Attachment 2

Greater Los Angeles County Region
IRWM Implementation Grant Proposal
Drought Impacts

This attachment explains the regional water management impacts due to the 2014 drought and any anticipated or projected impacts if drought or dry-year conditions continue into 2015. The attachment also describes water conservation measures or restrictions that have been implemented as a result of the 2014 drought, and planned or anticipated water conservation measures if drought or dry-year conditions continue into 2015.

Drought Impacts

The Greater Los Angeles County (GLAC) IRWM Region is home to 10 million people with 84 cities and hundreds of agencies and districts responsible for the management of water resources to meet local demands and needs. Although the Region provides about 600,000 AFY of local surface water, groundwater, recycled water supplies, nearly 1 million AFY (or over 60%) of the region's demands are met by importing water from the State Water Project (SWP) and Colorado River Aqueduct (CRA) systems. This imported water is procured and managed primarily by the Metropolitan Water District of Southern California (MWD) and conveyed to contracting water supply agencies and cities to meet demands. The City of Los Angeles also imports water from the Eastern Sierra Mountains through the Los Angeles Aqueduct.

MWD and local regional suppliers have been at the forefront of both the development and implementation of programs and projects aimed at increasing the reliability of these imported supplies. Increases in regional imported surface storage capabilities and groundwater recharge have allowed regional water purveyors to take advantage of excess imported supply when available and store it for future use when supplies are limited. Demand management programs have also been widely implemented resulting in historical average municipal use of about 150 gallons per capita per day (gpcd) – which is expected to be closer to 139 gpcd as SB7x7 S (20x2020) reductions are achieved.

The GLAC Region experienced significant cutbacks to imported supply in 2008-2010 as a result of both a protracted drought and newly instated environmental restrictions limiting SWP supplies from the Bay-Delta. The results of these still recent drought conditions can be seen throughout the Region as an increased implementation of local supply development projects and conservation measures and ordinances. With only one wet year in 2011, the Region is in the middle of yet another multiple year drought.

Many of the strategic reliability measures implemented by MWD and the local purveyors have helped to protect the Region from rationing or other severe conservation measures thus far. However, as the drought continues through the summer of 2014 and with SWP allocations held at only 5%, local and imported supply stores are being depleted. For example, MWD is expecting to lose one third (or 1 million AF) of regional imported storage by the end of 2014. It is expected that if dry-weather conditions persist this winter, MWD could implement its *Water Supply Allocation Plan* which will most likely require local purveyors to implement mandatory rationing by as early as spring 2015. As a result, MWD has invested over $1 billion in water conservation, recycled water and groundwater (Regional Progress Report, February 2014) and member agencies and local water agencies have invested a like amount or more.

Locally produced surface water has also been impacted by the drought. Less than 1% of the capacity of the 14 dams spread across Los Angeles County is available for release, according to data from LADWP. Of the 183,000 AF possible, the County has only about 759 AF which represents a 22 year low. In a typical year, 75,000 acre-feet of water is spread to replenish groundwater. October 2013 through January 2014, only 6,900 acre-feet was spread.

Given the scale of the GLAC Region's population, economy, critical habitats, and ecological resources, water shortages experienced here can create massive impacts with few solutions that can be immediately

implemented to mitigate them. This has increased the immediacy of local resource development and increasingly aggressive demand management projects and programs.

Depending on the mix of local and imported supplies used by local purveyors to meet demands, there are differences in the severity and type of impact experienced within the Region as a result of this latest drought. An overview of some of the regional and local drought impacts are provided below.

DROUGHT IMPACT: At Risk of Not Meeting Existing Drinking Water Demands

If current dry-weather conditions persist throughout the state, there is a risk that mandatory rationing measures will be required by early 2015. Historic lows in precipitation have produced limited local surface supplies as well as reduced natural recharge of local groundwater basins. This has resulted in decreasing groundwater basin levels and/or increasing dependence on and depletion of imported water stores to replenish groundwater as well as to meet direct potable needs. Specific examples of existing and potential drinking water impacts are provided here, with groundwater basin impacts described under the "Groundwater Basin Overdraft" discussion below.

North Santa Monica Bay/Malibu Creek: The only groundwater basins that do exist within this area (in the Malibu Creek watershed) are not viable for potable use due to naturally poor quality (e.g., high TDS and sulfate MCL exceedances). Las Virgenes Municipal Water District (LVMWD) (a primary water purveyor in the area), also cannot use any local supply for potable use given naturally poor water quality from high total dissolved solid (TDS) levels. This has resulted in significant dependence upon MWD imported water supply. As a result, LVMWD has continued to enforce both voluntary and mandatory conservation requirements that were initiated during the previous drought in 2009. Penalties and fines have been already been assessed in 2014 to those unable to meet the mandatory drought requirements. A temporary connection to the Los Angeles Department of Water and Power (LADWP) water distribution system was also implemented to avoid further impacts.

Further demand management programs such as LVMWD's *Budget Based Rates Project* included in this application will help mitigate these and future drought impacts.

City of Los Angeles and San Fernando Valley: The Eastern Sierra has been the primary source of water for the City of Los Angeles, historically providing more than 70 percent of the City's water supply. Today, due to drier hydrologic conditions and environmental restoration commitments, the Eastern Sierra now provides less than 40 percent of the City's total water supply. This has resulted in increased reliance upon imported supplies during a time of cutbacks to those supplies. Although mandatory and voluntary conservation measures have been in place since the 2009 drought, there is concern that more aggressive measures will be needed to reduce demands if MWD implements its *Water Supply Allocation Plan* in 2015.

Projects such as the LADWP's *Mission Well Improvement Project* are needed to help further develop groundwater resources for use to offset limited imported supplies.

Crescenta Valley: This area has no access to local surface supply with only local groundwater in the Verdugo Basin and imported supplies available to meet demands. Although groundwater levels are dropping in the Basin, they must continue to develop it as a source of supply so as to not further strain limited imported water supply. If MWD does require cutbacks to imported supply in 2015, the Crescenta Valley Water District (CVWD) *Rockhaven Well Project (* included in this application) and continuing expansion of conservation programming will be needed to help CVWD meet demands. CVWD has issued an "Extraordinary Conservation" alert which mandates outdoor conservation measures.

San Gabriel Valley: California's severe drought has caused rainfall in the San Gabriel Valley to reach historic lows, causing substantial decreases to local surface supplies available for direct use and for replenishment of the Main San Gabriel Basin. In May 2012, only 30% of the storage capacity in the San Gabriel Canyon reservoirs was utilized which has further decreased to 21% as of May 2014. The combined lack of both local surface and imported replenishment water supply has caused groundwater levels in the Main San Gabriel Basin to reach historic lows (as detailed in the "Groundwater Basin Overdraft" section below). In an effort to meet demands with dwindling supplies, as of 2014, the Basin has been over-pumped to 60,000 AFY over safe yield. While this has prevented the need for mandatory rationing to date, it is recognized that the continued over-pumping of the Basin is not sustainable in the near-term and is detrimental to the overall health and

ability to restore basin levels over the long-term. If MWD reduces imported water allocations further in early 2015, there is concern that supplies will not be sufficient to meet demands.

To respond, purveyors in this area have expanded conservation programs and are also looking to better leverage recycled water as a local supply to offset potable demands in three new areas through the Upper San Gabriel Valley Municipal Water District (USGVMWD) *Recycled Water Program Expansion Project* included in this application.

Puente Valley /Six Basins: The Puente Valley's only groundwater sources are the Spadra and Puente Basins which can only be used to meet non-potable use given water quality and reliability constraints. With no local surface supplies either, the Walnut Valley and Rowland water districts are therefore 100% dependent upon imported water to meet potable needs. If MWD implements its *Water Supply Allocation Plan* and reduce allocations in 2015, this area would be more susceptible to having unmet demands. With unused supplies available in the adjacent Six Basins/Pomona groundwater basin, PBWA is seeking to prevent such drought impacts by obtaining use of supplies through the *Pomona Basin Groundwater Project* included in this application.

West Coast and Central Basin: Many of the water purveyors that operate within these areas are highly dependent upon a balance of imported and groundwater supplies to meet potable demands. Recent drought conditions have resulted in decreased imported water reliability and therefore an increased reliance on local groundwater production. There are, however, areas within the West Coast and Central Basins that have significant water quality issues either from past seawater intrusion or pollutant contamination causing some facilities and pockets of greater groundwater supply to go unused. If MWD implements its *Water Supply Allocation Plan* and reduces allocations in 2015, many water purveyors may need to implement more mandatory water conservation ordinances.

Local groundwater development and use projects included in this application such as the Water Replenishment District of Southern California (WRD) *Goldsworthy Desalter Expansion Project,* LADWP's *Manhattan Wells Improvement Project* and the City of Inglewood *Well No. 2 Rehabilitation Project* will help to mitigate against these drought impacts through improving access to local groundwater supplies. Recycled water development and use to offset potable supply needs through the *Terminal Island Water Reclamation Plant Advanced Water Purification Facility and Distribution System Expansion* and the West Basin Municipal Water District's (WBMWD) *On-Site Recycled Water Retrofits Project* are also important to limit dependence on drought impacted supplies.

DROUGHT IMPACT: At Risk of Not Meeting Existing Agricultural Water Demands

Not applicable

DROUGHT IMPACT: At Risk of Not Meeting Ecosystem Water Demands

The Malibu Creek and North Santa Monica Bay area is home to one of the few remaining steelhead trout runs in Southern California. Natural environmental flows in Malibu Creek and its tributary streams have decreased to record lows because of the recent drought. LVMWD is required to discharge tertiary treated recycled water to Malibu Creek during low flow periods to sustain habitat for endangered southern California steelhead trout when peak daily flow drops below 2.5 cfs for a specified period of time. Previous drought years have required releases of 1-2 AF (2007 & 2008) and 28 AF (2009). In contrast, due to extreme low flow conditions, habitat-related releases in 2013 totaled 259 AF. With so much recycled water being diverted for fish flows, the recycled water system required supplementation with 226 AF of potable imported water to meet non-potable customer demand. Discharges for steelhead trout in 2014 are expected to meet or exceed those of 2013. While Malibu Creek has regulations protecting environmental flows, this will become increasingly difficult to maintain if drought conditions persist as conservation efforts will further reduce recycled water supplies available for stream augmentation and imported supplies become insufficient to meet remaining potable and non-potable demands.

Additional demand management programs such as LVMWD's *Budget Based Rates Project* included in this application will help mitigate these and future drought impacts.

DROUGHT IMPACT: Drinking Water MCL Violations

Given recent cutbacks of SWP supplies to only 5% of allocations, MWD has had to significantly increase the amount of CRA supply that is used to meet regional demands. MWD has had to make physical modifications to treatments plants and local distribution systems to push CRA water farther west and north of their service area. CRA supplies have higher levels of total dissolved solids (TDS) at about 570 milligrams per liter (mg/L) compared to an average of about 280 mg/L in SWP supplies (in 2013). This can require additional blending or treatment to meet potable water permit requirements. Purveyors that traditionally receive higher ratios of CRA supply are better equipped to manage the higher TDS levels; however, there are some suppliers that, because of the 5% SWP allocation, are now receiving supplies with a higher TDS levels and are unable to use SWP or local supplies for blending. While no MCL's have been violated within the Region, there is growing concern in some areas about the ability to meet TDS permit requirements and overall salt loading within the GLAC Region.

Overall drops in groundwater levels have further challenged the ability of the West Coast Basin Barrier Project to maintain groundwater quality protection. As a result, an area with non-functioning injection wells is now observing rising chloride levels that could eventually impact local production wells. The Los Angeles County *West Basin Barrier Project Unit 12 Injection and Observation Wells Project* included in this application is essential to preventing further seawater intrusion by injecting local recycled water supply in new replacement wells.

DROUGHT IMPACT: Groundwater Basin Overdraft

San Fernando /Sylmar Basin: Groundwater levels in the San Fernando Basin are highly dependent on precipitation and the extraction rights of parties have been fixed since adjudication in 1979. Storage volume of the San Fernando Basin was 90,000 AF below the lowest level of the regulatory storage requirement in 2011/12 and the total stored water credit retained by the parties is in excess of currently available water.

Projects such as the *Los Angeles-Burbank Groundwater System Interconnection Project* and the *Mission Wells Improvement Project* will help access groundwater supplies from other areas in the Basin that are currently unused due to poor water quality and improve overall Basin functionality. However overall conservation efforts will need to be increased through projects like the Burbank Water and Power (BWP) *Be a Water Saver Conservation Program* included in this application.

Central and West Coast Basins: The West Coast and Central Basins are hydraulically linked and are therefore evaluated together. An overall average decrease in water levels by 4 feet, with some key wells showing drops in excess of 17 feet, has occurred over the past year due to drought conditions. This has resulted in a calculated annual overdraft of 153,000 AF for 2012-2013 and an estimated additional overdraft of 120,000 AFY for 2013-2014.

The West Coast Basin is recharged with underflow from the Central Basin and with a series of seawater intrusion barriers that inject imported and recycled water into the Basin along coastal areas. As a result of the drought and reduced local surface and imported replenishment in the Central Basin, overall injection rates at the barriers have needed to increase substantially (from about 10,000 AFY to 18,000 AFY) over the past 2-3 years to maintain an effective barrier to seawater intrusion.

The *West Coast Barrier Basin Project Unit 12 Injection and Observation Wells Project* included in this application is needed to raise groundwater levels to meet the protective elevations necessary to maintain full barrier protection and will therefore increase groundwater supplies available within the West Coast Basin. Increasing levels of recycled water diverted to existing spreading grounds in the absence of imported supplies, through the WRD's *Recycled Water Turnout Project,* will also help to enhance recharge at these groundwater basins for increased potable local use.

Main San Gabriel Basin: The recent June 13, 2014 elevation reading at the Main San Gabriel Basin's Key Well of 188.85 feet indicates that groundwater within the Basin has reached an all time historic low (an over 40-foot drop since 2012). Even if the next two years have normal rainfall, the Key Well groundwater elevation would continue to fall to approximately 155 feet by the end of fiscal year 2015-16. (One vertical foot is equivalent to approximately 8,000 AF of groundwater in the Main Basin.) The Basin Watermaster has

dropped the operating safe yield (OSY) of the basin by 30,000 AF over the last two years. This OSY reduction and constrained imported supplies have required local producers to over-pump the Basin at a rate of 60,000 AFY. It is widely accepted that this is not a sustainable practice.

DROUGHT IMPACT: Discharge Water TMDL Violations

The increase in TDS of imported supplies as described above also impacts the ability to meet required TDS discharge water requirements for wastewater treatment agencies. Salinity increases in the source water result in salinity increases in the wastewater entering the regional wastewater and reclamation plants. Increased salinity will either be discharged to local rivers or will impact the water quality of regional recycled water supplies. Given the current drought conditions, these higher salinity discharges also have limited local surface flows that can be used to dilute the TDS concentrations.

As an example, the Burbank Water and Power (BWP) historically uses a blend of 95% SWP and 5% CRA imported water supply. This year they are required to use 100% CRA water which has increased TDS and hardness levels in their supply by 50%. This has resulted in local customers increasing water softening units – further increasing the salt loading in wastewater flowing into the Burbank Water Reclamation Plant (BWRP). The resulting water qualities could jeopardize the ability for some water customers to continue using recycled water to meet irrigation demands. BWRP's discharge limit to the Los Angeles River is 900 mg/L; however, in June 2014 BWRP's TDS levels exceeded the limit and is now in danger of being fined by the California State Water Resources Control Board.

DROUGHT IMPACT: Other Drought Related Adverse Impacts

Seawater Intrusion Barriers: Maintaining the West Coast and Central Basin (which are hydrologically linked) potable water quality is heavily dependent upon the use of three seawater intrusion barriers that operate by injecting imported and recycled water into the basins along coastal areas. The barriers function by maintaining Basin groundwater water levels above "protective elevations" that have been determined as necessary to keep seawater from contaminating the groundwater supply. Recent drought conditions have limited the supplies available to replenish and maintain overall groundwater elevations. The majority of groundwater levels in both the West Coast and Central Basins are now below sea level, thus increasing reliance of the seawater barriers to prevent saltwater intrusion. If existing injection wells are not able to meet this increased demand, they will need to be replaced.

There is one such area along the West Coast Barrier where a chloride contour map prepared using data from July 2013 indicates seawater may now be making its way through the barrier. The *West Basin Barrier Project Unit 12 Injection and Observation Wells Project* included in this application is critical to ensuring that the seawater barriers are fully operational and maximizing the use of locally produced recycled water supplies to protect the entire area from further overall basin level decreases as the drought continues.

Conservation Measures

The GLAC Region has been at the forefront of the development and implementation of demand management/water use efficiency (WUE) programs that have resulted in very low average municipal use levels (of about 150 gpcd) when compared to other regions in Southern California and throughout the state.

The impacts from the previous drought of 2008-2010 and the combined SWP system cutbacks due to new environmental restrictions resulted in MWD implementing their *Water Supply Allocation Plan*. The *Water Supply Allocation Plan* reduced allocation levels for MWD contractor water purveyors and prompted the development and implementation of expanded voluntary and mandatory conservation programs and ordinances/restrictions by nearly all municipalities across the Region.

Although MWD has not yet needed to again implement the *Water Supply Allocation Plan* for this most recent drought, many of the "drought" conservation programs and requirements that resulted from 2008-2010 cutbacks were never discontinued and are still being implemented throughout the Region. These continued conservation measures have helped the Region avoid more severe impacts from this current drought.

SB7x7 requirements also set water use targets for water purveyors within the GLAC region with the 2010 Urban Water Management Plans (UWMPs). MWD is currently targeting to achieve a full 20% reduction in demand, which is about 580,000 AFY for their service area (of which the GLAC Region is by far the most populous part). The 2010 UWMPs articulated what type of demand management measures that each water purveyor would be using to help meet reduction targets as well as water shortage contingency plans in case supplies were becoming insufficient to meet demands. As a result, there had already been a great deal of conservation savings generated within the Region in advance of the 2014 drought.

However, given the unprecedented nature of the 2014 drought, the Region has gone further to generate even greater demand reductions and conservation of both potable and non-potable supplies. At the forefront of this 2014 drought response is MWD. Without waiting for supply storage to be further depleted, MWD took action at the beginning of 2014 and implemented the following conservation programs and measures.

- In February, the MWD Board adopted the 2014 Water Supply Alert Resolution to:
    - Urge all cities, counties, and retail agencies to implement extraordinary conservation, activate and enforce existing ordinances and adopt new ordinances if none exist
    - Work with member agencies to develop a unified regional message
    - Assist agencies in adopting and implementing ordinances
- In May, MWD began the first phase of a $5.5 million regional communications, outreach and advertising campaign on radio, TV and the Internet promoting water awareness and heightened conservation. The second phase began in June and will continue through October.
- MWD doubled its water use efficiency incentive budget from $20 million to $40 million.
- MWD increased funding for private and public property owners to convert potable water irrigation or industrial water systems to recycled water.
- MWD extended funding for rain barrels and for the residential high-efficiency toilet program. Specific MWD rebate incentive program increases are shown in Figure 2-1.

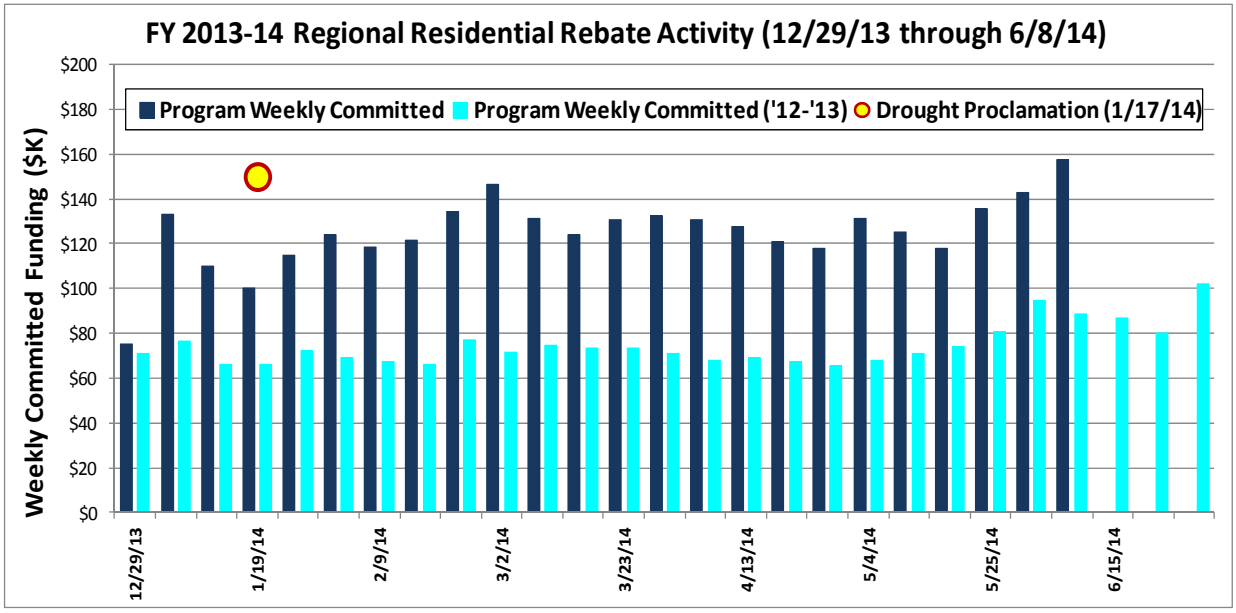
Figure 2-1: MWD 2014 Water use Efficiency Rebate Incentives

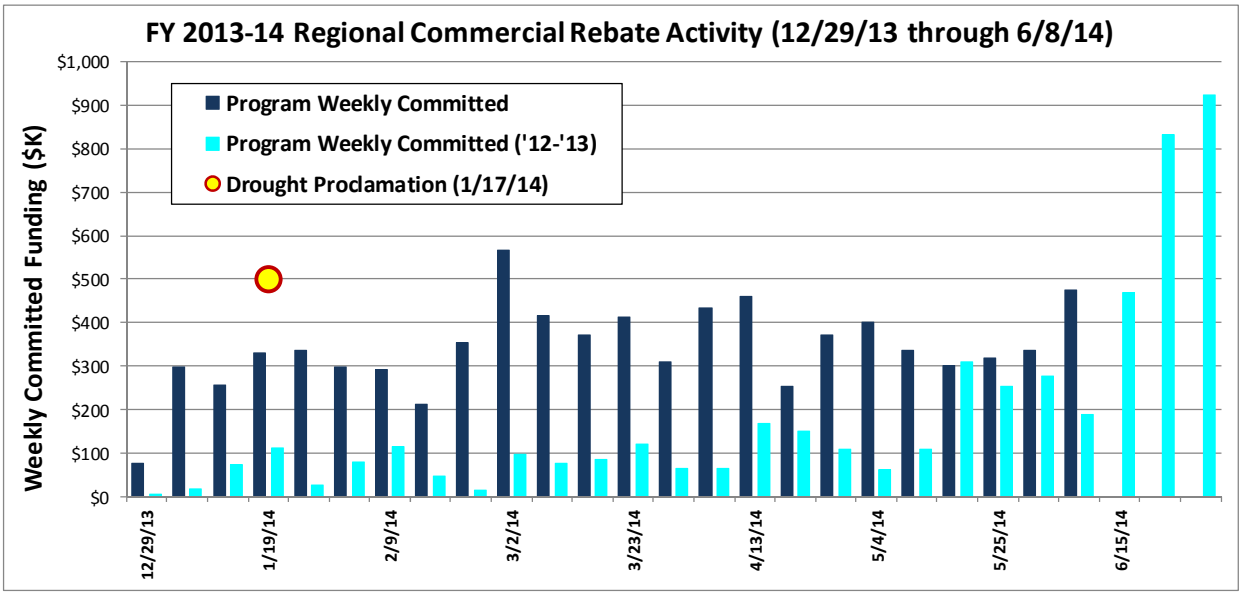
Residential	**2014**	**Previous**
• High-Efficiency Toilet (Melded Rate)	$100	$50
• Weather-Based Irrigation Controller	$35 per stn	$25 per stn
• Soil Moisture Sensor System	$35 per stn	$25 per stn
Commercial / Industrial / Institutional		
• Multi-Family High Efficiency Toilet	$100	$50
• Multi-Family High Efficiency Toilet (4-liter)	$145	NA
• Weather-Based Irrigation Controller	$35 per stn	$25 per stn
• 10 Central Computer Irrigation Controller	$35 per stn	$25 per stn
• Soil Moisture Sensor System	$35 per stn	$25 per stn
• Public Agency Landscape Weather-Based / Central Computer Irrigation Controller, Soil Moisture Sensor System	$55 per stn	$40 per stn
• Turf Removal	$2 per sq. ft	$1 per sq. ft

While MWD has worked regionally to develop, facilitate and fund these programs, these measures are only effective if the local water purveyors and retailers are conveying consistent conservation messages and working with their customers to take advantage of conservation incentives. To monitor program success, MWD has been tracking the number of rebates requested and provided since the drought proclamation in January of 2014 and then comparing it to monthly activities last year (before these new incentives and marketing campaigns were in place).

The two charts in Figure 2-2 show that in both residential and commercial sectors, rebate program participation has doubled so far in 2014 relative to last year. Since MWD's service area extends beyond the GLAC Region, not all of the participation reflected in these tables is from within this Region; but it is safe to assume that given the population and sheer number of water purveyors in the GLAC area that the majority of participation is within this Region.

Figure 2-2: Regional Rebate Activity (12/29/13 through 6/8/14)





Local water purveyors and retailers use the MWD program to enhance their own unique conservation programs. Some specific examples of conservation measures/programs currently being implemented by local water purveyors in the GLAC Region are provided below.

Burbank Water and Power: Over the past four years, the City of Burbank has saved an estimated 1,116 AF of water from implementing both City and MWD sponsored WUE measures. In particular, recently increased turf removal incentives from MWD and program enhancements from BWP have resulted in a 261% increase in approved turf removal projects requests from January through mid-June of 2014 as compared to the same time period in 2013. Participation in landscaping and educational workshops has also increased from 20 customers in a class held every two months to 30 customers every month – with more customers on waiting lists. To date, the City has achieved a 15 percent reduction in water use; in order to achieve the additional 5 percent to meet the requirement of 20 percent by 2020, the City requires additional funding as the City has maximized its financial resources for conservation programming.

Crescenta Valley Water District and Glendale Water and Power: CVWD and GWP offer water conservation rebate programs to encourage residents to reduce indoor/outdoor water use, including a turf removal program, residential high efficiency toilets, rain barrels, high efficiency washing machines, weather-based irrigation controllers, rotating sprinkler nozzles, and soil moisture sensor systems. These rebate programs are administered in conjunction with MWD's WUE program. Also, CVWD & GWP offer free landscaping programs to educate the public on using "California Friendly" plants and irrigation systems to reduce outdoor water use. These programs are publicized on CVWD's & GWP's websites, on informational flyers distributed at local events, in the local newspaper, and in quarterly newsletters. Public events also include speakers who promote these programs.

In one successful program, CVWD offers a free residential water audit using an outside consultant. The consultant conducts a residential water use survey that provides recommendations for improving water use efficiency, which could lead to a potential reduction on water bills. The turf removal program has also been effective as the number of participants has increased during the current drought conditions. In FY 12/13, CVWD processed 24 turf rebates and in FY 13/14, the number doubled to 47 rebates.

Additionally, CVWD has implemented a "Water Conservation Alert System" as a result of the current drought that alerts the community on the status of the water supply in the area. As a result of the drought, CVWD is currently at the yellow level, or "Extraordinary Conservation Alert." As such, customers are requested to minimize indoor water use and water outdoors no more than three days per week. Notification of the Water Conservation Alert System status is posted at the District's Administration Office and other visible locations

throughout the Community. A direct mailing was sent to all water customers with the notification and explanation of the alert system.

CVWD and GWP have similarly adopted water conservation regulations which outline water conservation programs and measures to reduce indoor/outdoor water consumption.

Las Virgenes Municipal Water District: LVMWD has maintained the following drought conservation programs and ordinances that were implemented during the last drought in 2009:

- Irrigation is prohibited between the hours of 10 a.m. and 5 p.m.
- Irrigation may not occur during periods of rain or in the 24 hours following rainfall of an inch or more.
- Irrigation may not run off the property into streets, gutters or onto adjacent properties.
- The washing down of sidewalks, parking areas and driveways is not permitted, unless an approved water broom is used.
- A trigger nozzle is required on hoses used for home car washing.
- Hotels & motels must give multi-night guests the option to retain towels and linens during their stay

Enforcement of these measures has increased in 2014, resulting in penalties being assessed for violations. A new mechanism for reporting violations has been instituted where water waste can be reported anonymously. As of June 2014, 165 conservation ordinance violation letters have been sent and two violators have received fines for second offenses

In response to the 2014 drought, LVMWD has also enhanced its existing conservation program by taking advantage of MWD's free Landscape Irrigation Surveys for large landscape customers. A certified landscape irrigation auditor surveys and provides written recommendations for qualifying non-residential properties at no cost. One survey of a golf course has been completed. Surveys are currently scheduled for two public schools and one large HOA common area. LVMWD has also received additional MWD funding for their "Mow No More" lawn removal incentive program through MWD's member agency conservation incentives program. Participation in LVMWD's turfgrass removal program has been hugely successful. During the first 19 months, 22,514 square feet of turf was removed and replaced. A second round of incentives began in December 2013 in response to the drought, and in the six months after, 19,015 square feet of turf has been replaced. Another 23,150 square feet of replacement is underway – doubling the rate of turf removal from previous efforts.

Los Angeles Department of Water and Power: LADWP has responded to the prior dry-year conditions by implementing Phase 2 of its aggressive water conservation ordinance and has successfully reduced water use by over 17% since the 2009 dry-year period. In addition to numerous mandatory prohibitions on wasteful water uses, Phase 2 restricts outdoor watering to 3 times per week.

In 2014, LADWP ramped up its Water Conservation Program by:

- Initiating a focused media campaign to remind customers about the outdoor watering restrictions in effect and encourage customers to increase conservation efforts. LADWP will spend $2 million in 2014 on water conservation outreach and education.
- Launching a Water Conservation Response Unit enforcement team to investigate outdoor watering and wasteful use violations, educate offenders on the importance of compliance, and issue citations for repeat offenders
- Increasing water conservation rebates and incentives such as the May 2014 increase to $3 per square foot of turf removed and replaced with "California Friendly" landscape.

In 2013, LADWP saw a 10-fold increase in customer applicants for its turf removal rebate as a result of the rebate increasing to $2 per square foot and focused media outreach promoting the rebate. In 2014, LADWP has been able to use MWD incentives to further increase its turf replacement rebate for LA residents from $2/sf to $3/sf and expects to see another increase in customer applications for this program. In addition, LADWP benefits from MWD's extension of the rain barrel rebate program beyond the initial 6-month application window and their extension of the high efficiency toilet rebate.

Puente Basin Water Agency: PBWA's JPA members Walnut Valley Water District and Rowland Water District have maintained the conservation based water rates system and ordinances developed and implemented during the previous 2008-2010 drought. As a result of the recent drought there has been a call for a voluntary 20% reduction in water use which has resulted in an increased interest in incentive programs including the recently increased turf replacement rebate program.

Upper San Gabriel Valley Municipal Water District: USGVMWD has continuously participated in MWD WUE programs, providing rebates to customers for replacement of water efficient equipment and encouraging participation through public outreach efforts. In support of 2014 drought preparedness, USGVMWD expanded their WUE program to include a large landscape irrigation survey and retrofit project. The project involved conducting surveys with the customers and retrofitting their irrigation systems as needed to realize water savings. The estimated annual water savings for this program is approximately 20 AF.

West Basin Municipal Water District (includes City of Inglewood as retailer): WBMWD ordinarily promotes the MWD WUE rebates and incentives. With the current drought conditions, it has been ever more important to increase awareness of these rebates and incentives to aid in water use reduction. In addition, WBMWD utilizes these rebates and incentives in the programs that are implemented to offset the costs such that funds could then be deferred toward other local supply development programs, including recycled water and ocean-water desalination. WBMWD recently held a free high-efficiency toilet distribution event with participation that exceeded expectations. Similarly at a free rain barrel distribution event, the demand for barrels exceeded the availability. Some of WBMWD's 17 cities (retail water agencies) have taken measures to address the drought by including information in their collateral material and water bills and by requesting a presentation to be made to the City Council to inform elected officials of the current drought situation and how their city is impacted.