ITEM 7 b

Agenda Item No

File Code No.

CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: July 26, 2016

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Stage Three Drought Update

RECOMMENDATION:

That Council receive an update on the status of the current drought, drought-response capital projects, and continuing conservation efforts.

DISCUSSION:

Council declared a Stage One, and subsequently a Stage Two Drought Condition on February 11, 2014, and May 20, 2014, respectively, as a result of unprecedented drought conditions. On May 5, 2015, in response to the driest consecutive four-year period on record, Council declared a Stage Three Drought Emergency, increasing the community's water conservation target to 25 percent and adopting additional water use regulations by Resolution on May 12, 2015. This was followed by a fifth consecutive year of minimal rainfall with virtually no runoff to local reservoirs, which caused Council to increase the community's water conservation target to 35 percent on April 26, 2016.

This drought update will cover the following items:

- Lake Cachuma Emergency Pump Station Relocation
- Water Supply Outlook/Weather Forecast
- Drought Response Capital Projects
- Conservation Efforts

Water Supply Outlook

Rainfall for the last five years has averaged less than half of the long-term average. In accordance with the City's Long Term Water Supply Plan, depleted surface water supplies have been replaced with increased groundwater production, supplemental water purchases, and water from the soon-to-be-operational Desalination Plant. This strategy has been successful in securing supplies sufficient to meet demand through 2016, assuming the community continues to conserve water at a rate of 35 percent or more.

In September 2015, Cachuma Reservoir's water level dropped below the intake tower that conveys water to the South Coast, requiring the Cachuma Operations and Maintenance Board to install and operate the Emergency Pump Project (EPP), which is a barge-mounted pump station that pumps water from Lake Cachuma up into the intake tower, through Tecolote Tunnel, and on to the South Coast Water Agencies.

On June 29, 2016, in response to dropping lake levels, the EPP was successfully relocated from Site 1 to deeper water at Site 2. The original Site 1 consisted of 3,700 feet of 24-inch pipeline between the barge and the intake tower. Moving the barge to Site 2 required an additional 6,500 feet of 24-inch pipeline. The EPP allows the City to continue to receive its remaining Cachuma carryover and state water. The relocation work was completed just ahead of the downstream water release which started on July 12, 2016, and is anticipated to release over 7,000 acre-feet, dropping the lake by several feet.

Final allocations of State Water "Table A" deliveries for the year are 60 percent of the City's entitlement, or approximately 1,980 acre-feet. The increase was seen as a significant improvement over past years and reflected the improved water supply situation in Northern California. In addition to State Water, the City was successful in purchasing 4,000 acre-feet of supplemental water to help meet demands next year. Despite the ability to secure imported water there still remains limitations on how much water can physically be delivered. During prior drought updates staff raised concerns that there may be a need to temporarily reduce demands further during peak water usage in August and September. Fortunately, there have been several improvements in our water supply situation including a 10 percent increase in imported water deliveries and the City has been able to take advantage of excess capacity in the state water delivery system as a result of other water agencies taking less than their full capacity in the pipeline. Based on projected deliveries to the lake as of July 19, 2016, and continued conservation of 35 percent, staff anticipates that there will be adequate water supplies to get through peak demand times without the need for additional water use restrictions. If conditions change for the worse, staff will bring forth a plan for additional temporary restrictions for consideration.

The National Oceanic and Atmospheric Administration forecasts an increasing chance of a La Niña developing during the second half of the year. Drier, colder weather for Southern California is associated with a La Niña events. Given the unpredictable nature of El Niño and La Niña events, and the unprecedented nature of the current drought situation, the City is planning for continued drought conditions.

<u>Drought Response Capital Projects</u>

The Desalination Plant start-up has been delayed by approximately a month and is now tentatively scheduled for October 2016. Following plant testing and approval by the State, water is not anticipated to be put into the distribution system until December 2016. A detailed staff update on the changes is tentatively scheduled for August 2, 2016. Recent highlights include delivery to the site of the three main treatment units

and major electrical equipment. The preparation and installation of the offshore intake pumps will begin in late July. As a recap, the current Desalination Plant reactivation will produce 3,125 AFY for City water customers, and testing is anticipated for October 2016 with production of water expected as late as the end of December.

Water modeling work is underway to understand how water quality will change with the addition of desalinated water as the City's water demands and supplies vary. We understand that some City customers have unique water quality needs, i.e. dialysis centers and breweries, and we want to make the community aware of the changes so they can plan accordingly. Once the modeling is completed, staff will be working with a public relations firm to assist with communicating what changes water customers should anticipate after the Desalination Plant goes online.

Staff has been working closely with a water filtration expert to make modifications to the recycled water treatment plant to boost production to meet peak summer demands. Thus far the facility has been able to keep up with demands without the need for blending potable water, or requests to customers to reduce demand. The cooler weather this year has helped to keep demands down and ongoing modifications and testing are occurring to determine the maximum sustainable production.

All of the City's wells, with the exception of the Vera Cruz Well, are operational and are providing the community with much needed groundwater supplies. The Vera Cruz Well is scheduled to be back online in July, after significant improvements to increase the reliability of this 40-year old well.

Conservation Efforts

The City's water conservation numbers for June 2016 show a reduction of 36 percent, compared to 2013 water demands. The cumulative citywide average reduction since the Stage Three Drought declaration in May of 2015 is 35 percent.

The City's water customers continue to meet and exceed both the City's and the State's conservation targets with extraordinary conservation measures. The amended Stage Three Drought Emergency requires a citywide 35 percent water reduction to ensure the City has adequate supplies for the 2016 water year. The community's ability to meet this conservation target will be critical for the City's ability to meet customer demands throughout this summer.

The state-mandated water use reduction for the City is 12 percent below 2013 water usage. The City is one of the few water providers statewide that has consistently exceeded the state's water use reduction targets and mandated conservation standard. The State recently adopted new regulations that allow agencies to reduce their conservation requirements by demonstrating their water supply reliability through 2019. An agency that does not submit a new conservation standard under the new regulations, must comply with the original conservation standards which are based on per-capita water use. Since the City remains in a severe drought condition, the City is

electing to keep the original conservation requirement of a 12 percent reduction, based on the per-capita water use.

Sustainability Impacts

The recommended conservation target of 35 percent is appropriate at this time, given the community's success in reducing demand and the need to further stretch remaining water supplies, especially during the months of August and September. Staff will continue to monitor the community's cumulative water savings and will use the information as a basis for determining whether or not to recommend additional water use restrictions for Council's consideration.

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