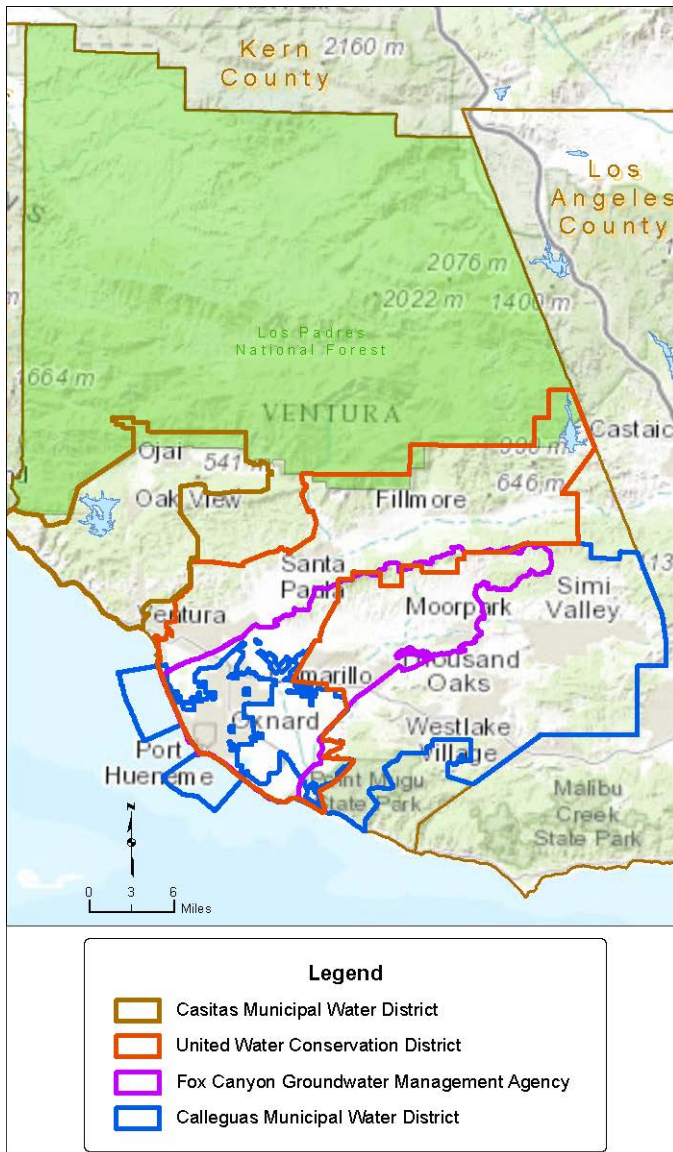


## WATERSHEDS COALITION OF VENTURA COUNTY 2014 Drought Grant Proposal

### DROUGHT IMPACTS

More than 800,000 residents and 100,000 acres of irrigated farmland in Ventura County are experiencing direct impacts from the drought that started in 2012 and has continued into 2014. The impacts of the drought on the residents, businesses, agriculture, and environmental resources of Ventura County will reach crisis levels if dry conditions persist.



### The Ventura County Region is at Risk of Not Meeting Drinking Water Demands

#### Surface Water at Risk in Western Ventura County

The water for 70,000 people in western Ventura County is at risk due to drought.<sup>i</sup> Imported water cannot be delivered to western Ventura County and groundwater is very limited. Water agencies that typically get all or part of their water from wells have had to start purchasing Lake Casitas water, as their wells have run dry. Since 2011, purchases of Lake Casitas water have increased by 1,000%. The lake is an important, but dwindling, resource threatened by both water quality and water supply concerns.

For the first time since 1968, levels in Lake Casitas are expected to drop below 50% volume. Low water levels in 1968 resulted in significant thermal stratification and anoxic (without dissolved oxygen) conditions, rendering the lake generally unsuitable for aquatic life. The low oxygen levels also created an environment where manganese and hydrogen sulfide, normally trapped in sediments, became soluble, causing the lake water to have a brown color and bitter metallic taste. There were also large blue-green algae blooms.<sup>ii</sup>

Normally creek inflows provide supply and facilitate lake mixing (which helps maintain good water quality). Inflows have significantly decreased since 2012, causing the lake to

stratify and stagnate. Dissolved oxygen (DO) levels have dropped by 2 mg/L each of the last 3 years.<sup>iii</sup> Data from Casitas Municipal Water District (Casitas) indicate that the lower parts of the lake are already anoxic and the affected lake volume is expected to increase as drought continues. The Casitas water treatment plant does not have sufficient coagulation or sediment treatment processes to address anoxic lake conditions, and widespread algae blooms may result in Casitas not meeting drinking water standards. The deteriorating conditions mean Lake Casitas, as a drinking water source, is threatened.<sup>iii</sup> Additionally, the lake level dropping below 50% is of great concern; as discussed in Water Conservation Measures, it triggers mandatory restrictions, even though groundwater supplies, the only other water supply option of significance in the area, are also already less available or not available at all. If drought conditions persist into 2015, the risk to Lake Casitas as a drinking water source increases, just as other sources (such as groundwater, discussed below) become less available and reliable.



## **WATERSHEDS COALITION OF VENTURA COUNTY 2014 Drought Grant Proposal**

### **Ventura River Basin Wells Left Dry**

Recharge to the Ventura River Basin is almost exclusively from Ventura River flow. The basin is relatively shallow and responds quickly to rainfall or lack thereof. Due to drought, the City of Ventura has lost 70% of its normal Ventura River supply. Due to low water levels in the Ventura River Basin, the wells operated by Meiners Oaks Water District have already gone dry, and they are now entirely dependent on purchases of Lake Casitas water. Ventura River County Water District has only one of its four wells still in operation; customer needs are being served through purchases of Lake Casitas water supplies, which as noted above, are being rapidly depleted and are at risk due to declining water quality.

### **Groundwater Supplies Curtailed in Southern Ventura County**

The groundwater basins managed by Fox Canyon Groundwater Management Agency (GMA) support agriculture and municipal and industrial use for a significant portion of developed Ventura County.<sup>iv</sup> On April 11, 2014, the GMA adopted an emergency ordinance to prevent further seawater intrusion and to limit risk of subsidence. Groundwater from the Fox Canyon GMA area makes up approximately 45% of supplies for the cities of Ventura, Oxnard, Port Hueneme, Camarillo, and Moorpark, plus various adjacent unincorporated communities; Emergency Ordinance E effectively mandates reduced groundwater use by these entities.<sup>v</sup> As of July 1, 2014, pumpers were to reduce extractions by 10%. Required reductions increase to 15% by January 1, 2015 and to 20% by July 1, 2015 if drought conditions continue.<sup>vi</sup> Affected agencies will use a combination of conservation and drawdown of stored imported water to meet the shortfall. It will be increasingly difficult to meet drinking water demands if dry conditions persist, as constrained imported water supplies are being rapidly depleted, and demand hardening limits the potential for additional conservation savings.

### **Ventura County Heavily Dependent on Dwindling State Water Project Supplies**

Approximately three-quarters of Ventura County residents (~630,000 people) depend on imported supply from Calleguas Municipal Water District (Calleguas). Those residents use an average of about 25% local supplies and 75% imported water, with the Simi and Conejo Valleys 99% dependent on imported supplies. Unlike most of Southern California, Ventura County typically receives all of its imported water from the State Water Project (SWP). Because the County is at the westernmost extent of Metropolitan Water District's (MWD) service area, there is very limited infrastructure to deliver Colorado River water to the area. With SWP allocations at an unprecedented low of 5% for 2014, Ventura County has been able to receive about 30% of its imported water demands from Colorado River supplies through non-routine system operations and a wheeling arrangement with the Los Angeles Department of Water and Power, but 30% is the maximum available capacity. It is anticipated that demands can be met in 2014 through conservation and by using this small quantity of Colorado River water, MWD's stored groundwater in the Central Valley, and remaining SWP and MWD reservoir storage. However, this storage is limited and is being drawn down dramatically. Further exacerbating the problem, groundwater pumpers are turning to imported supplies as allowable groundwater extractions are curtailed. Without substantial rainfall or snowpack, it is estimated that SWP storage reserves will be largely depleted by the end of 2015. The associated loss of SWP water will prevent Calleguas from meeting its customers' demands, even if those demands are significantly reduced.

## **The Ventura County Region is Not Meeting Existing Agricultural Demands**

### **Agriculture Must Reduce Groundwater Use**

Groundwater managed by the GMA also supplies much of the water to 50,000 acres of irrigated agriculture. Emergency Ordinance E mandates pumping reductions, as of July 1, 2014, agricultural pumpers were to reduce extractions by 10%. Reductions increase to 15% by



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January 1, 2015 and to 20% by July 1, 2015 if drought continue.<sup>vi</sup> Some agricultural users have supplemented reduced supplies by increased purchases of recycled water, but alternate supplies are not available to many farms. According to the Ventura County Farm Bureau, it is likely that farmers will comply with pumping restrictions by having fewer crop rotations (e.g., four instead of five).<sup>vii</sup> If dry conditions continue into 2015, the risk of agricultural fallowing grows. In the worst case, some growers may choose to permanently leave the region.

### **Water Deliveries to 4,600 Acres of Farmland to Halt in Summer 2014**

Approximately 4,600 agricultural acres (~5% of Ventura County's ag land) in the Oxnard area will stop receiving water in late summer 2014. In an average year, United Water Conservation District (United) delivers 8,300 AF to strawberry growers along the Pumping Trough Pipeline (PTP) in the affected area.<sup>viii</sup> Unfortunately, the sources of supply for the PTP have dwindled in the drought. The PTP can receive water from the Santa Clara River at the Freeman Diversion, the Saticoy wellfield, and five wells (PTP wells). By March 2013, Santa Clara river flows had diminished to a point where no surface water was available for the PTP. By September 2013, the wells at the Saticoy wellfield were dry. At the rate levels are dropping within the Oxnard Plain Pressure Basin, it is anticipated that none of the PTP wells will function after September 2014.<sup>ix</sup> Continuing dry conditions mean no water to serve farms along the PTP.

### **The Ventura County Region is at Risk of Not Meeting Ecosystem Water Demands**

#### **Endangered Species Further Stressed by Low Flow Conditions**

Downstream of Lake Casitas, the Ventura River and ecological resources are stressed due to low flows. The portion of the river downstream of the Highway 150 Bridge to Foster Park (reaches 3 and 4) has been listed by the US Environmental Protection Agency (EPA) as impaired due to water diversions and pumping.<sup>x</sup> A particularly sensitive resource is steelhead. Historically, steelhead were abundant in coastal mountains of Southern California, but now Southern California Steelhead are on the verge of extinction and have been federally-listed as an endangered species since 1987. The US EPA report on the Ventura River states:

“water quality problems related to eutrophication are compounded by low flow...Decreased summer flows and elevated nutrient concentrations in the Ventura River contribute to the excessive algal biomass growth, which in turn contributes to low DO conditions. Reducing nutrient loading, concurrent with maintaining or increasing existing river flow, are the most effective way to address eutrophication, which is the underlying cause of the impaired aquatic life beneficial uses in the Ventura River system....”

The extremely low precipitation over the last two years has further stressed steelhead populations. As noted by the National Marine Fisheries Service as part of their recent surveys, “It is unlikely that any anadromous adults were able to travel beyond the Ventura River estuary due to low flow conditions and subsequent barriers to migration. In the absence of substantial high flow events, vegetation has become well established in the floodplain. Primrose and watercress were most abundant, and formed dense cross-channel thickets that may have acted as further barriers to steelhead migration.”<sup>xi</sup>

#### **Lake Fishery at Risk**

In addition to being a drinking water source, Lake Casitas is a sport fishing destination. The lake is home to bass, crappie, red-ear sunfish, and bluegill. With the current drought, DO levels in the hypolimnion (the lowest level in a stratified lake) are at less than 1 mg/L, which means this part of the lake can no longer support fish.<sup>xii</sup> Fish habitat is generally defined by water that is less than 68°F and greater than 4 mg/L DO.<sup>xiii</sup> Using data from 2013, Casitas could not find any locations within the lake that would support fish because DO levels are too low in the deeper parts and temperatures are too high in the upper levels. While there have not been



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any documented fish kills, there is concern that continuing low lake levels will cause a fishery die off. The longer the drought continues, the greater the risk to the lake fishery.

### **Drinking Water MCL Violations**

#### **Water Needed to Meet Primary MCLs is Dwindling**

Nitrate has long been a problem in the Oxnard Plain Forebay. Its causes are generally considered to be septic systems and fertilizer from agricultural operations. According to United, “the highest nitrate concentrations are often observed during drought periods when nitrogen inputs continue but the diluting influence of natural and artificial recharge is reduced.”<sup>viii</sup> From 2007 to 2012, nitrate (as NO<sub>3</sub>) in the El Rio Wellfield was generally less than 40 mg/L, below the MCL of 45 mg/L. Starting in April 2013, nitrate levels starting rising; as of June 2014, nitrate levels exceed 100 mg/L. The El Rio wellfield is a drinking water source for the cities of Oxnard and Port Hueneme, several mutual water companies, and two navy bases. In order to meet drinking water standards, United has recharged what little Santa Clara River water has been available to dilute the high nitrate well water. With nitrate levels continuing to increase and Santa Clara River water becoming less and less available, this approach will not be viable as the drought continues and nitrate MCLs may be exceeded.

#### **Lake Casitas Could Exceed Secondary MCLs**

As discussed above, the drought could cause Lake Casitas water quality to exceed secondary drinking water standards related to manganese. As low DO levels affect more of the lake, more manganese will be release from lake sediments. The secondary drinking water standard for manganese is 0.05 mg/L; Casitas has already recorded spikes of over 0.28 mg/L. Casitas’ water treatment plant is not equipped to remove manganese to meet the MCLs.

### **Drought is Exacerbating Groundwater Overdraft**

Groundwater is the single largest water source for Ventura County, providing about 65% of supplies. It is relied upon by individual well owners and by a majority of the 166 water purveyors in the County. Releases from Lake Piru are typically managed to recharge groundwater basins, including the Oxnard Plain Forebay, Oxnard Plain Pressure Basin,<sup>1</sup> and Pleasant Valley Basin. Lack of surface water and SWP water have dropped Lake Piru below deadpool, and groundwater recharge has been severely curtailed.

#### **Oxnard Plain Forebay Falls Below Sea Level**

The Oxnard Plain Forebay is the primary recharge area for the Oxnard Plain Pressure Basin, which underlies the cities of Oxnard and Port Hueneme, Naval Base Ventura County Point Mugu, and Naval Base Ventura County Port Hueneme. Changes in storage in the Forebay change the hydrostatic pressure in the Oxnard Plain Pressure Basin. When groundwater falls below sea level in the Forebay, there is significant seawater movement inland.

Before the drought, the Forebay was considered to be in balance.<sup>xiii</sup> In October 2011, groundwater elevations in a key index well were 40 feet above msl; in May 2014, groundwater elevations in the same Forebay well were 10 feet below msl.<sup>xiv</sup> With continuing drought, the Forebay groundwater elevations will continue to decline and hydrostatic pressure in the Oxnard Plain Pressure Basin will fall and the inland migration of seawater will accelerate.

#### **Oxnard Plain Pressure Basin at Risk of Further Seawater Intrusion and Subsidence**

The Oxnard Plain Pressure Basin is the largest and most complicated of the basins in Ventura County. The Oxnard Plain Pressure Basin has both an upper aquifer system and a lower

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<sup>1</sup> The Oxnard Plain Forebay and Oxnard Plain Pressure Basin are collectively considered DWR Groundwater Basin No. 4-4.02. Pleasant Valley Basin is designated 4-06.



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aquifer system. Before the drought, this basin was considered to be in overdraft. As a result of the lack of surface water and precipitation to recharge the Forebay, overdraft in the Oxnard Plain Pressure Basin has been severely exacerbated. In October 2011, an index well in the upper aquifer system had a groundwater elevation of 40 feet above msl. The same well in May 2014 had a groundwater elevation of 10 feet below msl.<sup>xv</sup> In the same timeframe, groundwater levels in the lower aquifer system index well dropped from 20 feet below msl to 100 feet below msl.<sup>xvi</sup>

As groundwater elevations reach historic lows, the risk of subsidence increases. Portions of the Oxnard Plain Pressure Basin have subsided 12 feet since the 1930's, and the extraction of groundwater appears to be the dominant cause.<sup>viii</sup>

### **Pleasant Valley Basin at Risk of Further Saline Intrusion and Subsidence**

Water elevations in the northern part of the Pleasant Valley Basin have greatly improved since the mid-1990s, but the southern coastal portion of the basin has been in overdraft for many years. United delivers 12% of its diversions from the Santa Clara River to agricultural users in the Pleasant Valley Basin for irrigation. In 2011, United made 12,000 AF of surface water deliveries; due to dry conditions, deliveries dropped to 9,670 AF in 2012 and to 3,000 AF in 2013.<sup>xvii</sup> As of May 2014, deliveries have been a paltry 274 AF.<sup>xviii</sup> In the lower aquifer system, levels have dropped from 25 feet below msl in October 2011 to 110 feet below msl in May 2014.<sup>xix</sup> Like in the Oxnard Plain Pressure Basin, as groundwater levels decline, there is greater saline intrusion.

The US Geological Survey has also identified the Pleasant Valley Basin as susceptible to subsidence as groundwater pumping increases.<sup>xx</sup>

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<sup>i</sup> Casitas MWD. 2011. 2010 Urban Water Management Plan.

<sup>ii</sup> Casitas MWD. 2013. Lake Casitas Water Quality Study. Prepared by Flow Science Inc.

<sup>iii</sup> Personal communication Susan McMahon, Casitas MWD. June 2014.

<sup>iv</sup> Fox Canyon GMA website. [www.fcgma.org/about-fcgma](http://www.fcgma.org/about-fcgma). Accessed June 19, 2014.

<sup>v</sup> 2010 Urban Water Management Plans for Cities of Ventura, Oxnard, Port Hueneme, Camarillo, and Waterworks District 1.

<sup>vi</sup> Fox Canyon GMA. 2014. *An Emergency Ordinance Limiting Extractions from Groundwater, Suspending Use of Credits and Prohibiting Construction of Any Groundwater Extraction Facility*.

<sup>vii</sup> Personal communication John Krist, Chief Executive Officer Ventura County Farm Bureau. May 2014.

<sup>viii</sup> United Water Conservation District. 2014. Groundwater and Surface Water Conditions Report 2013.

<sup>ix</sup> PTP Users Group Meeting February 27, 2014. Available at: <http://www.unitedwater.org/>

<sup>x</sup> US Environmental Protection Agency. 2012. Ventura River Reaches 3 and 4 Total Maximum Daily Loads for Pumping and Water Diversion-Related Water Quality Impairments. December.

<sup>xi</sup> Sam Bankston, Heidi Block and Chris Lima of the Pacific States Marine Fisheries Commission and California Department of Fish and Wildlife. 2014. Ventura River Watershed Spawner Surveys 2013.

<sup>xii</sup> Fast, Arlo. 1993. Distributions of Rainbow Trout, Largemouth Bass and Threadfin Shad in Lake Casitas California, with Artificial Aeration. Fish and Game 79(1):13-27.

<sup>xiii</sup> County of Ventura website [portal.countyofventura.org/portal/page/portal/PUBLIC\\_WORKS/Watershed\\_Protection\\_District/About\\_Us/VCWPD\\_Divisions/Water\\_and\\_Environmental\\_Resources](http://portal.countyofventura.org/portal/page/portal/PUBLIC_WORKS/Watershed_Protection_District/About_Us/VCWPD_Divisions/Water_and_Environmental_Resources)

<sup>xiv</sup> Index Well 02N22W22R02S

<sup>xv</sup> Index Well 01N22W02A2S

<sup>xvi</sup> Index Well 01N22W13D03S

<sup>xvii</sup> United Water Conservation District. 2014. Groundwater and Surface Water Conditions Report 2013.

<sup>xviii</sup> United Water Conservation District. 2014. May 2014 Hydrologic Conditions Report.

<sup>xix</sup> Index Well 2N/21W-34G2

<sup>xx</sup> US Geological Survey. 2003. Water Resources Report 02-4136.



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### WATER CONSERVATION MEASURES

Water agencies in Ventura County have taken actions to both encourage and enforce water conservation in response to the drought. The regional water wholesaler, both groundwater management agencies, several retail water agencies, the County of Ventura, and several cities are taking action. With the exception of Ojai Valley Land Conservancy (a non-profit group without water authority), all project proponents seeking funding as part of the 2014 IRWMP Drought Grant Solicitation have taken drought response actions. Water agencies throughout Ventura County have also taken similar actions, but not all are listed due to space constraints. Drought declarations and resolutions are provided in Att2\_DG\_Impact\_2of2.

#### Calleguas Municipal Water District, Regional Wholesale Water Agency

Calleguas is the wholesale water agency for 19 local purveyors, who in turn deliver water to area residents, businesses, and agricultural customers. Approximately three-quarters of Ventura County residents (roughly 630,000 people) depend on Calleguas for all or part of their water, and the water supplied by Calleguas meets three-quarters of the total municipal and industrial water demand in the Calleguas service area.<sup>i</sup> Calleguas is entirely dependent on supply from the Metropolitan Water District of Southern California (Metropolitan). In early



2014, Calleguas and Metropolitan undertook infrastructure improvements that allow Calleguas to take a small amount of Colorado River water; otherwise Calleguas is fully dependent on supplies from the SWP. In 2014, it is estimated that up to 30% of Calleguas demand will be met with Colorado River water and the rest will be taken out of SWP storage.

In February 2014, Calleguas' Board of Directors passed a resolution calling for enhanced water use efficiency; in July 2014, a second drought resolution called for a minimum 20% reduction in water use and retail purveyors were urged to fully implement their respective drought response plans and conservation ordinances in light of Governor Brown's April 25, 2014 Executive Order. Calleguas staff have undertaken extensive public outreach to achieve conservation goals, making drought presentations to 18 different civic groups, retail water agencies, and city councils since January 2014. In addition, Calleguas is reaching out to

Front-Page Post-It Note Placed on Local Newspapers June to September 2014

water customers through cable television and radio interview broadcasts, print media (articles and/or display advertisements in three different local papers), "before the movie" conservation messaging spots in area theaters, and the posting of numerous, large format banners at high visibility locations to encourage public participation in regional rebate programs. This outreach is complemented by a regional website hosted by Metropolitan ([bewaterwise.com](http://bewaterwise.com)) where water users can get specific tips and rebates to reduce water use.

Residents and business in the Calleguas service area (which includes Camrosa, Oxnard, and Ventura County Waterworks Districts below) have always been eligible for many water conservation incentives, including rebates on high-efficiency clothes washers, high efficiency plumbing fixtures, commercial kitchen equipment, sprinkler controllers, high-efficiency hose nozzles, and soil moisture sensors. Calleguas, in coordination with Metropolitan, is enhancing conservation reimbursements during the drought. Calleguas now offers \$3 per square foot for turf removal and up to \$100 rebates for high-efficiency toilet installation. Another



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program available is a subsidy for customers to fund on-site improvements to accommodate a shift to the use of recycled water. Calleguas has also reduced its own water usage, by installing dual-flush toilets in its facilities and converting grassy areas to drought-tolerant landscaping and rockscape.

It is Calleguas' policy to respond to drought by first encouraging local purveyors to maximize local supplies and to promote voluntary conservation, followed by withdrawals from stored groundwater (as available), then to ask customers to implement extraordinary conservation. If the drought continues into 2015, SWP storage reserves may be largely depleted. Loss of SWP water will prevent Calleguas from delivering sufficient water to meet customers' demands, even if those demands are significantly reduced. Calleguas will be subject to Metropolitan's Water Supply Allocation Plan, which prescribes a specific formula for allocating supplies among Metropolitan member agencies. If necessary, Calleguas will implement an allocation program in 2015. As part of the allocation program, Calleguas will monitor consumption and impose penalties for excessive use.<sup>ii</sup>

### **Fox Canyon Groundwater Management Agency, Groundwater Basin Manager**

As described earlier, in April 2014 the GMA adopted Emergency Ordinance E, which mandates reduced groundwater use by 50,000 acres of irrigated agriculture and by the water purveyors serving the cities of Ventura, Oxnard, Port Hueneme, Camarillo, and Moorpark, plus various adjacent unincorporated communities. As of July 1, 2014, pumpers were to reduce extractions by 10%. Reductions increase to 15% by January 1, 2015 and to 20% by July 1, 2015 if drought conditions persist.

To achieve these reductions, the GMA has set allocations for different users. Extractions in excess of allocation are subject to fees. Per the ordinance, agencies cannot use nor acquire additional groundwater credits during the drought. Construction of new or expanded groundwater extraction facilities is prohibited (with very limited exceptions). The ordinance was passed after several well-publicized meetings and outreach to affected water agencies, cities, the Ventura County Farm Bureau, and Ventura County Agricultural Commission.

### **United Water Conservation District, Groundwater Protection Agency**

Because of the drought, United has restricted deliveries to agricultural customers in order to protect drinking water quality and long-term function of local groundwater basins. United encompasses nearly 213,000 acres of central and southern Ventura County and serves as a steward for managing surface water and groundwater resources within all or portions of eight groundwater basins. United serves approximately 250,000 people within the cities of Oxnard and Port Hueneme, Naval Bases Ventura County Point Mugu and Port Hueneme, and numerous small districts, mutual water companies, and schools.<sup>iii</sup> United typically uses Santa Clara River flows to recharge local groundwater basins or as deliveries to agricultural areas. In a normal year, a small portion of the water diverted from the Santa Clara River by United for groundwater recharge is SWP water (3,150 AF).<sup>iv</sup> During the drought, only limited amounts of Santa Clara River water have been diverted. In 2012, approximately 47,000 AF were diverted by United; this dropped to 22,000 AF in 2013, and only 3,570 AF thus far in 2014, with the dry summer months ahead. The limited diversions have forced United to prioritize its water operations. The highest priority use is delivery to the El Rio spreading basins – this water is needed to dilute groundwater containing high nitrate levels to meet primary drinking water standards. The second priority is delivery to Pleasant Valley County Water District, an agricultural water purveyor. The third priority is recharge of the Oxnard Forebay to protect the long-term viability of the Oxnard Plain Forebay and Oxnard Plain Pressure Plain Basin. If water is available, it will then be made available to the PTP, which provides water to agricultural users in an overpumped part of the basin.<sup>v</sup> The service area of United



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substantially overlaps with that of the GMA and therefore restrictions by that agency substantially affect United's customers.

### **County of Ventura, County Government and Local Water Retailer**

The County of Ventura has adopted a resolution recognizing the drought and the implications for Ventura County. The four Waterworks Districts run by the County of Ventura are requesting that customers reduce water use by 20%, and its customers are eligible for all of the rebates and incentives provided through Calleguas. The Board of Supervisors has directed County departments to reduce water use at county administrative facilities, jails, hospitals, and parks. The County of Ventura is working to reduce its internal water use through public outreach (signage in County buildings), turf replacement, replacement of inefficient plumbing fixtures, and by recycling water used for vehicle and equipment washing.

### **Camrosa Water District, Local Water Retailer**

Camrosa Water District (Camrosa) is located in the southern portion of Ventura County, and operates a potable water system and a non-potable water system that serves approximately 7,990 residential, municipal, and industrial water connections, including California State University Channel Islands, and about 90 potable agricultural connections. As part of their drought operations, Camrosa has been actively encouraging use of non-potable (primarily recycled) water. In their February 2014 drought declaration, Camrosa requested all customers reduce water usage, by 20% from 2013 usage and its customers are eligible for all of the rebates and incentives provided through Calleguas. If the drought persists into 2015, Camrosa anticipates it will be necessary to implement restrictions.<sup>vi</sup>

### **City of Oxnard, Local Water Retailer**

The City of Oxnard serves water to approximately 200,000 people. Sources of supply for Oxnard include imported water from Calleguas, groundwater from United, and groundwater produced by the City within the GMA boundary. The drought has affected all potable sources of supply available to Oxnard. The City of Oxnard has requested all customers reduce water use by 20% (Resolution 14,475). The City of Oxnard is using a variety of strategies for reducing demand and extending supplies. The City has numerous restrictions on allowable water uses and times of day when irrigation is permitted. These restrictions are enforced through penalties, installation of flow restrictors, and discontinuation of water service. Restrictions are complemented by the rebates and incentives provided through Calleguas.

### **Casitas Municipal Water District, Wholesaler and Local Water Retailer**

Casitas has asked customers to achieve a 20% reduction in water use.<sup>vii</sup> Without any significant rainfall in 2014 and the additional pressure on Lake Casitas described in Drought Impacts, it is expected Lake Casitas will decline to 50% capacity by September 2014. The 50% capacity is a critical point at which the following additional water conservation measures will be automatically triggered. Casitas will:

- Establish a water allocation program based on historical uses of Casitas water or other fair and equitable bases, which will establish the amount of water that can be obtained by each customer, including other water agencies.
- Implement or adjust an increasing-block rate structure for any classification of water service (i.e., impose a drought surcharge).
- Require all water agencies taking water from Casitas to implement water conservation and restrictive water use measures.



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- May direct the oil companies to cease taking any Casitas water for secondary oil recovery purposes or other non-life-sustaining purposes.
- May request the Ventura County Board of Supervisors and the Cities of Ojai and Ventura to place a moratorium for all building permits, lot splits, or subdivisions within Casitas boundaries.<sup>viii</sup>

### **Meiners Oaks Water District, Local Water Retailer**

Meiners Oaks Water District (MOWD) is not a project proponent in this application, but rather illustrates the significant effect of the drought in western Ventura County and the increased pressures on Lake Casitas water. MOWD declared a Stage 2 water shortage in August 2013. Since early 2014, water levels have dropped below the pumping level for all five of MOWD's wells and MOWD is now fully dependent on supplies from Lake Casitas. However, MOWD has only a 4-inch meter to Casitas, limited to 1,000 gpm. During hot summer days, demand can peak at over 1,200 gpm. MOWD is limiting residential customers to 11,000 gallons/month/meter, agricultural customers to 365 HCF per month/meter, and commercial customers to 49 HCF per month/meter. Customers using more than the allotted amount are charged a penalty of 1.5 times the normal rate/HCF.<sup>ix</sup> MOWD will operate under allocations until rainfall returns to the Ventura River area.

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<sup>i</sup> Calleguas Municipal Water District. May 2011. 2010 Urban Water Management Plan.

<sup>ii</sup> Ibid

<sup>iii</sup> United Water Conservation District. June 2011. 2010 Urban Water Management Plan.

<sup>iv</sup> United Water Conservation District. 2014. Groundwater and Surface Water Conditions Report 2013.

<sup>v</sup> Personal communication Tony Morgan, United Water Conservation District Groundwater Section Manager. June 2014.

<sup>vi</sup> Camrosa Water District. 2011. 2010 Urban Water Management Plan.

<sup>vii</sup> Casitas Municipal Water District Resolution Proclaiming Drought Conditions adopted July 9, 2014.

<sup>viii</sup> Casitas MWD. 2011. 2010 Urban Water Management Plan.













































<sup>ix</sup> Meiners Oaks Water District Resolution 2013-8-5 and Meiners Oaks Water District Water Shortage Declaration, Stage, Guidelines, and Penalties for Commercial, Agricultural, Domestic and Multiple Dwelling Unit Customers as Stated Under Ordinance 101601 Rules.



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**Summary of Drought Response Actions in Ventura County**

The table below provides a quick summary of the various drought response actions taken in Ventura County.

| Agency                                   | Drought Declaration or Resolution   | Changes in Agency Operations  |   | Customer Demand Reduction Actions   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|
|  |   | <i>Utilizing Drought Mitigation Supplies</i>                                      | <i>Reducing Water Use in Agency Operations</i>                                      | <i>Public Outreach</i>  | <i>Conservation Incentives</i>  | <i>Drought Surcharge</i>  | <i>Restrictions</i>   | <i>Allocations</i>  |
| Calleguas Municipal Water District       |  |  |  |  |  |   | NA  | As needed in 2015   |
| Fox Canyon Groundwater Management Agency |  | None available  |  |  | NA  |  |  |  |
| United Water Conservation District       |  | None available  |  |  | NA  |  |  |  |
| County of Ventura                        |  |  |  |  |  |   |   | As needed in 2015   |
| Camrosa Water District                   |  |  |  |  |  |   | As needed in 2015   | As needed in 2015   |
| City of Oxnard                           |  |  |  |  |  | As needed in 2015   |  | As needed in 2015   |
| Casitas Municipal Water District         |  | None available  |  |  |  | Near future   | Near future   | Near future   |
| Meiners Oaks Water District              |  |  |  |  |   |  |  |  |

\*Drought surcharges, restrictions, and allocations apply within that portion of United Water Conservation District that overlaps with the Fox Canyon Groundwater Management Agency.