies to SDCWA, and allocation of SDCWA supplies to its member agencies is required.

Appendix 2-1: San Diego County Water Authority Drought Management Plan



Drought Management Plan



Prepared by
Water Resources Department

With Assistance from
Public Affairs Department

Drought Management Plan
Technical Advisory Committee

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DROUGHT MANAGEMENT PLAN

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Section 1 - Introduction

The primary purpose of the Drought Management Plan (DMP) is to provide the Water Authority and its member agencies with a series of potential actions to take when faced with a shortage of imported water supplies from Metropolitan due to drought conditions. The actions will help the region minimize the impacts of shortages and ensure an equitable allocation of supplies. Different from a treated water shortage allocation plan, the DMP focuses on issues associated with shortages due to supply cutbacks, not shortages due to facility constraints.

1.1 Reliability

The Water Authority and its member agencies have made substantial investments in new diversified supplies and facilities to improve water reliability in the San Diego region. As mentioned in the Water Authority's 2005 Urban Water Management Plan, if the Water Authority and member agency supplies are developed as planned and Metropolitan's Integrated Resource Plan is fully implemented, no shortages are anticipated within the Water Authority's service area through 2030. **Table 1-1**, below, shows the mix of resources identified to meet future demands in a single dry-year period.

TABLE 1-1
SAN DIEGO COUNTY WATER AUTHORITY
SINGLE DRY WATER YEAR SUPPLY AND DEMAND ASSESSMENT
(AF/YR)

	2010	2015	2020	2025	2030
Water Authority Supplies					
Regional Seawater Desalination at Encina	0	56,000	56,000	56,000	56,000
IID Water Transfer	70,000	100,000	190,000	200,000	200,000
ACC and CC Lining Projects	77,700	77,700	77,700	77,700	77,700
Sub-Total	147,700	233,700	323,700	333,700	333,700
Member Agency Supplies					
Surface Water	22,284	22,284	22,284	22,284	22,284
Water Recycling	33,668	40,662	45,548	46,492	47,584
Groundwater	10,838	10,838	10,838	10,838	10,838
Groundwater Recovery	11,400	11,400	11,400	11,400	11,400
Sub-Total	78,190	85,184	90,070	91,014	92,106
Metropolitan Water District Supplies	541,760	477,086	411,790	423,896	457,224
TOTAL PROJECTED SUPPLIES	767,650	795,970	825,560	848,610	883,030
TOTAL ESTIMATED DEMANDS w/ Conservation	767,650	795,970	825,560	848,610	883,030

Source: Water Authority's 2005 Urban Water Management Plan

Water conservation plays a critical role in long-term supply reliability for the region. The Water Authority and its member agencies are considered leaders in California in the implementation of an aggressive conservation program to use water more efficiently. The total reduction in water demand attributable to projected conservation savings over the next 25 years is identified in **Table 1-2**.

TABLE 1-2
PROJECTED CONSERVATION SAVINGS
WATER AUTHORITY SERVICE AREA
(Normal Year - AF/YR)

2010	2015	2020	2025	2030
79,960	87,306	94,174	101,954	108,396

Source: Water Authority's 2005 Urban Water Management Plan

With the objective to obtain a reliable supply as outlined in the agencies' planning documents - with no anticipated shortages - Metropolitan, Water Authority and its member agencies will need to make investments in development of projects and programs along with gaining support from the local community for implementation.

While the region has plans to provide a high level of water reliability, there will always be some level of uncertainty associated with maintaining and developing local and imported supplies. Therefore, as a prudent measure, the Water Authority and its member agencies have developed a comprehensive DMP in the event that the region faces supply shortages due to drought conditions.

1.2 Defining a Drought

The question is often asked as to what defines a drought. As stated on the California Department of Water Resources (DWR) drought preparedness website:

“Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.”

Defining when supply conditions signify a drought in the San Diego region is a combination of the condition of Metropolitan's supplies and storage levels and local supply production in San Diego, both groundwater and surface water. One of the actions that may trigger initial drought conditions is when Metropolitan must take water from storage to meet demands. With the storage and supplies developed by the Water Authority, its member agencies, and Metropolitan since the last drought in 1987-1992, the region has significantly improved its ability to respond to drought conditions. As further stated on DWR's website:

“Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall – ranchers engaged in dryland grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.”

1.3 Plan Summary

This first section of the report highlights the region's plans for providing a reliable supply for the next 25 years, with no anticipated shortages. It also describes the need for a DMP due to uncertainties in development and management of both imported and local supplies. This section also looks at defining a drought and the DMP report format.

The next section, Section 2 – DMP Preparation, discusses preparation of the DMP. This section includes a discussion of the formation of the member agency Technical Advisory Committee (TAC), along with the results from a questionnaire completed by the TAC members. This section also includes the principles that provided guidance in preparation of the DMP.

Section 3, Review of Historic Plans and Implementation, contains a summary of the past drought response plans and ordinances prepared by the Metropolitan Water District and the Water Authority. The section concludes with a discussion on the lessons learned from preparation and implementation of these previous plans.

The following section, Section 4 – Drought Response Matrix, includes a description of the stages and actions contained in the drought response matrix. The matrix provides guidance to the Water Authority in selecting potential regional actions that can be taken to lessen the severity of shortage conditions. This includes such items as purchasing spot transfers and utilizing carryover storage.

Section 5, Supply Allocation Methodology, provides a detailed description of the supply allocation methodology. The methodology provides the Water Authority a means to allocate its supplies to its member agencies in a shortage situation. To help describe and demonstrate the calculation procedure, an example is included for illustrative purposes.

Section 6, Water Authority/Member Agency Coordination, outlines the coordination to occur between the Water Authority and its member agencies in implementation of the DMP. A communication strategy is included that describes actions for the Water Authority to take to ensure clear communication with its member agencies, the public, and elected officials prior to and during shortage conditions.

The final section, Section 7 – Summary, summarizes the accomplishments of the DMP. There are also a series of appendices containing detailed supporting documentation.

1.4 Member Agency Coordination

The challenge in preparing the DMP was to meet the needs of the Water Authority's member agencies in a fair and equitable manner. Each of the agencies has a unique supply portfolio and customer-base. Some agencies have abundant local supplies, while others are 100 percent reliant on water supplies purchased from the Water Authority. There are member agencies that serve primarily agricultural customers, while others serve only municipal and industrial customers. Through the yearlong process of developing the DMP, these challenges were addressed and the Water Authority appreciated the involvement of the member agencies.

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Section 2 – DMP Preparation

In February 1991, as a result of the 1987-1992 drought, the Water Authority prepared and adopted a Drought Response Plan that outlined the actions for the Water Authority and its member agencies to take during the supply shortage situation. In accordance with California Water Code, the Water Authority prepared an Urban Water Shortage Contingency Plan in January 1992 that included the ordinances and other procedures adopted during the 1987-1992 drought. The current DMP was prepared to identify the actions that the Water Authority and its member agencies will now take if faced with drought conditions, and specifically, how supplies will be allocated.

2.1 Member Agency Technical Advisory Committee

Preparation and implementation of a drought plan for the San Diego region must have input and support from the Water Authority's member agencies. Recognizing the importance of member agency involvement, the Water Authority formed a TAC – Technical Advisory Committee – to provide input on development of the DMP. The TAC included a representative from each of the member agencies. Key to the successful preparation of the plan was full involvement from all member agencies to ensure effective communication and understanding of member agencies' issues and concerns. To assist in this effort, a consultant team was hired to facilitate the TAC meetings and assist with technical details such as the historic context of drought plans in Southern California and the development of the allocation model. The TAC members are to be commended for their efforts to work together to develop the elements of this regional DMP.

2.2 Drought Management Plan Questionnaire

To gain an initial understanding of the TAC members' position on the DMP elements, a five-page questionnaire was distributed to the member agencies. The questionnaire consisted of eighteen questions, as well as a section for general comments. The questions were divided into the following five areas: 1) what is important in the overall design of a drought management plan; 2) what are the issues related to water transfers; 3) what role should the Emergency Storage Project play during a drought; 4) how should water be allocated in a drought; and 5) what role should a public communication strategy play during a drought. **Appendix B** contains the questionnaire results. Each of the TAC members completed the questionnaire, which was helpful to ensure that all member agency perspectives were heard. The results also provided valuable information used to develop a set of DMP Principles.

2.3 Principles

To provide guidance to the Water Authority and its member agencies in developing and implementing the DMP, twenty-three principles were developed. The principles were initially drafted based on results from the questionnaire that was completed by the TAC members (**Appendix B**). They were then revised and finalized based upon input received during a series of TAC meetings.

The principles are grouped below under the following categories: a) Overall Plan; b) Communication Strategy; c) Drought Supply Enhancement; d) Drought Response Stages; and e) Allocation Methodology.

Overall Plan

- 1. The DMP will be developed in cooperation with the member agencies and include all aspects of drought planning – including steps to avoid rationing, drought response stages, allocation methodology, pricing, and communication strategy.*

Communication Strategy

- 2. An on-going, coordinated and regional public outreach program shall be developed by the Water Authority that provides a clear and consistent message to the public regarding water supplies and specific conservation measures. The outreach program will also recognize and support member agency communication efforts that address specific retail level allocations.*
- 3. A Drought Coordination Team, made up of one representative from each member agency, will be established to assist the Water Authority in implementation of the DMP. This includes items such as formulation and implementation of the public outreach program, timing of drought stages, selection of drought supply actions, and addressing potential issues surrounding implementation of the shortage allocation methodology.*
- 4. The drought management plan should specify actions and timing of communications.*

Drought Supply Enhancement

- 5. The Water Authority and its member agencies will work cooperatively to avoid and/or minimize rationing during droughts through supply enhancement and voluntary demand reduction measures.*
- 6. Future Water Authority carryover storage supplies will be managed and utilized to assist in meeting demands during drought periods. Member agencies will be encouraged to develop carryover storage.*
- 7. The Water Authority will consider securing option and/or spot water transfers to meet the reliability goal set by the Board. The cost of this regional supply will be melded into the Water Authority's supply costs for all classes of service that benefit.*

8. *Subject to the Water Authority's wheeling policy, if a member agency purchases transfer water from a source other than the Water Authority, the full cost of the transfer, including, but not limited to, purchase costs, wheeling costs, and administrative costs, will be borne by said member agency.*
9. *ESP supplies may be available when any member agency's non-interruptible firm demands drop below a 75 percent service level.*
10. *The quantities of supplies from the ESP to be removed from storage will be based on a minimum amount necessary to meet essential health, safety, and firefighting needs, and maximum amount based on the need to ensure adequate supplies remain for a catastrophic event (e.g. earthquake).*

Drought Response Stages

11. *Develop drought response stages, which at a minimum, accomplish the following:*
 - *Can be easily communicated to the public;*
 - *Flexible to handle unexpected changes in demand and supply conditions;*
 - *Includes percent reduction (voluntary or mandatory) per stage; and*
 - *Includes both supply enhancement and emergency demand reduction methods.*
12. *Targets for achieving the emergency demand reduction measures should take into account the region's already aggressive long-term water conservation program.*
13. *The decision on when, and in which sequence drought enhancement supplies will be utilized during different stages will include consideration of the following factors:*
 - *Location – Out-of-region supplies will be utilized in the earlier stages, prior to in-county storage, because these supplies are more vulnerable to implementation risks such as seismic events;*
 - *Cost – Priority will be given to maximizing supply reliability and at the same time using the most cost-effective supplies; and*
 - *Limitations – Potential restrictions on the use of drought enhancement supplies is a factor in determining supply availability (e.g. potential restrictions on ESP supplies).*

Allocation Methodology

14. *The allocation methodology will be equitable, easy to administer, contain financial penalties and pricing signals, and a communication strategy to ensure member agencies and the public are informed and understand the need to conserve.*

- 15. In order to protect the economic health of the entire region, it is very important for the allocation methodology to avoid large, uneven retail impacts across the region. The methodology should include a minimum level of retail agency reliability to ensure equitable allocation among the member agencies.*
- 16. With the exception of allocating water from the ESP, the Water Authority shall make no distinction among customers paying the same M&I rate (e.g. non-Interim Agricultural Water Program (IAWP) agriculture, residential, commercial, and industrial).*
- 17. Additional IAWP cutbacks beyond the initial 30 percent faced by IAWP customers should be equally applied to both IAWP and M&I customers.*
- 18. A member agency that has developed local projects and instituted conservation measures should not be penalized in the computation of allocations.*
- 19. To help balance out the financial costs and risks associated with development of local resources, the shortage allocation methodology should provide an incentive to those member agencies that have developed local supplies.*
- 20. The base-year, upon which allocations will be derived, will be based on historic demands. Adjustments to the base-year will be made for demographic changes, growth, local supplies, demand hardening, and supplies allocated under interruptible service programs.*
- 21. A member agency's base-year will be adjusted to reflect the regional financial contribution from the Water Authority for development of local projects. The adjustment will take into account the risks associated with developing the local projects.*
- 22. A member agency will not be able to market its unused allocation to other agencies within the Water Authority's service area at a cost higher than the Water Authority's charges for those supplies.*
- 23. Penalty rates, along with other demand reduction measures, will be used by the Water Authority to encourage conservation during a drought.*

2.4 Report Preparation and Approval

Water Authority staff, with consultant assistance, prepared an initial draft of the DMP based on results from the TAC member discussions on DMP elements. TAC members reviewed the draft report and their comments were incorporated. On February 14, 2006, the TAC supported forwarding the report to the Water Authority's Board of Director's Water Planning Committee for their consideration. The DMP elements were presented to Water Authority's Board of Directors through a series of meetings and workshops, with final approval of the DMP on May 25, 2006.

Section 3 – Review of Historic Plans and Implementation

“Experience is not always the kindest of teachers, but it is surely the best.”¹ Thus, it was important to review the historical context of drought plans in Southern California and examine how those drought plans were implemented, and what impact they had on the Water Authority. Historically, due to the dependence on deliveries from Metropolitan, the Water Authority’s guidelines for drought management actions have paralleled Metropolitan’s adopted plans for supply management in drought situations. Lessons learned from the creation and implementation of these plans were used when preparing the DMP. This section summarizes those historical drought plans and lessons learned. Detailed information regarding the historical drought plans can be found in **Appendix C** (Water Authority) and **Appendix D** (Metropolitan).

Metropolitan began delivering water in 1941 and had been able to meet demands through system expansion through much of its history. However, during the drought of 1976-1977, Metropolitan first experienced demands that were greater than supplies. During the 1976-77 drought, Metropolitan asked for and received voluntary reductions in deliveries of 10 percent. It was then, that Metropolitan began considering how to deal with future supply shortages. The sections below describe the four drought plans that Metropolitan has had since that time, along with the Water Authority’s actions to implement those plans.

3.1 Metropolitan’s 1981 Interruptible Water Service Program

The first drought plan that Metropolitan’s Board of Directors adopted was the Interruptible Water Service Program in 1981. This program combined a rate structure and drought plan. The Interruptible Water Service Program was intended to deliver water at a discounted rate in return for the ability to interrupt the deliveries as required. Water that did not receive a discount was deemed to be “noninterruptible.”

Deliveries for groundwater or reservoir storage, agricultural purposes, and seawater barrier injection were considered to be interruptible water. An agency had an obligation to take a reduction or interruption in deliveries for three years after taking interruptible water deliveries.

When the 1987-1992 drought occurred, many member agencies that had purchased the interruptible water were not able to manage an interruption in deliveries. Some agencies did not have the facilities in place to produce stored water, others did not have the water in storage, while others preferred to have customers conserve rather than produce from storage.² Additionally, there was concern expressed by some farmers that trees and vines

¹ Spanish Proverb, *The Columbia World of Quotations*, 1996.

² Memorandums dated June 4, 1990, and July 19, 1990, to Chief of Operations, and September 10, 1990, Water Problems Committee Public Hearing minutes, pgs. 1-6, and attachments.

and livestock would be permanently destroyed by interrupting their water service.³ In response and as the drought deepened, Metropolitan's Board of Directors adopted the Incremental Interruption and Conservation Plan.

3.2 Metropolitan's 1990 Incremental Interruption and Conservation Plan

The Incremental Interruption and Conservation Plan (IICP) was devised to reduce both noninterruptible and interruptible deliveries. Metropolitan's Board of Directors attempted to rectify the inequity of agencies receiving past discounts for interruptible water service by reducing water taken as interruptible water at a greater percentage than water taken as noninterruptible water. Stages of reductions in deliveries for "firm" and "nonfirm" water deliveries were created based on the amount of supply available to Metropolitan and projected demands. This reduction in deliveries occurred for 14 months starting in February 1991.

The IICP used fiscal year 1989-90 sales as the basis of its allocation. These sales were broken down into monthly targets. The targets were adjusted for loss of local supply, growth, conservation, and reclamation. The percentage reduction in deliveries was then applied. For part of the allocation period, agencies that took less water than their IICP target received an incentive of \$99 per acre-foot. These incentives were eliminated as the combined revenue impacts of reduced sales and large incentive payments affected Metropolitan. Agencies that took more than their target paid a disincentive of two times the untreated noninterruptible rate in addition to paying the noninterruptible rate for delivery of the water. Monthly overages and underages were allowed to offset one another over the course of the year through an annual reconciliation. At the beginning of the allocation, billing for disincentives occurred monthly. This was later changed to a quarterly basis. Additionally, a time limit was placed on applying for adjustments.

3.3 Water Authority's 1991 Drought Response Plan

In response to the continuing drought and Metropolitan's adoption of the IICP, the Water Authority adopted its own Drought Response Plan in 1991. The Board Letter and Drought Response Plan are included in **Appendix C**. The Drought Response Plan had four components as summarized below.

1. Drought Response Program

The Water Authority tied its response stages to the IICP. However, reductions were not broken down between "firm" and "nonfirm" deliveries in the base year. Rather, it reduced deliveries to its agencies uniformly based on fiscal year 1989-90 sales. Incentive and disincentive payments were assessed using the same formula as Metropolitan. Additionally, a Response Stage Activities matrix was developed for the member agencies. This matrix arranged water management techniques, such as

³ Metropolitan Water District of Southern California, *Draft Paper on Events Leading Up to and Chronology of the 1990-92 Drought Years and Supply Reliability Improvements Achieved as a Result of the Drought*.

no outside irrigation except with water reclaimed from indoor use, to the reduction levels corresponding to the stage of the IICP. Through its member agency response to the public information program and prohibitions of water use, the Water Authority, overall, was able to stay within its allocation of water from Metropolitan.

2. Conservation Program

The Water Authority had long-term conservation programs in place prior to the allocation of water. Once the allocation of water began, additional short-term conservation programs, such as assistance to public institutions for conserving water, were added.

3. Member Agency Assistance Activities

Beyond the Response Stage Activities matrix, the Water Authority provided other assistance to member agencies, such as a member agency workshop on penalty pricing methods.

4. Public Information Activities

There were two objectives to the activities. The first was to highlight the drought situation and the need for immediate cutbacks in water usage. The second was to develop continuing methods to assist member agencies and educate the public on water supplies.

3.4 Department of Water Resources Drought Water Bank

Supplies from a Drought Water Bank were made available by DWR for one year, in 1991, to State Water Contractors. Metropolitan was able to obtain 215,000 acre-feet of the bank water. It sold some water directly to member agencies and melded the remainder with the rest of its supplies. Water sold directly to agencies was sold at DWR's melded rate of \$175 per acre-foot plus Metropolitan's noninterruptible rate. The Water Authority contracted for 21,600 acre-feet of bank water, and took delivery of 20,100 acre-feet of bank water. The Water Authority melded the bank water into its other supplies.

3.5 Metropolitan's 1995 Drought Management Plan

The 1995 Drought Management Plan (1995 Plan) was the first time that Metropolitan formalized a plan which addressed the actions to take during a drought prior to reducing or interrupting deliveries of water. These actions included calling on water from various storage programs and participating in water bank and transfer options.

The 1995 Plan included a modified IICP. The modifications to the IICP included using an average of three fiscal years rather than one fiscal year for the base period and the

establishment of an Interagency Advisory Committee to assist Metropolitan's General Manager during an allocation.

The 1995 Plan was adopted for only one year. As part of Metropolitan's integrated water resources planning process, it was intended that a more permanent drought management plan, which also incorporated surplus conditions, be prepared to create a general policy direction on the basic sequence of water resource management steps to take under surplus or shortage conditions. This plan, adopted in 1999, became known as the Water Surplus and Drought Management Plan (**Section 3.7**).

3.6 1994 Ordinance of the San Diego County Water Authority Establishing Contingency Plans, Rules, Regulations, and Restrictions so that Available Water Supplies are Allocated among Member Agencies for the Greatest Public Interest and Benefit

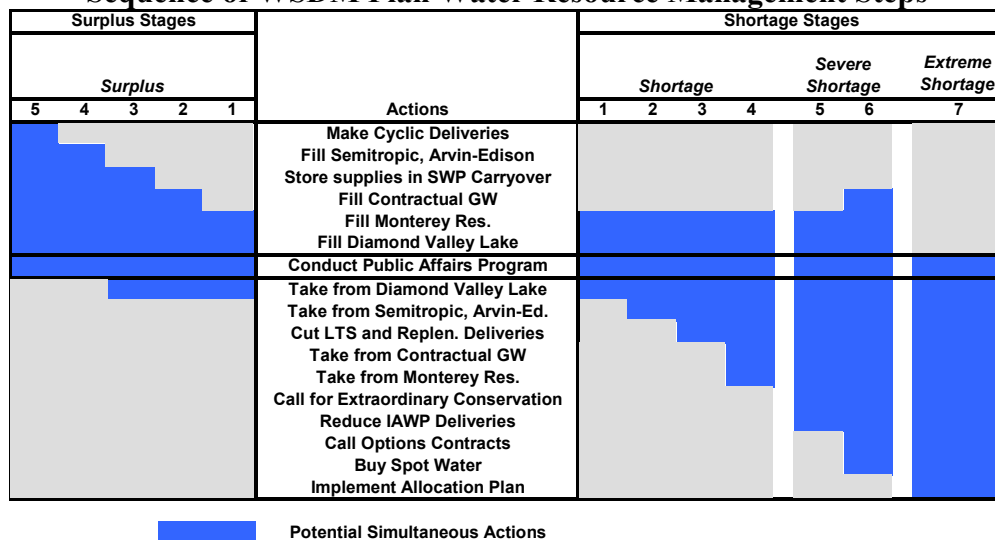
The Water Authority, in response to Metropolitan adopting its 1995 Plan (in October 1994), adopted its own water shortage contingency ordinance (**Appendix C**) a month later, in November 1994. The water resource portion of the ordinance included two basic components. First, if Metropolitan had to implement the IICP, the Water Authority would act to minimize shortages to its service area by making available stored water that it owned and securing other water supplies. And second, if the Water Authority continued to have a supply shortage it would allocate water supplies using Metropolitan's 1995 Plan-modified IICP as a template. This allocation included having separate cutback percentages for IAWP deliveries and firm deliveries, using the same three-year base period as the basis for the firm allocation, and passing through any penalties on a pro-rata basis to those agencies that received deliveries in excess of their allocation. If a member agency was not able to reduce its deliveries to within 5 percent of its monthly allocation, then its daily deliveries could be reduced by the Water Authority in a manner to ensure compliance. In addition to the basic concepts listed above, an appeals board was established to review actions taken by the Water Authority's General Manager if a member agency did not agree with the actions. The appeals board consisted of five Water Authority Board members.

3.7 Metropolitan's Water Surplus and Drought Management Plan

The Water Surplus and Drought Management Plan (WSDM) is the drought management plan that Metropolitan currently operates under. Based on water supplies and projected demands, varying actions may be taken by Metropolitan. These actions are shown in **Figure 3-1**.⁴ The matrix acts as a "framework." Actual responses would be based on conditions at the time of need.

⁴ Metropolitan Water District of Southern California, *Water Surplus and Drought Management Plan*, 1999, page 28.

Figure 3-1
Sequence of WSDM Plan Water Resource Management Steps



A water allocation methodology in the event “rationing” becomes necessary is not included in the WSDM Plan. A draft methodology was devised and specific concepts of an allocation are laid out in the WSDM Plan. These concepts include the goal that overall retail demands would be used to minimize uneven impacts to agencies within Metropolitan’s service area. The final allocation plan was not adopted, in part, due to this concept. Agencies that had invested heavily to develop local supplies or for conservation felt that they were being treated unfairly and that there was no incentive to continue with these local investments since overall retail demands were used as the starting point for the drought allocation.

3.8 Interim Agricultural Water Program Reduction Guidelines

Metropolitan converted the “Interruptible Program” for agricultural users into the Interim Agricultural Water Program (IAWP) in May 1994. The IAWP provides for the delivery of surplus water for agricultural purposes at a discounted rate in exchange for up to a 30 percent reduction in demand by participating agricultural water users prior to implementation of municipal and industrial water use rationing. This reduction enables Metropolitan to better conserve limited supplies during shortages.

For the past several years and until the fall of 2004, Metropolitan’s service area experienced dry conditions combined with high demands. Metropolitan and its member agencies began preparing a plan to reduce IAWP deliveries in the 2004-2005 water year (October through April) in the event that a reduction was necessary. This plan, although not finalized, is included in **Appendix E**.

3.9 Lessons Learned

As review of the historical plans occurred, it became apparent that certain lessons could be learned from them about both what to do and not to do before and during an allocation. These lessons include:

Effective Communications

It is important that Directors, agency staff, governmental officials, the news media, and the public understand the water supply situation, how the Water Authority is prepared to meet demands, and ultimately if required, how an allocation plan would be implemented. Permanent outreach activities that educate the public about the region's water supplies are vital. Additionally, a communication team that has a plan that it can work during a drought in a proactive, rather than reactive mode, will help in the implementation of the drought plan. A proactive approach will also help manage rapidly changing conditions during a shortage. In response to these observations, a communication strategy has been included in the DMP that establishes a drought communication team. Please refer to **Section 6** for a more complete discussion of the communication plan.

Advance Supply and Facility Planning

Agencies should have supply and facility plans in place ahead of time to avoid supply shortage situations. The planning should include storing surplus supplies when and where possible, having the facilities in place to withdraw these supplies, and being prepared with a staged plan on how to deal with shortages. The Water Authority and its member agencies have accomplished this through development of urban water management plans, facility master plans, and the DMP.

Avoid Rationing as much as Possible

This avoidance includes entering into option contracts, voluntary conservation, and encouraging the development of local supplies. Although all of these methods have some cost associated with them, they are likely not as high as the economic impacts of water supply shortages to the region. This DMP, through its Drought Response Matrix and possible supply enhancement actions, provides a plan to potentially avoid rationing when feasible. The Drought Response Matrix is discussed further in **Section 4**.

Develop an Allocation Methodology that Encourages Local Supply Development

By developing local supplies, the reliability of both the individual member agency that developed the supply, as well as the region, is improved. Thus, any drought plan should encourage the development of local supplies, not hinder them. The allocation

methodology in this DMP encourages local supply development in two ways. First, it uses historic Water Authority demands, not retail demands, as the basis for allocating water. Second, an adjustment for the development of local projects (recycled water, groundwater recovery, and seawater desalination) is provided in the allocation methodology. This adjustment provides a 30 percent credit on the yield of locally developed reliable supplies in the base period (discussed in **Section 5**).

Review and Remind Agencies of DMP Annually

This review educates staff members who are new to the Water Authority or its member agencies on how the DMP works. One of the problems with the 1981 Interruptible Water Service Program was that the reason for Metropolitan providing the discount was lost with the departure of staff members who had worked on the program. Thus, implementation of the plan could not occur and a new plan, the IICP, had to be formulated at the last minute. An annual review and reminder of the DMP will help reduce any last minute confusion.

Make Adjustments in Allocation Methodology Simple to Administer

By having a fairly simple preset formula that uses historic information for adjustments and a three-year average base period, administering adjustments in the DMP allocation methodology will be easier and less time consuming.

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Section 4 – Drought Response Matrix

4.1 Introduction

The Water Authority exists to provide, as far as practicable, each of its member agencies with adequate supplies of water to meet their expanding and increasing needs. In times of extreme drought, where the San Diego region could experience shortages of supply from Metropolitan, the Water Authority needs to take actions to try to both reduce and eliminate shortages. A Drought Response Matrix was developed to provide guidance to the Water Authority and its member agencies to select potential regional actions to lessen the severity of shortage conditions. The matrix is shown below in **Table 4-1**.

Table 4-1
Drought Response Matrix – Firm Demands

POTENTIAL SDCWA DROUGHT ACTIONS	STAGES		
	Voluntary	SDCWA Supply Enhancement	Mandatory Cutbacks
Ongoing BMP implementation	X	X	X
Communication strategy	X	X	X
Monitoring supply conditions and storage levels	X	X	X
Call for voluntary conservation	X	X	X
Draw from SDCWA Carryover Storage	X	X	X
Secure transfer option contracts	X	X	X
Buy phase 1 spot transfers (cost at or below Tier 2 rate)		X	X
Call transfer options		X	X
Buy phase 2 spot transfers (cost at or above Tier 2 rate)		X	X
Implement allocation methodology			X
Utilize ESP Supplies			X

The matrix includes a list of potential actions available to the Water Authority at each of the three main stages. To determine the specific actions that should be taken at each stage, the Water Authority and its member agencies will evaluate conditions specific to the timing, supply availability, and cost, along with other pertinent variables. Numerous variables can influence the supply reduction levels during a drought. These variables include, but are not limited to, State Water Project allocation, conditions on the Colorado River, Water Authority supplies, local storage, local demands, and timing. Member agencies will independently adopt retail-level actions to manage potential shortages.

4.2 Drought Response Matrix Stages

The potential actions are grouped into the following three stages:

Voluntary

The first stage of the drought response matrix is considered voluntary. The voluntary stage would likely occur when Metropolitan has been experiencing shortages in its imported water supply (from either the Colorado River or the State Water Project, or both) and is withdrawing water from storage due to the drought conditions to meet normal demands.

Water Authority Supply Enhancement

This stage could occur in year three or four of a dry period and represents that point in time when Metropolitan reduces water deliveries to its member agencies. The Water Authority's Board of Directors will then consider the potential actions in this stage, or others that may surface, to eliminate any cutbacks to the member agencies from the reduction in Metropolitan supplies.

Mandatory Cutbacks

The final stage follows once both Metropolitan and the Water Authority Board have exhausted all supply enhancement options due to lack of supplies and/or increasing costs, and mandatory cutbacks are required. The actions taken at this stage include implementation of the allocation methodology and potential utilization of ESP supplies. It should be noted that members of the DMP TAC expressed strong opinions that the ESP supplies only be used during a hydrologic drought as a last resort, if at all. Should the dry weather continue and the region enter a sixth year of drought, some communities may begin facing health and safety issues.

4.3 Potential Water Authority Drought Actions

The following is a brief description of each of the potential Water Authority actions that may be taken in a drought situation.

Ongoing Best Management Practices Implementation

The Water Authority and its member agencies continue to implement the California Urban Water Conservation Council's comprehensive water conservation Best Management Practices.

Communication Strategy

A Communication Strategy will be in place prior to the drought and continue through all stages. The strategy is a coordinated effort between the Water Authority and its member agencies. It includes phases of response and corresponding activities to take during each phase. Refer to **Section 6** for additional information.

Monitoring Supply Conditions and Storage Levels

Water Authority staff monitors State Water Project and Colorado River supplies, along with supply levels in Metropolitan's storage facilities and programs. Reports will be made to the member agencies and the Water Authority's Board of Directors on the status of the supply conditions. This action is also an important element of the Communication Strategy.

Call for Voluntary Conservation

The Water Authority and its member agencies will ask the public to implement voluntary water conservation practices. The voluntary water conservation measures are in addition to the region's ongoing implementation of the BMPs. Voluntary water conservation measures may focus on outdoor water conservation, elimination of run-off, and leak detection. The shift from indoor water conservation to outdoor water conservation is due to demand hardening that is the result of 15 years worth of indoor water conservation efforts that targeted homes and businesses. The specifics of the voluntary water conservation measures will be determined by member agencies, with the Water Authority providing regional messages and assistance. The action will be closely coordinated through the Communication Strategy.

Draw from Water Authority Carryover Storage

The Water Authority will draw from its non-ESP storage in order to meet member agency demands. This could include supplies available through the Water Authority's proposed carryover storage project that is scheduled for completion in 2011.

Secure Transfer Option Contracts

The Water Authority secures transfer option contracts for supplies from outside of the region. Transfer options are multi-year contracts that allow the Water Authority to obtain a specified quantity of water at some future date. The amount secured will depend on supply need and cost. A minimum payment for water is usually required in order to secure the transfer. This payment must be made even if the water is not needed.

Buy Phase 1 Spot Transfers

The Water Authority buys Phase 1 spot transfers from outside of the region. Spot transfers make water available for a limited duration (typically one year or less) through a contract entered into in the same year that the water is delivered. The cost for this block of water would be at or below the Tier 2 water rate. Purchase of spot transfers are categorized into two phases to provide the Board the ability to determine action based on cost. The cost includes purchase and conveyance. Examples of a spot transfer are supplies purchased through DWR's Drought Water Bank during the 1987-1992 drought (See Section 3.4). The transfer water will be melded in with the remaining supplies available to the Water Authority.

Call Transfer Options

The Water Authority buys the previously secured transfer options. In addition to the cost to purchase the transfer water, the Water Authority needs to pay for conveyance between the location

of the sale and the San Diego region. Additional costs could include storage, treatment, and seepage losses depending upon the origin of the transfer water. The transfer water will be melded in with the remaining supplies available to the Water Authority.

Buy Phase 2 Spot Transfers

The Water Authority buys Phase 2 spot transfers from outside of the region. The transfer water will be melded in with the remaining supplies available to the Water Authority.

Implement Allocation Methodology

The Water Authority's Board of Directors determines that all potential actions have been taken to avoid shortages and the remaining action is to implement the allocation methodology outlined in **Section 5**.

Utilize Emergency Storage Project Supplies

The Water Authority draws from its ESP supplies when any member agency's non-interruptible firm demands drop below a 75% service level. The quantities of supplies drawn from storage are based on the minimum amount necessary to meet essential health, safety, and firefighting needs. It is also based on the maximum amount needed to ensure adequate supplies remain for a catastrophic event.

The drought response matrix provides guidance to the Board on potential actions that the Water Authority could take at certain stages of drought. There are variables, unknown at this time, which may influence the options available to the Water Authority's Board of Directors. This will need to be taken account when it is time to implement the matrix.

Section 5 - Supply Allocation Methodology

5.1 Introduction

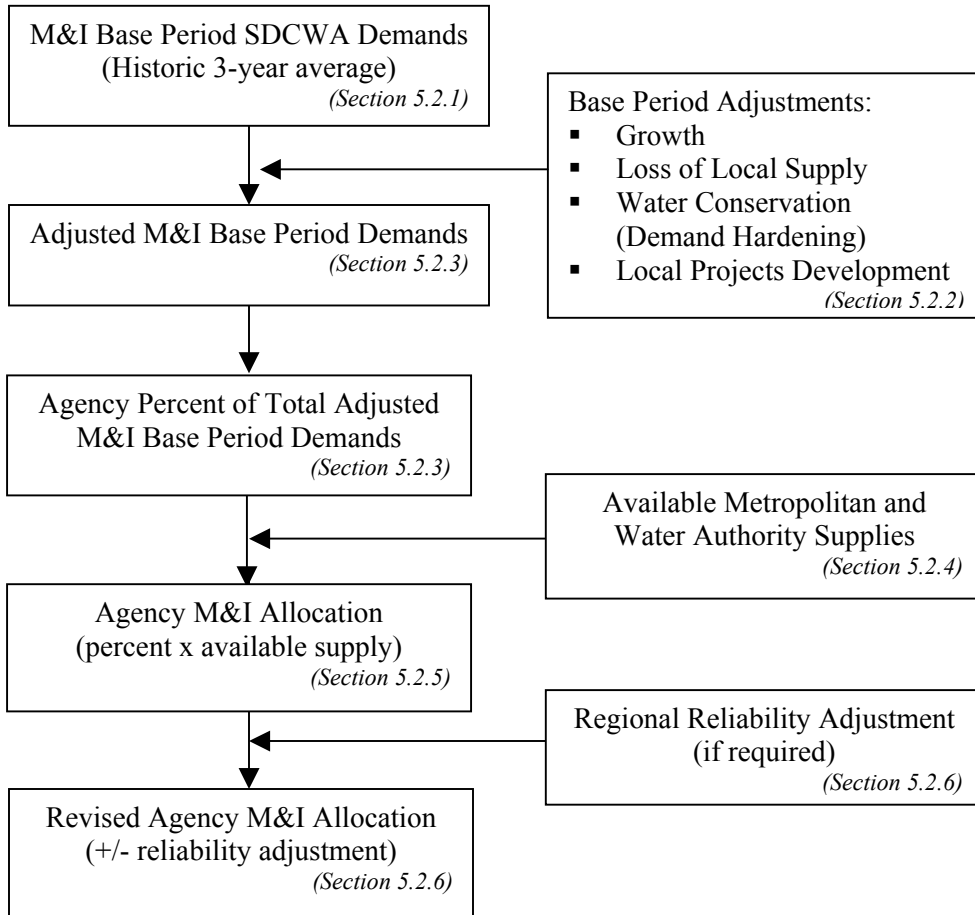
As outlined in the Drought Response Matrix discussed in **Section 4**, after the Water Authority's Board of Directors has exhausted available supply enhancement options and can no longer avoid cutbacks, implementation of an allocation methodology will occur. The challenge in developing the methodology was to meet the diverse needs of the member agencies in a fair and equitable manner. Each of the Water Authority's member agencies has a different demand profile and unique supply portfolio. Some agencies have abundant local supplies, while others are 100 percent reliant on water supplies purchased from the Water Authority. There are member agencies that serve primarily agricultural customers, while others serve only municipal and industrial customers.

This section includes a description of the supply allocation methodology developed through a collaborative effort between the Water Authority and its member agencies. The goal of the methodology is to provide an equitable means of apportioning the Water Authority's municipal and industrial (M&I) supplies during periods of supply shortages consistent with the TAC approved principles discussed in **Section 2.3**. Through the TAC meetings, Water Authority staff and designated member agency representatives have collectively agreed to the allocation methodology described in this section.

The methodology distinguishes between Metropolitan's two distinct classes of service – "Full Service" and surplus water. Full Service water has the highest supply reliability and is priced at Metropolitan's total cost of service. Typically, Full Service water is used to meet the Water Authority's M&I sector demands. In contrast, Metropolitan's surplus water supplies are subject to first cutback during supply shortage conditions. Regional surplus supplies are primarily obtained through Metropolitan's IAWP program. IAWP water is subject to up to a 30 percent cutback in any one year during a shortage before any reductions in Full Service water are implemented. To account for this lower reliability level, surplus water supplies are priced below the Metropolitan Full Service rate. A further discussion on the reduction of the IAWP class of service can be found in **Section 3.8**.

To provide an overview of the allocation methodology for M&I customers, a schematic has been prepared that includes the principal steps in the process. As shown in **Figure 5-1**, the methodology begins with a determination of each agency's base period demands. From this base, adjustments are added to account for each agency's local supply conditions and their individual demand characteristics. This calculation results in an adjusted base period demand for each member agency. Next, the amount of M&I supplies available from the Water Authority is determined. This includes the Water Authority's own supplies along with supplies available from Metropolitan. The individual member agency's percent share of the total regional M&I adjusted base period demand is calculated. This percentage is then multiplied by the total Water Authority M&I supplies available to derive an allocation for each member agency. In the rare circumstance of severe imported supply shortages, a regional reliability adjustment will be applied to avoid large uneven retail impacts. Each box shown in **Figure 5-1** contains a reference number to the corresponding subsection that describes the step in detail.

Figure 5-1
M&I Supply Allocation Methodology



5.2 Description of Allocation Methodology

To help describe the allocation methodology and demonstrate the calculation procedures, the following example was developed. The example was prepared for illustration purposes only. For this sample analysis, demand and local supply data for five representative agencies was established to approximate a cross-section of urban and agricultural characteristics unique to the region. Other agency attributes such as demand, estimated growth, conservation, and local supply availability were also based on local agency characteristics.

The first step in determining the severity of necessary cutbacks during any water supply shortage event is an assessment of available supply compared to estimated demands. Because the majority of the region's water supply originates from outside the San Diego area, the severity of regional drought cutbacks is driven by the availability of imported supplies. However, imported supplies developed by the Water Authority are less vulnerable to reductions due to their higher priority water

right. The high reliability of the IID transfer water and conserved water resulting from the lining of the All-American Canal and Coachella Canals assures that these supplies will be available to the Water Authority during extreme hydrologic events. As a result, imported Metropolitan supplies and local surface water would be most susceptible to a reduction during a drought. Additionally, in the absence of adopted Metropolitan supply allocation guidelines, there is a degree of uncertainty as to the Water Authority's share of Metropolitan's supplies during a shortage. Therefore, an estimated percent cutback in Metropolitan supplies to the Water Authority was assumed to illustrate the allocation methodology.

In the example, agricultural purchases under Metropolitan's IAWP program are cutback by 30 percent – the maximum allowable in any one year before reductions in Full Service water are imposed. The example further assumes that a 20 percent reduction in the remaining Metropolitan supplies occurs.

5.2.1 Historic Base Period Demands on the Water Authority (Unadjusted)

A historic base period demand is required to establish each agency's pre-allocation demands on the Water Authority. Base period M&I demands are calculated using data from the three most recently completed fiscal years immediately preceding the year in which an allocation process is needed due to supply shortages. Each agency's base period M&I demand is established by calculating their three-year average of demand.

Base period demands for agriculture are certified through Metropolitan's IAWP program and are calculated using a different approach. For IAWP demands, only the most recently completed single fiscal year prior to the imposition of an allocation is considered. This calculation is required by Metropolitan's Draft IAWP Reduction Guidelines.

For illustrative purposes, **Table 5-1** contains historic base period demands for the sample agencies. In the event that consecutive multi-year allocations are required, base period demands (based on the three years prior to the first year of allocations) are to remain fixed for the duration of the allocation.

Table 5-1
Example
Historic Base Period Demands on Water Authority

	Agency A	Agency B	Agency C	Agency D	Agency E
SDCWA M&I Demand (three-year average)	2,200	6,500	181,000	43,100	25,000
IAWP Demand (previous year)	0	19,000	200	100	0

5.2.2 Adjustments

M&I adjustments to be applied to the base period were developed to equitably account for relevant factors in calculating each agency's allocation. Such factors include growth, demand hardening levels due to conservation, local supply availability from groundwater and surface reservoirs, and

efforts taken by local agencies to develop reliable local projects such as recycled water, groundwater recovery, and seawater desalination. The adjustments are intended to acknowledge unique agency characteristics and provide an incentive for agencies to decrease their reliance on imported supplies over the long-term. Consistent with the Draft IAWP Reduction Guidelines, no adjustments are made to the IAWP base demand.

The following is a summary of each M&I adjustment:

Growth

Because the base period is fixed, a growth adjustment is applied that estimates the increase in demand due to growth from the base period to the allocation year. This adjustment is calculated using the average number of new meters purchased by each agency over the three-year base period. New meter data is derived from annual Water Authority Capacity Charge records. Water demands associated with these meters are calculated using an annual equivalent demand per meter estimate. For meters under one inch, demand is estimated at 0.5 acre-feet per year, consistent with average residential water use. The adjustment is based on the annual demand increase associated with the average annual meter purchases over the three-year period. Due to the two-year difference between the base period and allocation year, the calculated growth adjustment is doubled. The growth adjustment calculation is expressed as:

$$= (\text{Average Number of Meters by Size}) \times (\text{Equivalent Demand per Meter by Size})$$

Table 5-2 illustrates the growth adjustment calculations for each sample agency.

**Table 5-2
Growth Adjustment**

Three-Year Average of New Meters by Size

Meter Size	Agency A (new meters)	Agency B (new meters)	Agency C (new meters)	Agency D (new meters)	Agency E (new meters)
5/8"	14	49	1,467	2,000	70
1"	4	38	800	41	25
1.5	0	1	123	35	10
2	0	1	93	21	0

Estimated Demand per Meter

Meter Size	Demand per Meter (AF/YR)
5/8"	0.5
1"	0.8
1.5	1.5
2	2.6

Total Annual Meter Demand

Meter Size	Agency A (AF)	Agency B (AF)	Agency C (AF)	Agency D (AF)	Agency E (AF)
5/8"	7	25	733	1,000	35
1"	3	31	640	33	20
1.5	0	2	185	52	15
2	0	2	242	55	0
Total	10	60	1,800	1,140	70
2-Year Growth	20	120	3,600	2,280	140

Water Conservation (Demand Hardening)

On-going water conservation programs are an effective method of reducing reliance on imported supplies. However, these savings curtail an agency's ability to further reduce their demands during supply shortages (demand hardening). To avoid penalizing agencies that have undertaken such conservation activities for the long-term, an adjustment for these savings is applied. The conservation adjustment is calculated using an average of active conservation program savings, as tracked by the Water Authority, over the most recently completed three fiscal years - similar to the base period calculation. Inclusion of only active conservation measures such as the installation of high-efficiency clothes washers ensures that legislatively mandated conservation savings (attributable to growth) are excluded. The adjustment added to the base period is the three-year average conservation savings. Estimated annual savings and resulting conservation adjustments for the sample agencies are shown below in **Table 5-3**.

Table 5-3
Conservation Adjustment (AF)

Year	Agency A	Agency B	Agency C	Agency D	Agency E
1	25	20	17,650	1,475	995
2	30	25	18,000	1,500	1,000
3	35	15	18,350	1,525	1,005
Average	30	20	18,000	1,500	1,000

Loss of Local Supply

Some agencies have invested heavily in surface and groundwater supplies, thereby reducing their reliance on imported water and providing other regional benefits such as surface water treatment

capacity. Typically, these supplies are based on the amount of local runoff from annual rainfall. Because local rainfall is subject to drought cycles, a Loss of Local Supply Adjustment was developed to recognize the benefit of these historic supplies and not penalize agencies for diminished local supplies during shortage conditions. The adjustment is calculated as the difference between the average local supply use over the most recently completed three fiscal years and the estimated allocation-year local supply use. The adjustment is 50 percent of the local supply difference. An agency that has developed recycled water supplies, brackish groundwater recovery, or desalinated ocean water may apply for this adjustment if it deems necessary; however, this will preclude that agency from applying for the Local Projects Development Adjustment described in the next sub-section.

The Loss of Local Supply Adjustment for the sample agencies is shown in **Table 5-4**. For purposes of the sample calculation, it was assumed that a 25 percent loss of local supply volume occurs during the allocation year.

Table 5-4
Loss of Local Supply Adjustment (AF)

Year	Agency A	Agency B	Agency C	Agency D	Agency E
1	0	0	39,500	0	6,500
2	0	0	34,400	0	5,700
3	0	0	22,100	0	4,600
Average	0	0	32,000	0	5,600
Assumed 25% Reduction	0	0	8,000	0	1,400
50% of Difference	0	0	4,000	0	700

Local Projects Development

The development of highly reliable in-region supplies, such as brackish groundwater recovery, recycled water, and seawater desalination result in a dual benefit. They add to the region's supply diversity and are a dependable source during shortages of imported water. An adjustment is made for the regional benefit of these annually reliable supplies. The adjustment recognizes both the investment made by the local agency and the regional financial contribution made by the Water Authority. Similar to the base period calculation time frame, a three-year average of beneficial use from these reliable supplies is employed to calculate the adjustment. The Local Projects Development adjustment is 30 percent of the three-year average. In addition to the incentive from the adjustment, the member agency will be able to utilize 100% of their local project's supply that is available during a drought. **Table 5-5** on the following page shows the Local Projects Adjustment.

**Table 5-5
Local Projects Development Adjustment (AF)**

Year	Agency A	Agency B	Agency C	Agency D	Agency E
1	65	0	4,900	1,310	1,850
2	64	0	4,950	1,350	2,100
3	66	0	5,150	1,340	2,050
Average	65	0	5,000	1,333	2,000
30% Credit	20	0	1,500	400	600

5.2.3 Adjusted Base Period Demands and Supply Allocation Percentages

An agency's adjusted base period M&I demand is calculated by adding the applicable adjustments to their initial base period M&I demand. The adjusted base period M&I demand amount is then used to generate an agency's pro-rata percent share of the total adjusted base period M&I demand. It is this percentage that is used to calculate an agency's imported M&I supply allocation volume. **Table 5-6** illustrates the calculation for the sample agencies.

**Table 5-6
Adjusted Base Period M&I Demand and
Imported M&I Supply Allocation Percentages (AF)**

Agency	Base Period M&I Demand on SDCWA	Growth Adjustment	Loss of Local Supply Adjustment	Conservation Adjustment	Local Projects Development Adjustment	Adjusted Base Period M&I Demand	Pro-rata Share of Adjusted Base Period M&I Demand
A	2,200	20	0	30	20	2,270	0.8%
B	6,500	120	0	20	0	6,640	2.3%
C	181,000	3,600	4,000	18,000	1,500	208,100	71.3%
D	43,100	2,280	0	1,500	400	47,280	16.2%
E	25,000	140	700	1,000	600	27,440	9.4%
Total						291,730	

IAWP allocation percentages are also calculated based on an agency's pro-rata share of demand. However, the based period IAWP demand used for this calculation is not adjusted as described in **Section 5.2.2**. **Table 5-7** shows the pro-rata percent share of IAWP demands for the sample agencies.

Table 5-7
Base Period IAWP Demand and
IAWP Supply Allocation Percentages (AF)

Agency	Base Period IAWP Demand on SDCWA	Pro-rata Share of Base Period IAWP Demand
A	0	0.0%
B	19,000	98.5%
C	200	1.0%
D	100	0.5%
E	0	0.0%
Total:	19,300	

5.2.4 Water Authority Supply Availability and Net Cutback Percentages

The next step in the allocation methodology is to identify the total supplies available to meet member agency demands during shortage events. M&I supplies are equal to the sum of non-IAWP water from Metropolitan, the Water Authority's existing Imperial Irrigation District transfer water, conserved water from planned canal lining programs, and projected supplies from future seawater desalination project(s). These additional supplies developed by the Water Authority help to reduce demands on Metropolitan, and therefore decrease the impact from reductions in Metropolitan's supplies. This is demonstrated in the calculations shown in **Table 5-8**.

As discussed in **Section 5.2**, Metropolitan has yet to adopt drought allocation procedures. Lacking any definitive methodology, a simplifying assumption was made to estimate the Water Authority's share of Metropolitan's drought supplies. For this example, it is assumed that Metropolitan's allocation process results in a drought supply allotment equal to 80 percent of the Water Authority's M&I demand on Metropolitan. In the example, Water Authority supplies are set at 20,000 acre-feet per year. Total M&I supply availability is computed by combining Water Authority supplies and Metropolitan M&I drought supplies (**Table 5-8**).

As noted in **Section 5.1**, IAWP supply is subject to up to a 30 percent reduction prior to cutbacks in imported M&I supplies (Full Service water) from Metropolitan. In this example the 30 percent cutback has occurred, resulting in an initial imported IAWP supply of 13,642 acre-feet. At this time, Metropolitan has not made clear what will occur if further IAWP reductions are needed beyond the initial 30 percent cut. However, the Water Authority, as agreed to by the TAC, has applied any further cutback to the remaining IAWP demands at an equal level as M&I demand reduction. Thus, an additional 20 percent cutback (the M&I cutback) on the remaining IAWP supply is taken. This results in a net 44 percent reduction to IAWP supply availability (**Table 5-8**).

Table 5-8
Supply Availability (AF)

M&I Supply Availability

Allocation-Year M&I Demand	273,360
SDCWA Supply	20,000
M&I Demand on Metropolitan	253,360
Metropolitan Cutback to M&I Supplies	20%
Net Metropolitan M&I Supply Availability	202,688
Total SDCWA M&I Supply Availability	222,688
Net Cutback to Imported M&I Supply	18%

IAWP Supply Availability

Allocation-Year IAWP Demand	19,300
Metropolitan Cutback to IAWP Supply	30%
Initial IAWP Supply	13,510
Additional Cutback to Initial IAWP Supply (based on Metropolitan M&I Cutback level)	20%
Additional Cutback Volume	2,702
Total IAWP Supply Availability	10,808
Net Cutback to IAWP Supply	44%

5.2.5 Member Agency Allocation of Water Authority Supplies

One of the final steps in the allocation methodology is to determine the agency level allocation of available M&I and IAWP supplies. This is calculated by multiplying total available supplies by each agency's percent share of the adjusted base period demand (base period for IAWP), as shown in the following equation:

$$= (\text{Available Regional Imported Supply Type}) \times (\text{Agency's Pro-rata Share of Demand Type})$$

For the example, data from **Tables 5-6, 5-7, and 5-8** are used to calculate M&I and IAWP allocations for the sample agencies. The results are shown in **Table 5-9**.

**Table 5-9
Supply Allocation Volumes**

Agency	Pro-rata Share of Adjusted Base Period SDCWA M&I Demands	SDCWA M&I Allocation Volume	Pro-rata Share of Base Period IAWP Demands	IAWP Allocation Volume
A	0.8%	1,781	0.0%	0
B	2.3%	5,122	98.5%	10,646
C	71.3%	158,777	1.0%	108
D	16.2%	36,075	0.5%	54
E	9.4%	20,933	0.0%	0
Total	100.0%	222,687	100.0%	10,808

Unless Water Authority supply cutbacks are severe, at or exceeding 30%, the calculation is now complete and each agency knows their allocated volume of Water Authority supplies. If the cutback is severe, the methodology includes a regional reliability adjustment, which is discussed in the next section.

5.2.6 M&I Regional Reliability Adjustment (if needed)

In accordance with Principle 15, which states, *“In order to protect the economic health of the entire region, it is very important for the allocation methodology to avoid large, uneven retail impacts across the region. The methodology should include a minimum level of retail agency reliability to ensure equitable allocation among the member agencies,”* a regional M&I reliability floor was established. The floor, if needed, is set at 5% below the region’s total M&I level of service and is triggered when the net cutback to total Water Authority supplies reaches or exceeds 30 percent. Taking into account the supply development by the Water Authority, its member agencies, and Metropolitan, this level of cutback is very unlikely. The first step in determining the adjustment is calculation of the M&I level of service for each member agency and region, which is shown below.

Level of Service

The level of service value is computed as the ratio of total supplies available to an agency, including allocated imported supplies and local resources, to projected M&I demand during that same period. Thus, in order to calculate Level of Service estimates, projected member agency allocation-year demand and supply projections are necessary.

Table 5-10 contains estimated allocation-year M&I demands and supplies used for this example. The second column titled, M&I Demand on SDCWA, has been computed for this example by adding the demand increase associated with the growth adjustment and the estimated loss of local potable supply volume to the base period M&I demand. Included in the next column are projected allocation-year local potable supplies used to offset imported demand. These supplies are calculated by subtracting the assumed volumetric loss of local potable supply from the base period average of local potable supplies. Finally, brackish groundwater and recycled water use projections are based on member agency estimates of allocation-year facility operations.

Table 5-10
Allocation-Year Demand and Supply (AF)

Agency	M&I Demand on SDCWA	Local Potable Supplies	Recycled & Brk GW Supplies	Total M&I Demands
A	2,220	0	80	2,300
B	6,620	0	0	6,620
C	192,600	24,000	4,500	221,100
D	45,380	0	3,800	49,180
E	26,540	4,200	6,000	36,740
Total	273,360	28,200	14,380	315,940

Summing an agency's M&I allocation volume (**Table 5-9**) and projected allocation-year total local supplies (**Table 5-10**) results in their total M&I supply during a cutback. This value is then divided by the projected total M&I demand (**Table 5-10**) to generate the agency's estimated M&I level of service. A summary of agency level allocations and resulting levels of service is shown in **Table 5-11**. The M&I level of service of the agencies' and region are utilized in severe cutback levels to calculate the regional reliability adjustment.

Table 5-11
Allocation and Resulting Level of Service (AF)
20% Cutback to Metropolitan M&I Supply

Available Supply

M&I 222,688

Agency	Pro-rata Share of Adjusted Base Period SDCWA M&I Demand	SDCWA M&I Allocation Volume	Estimated Local Potable Supplies	Estimated Recycled & Brk GW Supplies	Total M&I Supply	Projected Total M&I Demand	M&I Level of Service
A	0.8%	1,782	0	80	1,862	2,300	80.9%
B	2.3%	5,122	0	0	5,122	6,620	77.4%
C	71.3%	158,777	24,000	4,500	187,277	221,100	84.7%
D	16.2%	36,075	0	3,800	39,875	49,180	81.1%
E	9.4%	20,933	4,200	6,000	31,133	36,740	84.7%
Total	100.0%	222,688	28,200	14,380	265,268	315,940	

Total Regional M&I Level of Service - (265,268 / 315,940) = 84%

Net 44% cutback to IAWP demand results in 56% IAWP level of service for IAWP program participants

M&I Regional Reliability Adjustment Calculation

The regional M&I reliability floor effectively reallocates a portion of the Water Authority's M&I supplies necessary to bring all agencies up to the minimum M&I level of service. This floor is set at five percent below the region's total M&I level of service and is triggered when the net cutback to total Water Authority M&I supplies reaches or exceeds 30 percent. The volume of imported supplies required to meet this shortfall is provided by those agencies with a total M&I level of service exceeding the region's total M&I level of service. An agency's contribution is calculated by multiplying its pro-rata percent share of the aggregated exceedance volumes by the total M&I level of service shortfall. However, an agency's contribution cannot exceed quantities that would lower its total M&I level of service below the regional M&I level of service.

Data from the previous example is used to illustrate the regional M&I reliability floor adjustment procedure. In this scenario the reduction in Metropolitan's M&I supply is elevated to 40 percent. As a result, the net cutback in Water Authority total M&I supplies increases to 37 percent, which triggers the reliability adjustment. A detailed summary of the regional M&I reliability floor calculation is shown in **Table 5-12**.

5.2.7 Data Reconciliation

Since allocations are based on estimated values, an assessment of each agency's actual demand and supply utilization during a cutback is necessary. Through this process, a final accounting of appropriate allocation volumes will be calculated. The reconciliation of certified and actual data will occur at the end of the allocation period or at the end of twelve months, whichever comes first. Agencies are required to certify the following information: number of new meters, M&I and IAWP demands, and local use from potable and recycled sources.

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Table 5-12
Regional Reliability Floor (AF)
40% Cutback to Metropolitan M&I Supply

Available Supply

M&I **172,016**
IAPW **8,106**

Regional Reliability

Regional M&I Level of Service(214,596/315,940)= **68%**
Regional M&I Reliability Floor (-5%) **63%**

Level of Service

Agency	Pro-rata Share of Adjusted Base Period SDCWA M&I Demand	SDCWA M&I Allocation Volume	Pro-rata Share of IAPW Demand	IAPW Allocation Volume	Estimated Local Potable Supplies	Estimated Recycled & Brk GW Supplies	Total M&I Supply	Projected Total M&I Demand	M&I Level of Service
A	0.8%	1,376	0.0%	0	0	80	1,456	2,300	63.3%
B	2.3%	3,956	98.5%	7,984	0	0	3,956	6,620	59.8%
C	71.3%	122,647	1.0%	81	24,000	4,500	151,147	221,100	68.4%
D	16.2%	27,867	0.5%	41	0	3,800	31,667	49,180	64.4%
E	9.4%	16,170	0.0%	0	4,200	6,000	26,370	36,740	71.8%
Total	100.0%	172,016	100.0%	8,106	28,200	14,380	214,596	315,940	

Regional M&I Reliability Floor Reallocation

Agency	Total M&I Floor Check	Total M&I Shortfall	Pro-rata Share of Total M&I Shortfall	Exceedance of Regional Reliability Average	Exceedance Volume	Pro-rata Share of Exceedance	Exceedance Agency Contribution	Revised SDCWA M&I Allocation	Revised M&I Level of Service	Total Level of Service
A	0%	0	0%	0.0%	0	0.0%	0	1,376	63.3%	63.3%
B	-3.2%	215	100%	0.0%	0	0.0%	0	4,171	63.0%	47.4%
C	0.0%	0	0.0%	0.4%	799	31.0%	67	122,580	68.3%	68.3%
D	0.0%	0	0.0%	0.0%	0	0.0%	0	27,867	64.4%	64.3%
E	0.0%	0	0.0%	3.8%	1,775	69.0%	148	16,022	71.4%	71.4%

Shortfall Calculation

Exceedance Calculation

M&I Reallocation

5.3 Member Agency Transfers Secured Following Allocation Methodology

The Water Authority's member agencies have the option of purchasing water from an entity and using, among other facilities, the State Water Project, the Colorado River Aqueduct, Metropolitan's distribution system, and the Water Authority's distribution system to wheel the water. In addition to the cost of the transfer water, the member agency would pay the applicable wheeling rate to utilize these facilities. This transfer water would not be considered a Water Authority supply or local supply when allocating Water Authority supplies under the methodology included in the DMP. Rather, the transfer water would be "on top" of the allocation, and thus, not factored into the allocation methodology base period or be eligible for the local project development adjustment.

Water Authority staff will assist member agencies in entering into agreements with the wheeling entities. Additionally, the Water Authority may need to be a signatory to some of the wheeling agreements, such as an agreement with Metropolitan. However, it will be the member agency's responsibility to find the transfer water, enter into an agreement with the selling entity, and comply with any other requirements (e.g. CEQA, NEPA). Any transfer water identified by the Water Authority during its search that it chooses not to purchase will also be available for purchase by its member agencies.

Section 6 - Water Authority/Member Agency Coordination

6.1 Introduction

Communication and coordination between agencies, the public, and public officials are vital for the successful implementation of the DMP elements. To facilitate this effort, two member agency groups will be formed to handle coordination of activities and communication. The first group is the Member Agency Advisory Team (advisory team) that will assist the Water Authority's General Manager with issues that arise during the implementation of the DMP. This will include actions related to implementation of the Drought Response Matrix (**Section 4**) and the Allocation Methodology (**Section 5**). The second group is a Drought Communication Team (communication team) that will aid in the coordination of communications with the press and public. The existing Joint Public Information Council (JPIC) can sit as the communication team.

Please note that while the communication team will only need to convene once a drought has begun, as with the advisory team, communications about water supplies and conservation are an on-going activity by the Water Authority and its member agencies. These activities currently occur through the JPIC, making that body the logical group to assume the responsibilities of the communication team. During a supply shortage, communication activities will increase and closer coordination will be necessary. This section describes the advisory team and the communications strategy.

6.2 Member Agency Advisory Team

The advisory team will be made up of the general managers of the Water Authority's member agencies or their representatives. The advisory team will focus on decisions related to actions included in the Drought Response Matrix, including the Allocation Methodology. The intensity of the drought will determine how often the advisory team meets. It may meet infrequently if water is only being withdrawn from storage, or the meetings may be scheduled monthly and possibly more often if the allocation of water begins. Also, during the implementation of the Drought Response Matrix actions, policy issues may arise where the Water Authority's General Manager may desire input from the member agencies before making a recommendation to the Water Authority's Board of Directors. The advisory team could be convened at this time to provide input. The policy decisions related to implementation of the matrix actions could include recommendations on:

1. What drought response action(s) to take to avoid rationing;
2. How much to spend to avoid rationing;
3. Adding a new rule to adjust the base period for an exception; and
4. Modifying a portion of the DMP that is not working as expected.

The advisory team will also be the body to which a member agency may appeal should the Water Authority's General Manager deny an adjustment during rationing. Should the

member agency want to appeal the advisory team's recommendation, it may then ask the Water Authority's Board of Directors for a review.

Additionally, the Water Authority's General Manager may wish to convene the advisory team to provide an update on supply conditions or conservation performance during a drought. This meeting may simply be for communication purposes or for further input to develop new programs to help avert the impacts of a drought.

6.3 Communication Strategy

During drought periods, it is necessary for any responsible water agency to activate an established drought communication strategy. The purposes of such a strategy are manifold, but all activities need to result in the reduced consumption of water during the drought period.

Given that priority, the remaining purposes include:

1. To ensure that all constituents believe they are being treated fairly in relationship to all other constituents;
2. To satisfy the political community that the agencies have done a good job managing the drought;
3. To cause constituents to understand that all reasonable steps have been taken to avoid the need to restrict water consumption during a drought;
4. To avoid the confusion of different jurisdictions asking their constituents to react substantially differently from other, proximate jurisdictions; and
5. To emerge from the drought period having demonstrated an agency's ability to provide leadership, good planning, equality and to have minimized the impacts of water shortages on its constituents.

For our purposes, communications is defined as the following:

“A two-way flow of information contrasted to the one-way dictates of a person or entity in power.”

Communication involves making plans, discussing those plans with those who are impacted, taking suggestions from those impacted and modifying the plan to respond to those needs. Issuing a press release that states, “everyone must reduce their water consumption by 10 percent,” is not sufficient communication. Thus, any communications strategy must include a process for feedback and plan modification. By the very nature of drought, the impacts can range from slight (during the early years of a drought period) to dramatic or onerous (during the latter years of a drought period). A communications strategy must account for the level of alarm to avoid later non-compliance due to the “cry-wolf” syndrome and to maintain credibility in the media.

A communication team has been established as part of the DMP to address this two-way flow of information on a Water Authority and member agency level. Additionally, the communication team will be able to coordinate information flow to/from the media, public officials, and the general public when needed. As part of the communication strategy, the Water Authority should also make an effort to coordinate communications with water agencies in Riverside County that share the same source of water from Metropolitan.

6.4 Five Phases of Drought Response

The Communications Strategy has five phases with respect to drought conditions, including a normal period. While the correlation between events (available water supply) and the duration of the drought is imperfect, experience indicates that Southern California, in general, can manage through three years of drought without great inconvenience to consumers. Historically, year four and beyond of a drought have resulted in calls for serious reductions in water use. A drought continuing beyond year four could result in mandatory reductions of deliveries to member agencies of Metropolitan and corresponding reductions in deliveries to sub-agencies of Metropolitan's member agencies, including reductions to, and by, the Water Authority.

Since the Water Authority is dependent on Metropolitan for water imported from other hydrologic basins, a drought period localized to San Diego County may not result in water shortages if adequate imported water is available. At the same time, heavy rainfall in San Diego County occurring during a lengthy dry period on the watersheds of the Colorado River and the California State Water Project could result in water-use restrictions during a local deluge. These anomalies are likely not well understood by most consumers in San Diego County (or any other county, for that matter) and will need to be part of a consumer education process.

Each of the five phases of drought response is described below, along with suggested activities to take.

6.4.1 Normal Periods

A normal period is the condition where available water supplies more or less match demand with little water left over for storage for use in some future year. This occurs prior to the stages included in the Drought Response Matrix, which are shown in **Section 4**. This condition is permanent in Southern California. Without regard to calendar year 2005, and in all probability, 2006, Metropolitan and its member agencies tend to be in water balance give or take a few hundred thousand acre-feet of water. While demand remains somewhat constant, supply hits peaks and valleys over any running period of time. On average, water supply and demand tend to be close to one another. Averages only work, however, when there is adequate storage to hold water made available by the peak wet years in order to deliver that water during the dry years. Absent such storage, the ability to meet consumer demands year in and year out would be seriously hampered.

Southern California water agencies would be oscillating from drought to abundance on a regular basis.

Actions taken by the Water Authority and its member agencies during normal periods to diversify supplies include implementation of Best Management Practices, development of brackish groundwater and seawater desalination projects, increasing the use of recycled water, and increasing the amount of local storage. The Water Authority and its member agencies will continue the effort to educate consumers about the need for, and the cost of, these types of projects.

Urging people to conserve water as part of a daily routine is a continuous process. Such lifestyle conservation often causes a “hardening of demands.” Demand hardening makes it more difficult to conserve additional supplies during a drought. This is taken into account in the Communication Strategy and accommodated during drought planning. Activities during this phase are considered part of “normal” business activities, the communication team does not need to convene for normal periods other than to continue its work as the JPIC.

Normal Period Activities

Normal period communication represents essentially what the Water Authority and its member agencies currently do – offer a high quality, multifaceted public outreach and education program in the form of news releases, publications, brochures, participation in special events, tours, and the remainder of its comprehensive program. As part of this DMP, the following steps will be added to the “everyday” communication tasks:

1. A current list of all people who have attended tours of Water Authority facilities will be maintained. Communications with these people will be held from time to time by way of letters or broadsides addressed to this special group of community leaders who have some inside information and may be viewed by their peers as a “water expert”.
2. An e-mail list of drought coordinators at all member agencies, cities, and the county will be created and maintained. The coordinators for member agencies would include the agency’s general manager or representative and communication team member. The list will be updated on a continuous basis. This list will be used to communicate how the Water Authority and its member agencies need to react to whatever drought stage is current. Suggestions from these people will be encouraged. The people on this list will be contacted before a program or drought event goes public. Such a list may already exist as the JPIC. Special efforts should be made to keep this list current.
3. A separate list of contacts at the offices of all municipal, county, state and federal elected officials will be created and maintained. During a drought emergency, a quick message to them about what the Water Authority’s message will be to the general public will be distributed.

4. E-mail lists will be kept current by sending a message to each list once every three months with the following message: “The Water Authority is attempting to keep this list current in the event of a drought emergency. If there is change in your organization, please respond to this message with the name of the new person.” If e-mails are returned as undeliverable, staff will need to research the reason.

6.4.2 Phase One

Phase One of the Communication Strategy occurs when Metropolitan experiences shortages in its imported water supply (from either the Colorado River or the State Water Project, or both) and must remove water from storage to meet normal demand. In all likelihood, during Phase One, the Water Authority will be in the “Voluntary” column of its Drought Response Matrix. This could be the first year of a multi-year dry period, but that cannot be known in advance. What is known is that Metropolitan will likely begin the following year with less water in storage than it had at the beginning of the year. If year two is a wet year and Metropolitan is able to restore its storage while meeting all normal demands, the period has passed with little notice or concern by most consumers. Nonetheless, as part of the communications process, consumers will need to be made aware that the water agencies are dipping into their savings account to meet demand. Consumers will also need to be reminded that conserving water now leaves more water for the future. The communication team will convene to discuss the supply situation, review any new communication messages that the Water Authority is formulating as a result of the supply situation and provide feedback. The Water Authority’s obligation is to take into account comments received from the member agencies through the communication team and make modifications as appropriate. Because the communication team is, by its nature, a large group, team members have an obligation to ensure that comments are on point and additive to the communication process.

Phase One Activities

Phase One communications will include monthly updates to the drought coordinators list that might coincide with a meeting of the board of directors where a similar update might be provided. An advisory will also be prepared for the media – print and electronic – that explains what the current drought means to the state and region and how the Water Authority has prepared to cope with it. This advisory is, in effect, a status report to the media that is not intended for publication, but rather for the media’s edification. If it does get published, that’s acceptable, but it is important for the Water Authority to continue maintaining personal relationships with members of the media by making them insiders to what is going on. Thus, if the drought should worsen, the media is not surprised as events unfold and also does not need a crash education course on water supplies. Media outlets in Riverside County that may be outside the Water Authority’s usual media program should be included in drought news. Contact with media that primarily serve consumers outside of the Water Authority’s service area should, as a courtesy, be coordinated with the local Metropolitan Water District member agency or agencies. The

communication team will be able to review and provide feedback to the Water Authority on advisories, as well as other messages to be distributed to the public.

The media's help will be sought to urge people to be conscious of how they are using water and advising them that reducing use now will help everyone in the future if the drought continues. This will be used as an opportunity to help ensure people understand how well the Water Authority and Metropolitan have positioned themselves to deal with the early stages of drought. The elected officials' e-mail list will also be employed. Hearing news from the Water Authority first, before being read in or heard on the media will establish the Water Authority as the primary message carrier on drought. Brief messages on a monthly basis to this list should be adequate unless conditions approach very serious levels of water shortages.

6.4.3 Phase Two

Phase Two could occur in year three or four of a dry period and represents that point in time when Metropolitan may restrict water deliveries to its member agencies through one means or another, but the Water Authority has adequate water either in storage or purchased from outside the region to avoid rationing to its member agencies. In all likelihood, the Water Authority would be in the "SDCWA Supply Enhancement" column of its Drought Response Matrix under Phase Two.

Phase Two communications require that people substantially reduce their use of water to retain water in storage for the following year. Phase Two should communicate the importance of water-use reductions without implying a sense of dire urgency. Consumers should be told that the more they conserve during Phase Two, the less would be the impact in the event of a Phase Three. The communication team will continue to convene to discuss the supply situation, review any new communication messages that the Water Authority is formulating as a result of the supply situation and provide feedback.

Phase Two Activities

Phase Two communications are essentially the same as in Phase One, except the communication is more frequent and the communication team is drawn into the message-building activities. This is an even more important opportunity to explain the Authority's preparedness in relation to other parts of the drought-stricken area that may not be as well prepared and that the Water Authority and its member agencies have anticipated this problem and are dealing with it. The communication team e-mail list will be used in making sure that messages are reasonably consistent throughout the service area. Coordination with Metropolitan's drought team will also be a priority, because they will have materials and easy access to data and to media contacts that may be of use to the Water Authority. Because of the joint reliance on the Skinner Treatment Plant by multiple agencies, coordination with other Metropolitan member agencies is important. During Phase Two it would be appropriate to begin preparing print and broadcast advertising that can be placed very quickly, if needed, in Phase Three.

6.4.4 Phase Three

Phase Three could occur in year four or five of an ongoing drought. It represents the period when Metropolitan is unable to meet all member agency demands and locally supplied or purchased and wheeled water is inadequate to make up the difference. In all likelihood, the Water Authority will be in the “Mandatory Cutbacks” column of its Drought Response Matrix under Phase Three.

Phase Three Activities

In this phase, the communications strategy needs to have solid results in terms of reducing demand, and a sense of urgency must be communicated to consumers. At the same time, consumers must understand the nature of the matter – that this is the fourth or fifth year of an on-going drought; that the Water Authority and its member agencies have been managing their resources well; that the duration of the drought cannot be known and that every gallon saved this year is a gallon that will be available next year should the drought continue. Communication during this period will likely result in the most contentiousness as member agencies and consumers are asked to make significant sacrifices. Because of differing levels of local supplies and local political philosophies, member agencies may perceive different levels of concern and want to protect their customers from more urgent messages. The communication team should be sensitive to this potential. Differences in localized responses to a drought emergency should be discussed openly within the communication team in order to avoid conflicting messages in media that transcends political borders and tends to confuse consumers.

One of the possible consequences of calls for urgent conservation is that after such sacrifices it could start raining during the winter months negating the effects of the drought and allowing some people to be critical of the agencies because they seemingly sacrificed for nothing. Because water sales are reduced, sales revenue to that agency is reduced. That, in turn, raises the water rate to cover fixed costs. Nearly every staff member and board member has heard consumers complain that “I reduced my water use and they raised my rates. Maybe I should have used more.” These are potential outcomes that must be addressed in any communications strategy.

Most agencies established a separate fund made available to stabilize rates during such periods. The DMP TAC endorsed the use of rate stabilization funds during this period. In this phase, communication with the communication team and the elected officials list is critical. The Water Authority must determine how all of its member agencies will be impacted; are there opportunities outside of what has been identified to supplement supplies?; can elected officials help spread the message? The communication team will involve the media in weekly briefings either in person or via e-mail. High demand water users, such as the California Landscape Contractors Association, Biotech Trade Assoc., agriculture, and hotel/motels, will be contacted by the Water Authority or the member agencies as appropriate to determine to what degree, if any, they can reduce water use. Paid advertising on radio, television, and newspapers will be considered if it is determined necessary to supplement media outreach through news contacts, interviews,

reporter briefings, and news releases. The tour guest list should be considered as a source of information within local neighborhoods where community leaders are regarded by some as water experts. To the extent that their peers approach them for information about the drought or how well the Water Authority and its member agencies are responding, the better informed they are, the better will be the information they pass along to their peer group.

Before the DMP allocation methodology is implemented, the elected officials e-mail list should be used to explain to them what is about to happen. The Water Authority should post a graphic on its website showing reservoir capacities and levels and the media should be advised that they are welcome to pull that graphic off the website for use as often as they can use it. Trained people will be assigned to take media calls at all hours. These people must be available and they must know how to respond.

6.4.5 Phase Four

Phase Four is a situation where water must be reserved for health and safety purposes. The Water Authority would be in the “Mandatory Cutbacks” column of its Drought Response Matrix under Phase Four. This is the unlikeliest of events, but plans must be made to address it. In this phase, Metropolitan is drastically restricting deliveries through one means or another and the Water Authority, although enhancing Metropolitan’s supplies with its own, is passing a large portion of the shortage through to its member agencies. The drought event will be major news within the region and the communication team will likely be in reactive mode rather than a proactive mode. If the steps noted below in the first four phases are taken, the Water Authority and member agencies will be well positioned to be viewed as having acted proactively during the first four phases and are responding honestly and competently to the drought.

Phase Four Activities

In Phase Four, the media will be covering this story on a daily basis and severe water restrictions will be in place. The communication team will be prepared to receive numerous complaints of inequities and the wasting of water. Additionally, water sensitive businesses (nurseries, car washes, etc.) will be seeking relief and it is possible that the state will have declared a drought emergency. Communications during this phase will be largely reactive. Nonetheless, the e-mail lists noted above, as well as the steps the Water Authority and its member agencies took prior to this phase will provide the perception in the media that the agencies are drought experts. If Sacramento has ordered certain severe conservation measures, as Metropolitan will have done already, the Water Authority will be chasing the story rather than managing it. A program of paid advertising specific to water conservation activities should be developed as part of the Phase Two activities and discussed with the communication team so they can be distributed in short order. While the Water Authority would likely be the primary “spokesagency” in the *San Diego Union-Tribune* for the region, member agencies will be encouraged to play the same role with local newspapers as well as with local politicians to explain their own situation since local supplies may vary. Because of Metropolitan’s

size and significance in supplying water, it is possible that the media will turn to that organization for drought information. The Water Authority will ask Metropolitan, should the local media contact them, to refer the media to the Water Authority for information specific to the region.

Table 6-1, on the following page, provides a summary of the phases of the General Communication Strategy discussed above. The Drought Response Matrix stage anticipated under each phase is also identified in the table. Please refer to **Section 4** for details on Drought Response Matrix stages.

6.5 Conclusion

The Communication Strategy presented in this section serves as a guidebook for the Water Authority if the San Diego region is ever faced with a prolonged drought situation. The phases and corresponding activities may vary because each drought situation is unique, but with a strategy available, the Water Authority and its member agencies will be able to be proactive if a long-term drought scenario occurs. The advisory team is also a critical element in implementation of the Drought Response Matrix and Allocation Methodology of the DMP. Successful implementation of these two elements will only occur through coordination with the member agencies.

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Table 6-1
General Communication Strategy

<u>Normal Period</u> Supplies and Demands Balance	<u>Phase One</u> (Response Matrix Stage: Voluntary)¹ Metropolitan Withdraws Water From Storage to Meet Demands	<u>Phase Two</u> (Response Matrix Stage: Supply Enhancement) Metropolitan Supplies Short, Water Authority Total Supplies Meet Demands	<u>Phase Three</u> (Response Matrix Stage: Mandatory Cutbacks) Metropolitan Supplies Restricted, Water Authority Supplies Restricted	<u>Phase Four</u> (Response Matrix Stage: Mandatory Cutbacks) Supplies at Health and Safety Level
Current Outreach	Convene communication team as needed	Communication team meets monthly	Communication team meets at a minimum weekly	Communication team meets daily
Create and maintain list of tour attendees, drought coordinators, elected officials	Monthly updates to drought coordinators	Same activities as Phase One	Weekly media briefings	Continue media briefings
Check e-mail lists every three months	Prepare, review, and distribute media advisory	Coordinate with Metropolitan's Drought Team	Weekly elected officials briefing	Continue elected official briefings
Utilize Public Access Television	E-mail elected officials on monthly basis		Drought speakers bureau implemented	Paid Advertising
			Advertising if possible	Continue other steps taken previously
			Graphics on website	
			Utilize trained phone personnel to respond to drought-related inquiries	

¹ Refer to **Section 4** for details on the Drought Response Matrix stages shown.

Section 7– Summary

The Water Authority anticipates that through implementation of member agency and Water Authority planned projects and successful implementation of Metropolitan’s Integrated Water Resources Plan, a higher degree of reliability will be attained in the region to avoid rationing levels experienced during the 1987-1992 drought. While the region has plans to provide a high level of reliability, there will always be some level of uncertainty associated with maintaining and developing local and imported supplies. The DMP encompasses not only a way to allocate water when supplies fall short of demands, but it addresses ways to avoid rationing through supply enhancement. The DMP also contains a strategy to communicate with the Water Authority’s stakeholders regarding water supplies. The DMP, combined with the Water Authority’s Urban Water Management Plan and Regional Facilities Master Plan, serve as excellent planning tools to provide guidance to the Water Authority and its member agencies on maintaining and planning for water supply reliability within the San Diego region.

Working collaboratively with the member agencies, the Water Authority was able to prepare a comprehensive DMP that contains the following elements:

1. *Initial principles that helped frame the issues and guide discussions at the TAC meetings in development of the DMP elements, including the supply allocation methodology included in **Section 2**.*
2. *A Drought Response Matrix that identifies potential actions that the Water Authority can take to avoid an allocation of water supplies to the member agencies. The Drought Response Matrix is described in **Section 4**.*
3. *A methodology for the allocation of Water Authority supplies (**Section 5**) that achieves the following:*
 - a. *Encourages local supply development and increased regional reliability through the use of the local supply development adjustment, conservation credits, and tying an allocation of water to Water Authority demands rather than total retail demands;*
 - b. *Achieves equity among member agencies by adjusting for local supply development, growth, loss of local supplies, and demand hardening; and*
 - c. *Avoids large uneven retail impacts to the region during the deepest stage of a drought by implementing the regional reliability adjustment which brings agencies up to a minimum allocation floor.*
4. *A communication strategy that identifies a phased approach to coordinating with member agencies, public, and media in response to drought conditions. (**Section 6**)*

The DMP serves as guidance to the Water Authority and its member agencies. With the many unknown conditions associated with any potential long-term drought, the Water Authority understands that elements of this plan may need to be modified to meet the needs at that time. With the DMP in place, the Water Authority and its member agencies will be better prepared to work with the public to minimize the effects of a prolonged drought.

Appendix 2-2: San Diego County Water Authority Staff Recommendation to Increase to a Level 2 Drought Alert

WATER PLANNING COMMITTEE

AGENDA FOR

JULY 24, 2014

Yen Tu - Chair
John Linden – Vice Chair
Mark Watton – Vice Chair
Brian Brady
Jerry Kern
Jim Madaffer

Marty Miller
Jim Murtland
Dennis Sanford
Javier Saunders
John Simpson
Fern Steiner
Mark Weston

1. Roll call – determination of quorum.
2. Additions to agenda (Government Code Section 54954.2(b)).
3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.
4. Chair’s report.
4-A Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

1. Notify the Water Authority member agencies of a Regional Drought Response Level 2, Drought Alert condition, and declare Stage 2 of the San Diego County Water Authority’s Water Shortage and Drought Response Plan.
Staff recommendation:
 1. Approve notification to the Water Authority member agencies of a Regional Drought Response Level 2, Drought Alert condition, which under the Model Drought Ordinance includes mandatory water use restrictions;
 2. Declare Stage 2 of the San Diego County Water Authority’s Water Shortage and Drought Response Plan; and
 3. Do not pursue dry-year supplies at this time due to severe statewide drought conditions and limited water transfer opportunities.
(Action)

Ken Weinberg/
Dana Frieauf



III. INFORMATION

1. Water Resources report.

Ken Weinberg

IV. CLOSED SESSION

V. ADJOURNMENT

Doria F. Lore
Clerk of the Board

NOTE: This meeting is called as a Water Planning Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.

July 16, 2014

Attention: Water Planning Committee

Notify the Water Authority member agencies of a Regional Drought Response Level 2, Drought Alert condition, and declare Stage 2 of the San Diego County Water Authority's Water Shortage and Drought Response Plan. (Action)

Staff recommendation

1. Approve notification to the Water Authority member agencies of a Regional Drought Response Level 2, Drought Alert condition, which under the Model Drought Ordinance includes mandatory water use restrictions;
2. Declare Stage 2 of the San Diego County Water Authority's Water Shortage and Drought Response Plan; and
3. Do not pursue dry-year supplies at this time due to severe statewide drought conditions and limited water transfer opportunities.

Alternative

None.

Fiscal Impact

There is no fiscal impact to the Water Authority associated with the staff recommendation.

Background

California is currently in the third year of a significant state-wide drought resulting in severe impacts to California's water supplies and its ability to meet all of the water demands in the state. Due to the critically dry conditions and resulting low storage levels, the Department of Water Resources (DWR) has taken the unprecedented action of allocating only five percent of the State Water Contractors delivery requests in 2014. According to the State Water Resources Control Board (SWRCB), more than 400,000 acres of farmland are expected to be fallowed this year, thousands of people may be out of work, communities risk running out of drinking water, and fish and wildlife will suffer. Some severely affected communities have implemented water rationing, limiting water use in some cases to only 50 gallons per person per day and banning all outdoor watering.

Because of the severe drought conditions, the governor declared a state of emergency in January 2014 and called for increased voluntary conservation statewide. In response to the governor's call for increased voluntary conservation and to preserve supplies in storage should 2015 be dry, the Water Authority Board of Directors on February 13, 2014 declared implementation of Stage 1, Voluntary Supply Management, of the Water Authority's Water Shortage and Drought Response Plan (WSDRP). The Board also approved notification to the member agencies of a Regional Drought Response Level 1, Drought Watch condition. The voluntary level was the appropriate first step and was consistent with the Governor's call and the San Diego region's water supply situation. Due to reduced water use over the last few years and the substantial regional and local reliability investments made in local supplies, long-term Colorado River

transfers and storage in Southern California, the region was able to enter the current drought period at a voluntary level.

Since the February 2014 Board action on drought response, conditions have further deteriorated and drought actions by the state have been heightened. In May 2014, Metropolitan Water District (MWD) staff reported to their Board that they plan to take approximately 1.1 million acre-feet out of storage in 2014 to meet demands, or close to 50 percent of available storage reserves. In addition, Metropolitan also reported that reduced storage levels and critically dry conditions next year could result in the need to allocate supplies to its member agencies in 2015. MWD has formed a member agency workgroup to review its Water Supply Allocation Plan (WSAP), develop any recommended revisions for the MWD Board consideration and prepare for 2015, if allocations are necessary.

Locally, the San Diego region has had extremely hot and dry conditions over the past six months. The January through May period was the warmest on record at Lindbergh Field, with average temperatures being exceeded in each month. The average daily maximum temperature was an extraordinary seven degrees above normal in May 2014. Due to the combination of dry conditions and extreme temperatures, regional water use – both agricultural and Municipal and Industrial – increased by approximately 10 percent over the first 5 months of 2014 when compared to the same wetter and cooler months in 2013. Typically, dry, above-normal conditions are expected to result in an approximate nine percent increase in water use on an annual basis over an average weather year. June average daily maximum temperature cooled slightly, but was still 1.7 degrees above normal. Water use this June was similar to June 2013 levels, which had an average daily maximum temperature below normal. The National Weather Service temperature outlook for the July through September period remains at above average. It should be noted that longer-term trends show regional water use has declined, having dropped over 20 percent since 2007.

With little snowpack accumulation on April 25, 2014, the governor issued another executive order to further strengthen the state's ability to effectively manage water and protect wildlife habitat in drought conditions. He called on all Californians to redouble their conservation efforts. The executive order contained a number of directives for state agencies. One of the directives required the SWRCB to conduct a statewide survey of urban agencies on their actions to reduce water usage and the effectiveness of those efforts. Results from the survey were discussed at a June 17, 2014 SWRCB meeting and, based on responses received at that time, there has been an estimated five percent decrease in water production. The reduction figure was updated at the July 15, 2014 SWRCB meeting, based on new and more accurate data, to a one percent increase in water production.

The April 25, 2014 executive order also directed the SWRCB to adopt and implement emergency regulations pursuant to Water Code Section 1058.5, as it deems necessary to prevent "the waste and unreasonable use of water." On July 15, 2014, the SWRCB adopted an emergency regulation for statewide urban water conservation. The emergency regulation is directed at reducing outdoor urban water use to promote conservation. The regulation targets

individual water uses by identifying practices that every Californian should abstain from during this drought emergency, as well as actions local water agencies should take to reduce water demand in their service areas. As stated by the SWRCB, the regulation is an immediate action needed to effectively increase water conservation statewide to help preserve the state's supplies throughout a continuing drought that could last through 2015 or beyond. SWRCB materials containing specific information on the final emergency regulation will be distributed at the Board meeting.

The emergency regulation consists of two main sections: 1) water waste prohibitions applicable to all Californians, which, if violated, could result in a \$500 fine; and 2) requires water suppliers to activate their drought response plans at a level that includes mandatory outdoor water use restrictions. The water waste prohibitions and mandatory water supplier actions being ordered by the SWRCB are encompassed in the Water Authority's Model Drought Ordinance adopted by the member agencies. By enacting a Level 2 Drought Alert, member agencies would comply with the emergency regulation. Failure of water suppliers to comply with the emergency regulation can result in fines of up to \$10,000 per day.

Discussion

Since earlier this year, staff has been reporting to the Water Planning Committee on the trend in overall water use in the region as well as the challenge of reducing demand when weather conditions continue to be abnormally hot and dry. As noted previously, above-normal temperatures and dry conditions are expected to result in higher demands for water, especially as we enter the peak summer irrigation period. The hot weather combined with the substantial hardening of water demand, resulting from the successful efforts of residents and businesses in San Diego County to use less water indoors and outdoors, has made achieving additional savings on a voluntary basis more difficult.

As we look towards potential water supply conditions in 2015, we see a downscaling of expectations of precipitation in the Sierra watersheds from current El Niño conditions by the National Oceanic and Atmospheric Administration (NOAA), Scripps Institute and other weather forecasters. The uncertainty of next year's weather, Metropolitan's estimate of withdrawing nearly 50 percent of its storage reserves this year, and the lack of demand reduction being seen these first six months of 2014 require a greater focus on preparing for the implications of a potential fourth consecutive dry year in 2015. These are the factors on a statewide basis behind the SWRCB actions, and Water Authority staff believes similar action by San Diego county water agencies to protect storage reserves and prepare for 2015 is fully warranted. For those reasons, Water Authority staff is recommending the Board take the next step in managing the current drought conditions and notify its member agencies of a Level 2, Drought Alert, and move to Stage 2 in its WSDRP.

In the emergency regulation, the SWRCB recognized that local water agencies with Water Shortage Contingency Plans adopted under their Urban Water Management Plans are in the best position to manage drought response. The emergency regulation affects member agencies as it specifically requires them to move to the mandatory level of their Shortage Contingency Plans,

which for the San Diego region is a Level 2 Drought Alert of the Model Ordinance, described in greater detail below. As a wholesale agency, the Water Authority has a limited role in implementing the mandatory water conservation measures due to the inability to enforce restrictions at the customer level. In addition, with the member agencies already reporting water production data, the Water Authority providing regional water use data would result in double counting, because the state will compile all the production data to determine the statewide conservation efforts. For these reasons, the emergency regulation adopted by the SWRCB on July 15, 2014 does not apply to wholesale water agencies. As the regional wholesale agency, the Water Authority still maintains a very important role in coordinating drought response actions within the San Diego region.

After approval of the regulation on July 15, 2014, they were submitted to the Office of Administrative Law. Once approved by the OAL, the regulation would go into effect on or about August 1.

Staff Recommended Drought Response Actions

The staff recommendations are based on three primary findings: 1) preserve water supplies in storage to minimize cutbacks should drought conditions continue through 2015 or beyond; 2) continued extreme drought conditions in the San Diego region will have a major influence on water use; and 3) assist member agencies in compliance with SWRCB emergency regulation.

Notify Member Agencies of a Drought Response Level 2, Drought Alert

In March 2008, the Board approved a Model Drought Response Conservation Program Ordinance (Model Ordinance) for use by member agencies in updating their existing ordinances. The intent of the Model Ordinance was to coordinate member agency drought response on a regional level. The Model Ordinance contains four distinct drought response levels that include water- use restrictions for each level. The severity of restrictions progressively increase with each level as the water supply situation worsens, and actions that cause economic harm are deferred to the later response levels. Table 1 contains information on the levels contained in the model ordinance.

Table 1: Model Drought Response Ordinance Levels		
Levels	Use Restrictions	Trigger
1: Drought Watch	Voluntary	Applies when there is a probability of shortage and increased demand reductions are required in order to ensure sufficient supplies will be available.
2: Drought Alert	Mandatory (up to 20% cutback)	Applies when there are supply shortages and increased demand reductions are required in order to ensure sufficient supplies will be available.
3: Drought Critical	Mandatory (up to 30% cutback)	
4: Drought Emergency	Mandatory (up to 40% cutback)	

All the member agencies updated their ordinances based on the Water Authority's model, with some modifications that primarily pertain to the water waste prohibitions. Based on supply conditions and other drought actions, the Water Authority will identify the applicable level and

provide notification to the member agencies. It is the responsibility of the member agency to declare the existence of a specific drought response level and take corresponding actions. Some of the agencies' ordinances are linked to the Model Ordinance and require the Water Authority's notification before moving to the corresponding level.

Based on the SWRCB emergency regulations and the need for increased demand reductions in order to ensure sufficient supplies will be available if 2015 is dry, staff is recommending declaration of a Level 2 mandatory condition. Moving to Level 2 will make mandatory those restrictions at Level 1, plus add additional restrictions. Table 2, provides a summary of the key measures included in the Model Ordinance.

Table 2: Key Measures of Water Authority Model Ordinance	
Level	Key Measures
1: Drought Watch	Water waste prohibitions, for example: Eliminating inefficient landscape watering (no runoff) Stop washing down paved surfaces Wash vehicles using hand-held hose with shut-off nozzle Use re-circulated water to operate ornamental fountains
2: Drought Alert	Level 1 restrictions apply Assigned watering days (3 days – summer and 1 day- winter) Limit watering time (10 min/station)
3: Drought Critical	Level 1,2 restrictions apply Assigned watering days (2 days – summer and 1 day- winter) Restriction on issuance of meters
4: Drought Emergency	Level 1,2,3 restrictions apply Prohibit landscape irrigation (with some exceptions)

Those member agencies that have structured their ordinance based on the Model Ordinance and trigger Level 2, should be in compliance with the emergency regulations section regarding implementation of mandatory conservation measures. Level 1 contains the water waste prohibitions contained in the first section of the regulations. By implementing Level 2, the agencies will be implementing their water shortage contingency plans to a mandatory level.

Declare implementation of Stage 2, Supply Enhancement, of the Water Authority's Water Shortage and Drought Response Plan

In May 2006, the Water Authority Board of Directors adopted a Water Shortage and Drought Response Plan (WSDRP) as a prudent planning measure in the event that the region is faced with potential supply shortages. The WSDRP provides guidance to the Board on possible regional actions that can be taken to minimize or avoid the impacts due to shortages. The plan takes an orderly, progressive approach to try to lessen economic hardship for residents and businesses in San Diego County. The three regional stages of the WSDRP and potential conditions that could trigger a certain stage are shown in Table 3.

Table 3: Water Authority WSDRP Regional Stages and Potential Triggers	
Stage	Potential Trigger
Stage 1: Voluntary Supply Management	MWD has been experiencing shortages in its imported water supply and is withdrawing water from storage due to drought conditions to meet demands
Stage 2: Supply Enhancement	Entered into a prolonged drought with a high likelihood of cutbacks or actual cutbacks from MWD and securing supplemental supplies can minimize the impact
Stage 3: Mandatory Cutbacks	MWD is allocating supplies to its member agencies and implementation of the Water Authority's allocation methodology is required

Due to the high likelihood of MWD allocating supplies in 2015, should conditions continue to be dry in 2015, staff is recommending declaration of Stage 2 of the WSDRP. Even though Stage 2 signals a need to consider securing dry-year supplies, such as spot transfers, staff is recommending the Water Authority not pursue acquiring dry-year supplies at this time. This recommendation is based on the limited opportunities and high costs due to the scarcity of water supplies in California.

Consistent with the WSDRP, staff is closely monitoring supply and demand conditions along with the actions of state agencies and MWD. Staff will report to the Board should conditions change and further drought response actions are warranted. In the fall, staff also plans to provide the Board supply outlook scenarios for the San Diego region that assume MWD will allocate supplies to its member agencies in 2015. The scenarios will take into account any modifications made to the MWD WSAP through the current member agency review process.

Prepared by: Dana L. Frieauf, Acting Water Resources Manager
Prepared and Reviewed by: Ken Weinberg, Director of Water Resources
Approved by: Maureen A Stapleton, General Manager

July 16, 2014

Attention: Water Planning Committee

Water Resources Report

Purpose

This report includes the following exhibits for June 2014:

- Rainfall totals for the month and water year to date
- Deliveries to Member Agencies (Exhibit A)
- Water Use by Member Agencies (Exhibit B)
- Storage Available to Member Agencies (Exhibit C)
- Firm Water Deliveries to Member Agencies (Exhibit D)
- Summary of Water Authority Member Agency Operations (Exhibit E)

RAINFALL TOTALS (inches)						
	June 2014		2013-2014 WATER YEAR (October 2013 through September 2014)			
Station	Actual	Normal	Actual	Normal	Departure	% Normal
Lindbergh Field (N.O.A.A.)	0.00	0.07	5.01	10.14	(5.13)	49
Lake Cuyamaca (Helix W.D.)	0.00	0.20	15.81	31.44	(15.63)	50
Lake Henshaw (Vista I.D.)	0.00	0.14	11.60	25.38	(13.78)	46

Sources: National Weather Service, Helix Water District, Vista Irrigation District.

MONTHLY WATER RESOURCES REPORT

Water Deliveries to Member Agencies

(acre-feet)

JUNE 2014

AGENCY	June		12 Months Ended June	
	2014	2013	2014	2013
Carlsbad M.W.D.	1,838.0	1,845.5	17,801.0	17,248.0
Del Mar, City of	96.2	149.2	1,084.9	1,147.0
Escondido, City of	2,236.2	1,931.5	23,462.7	22,656.1
Fallbrook P.U.D.	1,204.0	1,250.1	13,311.2	12,453.9
Helix W.D.	3,330.1	3,429.4	34,337.7	28,767.9
Lakeside W.D.	370.4	391.4	3,765.9	3,664.5
National City, City of	243.7	-	2,733.2	603.4
Oceanside, City of	2,612.1	2,722.4	24,762.9	24,140.6
Olivenhain M.W.D.	2,368.2	2,278.3	22,088.2	20,886.7
Otay W.D.	3,269.4	3,220.0	33,409.2	31,883.6
Padre Dam M.W.D.	1,198.1	1,168.8	12,033.9	11,842.1
Pendleton Military Reservation	5.8	4.3	49.2	45.1
Poway, City of	1,350.3	1,156.0	13,199.2	12,080.7
Rainbow M.W.D.	2,286.4	2,218.1	23,216.7	22,103.8
Ramona M.W.D.	784.3	743.6	7,022.5	6,957.0
Rincon Del Diablo M.W.D.	687.1	706.4	7,026.3	6,781.2
San Diego, City of	23,279.7	17,270.9	211,071.3	187,079.0
San Dieguito W.D.	712.8	620.2	5,597.9	2,394.8
Santa Fe I.D.	1,343.0	1,283.5	10,819.6	5,969.3
South Bay I.D.	1,315.8	0.1	10,017.8	2,024.3
Vallecitos W.D.	1,767.1	1,781.2	17,900.0	17,432.2
Valley Center M.W.D.	2,980.5	3,170.2	29,606.6	29,235.8
Vista I.D.	1,755.6	1,347.9	18,439.5	17,397.9
Yuima M.W.D.	544.9	366.9	4,534.2	2,200.0
Deliveries To SDCWA Agencies	57,579.7	49,055.9	547,291.6	486,994.9
Less: Deliveries to SDCWA Storage ¹	6,006.0	357.0	24,839.0	4,981.8
TOTAL MEMBER AGENCY DELIVERIES	51,573.7	48,698.9	522,452.6	482,013.1
Deliveries to South Coast Water District	16.9	40.9	207.5	494.1
Deliveries From SDCWA Storage	-	460.3	5,101.9	11,212.2

¹ June 2014 storage account deliveries totaled 5,921 AF, 73 AF and 12 AF to San Vicente (SR-76), Lower Otay, and Sweetwater Reservoirs, respectively.

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PRIMA
Water Resources Department

MONTHLY WATER RESOURCES REPORT

Estimated Water Use by Member Agency

(acre-feet)

JUNE 2014

AGENCY	Imported Source S.D.C.W.A.		Local Sources						June Totals	
	2014	2013	Surface Water		Groundwater		Reclaimed Water		2014	2013
			2014	2013	2014	2013	2014	2013		
Carlsbad M.W.D.	1,750.4	1,728.5	-	-	-	-	569.9	462.4	2,320.3	2,190.9
Del Mar, City of	96.2	149.2	-	-	-	-	18.1	13.7	114.3	162.9
Escondido, City of	2,159.9	1,871.8	204.0	733.5	-	-	87.1	81.5	2,451.0	2,686.8
Fallbrook P.U.D. ¹	1,228.3	1,296.3	-	-	10.6	10.7	85.0	78.6	1,323.9	1,385.6
Helix W.D.	3,274.5	3,311.7	1.3	-	12.9	9.8	-	-	3,288.7	3,321.5
Lakeside W.D.	370.4	391.4	-	-	49.6	58.6	-	-	420.0	450.0
National City, City of ²	238.8	-	-	330.2	204.9	239.5	-	-	443.7	569.7
Oceanside, City of ²	2,612.1	2,722.4	-	-	347.2	169.5	15.2	17.9	2,974.5	2,909.8
Olivenhain M.W.D.	2,368.8	2,278.3	-	-	-	-	348.4	339.0	2,717.2	2,617.3
Otay W.D.	3,269.4	3,220.0	-	-	-	-	527.3	583.4	3,796.7	3,803.4
Padre Dam M.W.D.	1,198.5	1,182.6	-	-	-	-	106.8	120.7	1,305.3	1,303.3
Pendleton M.C.B. ³	22.7	45.2	-	-	780.0	781.0	140.0	139.0	942.7	965.2
Poway, City of ⁴	1,353.8	1,379.6	-	-	-	-	105.0	103.5	1,458.8	1,483.1
Rainbow M.W.D.	2,386.4	2,360.1	-	-	-	-	-	-	2,386.4	2,360.1
Ramona M.W.D.	628.3	644.1	-	-	-	-	92.0	104.5	720.3	748.6
Rincon Del Diablo M.W.D.	687.1	706.4	-	-	-	-	179.3	288.4	866.4	994.8
San Diego, City of	17,320.3	16,758.3	2,068.9	2,235.9	48.6	50.2	750.0	754.8	20,187.8	19,799.2
San Dieguito W.D.	712.8	620.2	-	-	-	-	86.0	90.9	798.8	711.1
Santa Fe I.D.	1,352.3	1,287.8	-	-	-	-	71.7	67.7	1,424.0	1,355.5
South Bay I.D. ²	1,289.0	-	-	1,302.1	179.9	182.6	-	-	1,468.9	1,484.7
Vallecitos W.D.	1,753.8	1,745.1	-	-	-	-	-	-	1,753.8	1,745.1
Valley Center M.W.D.	2,980.5	3,170.2	-	-	-	-	34.4	33.7	3,014.9	3,203.9
Vista I.D.	1,755.6	1,347.9	225.9	623.8	-	-	-	-	1,981.5	1,971.7
Yuima M.W.D.	544.9	366.9	-	-	45.3	95.5	-	-	590.2	462.4
TOTAL USE	51,354.8	48,584.0	2,500.1	5,225.5	1,679.0	1,597.4	3,216.2	3,279.7	58,750.1	58,686.6
PERCENT CHANGE	6%		-52%		5%		-2%		0%	

¹ De Luz figures included in Fallbrook P.U.D. total.² Brackish groundwater use included in groundwater totals.³ Pendleton's imported water use includes water delivered by South Coast Water District.⁴ Poway recycled use is reported quarterly.

MONTHLY WATER RESOURCES REPORT
Reservoir Storage
 (acre-feet)

EXHIBIT C

JUNE 2014

Member Agency	Reservoir	Capacity	JUNE 2014	% of Capacity	JUNE 2013	% of Capacity	Change During Month
Carlsbad M.W.D.	Maerkle	600	180	30%	294	49%	2
Escondido, City of ¹	Dixon	2,606	2,440	94%	2,372	91%	(7)
	Wohlford	6,506	1,922	30%	2,042	31%	(72)
Subtotal		9,112	4,362	48%	4,414	48%	(79)
Fallbrook P.U.D.	Red Mountain	1,335	430	32%	360	27%	(7)
Helix W.D.	Cuyamaca	8,195	551	7%	747	9%	(85)
	Jennings	9,790	8,690	89%	9,081	93%	(90)
Subtotal		17,985	9,241	51%	9,828	55%	(175)
Poway, City of	Poway	3,330	3,132	94%	2,717	82%	66
Rainbow M.W.D.	Beck	625	0	0%	0	0%	(0)
	Morro Hill	465	164	35%	68	15%	(135)
Subtotal		1,090	164	15%	68	6%	(135)
Ramona M.W.D.	Ramona	12,000	2,648	22%	2,681	22%	105
San Diego, City of ²	Barrett	34,806	7,493	22%	16,385	47%	(1,346)
	El Capitan	112,807	34,357	30%	60,083	53%	(2,735)
	Hodges	30,251	2,640	9%	5,778	19%	(29)
	Lower Otay	49,849	30,238	61%	35,058	70%	(2,104)
	Miramar	6,682	5,577	83%	5,302	79%	126
	Morena	50,694	1,857	4%	7,641	15%	(72)
	Murray	4,684	4,106	88%	4,137	88%	61
	San Vicente	89,312	48,341	54%	35,919	40%	2,612
Subtotal	Sutherland	29,508	2,837	10%	3,268	11%	(109)
Subtotal		408,593	137,445	34%	173,572	42%	(3,595)
San Dieguito WD/Santa Fe ID	San Dieguito	883	492	56%	719	81%	25
Sweetwater Authority	Loveland	25,400	8,224	32%	8,956	35%	(127)
	Sweetwater	28,079	3,784	13%	8,061	29%	(72)
Subtotal		53,479	12,008	22%	17,017	32%	(199)
Valley Center M.W.D.	Turner	1,612	1,275	79%	1,433	89%	-
Vista I.D. ³	Henshaw	51,774	4,676	9%	5,366	10%	(809)
MEMBER AGENCY TOTAL WATER IN STORAGE		561,793	176,053	31%	218,468	39%	(4,800)
SDCWA Accounts (city evap/seepage losses estimated) ⁴	El Capitan		0		4,452		-
	Hodges		8,522		5,666		(648)
	Olivenhain	24,789	18,021		18,413		195
	Lower Otay		65		436		62
	San Vicente		23,125		1,885		5,569
Subtotal	Sweetwater		13		0		12
Subtotal			49,746		30,852		5,190
TOTAL WATER IN STORAGE		586,582	225,799	38%	249,320	43%	389
OTHER AGENCIES							
Metropolitan Water District	Skinner	44,264	38,706	87%	37,519	85%	1,738
	Diamond Valley	800,000	506,947	63%	658,168	82%	(53,088)
State Water Project	Oroville	3,537,600	1,511,388	43%	2,557,762	72%	(222,793)
TOTAL OTHER WATER IN STORAGE		4,381,864	2,057,041	47%	3,253,449	74%	(274,143)

¹ Excludes storage allocated to Escondido Mutual Water Co. or its rights to a portion of the unallocated water in Lake Henshaw.

² Includes reserves subject to city's outstanding commitments to San Dieguito WD, and California American Mutual Water Co. (Cal-Am)

³ SDCWA has storage contracts in City of San Diego reservoirs in the amount of 40,000 AF, if available capacity exists.

⁴ Includes allocated and unallocated water in Lake Henshaw.

⁵ City of San Diego and the Water Authority completed a paper transfer for February. Final monthly figures available at end of March. The Water Authority exchanged 1,304 AF in El Capitan and San Vicente accounts, in exchange for a like amount of water in Lake Hodges.

MONTHLY WATER RESOURCES REPORT
Tier 1 Estimated Deliveries to Member Agencies
(Figures in acre-feet)

Calendar Year 2014 Through June

Member Agency	CY2014 Tier 1 Threshold ¹	CYTD Firm Deliveries	% of Tier 1 Threshold (Pre-QSA)
Carlsbad M.W.D.	12,376.0	8,596.9	69.5%
Del Mar, City of	935.0	488.6	52.3%
Escondido, City of	17,859.0	11,690.2	65.5%
Fallbrook P.U.D.	10,325.0	6,459.5	62.6%
Helix W.D.	25,519.0	16,160.1	63.3%
Lakeside M.W.D.	3,168.0	1,819.0	57.4%
Oceanside, City of	19,383.0	12,176.1	62.8%
Olivenhain M.W.D.	13,071.0	10,576.2	80.9%
Otay W.D.	21,390.0	15,921.3	74.4%
Padre Dam M.W.D.	9,939.0	5,657.7	56.9%
Pendleton M.C.B./South Coast W.D.	758.0	107.2	14.1%
Poway, City of	9,348.0	6,016.1	64.4%
Rainbow M.W.D.	19,018.0	11,099.1	58.4%
Ramona M.W.D.	8,052.0	3,390.6	42.1%
Rincon Del Diablo M.W.D.	5,482.0	3,255.7	59.4%
San Diego, City of	144,555.0	86,436.3	59.8%
San Dieguito W.D.	3,116.0	2,675.4	85.9%
Santa Fe I.D.	5,226.0	5,209.3	99.7%
Sweetwater Authority	9,650.0	7,867.6	81.5%
Vallecitos W.D.	10,557.0	8,463.3	80.2%
Valley Center M.W.D.	29,774.0	13,955.2	46.9%
Vista I.D.	11,876.0	9,194.4	77.4%
Yuima M.W.D.	2,165.0	2,067.8	95.5%
MEMBER AGENCY TOTALS	393,542.0	249,283.6	63.3%
Less: QSA deliveries calendar year to date		(88,849.8)	
Less: ESP deliveries calendar year to date ²		0.0	
Deliveries to CWA storage year to date ³		25,102.2	
Deliveries from CWA storage year to date ⁴		(280.5)	
Estimated Tier 1 deliveries calendar year to date ⁵		185,255.5	47.1%
Invoiced Tier 1 deliveries calendar year to date ⁵		184,699.3	46.9%

¹ Tier 1 threshold is 60% of a member agency's historic maximum year firm demand.

² Emergency Storage Program (ESP) deliveries under Metropolitan's program designated by city of San Diego.

³ Includes forced deliveries and deliveries made through temporary carryover storage agreements and to Olivenhain Reservoir.

⁴ Includes sales from Water Authority storage accounts.

⁵ "Estimate" based on member agency deliveries, net of QSA deliveries and storage puts/takes. "Invoice" is as reported on Metropolitan's invoice.

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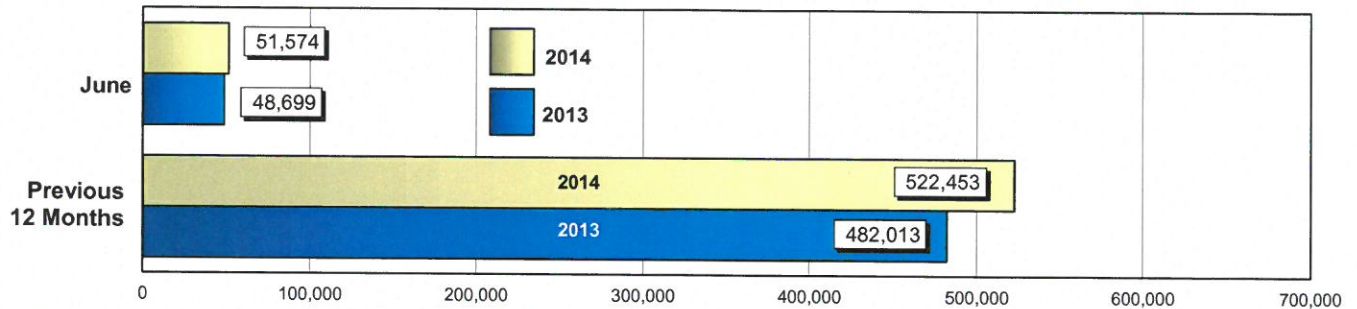
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MONTHLY WATER RESOURCES REPORT

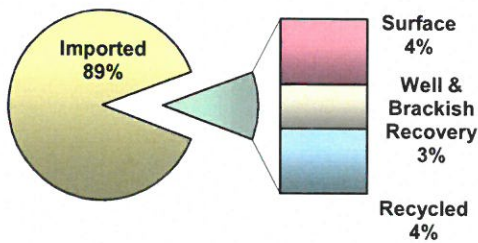
Summary of Water Authority Member Agency Operations

JUNE 2014

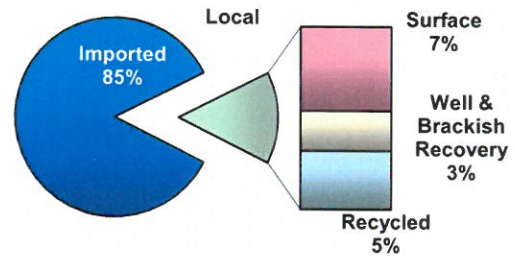
Member Agency Deliveries (AF)



Member Agency Water Use

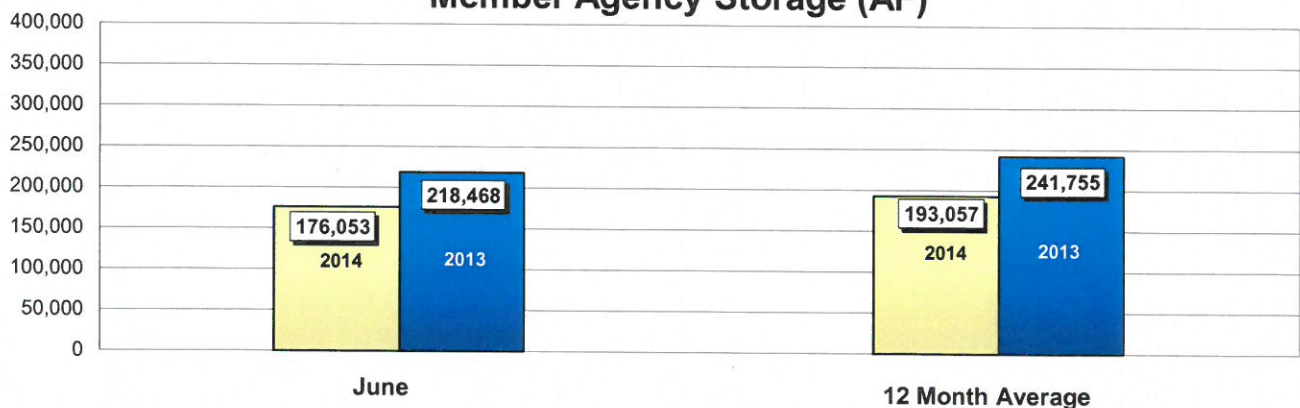


JUNE 2014



Previous 12 Months

Member Agency Storage (AF)



PRIMA
Water Resources Department

Appendix 2-3: Drought Actions taken by Local Project Sponsors in Response to 2014 Drought



**MAYOR KEVIN L. FAULCONER
CITY OF SAN DIEGO**

FOR IMMEDIATE RELEASE
Wednesday, April 23, 2014

CONTACT:
Craig Gustafson at (619) 453-9880 or cgustafson@sandiego.gov

NEWS RELEASE

Faulconer Calls for Voluntary Water Conservation Measures *Mayor Supports Declaration of Drought Response Level 1*

San Diego, CA – Today Mayor Kevin L. Faulconer announced his support for a Declaration of a Water Emergency that calls for voluntary measures to conserve water in the City of San Diego.

The declaration – Drought Response Level 1, Drought Watch Condition – asks San Diegans to take voluntary steps to reduce water demand in anticipation of a supply shortage.

"I want to thank San Diegans for continuing to save water and remind them that conservation is paramount as we continue to diversify our City's water supply to gain water independence," Faulconer said. "Water conservation should be a way of life regardless of whether a drought or emergency is officially declared."

The City Council's Environment Committee unanimously supported the declaration Wednesday and it now moves forward to a vote by the full City Council. If approved, it would go into effect July 1 due to drought conditions in California.

The voluntary measures include:

- Watering only during 3 assigned days per week
- Limiting the use of fire hydrants to fire fighting, construction, health and safety
- No irrigation during rain
- Using hose with a shutoff nozzle or timer for irrigation
- **Using recycled water for construction purposes, when available**

Faulconer also urged San Diegans to sign up for "My Water Pledge," a friendly competition between cities across the country to see which is more water-wise. San Diego currently ranks second in pledges among major U.S. cities in the challenge. Go to mywaterpledge.com to make your pledge to conserve water.

###

Article 7: Water System**Division 38: Emergency Water Regulations**

("Emergency Water Regulations" added 10-19-1998 by O-18596 N.S.)

§67.3801 Declaration of Necessity and Intent

- (a) This Division establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the City of San Diego Water Department service area in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times.
- (b) In addition to the general provisions of Section 67.3803, this Division establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available water supplies.
- (c) Drought Response Level 1 measures are voluntary and will be reinforced through local and regional public education and awareness measures. Drought Response condition Levels 2 or higher become increasingly restrictive in order to attain escalating conservation goals.
- (d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this Division are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies as provided in Chapter 1 of this Code.

(Renumbered from Sec. 67.38 and retitled to "Declaration of Emergency" on 10-19-1998 by O-18596 N.S.)

(Former Section 67.3801 repealed and added "Declaration of Necessity and Intent" 12-15-08 by O-19812 N.S.; effective 1-14-2009.)

§67.3802 Definitions

The following words and phrases whenever used in this Division will have the meaning defined in this section:

Customer means any person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the City of San Diego.

Days are defined as calendar days, unless otherwise indicated.

Disaster means a catastrophic, naturally occurring or man-made event, including earthquake, flood, fire, riot, or storm, for which a state of emergency has been declared by the President of the United States, the Governor of California, or the executive officer or legislative body of the City or County of San Diego.

Drought means any shortage in water supply based upon expected demands that are caused by hydrological, environmental, legislative, judicial actions, or by infrastructure failure.

Grower means a *customer* engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. Grower does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the San Diego County Water Authority Special Agricultural Rate Programs.

Metropolitan means the Metropolitan Water District of Southern California.

Potted Plant means any plant or group of plants contained in a pot or other receptacle that can be moved, including plants on boards, bark, driftwood or airplants (epiphytes).

Water Authority means the San Diego County Water Authority.

(10-2011)

Water Conservation means the efficient management of water resources for beneficial uses, preventing waste, or accomplishing additional benefits with the same amount of water.

(Renumbered from Sec. 67.38.1 and retitled to "Comprehensive Water Conservation Plan" on 10-19-1998 by O-18596 N.S.)

(Former Section 67.3802 repealed and added "Definitions" 12-15-08 by O-19812 N.S.; effective 1-14-2009.)

(Amended 10-28-2009 by O-19904 N.S.; effective 11-27-2009.)

§67.3803 Water Waste Prohibitions

The following restrictions will be in effect at all times:

- (a) A *customer* shall not allow water to leave the *customer's* property by drainage onto adjacent properties or public or private roadways or streets or gutters due to excessive irrigation and/or uncorrected leaks.
- (b) *Customers* shall repair or stop all water leaks upon discovery or within seventy-two hours of notification by the City of San Diego.
- (c) A *customer* will not use a running hose to wash down sidewalks, driveways, parking areas, tennis courts, patios or other paved areas, except to alleviate immediate safety or sanitation hazards, unless connected to a water efficient device such as a commercial water broom.
- (d) A *customer* will not overfill swimming pools and spas.
- (e) A *customer* will not use non-recirculating decorative water fountains.
- (f) Vehicle washing can only be done in a commercial car wash or using a hose with an automatic shutoff nozzle or hand held container.
- (g) Single pass-through cooling systems as part of new water service connections will be prohibited. Non-recirculating systems in all new conveyer car wash and commercial laundry systems will also be prohibited.
- (h) Restaurants and other food establishments will only serve and refill water upon request.
- (i) Guests in hotels, motels, and other commercial lodging establishments will be provided the option of not laundering towels and linens daily.

- (j) A *customer* may only irrigate *potted plants*, non-commercial vegetable gardens and fruit trees, residential and commercial landscapes, including golf courses, parks, school grounds and recreation fields, before 10:00 a.m. and after 6:00 p.m. during the months of June through October and before 10:00 a.m. and after 4:00 p.m. during the months of November through May. A *customer* may irrigate at any time the following:
- (1) as required by a landscape permit;
 - (2) for erosion control;
 - (3) for establishment, repair, or renovation of public use fields for schools and parks;
 - (4) for landscape establishment following a *disaster*. Such irrigation is permitted for a period of up to two months, after which a hardship variance is required in accordance with Section 67.3810;
 - (5) for renovation or repair of an irrigation system with an operator present; or
 - (6) for nursery and commercial *growers* using a hand-held hose equipped with a positive shut-off nozzle, a hand held container, or when a drip or micro-irrigation system or equipment is used. Irrigation of nursery propagation beds is permitted at any time.

(Renumbered from Sec. 67.38.2 and amended 10-19-1998 by O-18596 N.S.)

(Former Section 67.3803 repealed and added "Water Waste Prohibitions" 12-15-08 by O-19812 N.S.; effective 1-14-2009.)

(Amended 12-7-2010 by O-20008 N.S.; effective 1-6-2011.)

(Amended 10-3-2011 by O-20093 N.S.; effective 11-2-2011.)

§67.3804 Application

- (a) This Division applies to any *customer* in the use of any water provided by the City of San Diego.
- (b) This Division is intended solely to further the conservation of water. It is not intended to implement or replace any provision of federal, state, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff.

- (c) Nothing in this Division is intended to affect or limit the ability of the City Manager to declare and respond to an unforeseeable disaster or water emergency such as an earthquake, aqueduct break, or other major disruption in the water supply, pursuant to the City Charter or other provisions of this Code.
- (d) This Division does not apply to use of water from private wells or to reclaimed water, or the use of fully permitted grey water systems.
- (e) This Division does not apply to use of water that is subject to a special supply program, such as the *Metropolitan* Interim Agricultural Water Program or the *Water Authority* Special Agricultural Rate Programs. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program. A *customer* using both water subject to a special supply program and other water provided by the City of San Diego is subject to this Division in the use of water provided by the City of San Diego.
- (f) The use of potable water for industrial manufacturing, processing, or research and development is exempt from the water use restrictions during Drought Response Levels 1 and 2, if all of the following conditions are met as certified by the City Manager: 1) the business is one of the types of businesses described in categories 2000 through 3999, 7390, and 8730 of the Standard Industrial Classification Code [Editor's note. A copy is on file with the Office of the City Clerk as Document No. 00-18596-1]; 2) the business is located in an area where reclaimed water is available; 3) the business uses reclaimed water on its premises to the fullest extent possible; and 4) the business participates in all applicable City water conservation programs that are considered Best Management Practices by the California Urban Water Conservation Council. [Editor's note. A list of the City's water conservation programs that are Best Management Practices is on file with the Office of the City Clerk as Document No. 00-18596-2.]

(Renumbered from Sec. 67.38.3, retitled to "Authority to Implement Water Conservation Stages" and amended 10-19-1998 by O-18596 N.S.)

(Former Section 67.3804 repealed and added "Application " 12-15-08 by O-19812 N.S; effective 1-14-2009.)

§67.3805 Drought Response Level 1 – Drought Watch Condition

- (a) A Drought Response Level 1 condition is also referred to as a “Drought Watch” condition. The City Manager may recommend, and upon resolution of the City Council, declare a Drought Response Level 1 when there is a reasonable probability, due to *drought*, that there will be a supply shortage and that a consumer demand reduction of up to 10 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. Upon such declaration, the City Manager shall take action to implement the voluntary Level 1 conservation practices identified in this Division.
- (b) During a Level 1 Drought Watch condition, City of San Diego will increase its public education and outreach efforts to increase public awareness of the need to implement the following *water conservation* practices.
- (1) Limit all landscape irrigation to no more than three assigned *days* per week on a schedule established and posted by the City Manager. This provision does not apply to commercial *growers* or nurseries, nor to the irrigation of golf course greens and tees.
 - (2) Use a hand-held hose equipped with a positive shut-off nozzle or hand held container or a garden hose sprinkler system on a timer to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.
 - (3) The washing of automobiles, trucks, trailers, airplanes and other types of mobile equipment is permitted only before 10:00 a.m. or after 6:00 p.m. during the months of June through October and only before 10:00 a.m. and after 4:00 p.m. during the months of November through May, with a hand-held container or a hand-held hose equipped with a positive shut-off nozzle for quick rinses. Boats and boat engines are permitted to be washed down after use. Washing is permitted at any time on the immediate premises of a commercial car wash. The use of water by all types of commercial car washes which do not use partially recirculated water will be reduced in volume by an amount determined by resolution of the City Council. Mobile equipment washings are exempt from these regulations where the health, safety and welfare of the public are contingent upon frequent vehicle cleanings, such as garbage trucks and vehicles to transport food products, livestock and perishables.

(10-2011)

- (4) Use recycled or non-potable water for construction purposes when available.
- (5) Use of water from fire hydrants will be limited to fire fighting, meter installation by the Water Department as part of its Fire Hydrant Meter Program, and related activities or other activities necessary to maintain the health, safety and welfare of the citizens of San Diego.
- (6) Construction operations receiving water from a fire hydrant meter or water truck will not use water beyond normal construction activities, consistent with Section 67.3803 and that required by regulatory agencies. Construction projects requiring watering for new landscaping materials shall adhere to the designated irrigation hours of only before 10:00 a.m. and after 6:00 p.m. during the months of June through October and only before 10:00 a.m. and after 4:00 p.m. during the months of November through May.
- (7) Irrigation is not permitted during a rain event.

*(Renumbered from Sec. 67.38.4 and amended 10-19-1998 by O-18596 N.S.)
 (Former Section 67.3805 repealed and added "Drought Response Level 1 – Drought Watch Condition " 12-15-08 by O-19812 N.S.; effective 1-14-2009.)
 (Amended 10-28-2009 by O-19904 N.S.; effective 11-27-2009.)
 (Amended 12-7-2010 by O-20008 N.S.; effective 1-6-2011.)
 (Amended 10-3-2011 by O-20093 N.S.; effective 11-2-2011.)*

§67.3806 Drought Response Level 2 – Drought Alert Condition

- (a) A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. The City Manager may recommend and, upon resolution of the City Council, declare a Drought Response Level 2 when, due to *drought*, a consumer demand reduction of up to 20 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. Upon declaration of Drought Response Level 2, the City Manager shall take action to implement the mandatory Level 2 conservation practices identified in this Division.
- (b) All City of San Diego water *customers* shall comply with all Level 1 Drought Watch *water conservation* practices during a Level 2 Drought Alert, and shall also comply with the following conservation measures:

(10-2011)

- (1) Limit lawn watering and landscape irrigation using sprinklers to no more than ten minutes maximum per watering station per assigned *Day* during the months of June through October and no more than seven minutes maximum per watering station per assigned *Day* during the months of November through May. This provision does not apply to landscape irrigation systems using water efficient devices, including drip/micro-irrigation systems and stream rotor sprinklers.
- (2) Landscaped areas, including trees and shrubs not irrigated by a landscape irrigation system governed by Section 67.3806(b)(2) shall be watered no more than three assigned days per week by using a hand held container, hand-held hose with positive shut-off nozzle, or low volume non-spray irrigation (soaker hose.)
- (3) Stop operating ornamental fountains except to the extent needed for maintenance.
- (4) *Potted plants*, non-commercial vegetable gardens and fruit trees may be irrigated on any *day*, but must be irrigated only before 10:00 a.m. or after 6:00 p.m. during the months of June through October and only before 10:00 a.m. and after 4:00 p.m. during the months of November through May.
- (5) Irrigation is permitted any *day* at any time, as follows:
 - (A) as required by a landscape permit;
 - (B) for erosion control;
 - (C) for establishment, repair or renovation of public use fields for schools and parks; or
 - (D) for landscape establishment following a *disaster*. Such irrigation is permitted for a period of up to two months, which a hardship variance is required in accordance with Section 67.3810.

- (c) The City Manager may recommend and, upon resolution of the City Council, implement a water allocation per *customer* account served by the City of San Diego, and a schedule of surcharges or penalties for exceeding the water allocation. If the City Council adopts or modifies water allocations, the City Manager will post notice of the water allocation prior to the effective date(s). Following the effective date(s) of the water allocation as established by the City Council, any *customer* that uses water in excess of the allocation will be subject to a surcharge or penalty for each billing unit of water in excess of the allocation. The surcharge or penalty for excess water usage will be in addition to any other remedy or penalty that may be imposed for violation of this Division. The *water conservation* measures required under Level 1 Drought Watch and Level 2 Drought Alert conditions, shall be suspended during the period a water allocation is in effect.

(Renumbered from Sec. 67.38.5 and amended 10-19-1998 by O-18596 N.S.)

(Former Section 67.3806 repealed and added "Drought Response Level 2 – Drought Alert Condition" 12-15-08 by O-19812 N.S.; effective 1-14-2009.)

(Amended 10-28-2009 by O-19904 N.S.; effective 11-27-2009.)

(Amended 12-7-2010 by O-20008 N.S.; effective 1-6-2011.)

(Amended 10-3-2011 by O-20093 N.S.; effective 11-2-2011.)

§67.3807 Drought Response Level 3 – Drought Critical Condition

- (a) A Drought Response Level 3 condition is also referred to as a "Drought Critical" condition. The City Manager may recommend and, upon resolution of the City Council, declare a Drought Response Level 3 when, due to *drought*, there will be a supply shortage and that a consumer demand reduction of up to 40 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. Upon declaration of Drought Response Level 3, the City Manager shall take action to implement the mandatory Level 3 conservation practices identified in this Division.
- (b) All City of San Diego water *customers* shall comply with all Level 1 Drought Watch and Level 2 Drought Alert *water conservation* practices during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:
- (1) Limit all landscape irrigation to no more than two assigned days per week on a schedule established and posted by the City Manager. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established and posted by the City Manager. This provision will not apply to commercial *growers* or nurseries, nor to the irrigation of golf course greens.

- (2) Stop filling or re-filling ornamental lakes or ponds, except to the extent needed to sustain plants or animals that have been actively managed within the water feature prior to declaration of a *drought* response level under this Division.
 - (3) Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.
- (c) Upon the declaration of a Drought Response Level 3 condition requiring a 30 percent or greater demand reduction, new potable water services, temporary or permanent water meters, and statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) will be allowed only under the circumstances listed below. This provision does not preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted.
- (1) A valid building permit has been issued for the project; or
 - (2) The project is necessary to protect the public's health, safety, and welfare; or
 - (3) The number of new fire hydrant meters will not exceed the existing number of currently authorized fire hydrant meters. A new fire hydrant meter will be issued only when an old meter is returned; or
 - (4) The applicant provides substantial evidence satisfactory to the City Manager of an enforceable commitment that the new water demands for the project will be offset prior to the provision of new water meter(s). Such offset shall be in the form of additional *water conservation* measures, the provision of recycled water use in place of existing potable water demands, or other such offsets developed and approved by the City Manager. These offsets shall be reflected in a reduced capacity fee from the project's initially calculated demand (for example, an offset of 75 equivalent dwelling units ("edu") is provided so that the project's 200 edu demand is reduced to 125 edus and fees are paid on 125 edus but the service and meter will be sized at 200 edus).

Development projects with approved tentative maps and related entitlements shall have their maps and related entitlement's expiration dates tolled for the period of time that the Drought Response Level 3 condition is in place but not to exceed 5 years, unless the development project applicant chooses to proceed with development under subsections (c)(1) through (c)(4) above.

(10-2011)

- (d) Upon the declaration of a Drought Response Level 3 condition, the City Manager will suspend consideration of annexations to its service area.
- (e) The City Manager may recommend and, upon resolution of the City Council, implement a water allocation per *customer* served by the City of San Diego, and a schedule of surcharges or penalties for exceeding the water allocation. If the City Council adopts or modifies a water allocation, the City Manager will post notice of the allocation prior to the effective date(s). Following the effective date(s) of the water allocation as established by the City Council, any *customer* that uses water in excess of the allocation will be subject to a surcharge or penalty for each billing unit of water in excess of the allocation. The surcharge or penalty for excess water usage will be in addition to any other remedy or penalty that may be imposed for violation of this Division. The *water conservation* measures required under Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions shall be suspended during the period a water allocation is in effect.

(Renumbered from Sec. 67.38.6 and amended 10-19-1998 by O-18596 N.S.)

(Former Section 67.3807 repealed and added "Drought Response Level 3 – Drought Critical Condition" 12-15-08 by O-19812 N.S.; effective 1-14-2009.)

(Amended 10-3-2011 by O-20093 N.S.; effective 11-2-2011.)

§67.3808 Drought Response Level 4 – Drought Emergency

- (a) A Drought Response Level 4 condition is also referred to as a "Drought Emergency" condition. The City Manager may recommend and, upon resolution of the City Council, declare a water shortage emergency pursuant to California Water Code section 350 and declare a Drought Response Level 4 when there is a reasonable probability that there will be a supply shortage and that a consumer demand reduction of more than 40 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. Upon declaration of a Drought Response Level 4, the City Manager shall take action to implement the mandatory Level 4 conservation practices identified in this Division and on the grounds provided in California Water Code section 350.

(10-2011)

- (b) All City of San Diego water *customers* shall comply with all *water conservation* measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:
- (1) Stop all landscape irrigation, except crops and landscape products of commercial *growers* and nurseries. This restriction does not apply to:
- (A) Maintenance of trees and shrubs that are watered no more than two assigned days per week on a schedule established and posted by the City Manager, and by using a hand held container, hand-held hose with an automatic shut-off nozzle, or low-volume non-spray irrigation;
- (B) Maintenance of existing landscaping necessary for fire protection;
- (C) Maintenance of existing landscaping for erosion control;
- (D) Maintenance of plant materials identified to be rare, protected by City Council Policy or essential to the well being of rare animals;
- (E) Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two days per week according to the schedule established under Section 67.3807(b)(1);
- (F) Watering of livestock; and
- (G) Public works projects and actively irrigated environmental mitigation projects.
- (2) Stop filling or refilling residential pools and spas.
- (3) No new commitments or agreements will be entered into to provide water to *customers* or agencies located outside of the City of San Diego.

*(Renumbered from Sec. 67.38.7 and amended 10-19-1998 by O-18596 N.S.)
(Former Section 67.3808 repealed and added "Drought Response Level 4 –
Drought Emergency" 12-15-08 by O-19812 N.S; effective 1-14-2009.)
(Amended 10-3-2011 by O-20093 N.S.; effective 11-2-2011.)*

§67.3809 Procedures for Determination and Notification of Drought Response Level

- (a) The existence of a Drought Response Level 1 condition may be declared upon recommendation by the City Manager and resolution of the City Council, upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination will be filed with the City Clerk. The City Manager will publish a notice of the determination of existence of Drought Response Level 1 condition in the City's official newspaper. The City of San Diego may also post notice of the condition on its website.

The Water Department will monitor the projected supply and demand for water during periods of emergency or *drought* and will recommend to the City Manager the extent of the conservation required. The City Manager will recommend to the City Council the implementation or termination of the appropriate level of *water conservation* in accordance with this Division.

- (b) The existence of Drought Response Level 2 or Level 3 conditions may be declared upon recommendation by the City Manager and resolution of the City Council. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions will take effect on the tenth day after the date the response level is declared. Within five days following the declaration of the response level, the City Manager will publish a notice giving the extent, terms and conditions respecting the use and consumption of water a minimum of one time for three consecutive days in the City's official newspaper. If the City Council adopts a water allocation, the City Manager will publish notice of this adoption in the City's official newspaper. Water allocation will be effective on the fifth day following the date of publication or at such later date as specified in the notice.

(10-2011)

- (c) The existence of a Drought Response Level 4 condition may be declared upon recommendation by the City Manager and resolution of the City Council and in accordance with the procedures specified in California Water Code Sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions will take effect on the tenth day after the date the response level is declared. Within five days following the declaration of the response level, the City Manager will publish a notice giving the extent, terms and conditions respecting the use and consumption of water in the City's official newspaper. If the City Council adopts a water allocation, the City Manager will publish notice of the allocation in the City's official newspaper. Water allocation will be effective on the fifth day following the date of publication or at such later date as specified in the notice.
- (d) The City of San Diego may declare an end to Drought Response Levels 1, 2, 3 and 4 upon recommendation of the City Manager and resolution by the City Council at any regular or special meeting of the City Council.

(Renumbered from Sec. 67.38.8 and amended 10-19-1998 by O-18596 N.S.)

(Former Section 67.3809 repealed and added "Procedures for Determination and Notification of Drought Response Level" 12-15-08 by O-19812 N.S; effective 1-14-2009.)

§67.3810 Hardship Variance

- (a) If, due to unique circumstances, a specific requirement of this Division would result in undue hardship to a *customer* using City of San Diego water or to property upon which City of San Diego water is used, that is disproportionate to the impacts to City of San Diego water users generally or to similar property or classes of water uses, then the *customer* may apply for a variance to the requirements as provided in this Section.
- (b) The variance may be granted or conditionally granted, only upon a written finding of the existence of facts demonstrating an undue hardship to a *customer* using City of San Diego water or to property upon which City of San Diego water is used, that is disproportionate to the impacts to City of San Diego water users generally or to similar property or classes of water user due to specific and unique circumstances of the user or the user's property.

(1) Application.

Application for a variance will be in written form prescribed by the City Manager and will be accompanied by a non-refundable processing fee in an amount set by resolution of the City Council.

(2) Supporting Documentation.

The written application will be accompanied by photographs, maps, drawings, or other pertinent information as applicable, including a written statement of the applicant.

(3) Approval Authority.

The City Manager will exercise approval authority and act upon any completed application after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance will be promptly notified in writing of any action taken. The decision of the City Manager is final. Unless specified otherwise at the time a variance is approved, the variance applies to the subject property during the term of the mandatory *drought* response.

(4) Required Findings for Variance.

(A) Except as set forth in Section 67.3810(B), an application for a variance will be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the City of San Diego, all of the following:

- (i) that the variance does not constitute a grant of special privilege inconsistent with the limitations upon other City of San Diego *customers*; and
- (ii) that because of special circumstances applicable to the property or its use, the strict application of this Division would have a disproportionate impact on the property or use that exceeds the impacts to *customers* generally; and

(10-2011)

- (iii) that the authorizing of such variance will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the City of San Diego to effectuate the purpose of this Division and will not be detrimental to the public interest; and
 - (iv) that the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.
 - (B) An application for a variance will be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the City of San Diego, either of the following:
 - (i) that the property has been adversely impacted by a *disaster*; or
 - (ii) that proposed alternative water use restrictions for the property would result in greater water savings than the existing water use restrictions.
- (5) No relief will be granted to any *customer* for any reason in the absence of a showing by the *customer* that the *customer* has achieved the maximum practical reduction in water consumption in the *customer's* residential, commercial, industrial, institutional, agricultural or governmental water consumption.

(Renumbered from Sec. 67.38.9 on 10-19-1998 by O-18596 N.S.)

(Former Section 67.3810 repealed and added "Hardship Variance" 12-15-08 by O-19812 N.S; effective 1-14-2009.)

(Amended 10-28-2009 by O-19904 N.S; effective 11-27-2009.)

§67.3811 Violations and Penalties

It is unlawful for any *customer* to violate the mandatory provisions of this Division. Violations are subject to criminal, civil, and administrative penalties and remedies as provided in Chapter 1 of this Code. In addition, service of water may be discontinued or appropriately limited through the installation of flow-restricting devices to any *customer* who willfully uses water in violation of this Division.

(Renumbered from Sec. 67.39 and retitled to “Publication of Terms of Water Use” on 10-19-1998 by O-18596 N.S.)

(Former Section 67.3811 repealed and added “Violations and Penalties” 12-15-08 by O-19812 N.S; effective 1-14-2009.)



THE CITY OF SAN DIEGO
PUBLIC UTILITIES



FOR IMMEDIATE RELEASE

February 4, 2014

Reminder to Abide By Permanent Water Waste Restrictions

In light of the recent drought declaration by Governor Brown, due largely to supply shortages in northern and central California communities, it is important to remind San Diegans of the permanent water waste restrictions that are in force year round in San Diego, and to remember conservation as a way of life. Several years ago, the San Diego City Council approved these permanent restrictions. San Diego residents are encouraged to report water waste by calling the Water Waste Hotline at (619)533-5271, and to visit www.wastenowater.org for resources and information on how to be water wise.

The following prohibitions are now in effect at all times:

- *Customers* shall repair or stop all water leaks upon discovery within seventy-two hours of notification by the City of San Diego.
- The time of day when watering is allowed (before 10 a.m. and after 6 p.m. from June to October, and before 10 a.m. and after 4 p.m. from November to May) is a permanent restriction. This does not apply to irrigation as required by a landscape permit; for erosion control; for establishment, repair or renovation of public use fields; for landscape establishment following a disaster; for renovation or repair of an irrigation system; and for nursery and commercial growers using hand held containers, positive shut off nozzles, or drip/micro-spray systems. The City will review variance applications from customers who feel they cannot abide by this watering schedule.
- City of San Diego water customers must prohibit excessive irrigation and must immediately correct leaks in their private water systems. The City's regulations now state that customers "shall not allow water to leave their property due to drainage onto adjacent properties or public or private roadways or streets or gutters due to excessive irrigation and/or uncorrected leaks."
- Customers cannot use a running hose to wash down sidewalks, driveways, parking areas, tennis courts, patios or other paved areas, except to alleviate immediate safety or sanitation hazards, unless that hose is connected to a water-efficient device such as a commercial water broom.
- Overfilling of swimming pools and spas is strictly prohibited.
- All decorative water fountains must use a recirculating pump.

- Vehicles may only be washed at a commercial car wash or by using a hose with an automatic shutoff nozzle or with a hand-held water container.
- The City will not provide new water service connections for customers using single pass-through cooling systems.
- All new conveyer car wash and commercial laundry systems connections will be required to employ a recirculating water system.
- Restaurants and other food establishments shall only serve and refill water for patrons upon request.
- Guests in hotels, motels, and other commercial lodging establishments will be provided the option of not laundering towels and linens daily.

###



Carlsbad declares "Drought Watch," urges conservation

March 13, 2014



water-c

The Carlsbad Municipal Water District has declared a "Drought Response Level 1" and is urging residents and businesses to reduce water consumption by 10 percent.

A Drought Response Level 1, also known as a Drought Watch Condition, does not impose mandatory restrictions on water use, but it does encourage greater voluntary efforts. [Watch videos about how to save water. \(http://www.youtube.com/watch?v=up0sk4cVGYE&list=PL3FDB2D302FCE7F12&feature=share\)](http://www.youtube.com/watch?v=up0sk4cVGYE&list=PL3FDB2D302FCE7F12&feature=share)

"A Drought Level 1 involves things we do on a daily basis," said Mario Remillard, the Carlsbad Municipal Water District conservation coordinator. "But because of the current dry conditions and the governor's drought declaration, we want our residents and businesses to be more aware of the need to conserve."

Good conservation measures include:

- Irrigating residential and commercial landscape before 10 a.m. and after 6 p.m. only.
- Repairing all water leaks within five days of notification by the water district.
- No washing down of hard surfaces, such as driveways, patios, sidewalks and parking lots with a hose, unless necessary to remove safety or sanitation hazards.
- Preventing water waste from inefficient landscape irrigation, and repairing any water leaks as soon as possible.
- Washing vehicles with a bucket and hose equipped with a shut-off nozzle. Do not allow runoff to enter the street and storm drain.
- Serving water in restaurants only on request.
- Offering hotel guests the option of not having their towels and linens laundered daily.

Gov. Jerry Brown declared a drought-related state of emergency on Jan. 17 after two consecutive dry years and the start of a third. On Feb. 13 The San Diego County Water Authority's board of directors called upon the region's residents, businesses and institutions to increase water conservation efforts in response to the drought. Supplies are sufficient to carry the region through 2014, but any water conserved this year will carry into future years.

The City of Carlsbad is offering two free classes about becoming a more water wise gardener, from 9 a.m. to noon on April 9 and 10, at the City of Carlsbad Faraday Center, 1635 Faraday Ave. Click [here](http://news.carlsbadca.gov/news/learn-water-wise-gardening-at-free-class) (<http://news.carlsbadca.gov/news/learn-water-wise-gardening-at-free-class>) for more information about the classes.

The city's water district will also participate in World Water Day March 22 hosted by the Agua Hedionda Lagoon Foundation. The event includes a festival and 10- and five-kilometer runs. For information on that event, click [here](http://lagoon.aguahedionda.org/tip-top-run-world-water-day-festival-march) (<http://lagoon.aguahedionda.org/tip-top-run-world-water-day-festival-march>).

Also on March 22, the San Diego County Water Authority has teamed with Home Depot stores in Encinitas and Escondido to offer discounts on low-water-use landscaping at San Diego County Garden Friendly Plant Fairs. For more information, click [here](http://www.sdcwa.org/san-diego-county-garden-friendly-plant-fairs-offer-discounts-and-tips#sthash.OKUep2IW.dpuf) (<http://www.sdcwa.org/san-diego-county-garden-friendly-plant-fairs-offer-discounts-and-tips#sthash.OKUep2IW.dpuf>).

The Carlsbad Municipal Water District encompasses 85 percent of the city, and the Carlsbad City Council acts as the board of Directors. The [Olivenhain Municipal Water District](http://olivenhain.com/) (<http://olivenhain.com/>) and the [Vallecitos Water District](http://vwd.org/) (<http://vwd.org/>) serve the southeastern part of the city. Both those districts have also declared Drought Level 1s.

Staff from the Carlsbad Municipal Water District will provide an overview of the current water supply situation at a City Council meeting Tuesday, March 18, from 9 to 11 a.m. at 1635 Faraday Ave. This meeting is open to the public.

For more information

Visit the Carlsbad Municipal Water District's Web page at www.carlsbadca.gov/water (<http://www.carlsbadca.gov/water>), call 760-438-2722, or email water@carlsbadca.gov (<mailto:water@carlsbadca.gov>).

Visit the San Diego County Water Authority's conservation website, <http://www.watersmartsd.org/> (<http://www.watersmartsd.org/>).

City media contact

Kristina Ray, 760-434-2957, kristina.ray@carlsbadca.gov (<mailto:kristina.ray@carlsbadca.gov>)


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WE ARE HERE

DROUGHT WATCH Level 1-Voluntary

- *Up to 10% reduction
- *No new annexations
- *Restrictions: #3-13

DROUGHT ALERT Level 2-Mandatory

- *Irrigation Restrictions:
3 days per week, 10 min per station
- *Up to 20% reduction
- *No new connections
- *Restrictions #1-13

DROUGHT CRITICAL Level 3-Mandatory

- *Up to 40% reduction
- *No car washing at home
- *No pool filling
- *48 hours to fix leaks
- *Irrigation restrictions:
2 days in summer, 1 day in winter
- *Restrictions #1-13

DROUGHT EMERGENCY Level 4-Mandatory

- *More than 40% reduction
- *Irrigation for crops only
- *Potential fines
- *24 hours to fix leaks
- *Restrictions #1-13

Drought Level Restrictions

- 1: Limit landscape irrigation to 3 days per week & only 10 minutes per station. This does not apply to landscape irrigation using water-efficient devices, weather-based irrigation controllers, drip/micro irrigation systems, and the new rotating sprinkler nozzles.
- 2: If your address ends in an odd number: water Mon., Wed., & Fri. If your address end in an even number: water Tues., Thurs., & Sat.
- 3: Do not wash down paved surfaces, except when necessary for safety or sanitation hazards.
- 4: Stop water waste from inefficient irrigation, like runoff or overspray, onto non-targeted properties like roads.
- 5: Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.
- 6: Use a hand-held hose with a shut-off nozzle, or a bucket to water trees and landscaping on residential and commercial properties not watered by an irrigation system.
- 7: Irrigate nursery and commercial growers' products before 10 a.m. and after 6 p.m. only. Watering is permitted any time with a bucket or hand-held hose with a shut-off nozzle. Irrigation of nursery propagation beds and watering of livestock is permitted any time.
- 8: Ornamental fountains must recirculate their water.
- 9: Wash Vehicles using a bucket or hand-held hose with a shut-off nozzle, or high-pressure, low-volume wash system, or at a commercial site that recirculates its water. Don't wash in hot weather due to excess evaporation.
- 10: Restaurants: serve and refill water only when requested.
- 11: Hotels and motels: offer guests the option of not laundering towels and linens daily.
- 12: Repair all leaks within 72 hours of notification by FPUD, unless arrangements are made with FPUD's GM.
- 13: Use recycled or non-potable water for any construction, when available.

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Articles

Water Use Restrictions

July 17, 2014

Due to continuing drought conditions, on July 15 the State Water Resources Control Board adopted emergency statewide regulations to prevent water waste.

The regulations include ordering water suppliers to activate their drought response plans at a level that includes mandatory outdoor water use restrictions and prohibiting certain water-wasting practices by all **Californians beginning August 1.**

As our wholesaler, the San Diego County Water Authority (SDCWA) activates Level 2 of their Drought Response Plan, Rincon Water and most other water agencies in San Diego County will also activate Level 2 of each agency's Drought Response Plan. SDCWA, however is not anticipating cutbacks to its imported water supplies this year that would trigger mandatory supply cutbacks to Rincon Water customers.

Once Level 2 is activated, specific mandatory conservation measures will be required as follows. Violations will face mandatory fines of up to \$500 per day.

- Limiting outdoor watering days and times
- Watering only during the late evening or early morning hours
- Eliminating runoff from irrigation systems
- Repairing all leaks within 72 hours
- Turning off water fountains and other water features unless they recirculate water
- Using hoses with shut-off valves for washing cars (or patronizing commercial car washes that re-circulate water)
- Serving water to restaurant patrons only upon request
- Offering hotel guests the option of not laundering towels and linens daily
- Using recycled or non-potable water for construction when available

If you have not already done so, be sure to contact us for a residential water survey. There is still time to be proactive, rather than reactive. Call us at 760-745-5522 X503 to schedule your appointment.

Latest News

[Emergency Drought Regulations](#)
Due to continuing drought...

[Customer Testimonials](#)
Below are excerpts...

[Transparency Certificate of Excellence Awarded to Rincon Water](#)
October 23, 2013 - The...

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Upcoming Events

- JUL 22** 07.22.2014 4:30 pm - 6:00 pm
[Strategic Planning Workshop](#)
- JUL 24** 07.24.2014 7:30 am - 8:30 am
[Public Info & Intergov't Relations Meeting](#)
- AUG 11** 08.11.2014 8:00 am - 10:00 am
[ELRP Board Meeting](#)

1920 North Iris Lane, Escondido, CA 92028

Phone (24 hours): 760.745.5522 * Fax: 760.745.4235

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What does a "Level 1 Drought Watch" mean to you?

¿Cómo le afecta un "Nivel 1 Previsión de Sequía?"

A Level 1 Drought Watch is in effect which urges Sweetwater Authority customers to voluntarily cut water use by 10 percent. At this level, the current water rate structure remains the same. The following measures shall apply at all times:

1. Water should be used reasonably and productively at all times.
2. Customers are to keep water from draining onto adjacent properties, public or private roadways, and streets.
3. Customers are to repair major water leaks immediately and minor water leaks within 24 hours of discovery.
4. Customers are encouraged to restrict hose washing of sidewalks, driveways, parking areas, patios, or other paved areas to periods of immediate safety or sanitary hazards.
5. Customers are encouraged to use drip methods or hand-irrigation whenever possible and prudent, and to restrict sprinkler operation to the hours of 4 p.m. to 9 a.m. the following morning, except for the first 30 days necessary to establish a new lawn.
6. Customers are encouraged to use an automatic shut-off nozzle when using a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing.
7. Customers are encouraged to use re-circulating systems for decorative fountains and landscape water features.
8. Serve and refill water in restaurants and other food service establishments only upon requests.
9. Offer guests in hotels, motels and other commercial lodging establishments the option of not laundering towels and linens daily.

Level 1 - Drought Watch

NIVEL 1 - Previsión de sequía

Up to 10% Water Reduction Goal

Objetivo de reducción del consumo de agua en un 10%

Level 2 - Drought Alert

NIVEL 2 - Alerta por sequía

Up to 20% Water Reduction Goal

Objetivo de reducción del consumo de agua en un 20%

Level 3 - Drought Critical

NIVEL 3 - Sequía crítica

Up to 40% Water Reduction Goal

Objetivo de reducción del consumo de agua en un 40%

Level 4 - Drought Critical

NIVEL 4 - Emergencia por sequía

More than 40% Water Reduction Goal

Reducción del consumo de agua en más de un 40%

Governor Jerry Brown officially announced on Friday January 17, 2014 a Drought Emergency for the state of California. This was reaffirmed On April 25, 2014 when Governor Brown issued an Executive Order calling on the State to redouble state drought actions. Sweetwater Authority continues to ask customers in Chula Vista, National City and Bonita to use water wisely and efficiently. Sweetwater Authority's investments in drought-proof water resources over many decades have provided more flexibility in responding to current water supply conditions. For more information, call the Water Efficiency Helpline at 619-409-6779.

For information on the drought, visit www.sweetwater.org or call our water efficiency helpline, 619-409-6779.

