

Casitas Municipal Water District
WATER RESOURCES COMMITTEE
Baggerly/Spandrio

May 6, 2020 – 10:00 A.M.

This meeting will be held via teleconference
To attend the meeting please call
(888) 788-0099 or (877) 853-5247
Enter Meeting ID 935 9306 1483#

Special Meeting Agenda

1. Roll Call
2. Public Comments
3. Board Comments.
4. Manager Comments.
5. Review Fiscal Year 2021 Casitas MWD Water Supply Assessment.

Right to be heard: Members of the public have a right to address the Board directly on any item of interest to the public which is within the subject matter jurisdiction of the Board. The request to be heard should be made immediately before the Board's consideration of the item. No action shall be taken on any item not appearing on the agenda unless the action is otherwise authorized by subdivision (b) of ¶54954.2 of the Government Code.
If you require special accommodations for attendance at or participation in this meeting, please notify our office in advance (805) 649-2251, ext. 113. (Govt. Code Sections 65954.1 and 54954.2(a). Please be advised that members of the Board of Directors of Casitas who are not members of this standing committee may attend the committee meeting referred to above only in the capacity of observers, and may not otherwise take part in the meeting. (Govt. Code Section 54952.2(c)(6)

MEMORANDUM

TO: Water Resources Committee
From: Michael L. Flood, General Manager
RE: FY 2021 Casitas Water Supply and Demand Assessment
Date: May 5, 2020

1. BACKGROUND

In accordance with the direction provided in the Water Efficiency and Allocation Program, adopted April 24, 2019, specifically Section 5.2 entitled “*Water Resource Conditions and Actions*,” the Board of Directors are to receive an assessment of local water supplies, water demands, and current effectiveness of water demand reduction measures. The information in the assessment may necessitate the consideration and direction from the Board of Directors for further actions to preserve water supply for the future.

2. ANNUAL EVENT SUMMARY

The annual event summary is to provide insight to unusual events that have occurred within the boundary of the Casitas Municipal Water District that would not otherwise be directly reported in the content of the assessment. The key events are as follows:

- a) The Casitas Municipal Water District has continued to cope with the demands of the acquisition of the Ojai Water System. The acquisition transferred to Casitas the operations and maintenance of the Ojai Water System including six groundwater wells in the Ojai Groundwater Basin which have an ongoing goal of maximizing the use of groundwater for that system through both maintenance and planning for future improvements.
- b) The Thomas Fire of December 2017 has had a continuing effect on District operations primarily centered on the control of turbidity in Lake Casitas for water quality purposes and negative impacts to the operation of the Robles Fish Passage facility though in a lesser degree than in previous years. Recent water quality impacts are currently being analyzed by a consultant.
- c) A groundwater adjudication commenced in the Ojai Valley area through an amended cross complaint filed with the California Superior Court on September 21, 2018. This action included not only Casitas but also many public and private water users in the Ojai Valley. This is of special significance to the District due to its operation of seven groundwater wells in addition to its right to divert water from the Ventura River. There would likely be no impact on water supply for the next twelve months but the District may need to divert funding from other needs in order to cope with increased legal costs. A special pass-through fee is currently being considered by the Board to cover this cost.

- d) The District embarked on the development of a Comprehensive Water Resources Plan in early 2019 and a draft version is near completion. This document is expected to identify supply-gap scenarios and may result in alterations to District policy such as Casitas' Water Efficiency Allocation Plan (WEAP).

3. ASSESSMENTS

The assessments are to be considered in the implementation of a Stage and the demand reduction measures for FY 2020-21.

WEATHER CONDITIONS.

During the period of 2012 through 2020, the Ventura River watershed has been in an extreme to moderate drought condition with less than average rainfall amounts (Table 1) that had been insufficient to cause the restoration of local water resources. Rainfall totals during the 2020 winter season were below the long-term average rainfall for Matilija and Casitas Dam locations and have had a neutral impact to water supplies in the early months of the year.

Table 1 – Rainfall Totals for Matilija Dam and Casitas Dam (inches)

Water Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Avg.
Matilija Dam	36.54	40.28	14.21	11.85	14.76	17.57	13.35	31.98	16.75	37.54	16.46	25.23
Casitas Dam	31.13	35.99	15.11	10.99	9.90	11.65	11.07	30.75	9.89	24.77	13.93	20.87

The winter storms of 2020 can be described as moderate in effect. The annual rainfall total during the period of October 1, 2019 to April 15, 2020, at Matilija Dam and Casitas Dam are 16.46 and 13.93 inches respectively.

WATER RESOURCES.

The primary water resources within the Casitas MWD district boundaries are collectively the groundwater basins of the Ventura River, Ojai and Upper Ojai, and the surface water storage at Lake Casitas.

Groundwater Basins. The winter of 2020 brought some recovery to the local groundwater basins within Casitas' district boundaries. The rainfall events caused continued flashy peak flows with moderate amounts of debris and silt from the highly burned Ventura River watershed.

The Upper Ventura River groundwater levels have seen an overall decline since April of 2019. The recent data presented by the Ventura River Water District illustrates that while groundwater levels came to within six feet of the normal April 1 average, they are still short of being completely full (see April 1, 2020 VRWD Drought Status Chart). The storage in the Upper Ventura River Basin would likely continue to allow groundwater pumpers to minimize their use of Lake Casitas supply over the next twelve months.

The Ojai groundwater basin is a primary water source for the Ojai Valley's urban and agricultural water demands. The basin's groundwater storage recovered an approximate 15-foot rise in water elevation recorded at a key well in the basin since November of 2019. The Ojai basin Groundwater

Management Agency has reported that the Ojai basin has risen to an estimated storage of 57,600 acre-feet (72% capacity) by April 2020 and is continuing to rise.

Surface Water Storage. Lake Casitas is the primary source of water supply for the Casitas Municipal Water District. Its construction in the 1950's was as a supplemental supply to local groundwater and as a primary source for areas that do not have groundwater. Figure 1 presents the annual high-low water storage fluctuations that Lake Casitas has experience since 1970. Lake Casitas storage was last at full storage capacity in May 2006 and has since been in a declining storage trend due to drought conditions, evaporation, environmental conditions, and water use.

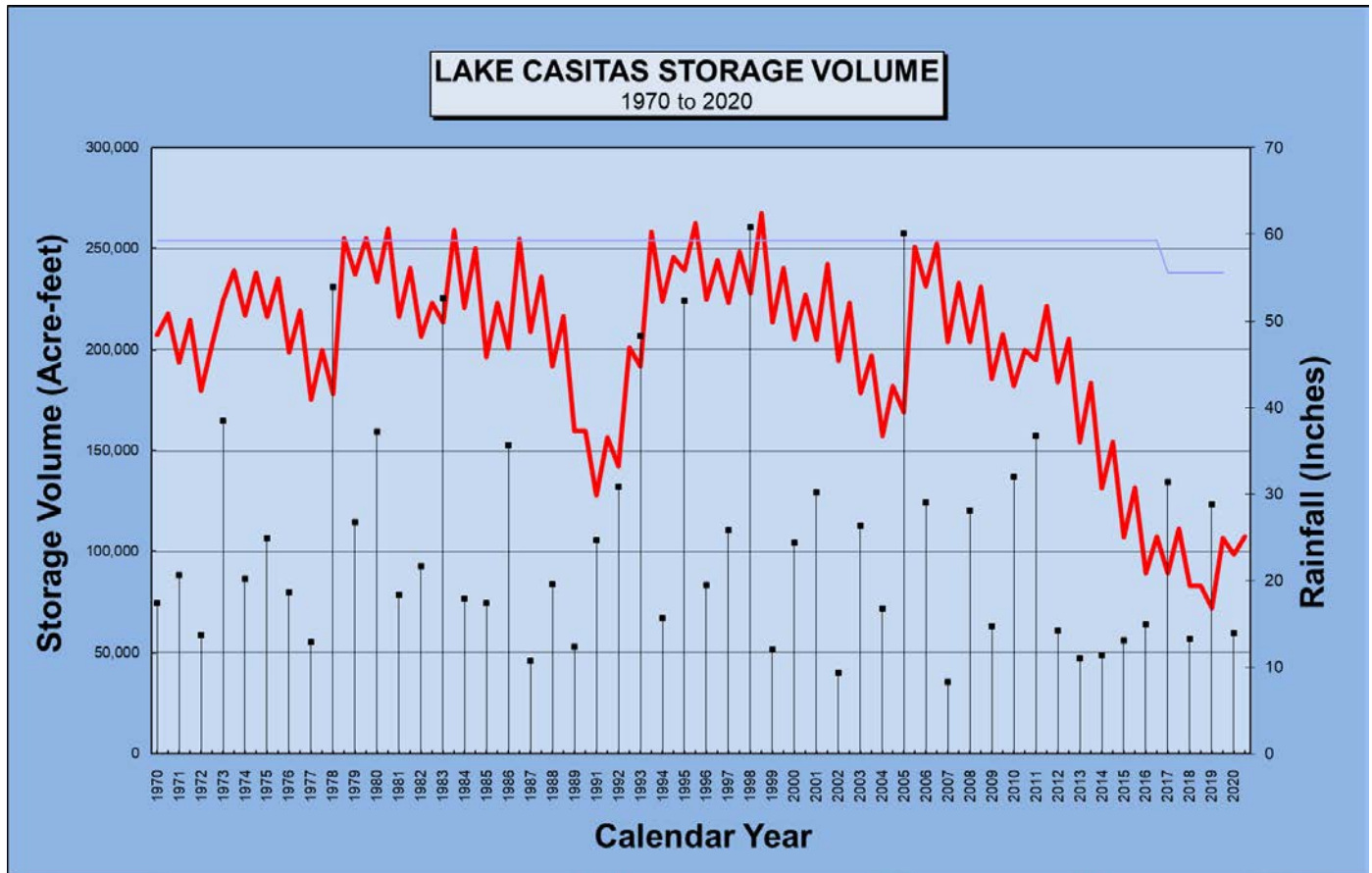


Figure 1 – Lake Casitas Storage Volume and Rainfall Trend (1970 to April 2020)

On January 1, 2018, Casitas officially changed the storage table based on the bathymetric survey conducted at Lake Casitas. The volume stored at each designated percentage specified in the Water Efficiency and Allocation Program (WEAP) is changed to reflect the data provided by the bathymetric survey as follows:

Table 2 – WEAP Stages and Lake Casitas Volumes

Stage	<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>	<u>Stage 4</u>	<u>Stage 5</u>
Percent Storage	100%	50%	40%	30%	25%
Volume (Acre-feet)	237,975	118,988	95,190	71,393	59,494

The Lake Casitas storage volume was 106,742 acre-feet on April 10, 2019. Current volume as of April 13, 2020 is 105,192 acre-feet.

In consideration of an April 2020 start point of approximately 105,000 Acre-feet of storage in Lake Casitas, applying evaporation, no runoff additions to storage, and comparing three rates of water demands, Figure 2 illustrates the time for Lake Casitas to reach a particular level. This chart illustrates that with the given demand rates, no additional rainfall and runoff, the District could reach Stage 3 in five to nine months, Stage 4 in fifteen months to two years, and Stage 5 in twenty-two months to just over three years.

Looking forward to the changes of Lake Casitas storage during the remainder of 2020, based on 2019 water demands and estimated evaporation, Lake Casitas is projected to decline to approximately a 95,000 acre-foot capacity by December of 2020.

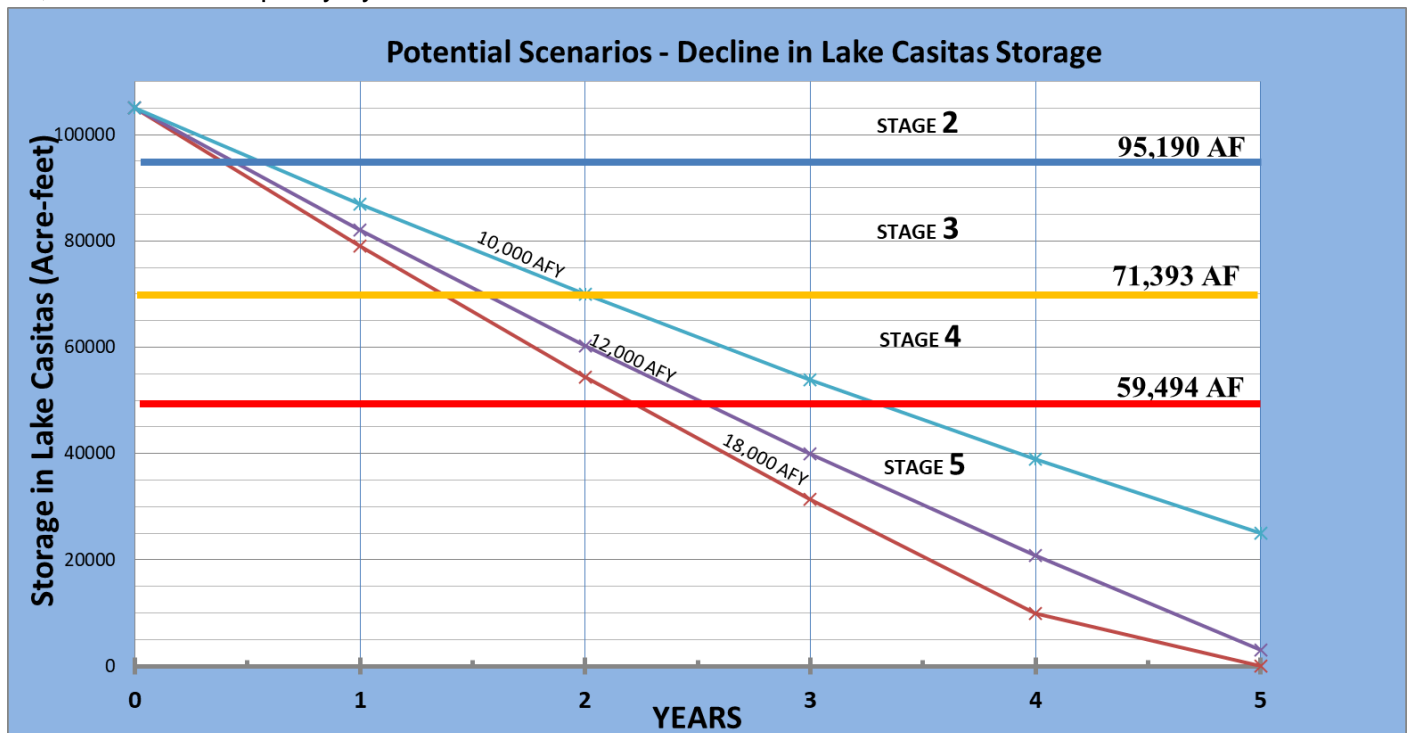


Figure 2 – Hypothetical Decline in Lake Casitas Storage with No Rainfall or Runoff.

WATER DEMAND

In FY 2013-14, the Casitas water demands from Lake Casitas peaked to 20,417 acre-feet, while Lake Casitas was still in a Stage 1 condition. In April 2014, the State’s Drought Emergency Declaration raised the public awareness to the on-going drought throughout California, the severe conditions in the State Water Project and Central Valley Project, and the growing scarcity of water for agriculture and communities statewide.

In April 2015, Lake Casitas storage declined to fifty percent of its storage capacity and the Casitas Board of Directors declared that a Stage 2 condition existed for the Lake Casitas supply. In doing so, the Board of Directors initiated Stage 2 mandatory water demand reduction requirements with the further adoption of a revised Water Efficiency and Allocation Plan (WEAP). A key element of the WEAP was the assignment of individual water allocations for residential, commercial and agricultural

beneficial water uses, and the assignment of a conservation penalty for water use that was in exceedance of the assigned water allocation.

In June 2016, the Casitas Board of Directors declared that a Stage 3 condition exists as Lake Casitas continued to decline to 100,000 acre-feet of water in storage. The Stage 3 declaration implemented a conservation surcharge of \$5.00 per unit and limited the available for new water use to 10 acre-feet per fiscal year. In April 2017, the Casitas Board of Directors continued the Stage 3 declaration, pending possible further decline of Lake Casitas storage to a Stage 4 level.

From December 2018 through February 2019, the Casitas Board of Directors considered the possibility of a Stage 4 declaration but decided to forego the declaration based on the strong conservation response from the community (near a Stage 5 level) combined with rainfall that had been adding significant supply volume to Lake Casitas.

A Stage 3 declaration was left in place for the 2020 Fiscal Year.

Water Demand Response. A critical function of the WEAP is to manage water supplies in such a manner that prevents Lake Casitas from reaching a minimum pool condition through the implementation of water demand response measures – the assignment of individual water allocations and the implementation of a conservation surcharge for water use in excess of the allocation.

Since FY 2013-14, the demand on the Lake Casitas supply has continued to decline (Table 3) in response to the WEAP, water resource changes by large customers, and the heightened customer awareness of water resource conditions. The estimated water delivery in FY 2018-19 is an indication of the continuance of the decline in water delivery from Lake Casitas.

Table 3 – Water Deliveries from the Lake Casitas Supply

Fiscal Year	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (Estimated)
Lake Casitas Water Deliveries (AF)	20,417	17,339	15,662	13,200	12,322	9,340	8,500
% below 2013-14 Delivery	0	15	23	35	40	54	58
Declared Stage	1	1	2	3	3	3	3

Each of the listed periods since FY2015 exhibit the water demand reduction resulting from the public outreach, the conservation surcharge, and the effects of the State’s 2014 drought declaration. (Note that the amounts in Table 3 are registered at the Marion Walker Treatment Plant and don’t include system losses thus will differ from amounts reported on the District’s Monthly Consumption Reports).

Conservation Penalty. The District has implemented a conservation penalty for water use in excess of the individual customer’s Staged allocation. The funds resulting from the conservation penalty are to be applied toward new water supply projects and the water conservation efforts of the District.

In September 2015, and for the remainder of FY 2015-16, the residential water used in excess of the monthly allocation was billed as a conservation penalty at the rate of \$1.00 per unit. Effective July 1, 2016, and continued into FY 2018-19, the conservation penalty was increased to \$5.00 and the allocation reduced an additional 10 percent for the Stage 3 condition.

Revenue. The Revenue and Expense Report for July 1, 2020 through February 28, 2020, indicates that Allocation penalties collected through February 2020 for all residential accounts equates to roughly 260 Acre-Feet of overuse in this category. This is a slight increase from 2019 wherein penalties had been collected on approximately 240 Acre-Feet of overuse.

Growth. The service area of the District is experiencing extremely slow growth. Most requests that Casitas receives are related to expansions of residential housing construction. The slow growth rate is indicative of the information illustrated in Table 5. During the past eight years, Casitas has installed twenty-three meters and issued 29.76 acre-feet of water allocation. On the average, less than three meters have been installed per year and new or additional allocation assignments have been less than four acre-feet per year.

In 2017, Casitas acquired the Ojai Water System in which Casitas has addressed residential and multi-dwelling projects that were in progress at the time of the system acquisition.

Table 4 – Water Service and Allocation Assignments by Casitas (CY 2012-2019)

Calendar Year	No. of Meters Issued	Allocation Issued (AF)
2012	3	2.22
2013	1	1.88
2014	6	9.85
2015	1	1.27
2016	3	2.08
2017	3	5.54
2018	0	0
2019	6	6.92
2020	2	0.17

4. POLICY AND PROGRAMS IN PLACE.

Resolution Adopting Management Priorities of Casitas Municipal Water District, Resolution No. 93-12. On March 10th, 1993, the Casitas Board of Directors resolved by Resolution No. 93-12 (1) that Casitas shall manage Lake Casitas and its water supplies so that it can provide back up to other water systems and meet its direct customer demands during droughts without running the lake dry.

Water Waste Prohibition Ordinance. (Casitas Ordinance 15-02). This Ordinance established water waste prohibitions and identified actions against violations of the Ordinance. Casitas staff has been actively engaged with the public reports of water waste.

Water Conservation Program. Since 1992, Casitas has actively assisted water customers throughout the district with fixture retrofits, irrigation surveys, residential and institutional water use surveys, provision of water conservation materials to local schools, public workshops and presentations on a wide variety of water conservation topics, public messaging, and financing assistance for water well improvements. The Water Conservation Program has partnered with other Ventura County agencies to obtain grants for additional water conservation measures. The Water

Conservation Department has also adjusted staffing levels as needed during drought to provide increased customer assistance with meeting conservation targets.

Water Efficiency and Allocation Program (WEAP). The WEAP is the key water management tool for long-term drought response and water demand. The WEAP was originally adopted by the Board of Directors in January 1992 and recently revised in April 2019. The WEAP is the backbone to the Casitas Urban Water Management Plan. A critical element of the WEAP implementation is to cause water demands to be commensurate to the declared Stage of Lake Casitas.

State of California. On April 7, 2017, Governor Brown lifted the January 17, 2014 drought declaration, leaving in place water waste prohibitions and requirements for continuing development of urban and agricultural water use standards to promote continued water conservation (Executive Order B-40-17). The State is developing new regulations to continue the conservation measures as well as measures to hold all water users accountable for their water use.

Water Security Projects. The Casitas Municipal Water District is committed to investigating and implementing opportunities to expand water supply availability.

State Water Interties – The Casitas Municipal Water District is diligently pursuing the development of the infrastructure and agreements needed for the exchange of State water between Calleguas, the City of Ventura, Casitas, United, and other parties and due consideration of the fiscal impacts and funding methods of the project. This is an opportunity for regional collaboration to address common water supply reliability needs of entirety of Ventura County. Additionally, Casitas and Carpinteria Valley Water District are pursuing grant funding to increase the size of a current intertie connection as well as build pump stations to move State Water Project water into Casitas' system. The preliminary schedule for final completion of these projects is five to eight years.

Ojai Well Field Rehabilitation – This project is intended to restore the production of the Ojai Well Field wells and also drill one replacement well. This is expected to be completed within by the end of this year.

Comprehensive Water Resources Plan - While not specifically a water security project, Casitas has hired a consultant to analyze current water resources and develop a plan that will support the development of appropriately-sized projects. One primary component is a refreshed analysis of the safe yield of Lake Casitas, taking into account possible climate change aspects. A final draft of the plan is nearly complete.

RECOMMENDED WEAP ACTIONS

The following are the staff recommendations for WEAP actions to be considered for adoption by the Board of Directors at the May 13, 2020 Board Meeting:

Customer Demand Reduction Measures

1. **Revise the declaration to Stage 2.** The level of Lake Casitas is roughly the same as it was twelve months ago. Through their demonstrated water use over the past three years, the District's customers have shown that they are willing to conserve at level greater than what the

District has required. Water conservation is a way of life for the District's customers and they have proven they understand that reality. The enforcement of the Water Waste Prohibition Ordinance should continue during Stage 2 under the current system of public notification of waste. Conservation staff will continue to work with customers to help them understand and implement conservation measures. The system for allocation assignment and billing will continue under Stage 2, until such time that the Board makes a different determination. The Board reviews consumption and hydrology information monthly thus it can respond quickly to changes in customer conservation behavior.

2. **Implement Stage 2 reduced water allocations.** If the water demand reduction measures are not being met during the course of FY 2020-21, the conservation penalty should be increased and the Board should consider a return to Stage 3.
3. **Landscape watering restriction.** Continue with current water use restrictions of no landscape watering between the hours of 10AM and 6PM.

Penalties and Rates.

1. **Consider and implement Conservation Penalty for water use in excess of allocation.** Reduce the current conservation penalty to \$2.50 for each unit of water that is over the monthly allocation assignment for all classifications of service. Return to \$5.00/units only if it is determined that water demand reduction is not being attained. Direct staff to work with customers that are repetitively in excess of the allocation assignments.
2. **Continue planned rates for revenue stabilization and cost of service.** The Board has adopted water rates to achieve revenue stabilization and cost of service that became effective July 1, 2017 and continue for the following four fiscal years. A new rate study will be completed later in 2020.
3. **Provide a leak-relief program**
The Board should consider implementing a leak-relief program. This will assist customers who have excellent conservation histories the ability to get relief from unusual situations that cause penalties to be assessed.

Issuance of Additional Allocations

1. **Continue to set an annual allocation limit for new or existing water service connections.** Adhere to the Board's prior direction to limit the volume of water to be allocated to new service connections or requests for additional allocation. Based on the Growth section above, a limit of 10 acre-feet per fiscal year appears to be a reasonable approach.

Communications

1. **Communicate the Stage 2 Condition.** Stage 2 is identified as a condition of a water shortage warning. The current demand for Lake Casitas supply is fifty percent of the current 20,000 acre-foot safe yield of Lake Casitas (Table 3) which is compliant with the Stage 5 demand reduction target. The conservation message is working very well at this point in time. The Board of Directors may consider at any time however to move to a particular Stage based on a number of factors including conservation response, supply forecasts, current supply, etc.

2. **Continue the public information campaign.** Despite the Governor's 2017 action in declaring the end of the California drought, local water users have continued to conserve. The local resale agencies also recognize that their water supplies are subject to sufficient rainfall and they may have to rely again on Lake Casitas under continuing drought conditions. Casitas needs to continue the messaging of local water supply reliability, water supply project status, and responsible water use. This can be done through newsletters, website and social media posts, and public workshops. The District's pending Comprehensive Water Resources Plan will also help to communicate the issues of water supply reliability.
3. **Provide regular briefings, publish monthly consumption report.** A part of this task is being accomplished by staff as a requirement of the State Water Resources Control Board. The billing system provides each customer a monthly status on their water use and the application of conservation surcharges.

Modification of the WEAP.

No modification of the WEAP is being considered as part of this assessment.

Modifications are expected later this year as a result of the Comprehensive Water Resources Plan.