



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: May 22, 2018

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:

Drought Update

Council declared Stage One and Stage Two Drought Conditions 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. Since then, the Stage Three Drought condition has been amended with appropriate conservation targets and water use regulations in response to current and forecasted supply conditions.

The City's 2011 Long Term Water Supply Plan (LTWSP) outlines the City's adopted water supply planning policies for managing a drought situation. The LTWSP had planned for a 10-15 percent demand reduction during drought conditions. However, the current drought has been historic, resulting in drier conditions for a longer duration than previous drought periods on record. As a result, the City has increased the required demand reductions to range up to 40 percent, on a temporary emergency basis, based on local water supply conditions. Most recently, on March 21, 2017, the Stage Three Drought condition was amended to decrease the City's water conservation target to a 30 percent reduction in response to the February 2017 rains, which filled Gibraltar Reservoir and increased storage in Lake Cachuma.

This drought update will cover the following items:

- Water Supply Outlook/Weather Forecast;
- Water Quality;
- Drought Response Capital Projects;

- Supplemental Water Purchases; and
- Conservation Efforts

Water Supply Outlook/Weather Forecast

Typically, April marks the end of the rainy season for Southern California, including the Central Coast. Despite four notable rainstorms in January and March 2018, the average rainfall for the past seven years is among the driest seven consecutive year period on record. Consistent with the City's LTWSP, the City has met water demands during the ongoing drought with increased groundwater production, increased use of water imported through the State Water Project, increased extraordinary conservation, and reactivation of the desalination plant. As a result of increased pumping during the drought, groundwater levels are near historic lows.

An updated three-year supply planning outlook indicates that the City is still in a drought and must continue to conserve. Rainfall in February and March 2018 filled Gibraltar Reservoir; however, the storms were not sufficient to noticeably increase storage in Lake Cachuma. The City and other Cachuma Member Units are still awaiting the annual allocation amount from Lake Cachuma for the next water year. In April 2018, the State Department of Water Resources announced water allocations from the State Water Project of 30 percent of contractor's Table A amounts.

A new water year will begin on October 1, 2018, marking the beginning of the eighth water year since Cachuma last spilled in May 2011. Even though the water year officially starts in October, the City typically receives most of its rainfall from January to March. The City's water supply planning charts have been updated to reflect current water supplies at the end of the rainy season. The projections currently show additional water shortages in 2021, assuming no significant inflow to Gibraltar and Cachuma over the next three years. The City's projected water demands can be met through 2020, using a combination of water from Lake Cachuma and the State Water Project, water stored in Gibraltar Reservoir, groundwater, desalination, and extraordinary conservation.

Water Quality

This past winter posed an unusual threat to water quality resulting from a combination of significant wildfires in the watershed – the Rey, Whittier, and Thomas Fires. Following the 2007 Zaca Fire, the City made significant investments to its management of water, treatment, and distribution, which has put the City in the best position to deal with difficult surface water quality. Major changes that address water quality included the addition of ozone treatment, an active carbon feed system, circulation and aeration of water in its treated water reservoirs, and pretreatment of surface water in Lauro Reservoir. In addition, the frequency of surface water monitoring has been increased to help with adaptive water management of the City's diverse water supply portfolio. At this time, water from Cachuma continues to be diverted and treated. Unfortunately, Gibraltar took the brunt of the Thomas Fire debris flows that occurred on January 9, 2018. The same devastating flows that swept through the community of Montecito also cascaded down the other side of the Santa Ynez Mountains, sweeping mud and fire debris into Gibraltar.

At this time, it is unknown how much of the water in Gibraltar will be usable and just how much capacity was lost as a result of that single event.

Drought Response Capital Projects

The desalination plant continues to operate in full production capacity. While the facility is finished and operating, there are still punch-list items that the contractor must complete before full acceptance. The temporary repairs to the intake pipeline have shown no signs of leaking, but staff continues to work with the contractor to identify a long-term repair solution. With work winding down, staff has been pushing the contractor to identify when the facility would be safe for an open house to give an opportunity for the public to tour the facility.

Supplemental Water Purchases

The State Department of Water Resources has issued a 2018 State Water Project delivery allocation of 30 percent. In order to maximize 100 percent of the City's capacity for imported water deliveries to Lake Cachuma, the City participated in the 2018 Supplemental Water Purchase Program facilitated by the Central Coast Water Authority (CCWA), and entered into an agreement for up to 1,500 acre-feet of delivered supplemental water through the CCWA program. The purchased water can be directly delivered to Lake Cachuma, used to repay outstanding water debt owed to the Antelope Valley East Kern Water Agency, or put into groundwater banking programs for future use.

Conservation Efforts

The City's 12-month running average water conservation reduction at the end of March 2018 was 37 percent, compared to 2013 water demands. Conservation is measured based on the City's water production meters (not retail customer meters used for water billing). This approach is consistent with state reporting requirements for conservation, since production meters account for overall water loss occurring in the system. As part of the City's ongoing meter replacement program, several production meters were replaced in March and April. Staff are evaluating the effect on reported conservation numbers, now that the new meter installations are complete.

With the Stage Three Drought declaration in effect and the need for a 30 percent reduction, the Water Conservation Program has continued its enhanced public information campaign of targeted outreach to specific user types, including:

- Weekly messaging through social media, online news outlets, and industry contacts;
- Presentations to community and industry groups;
- Printed materials with drought messaging;
- Targeted utility bill messaging;
- Drought signage throughout the City; and
- Additional training and workshops

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