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CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: September 20, 2016

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department
Planning Division, Community Development Department

SUBJECT: Stage Three Drought Update

RECOMMENDATION:

That Council receive an update on the status of the current drought, ongoing drought-response Capital Improvement Projects, projected supply shortages, and provide input on potential additional water use and development restrictions.

EXECUTIVE SUMMARY:

This report provides an update for Council on the current drought situation in relation to the water supply outlook, Capital Improvement Projects related to drought response, community-wide conservation, water use regulations, and development restrictions. The report outlines the efforts to date in response to the drought. A projected shortage in the ability of the City to meet peak demand during the summer of 2017 is discussed, as are proposed measures for addressing the shortage. A lawn watering moratorium, commencing as early as November 2016, is identified as the next available measure with sufficient savings to offset the projected supply shortage. Updated numbers on potential savings from implementing development restrictions are presented and are found to be insufficient in both quantity and timing to contribute significantly to reducing the supply shortage.

DISCUSSION:

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, increasing the community's water conservation target to 25 percent, and adopting a resolution for additional water use regulations 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.

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This drought update will cover the following items:

- Water Supply Outlook
- Drought Response Capital Projects
- Community Conservation
- Water Use Regulations
- Development Restrictions

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 reactivation of the City's Desalination Plant, now projected to supply water in January 2017.

In September 2015, Cachuma Reservoir's (Cachuma) water level dropped below the intake tower that conveys water to the South Coast by gravity. To keep water moving to the South Coast, an Emergency Pump Project (EPP) which consisted of a barge-mounted emergency pump station was installed to keep water moving into the intake tower through Tecolote Tunnel, and on to the South Coast Water Agencies. On June 29, 2016, in response to a continued decline in reservoir levels, the EPP was successfully relocated to deeper water. The current location of the barge now utilizes just over 10,000 feet (~2 miles) of 24-inch pipeline to move water to the intake tower. 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 was concluded on August 29, 2016, dropped the reservoir by 10 feet, and released 11,400 Acre Feet (AF), 2,000 AF more than what was planned.

Final allocations of State Water "Table A" deliveries for the current year are 60 percent of the City's entitlement, or approximately 1,980 AF, reflecting much improved surface water supplies in northern California. In addition to State Water, the City was successful in purchasing 4,000 AF of supplemental water to help meet demands next year. This fall/winter, the City will see the return of 1,285 AF of water that had been banked with the Dudley Ridge Groundwater Bank. Despite the ability to secure nearly 7,265 AF of additional imported water this year, there are limitations on how much can physically be delivered. In recent months, staff raised concerns about a potential need for further demand reductions during peak water usage in August and September of this year. Fortunately, strong conservation and the ability to utilize excess capacity in the State Water delivery system helped defer the need for further reductions this year. However, looking ahead, staff is projecting a shortage of approximately 300 AF from August through October 2017, assuming no additional delays in desalination deliveries or interruptions in groundwater production will occur. Accordingly, staff is recommending that Council consider additional actions for further demand reduction, as discussed below.

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The National Oceanic and Atmospheric Administration (NOAA) forecasts an increasing chance of a La Niña developing during fall 2016. Drier, colder weather for Southern California is typically associated with La Niña events. NOAA's forecast for January - March 2017 shows a projection of below-average precipitation during our key rainfall window. 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.

Drought Response Capital Projects

As reported previously, the Desalination Plant is now expected to complete testing, receive State approval, and supply water to the distribution system starting in late January 2017. The capacity of the reactivated plant will be 3,125 AF per year (AFY).

Staff has been working closely with an environmental engineering firm to make changes to the recycled water treatment plant to boost production. A combination of improved production and cooler weather this year has allowed the recycled water system to meet demands without the use of potable water. Efforts are still underway to get the plant up to its full production capacity.

All eight of the City's active wells are operational and providing much needed groundwater supplies. The Vera Cruz Well is back online, with significant improvements aimed at increasing the reliability of this 40-year old well.

Community Conservation

The City's water conservation numbers for August 2016 show a reduction of XX percent, compared to 2013 water demands. The cumulative citywide average reduction since the Stage Three Drought declaration in May of 2015 is XX 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 state-mandated water use reduction for the City is 12 percent below 2013 water usage. The state recently adopted new regulations that allow agencies to reduce conservation requirements by demonstrating they have sufficient supplies to meet full customer demands through 2019. Since the City remains in a severe drought condition, the City has not elected to seek a modification of its state requirement.

Water Use Regulations

For each successive year of continuing dry weather, Council has considered appropriate responses in the form of water use regulations and development restrictions, coupled with drought water rates and enhanced public outreach. These steps have been guided by the City's Water Shortage Contingency Plan. With Cachuma at record low levels, groundwater basins nearing record lows, the potential for construction delays in

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desalination production, and a projected inability to meet peak customer demand during the coming water year, staff has been working to develop recommendations regarding changes in the City's current regulations. Attachment 1 is an updated summary of current and potential additional regulations. Staff looked for measures that would generate savings sufficient to offset the projected short-term supply deficit of approximately 300 AF with an additional 500 AF of contingency, for a total of 800 AF of additional savings over the coming water year. This would mean an increase in our conservation target from 35 percent to approximately 40 percent, relative to 2013 water usage. In development of the regulatory options, staff was focused on protection of the community's investment in trees and shrubs, and minimizing impacts to economic activity in the community.

With regard to new water use regulations, staff's conclusion is that a general ban on turfgrass (lawn) watering with potable water (with limited exemptions) is the best tool for addressing the current situation. Staff is projecting a savings of 800 AFY from this action, based on a range of assumptions yielding 500 AFY as a worst case and 1,200 AFY as the best case scenario. Coupled with likely additional demand reductions from updated community outreach and recent changes in water rates, this step should be sufficient to allow the City to continue to meet system-wide demand with an acceptable supply buffer, barring significant, added setbacks. In the residential sector, the only exemptions would be watering of grass that is incidental to irrigation at the drip lines of trees and shrubs, and watering of certified water wise turf. In the institutional sector, staff proposes exemptions for open spaces and parks on publicly owned and operated lands; certified water wise turf; and areas of active recreation at schools, day care facilities, and after-school programs. In the commercial sector, staff proposes exemptions for turf areas that are directly related to the business activity, such as ceremonial event spaces, subject to an application for exemption and demonstrated ongoing compliance with the City's water conservation targets. In all sectors, staff anticipates the need for increased enforcement, much of it during likely irrigation times of midnight to 7:00 am.

Development Restrictions

Council previously discussed the potential for development restrictions in December 2014, April 2015, and April 2016, and the Planning Commission discussed the same in February 2015. On all occasions, decision-makers weighed the small amount of water savings gained by implementing development restrictions against the potentially negative impact on the local economy and decided to forego instituting development restrictions. In light of the projected water supply shortages and increasing community concerns that development continues to be approved and constructed during a Stage 3 Drought, potential development restrictions were explored again in detail by staff.

During a normal year, the City's water demand is 14,600 AFY. The City's current targeted water demand is 65 percent of normal, or 9,500 AFY. On average, over the last 10 years (2006 thru 2015), new development has accounted for 27 AFY, or about 0.28 percent of the drought demand (see Attachment 2 – Analysis of Water Use for Development). That average includes several years of the development boom of 2001 to 2008, and the

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recession that followed, and is similar to the previously calculated value. It is also well below the estimated demand of 40 AFY used in the 2011 Long-Term Water Supply Plan and the 2011 General Plan Update Environmental Impact Report.

An updated review of all pending (planning application received) and approved (planning approvals granted) development projects as of July 31, 2016, indicates new annual demand of approximately 179 AFY for these projects. However, based on past trends, staff expects that only about half of the projects will seek building permits and complete construction in the foreseeable future. It is also important to note that these projects will be staggered over a number of years. Staff's conclusion is that a moratorium on new development will not generate a significant savings relative to the demand reduction needed to address next summer's projected shortage, nor will any savings occur soon enough to impact the pending shortage.

The City's adopted Landscape Design Standards for Water Conservation prohibit the installation of new turf for exclusively commercial projects. They also limit turf to no more than 20 percent of the landscaped area for single-family and multi-family residential, and mixed-use projects. However, if Council adopts additional water use restrictions, such as a prohibition of lawn watering, those same restrictions would also apply to new development.

Schedule

Implementation of the lawn watering restrictions would be anticipated as early as November 2016, upon adoption by Council, in order to begin achieving savings as soon as possible. Furthermore, moving forward in the winter months also allows for a smoother transition for the community when the need for outdoor lawn watering should be unnecessary with rainfall similar to the past few years. Following Council adoption, staff will increase community outreach to raise public awareness, and begin to ramp up enforcement as necessary. It will be critical, if drought conditions continue, to have regulations in place that will allow the City to fully achieve the required conservation at the start of the 2017 irrigation season. Should water supply conditions improve this winter, staff would revisit rolling back these restrictions; however, if there is no improvement, the City will be well positioned to address the 6th year of a record drought.

BUDGET/FINANCIAL INFORMATION:

Additional revenue loss is anticipated as a result of the increase in water conservation. Current rates reflect the use of \$7 million in reserves, and it is not recommended at this time to use additional reserves to balance the projected losses. With input from Council, staff proposes to implement a Drought Impact Fee, which would be assessed equally on all units of water used, to make up the loss of revenue from anticipated additional conservation. The fee will be similar to what other communities have done to address shortages. Development of the fee will require working with a rate consultant, public

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noticing, and a rate hearing, which will likely lag behind the implementation of the regulations by several months.

SUSTAINABILITY IMPACT:

The recommended additional drought regulations are appropriate at this time, given the need to further stretch remaining water supplies. It is estimated that additional regulations will increase cumulative water savings to 40 percent on an annual basis, with monthly savings ranging from 32 percent to 50 percent. Staff will monitor the cumulative water savings from November 2016 through April 2017, and will use the information as a basis for determining whether or not to recommend additional action for Council consideration in the spring of 2017.

ATTACHMENT(S):

1. Stage Three Drought Phased Response Options
2. Analysis of Water Demand for Development

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APPROVED BY: City Administrator's Office

Stage Three Drought Phased Response Options

The following water use regulations and development restrictions can be considered for implementation in a phased approach if the water supply situation worsens or the community does not meet conservation targets. These actions could be implemented as part of a Stage 3 Drought, or could be further phased, depending on the drought condition at that time.

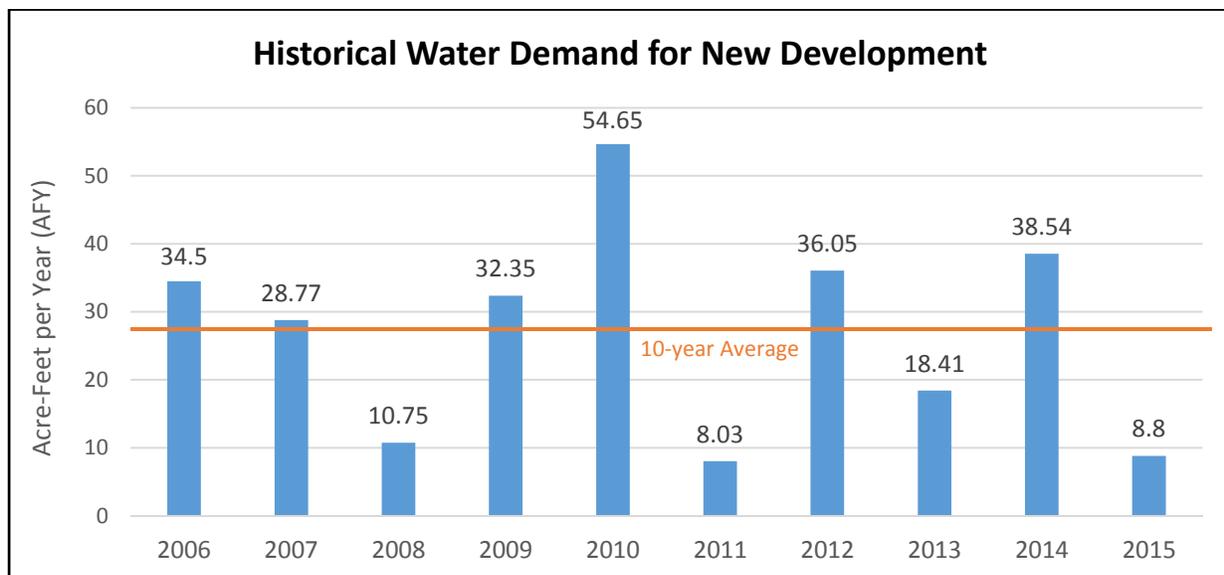
<i>Phase</i>	<i>Water Use Regulations</i>	<i>Development Restrictions</i>
Current	<p>Regulations align with statewide regulations and include:</p> <ul style="list-style-type: none"> • Restrict watering times • Nozzle required on hoses • Limited washing of hard surfaces • No irrigation during/after rain • Large commercial fountains may not operate • Pools and spa covers required • Water only served on request, drought notice required • Require towel/linen washing signage in hotels/motels • Require drought and shower limitation signage in gyms and pool facilities. 	<p>Irrigation with potable water for new homes and buildings must comply with regulations adopted by the CA Building Standards Commission and the Department of Housing and Community Development.</p> <p>No Public Works permits for groundwater wells if property is connected to the City's water system</p>
More Strict	<p>Prohibit overhead spray irrigation in parkways</p> <p>Prohibit irrigation of turf, with limited exceptions</p> <ul style="list-style-type: none"> • Recycled water • Athletic fields at schools and child care facilities • Open spaces and parks on publicly owned and operated land • Water wise turf (must apply for exemption) • Commercial event spaces (must apply for exemption) 	<p>Mandatory deferral of installation of all approved "aesthetic" landscaping, which does <u>not</u> include:</p> <ul style="list-style-type: none"> • Storm Water Management compliance • Required mitigation • Creek/riparian restoration • Tree relocations • Erosion control <p>No Building Permits for new swimming pools.</p> <p>No Building Permits for projects with <u>net new</u> water use.* (Note: This restriction could be made less strict by allowing certain exemptions.)</p>
Catastrophic Supply Interruption	<p>Outdoor watering by hand only or No outdoor water use</p>	<p>No new water meters*</p>

*Coordinate with Santa Barbara County to apply City development restrictions to out-of-City properties served by City water

ANALYSIS OF WATER DEMAND FOR NEW DEVELOPMENT

AUGUST 2016

During a normal year, the City's water demand is 14,600 acre feet per year (AFY). Currently, the City is in a Stage Three Drought Condition with projected annual demands of approximately 9,500 AFY (65% of normal potable demand). On average, new development represents approximately 0.28% of the City's drought water demand projection, or an additional 27 AFY each year. This estimate is based on water demand factors used by the City for development over the last ten years (refer to the chart below). The General Plan Update Final Environmental Impact Report (FEIR) anticipated an added demand of 722 AFY for new development by the year 2030, or an average of 38 AFY each year.



Looking specifically at development projects currently submitted to the City, there is a total of approximately 179 AFY attributable to new development either pending (not yet approved) or approved (building permit not yet issued). Please refer to the table below. If all pending or approved projects were constructed next year, this would represent 1.9% of the City's annual drought water demand projection (1.2% of normal year demand). These numbers represent projects that have been submitted over many years; some of these projects may never come to fruition, but it represents a worst-case scenario.

Potential Water Demand From All New Development (as of July 31, 2016)

	Approved Projects	Pending Projects	TOTAL
Water Demand	67.43 AFY	111.76 AFY	179.19 AFY

The following two tables break down this 179 AFY by land use, as well as magnitude of project water demand.

**Potential Water Demand From APPROVED Development
By Land Use Category (as of July 31, 2016)**

	Residential	Mixed Use	Non-Residential	TOTAL
Affordable Housing	21.47 AFY (2 projects)	-	-	21.47 AFY (2 projects)
Projects > 5 AFY	6.51 AFY (1 project)	6.88 AFY (1 project)	-	13.39 AFY (2 projects)
Projects 1-5 AFY	3.26 AFY (2 projects)	5.48 AFY (7 projects)	4.27 AFY (2 projects)	13.01 AFY (11 projects)
Projects < 1 AFY	14.13 AFY (34 projects)	3.55 AFY (6 projects)	1.88 AFY (14 projects)	19.56 AFY (54 projects)
TOTAL	45.37 AFY (39 projects)	15.91 AFY (14 projects)	6.15 AFY (16 projects)	67.43 AFY (69 Projects)

**Potential Water Demand From PENDING Development
By Land Use Category (as of July 31, 2016)**

	Residential	Mixed Use	Non-Residential	TOTAL
Affordable Housing	2.30 AFY (1 project)	-	-	2.30 AFY (1 project)
Projects > 5 AFY	-	39.80 AFY (3 projects)	23.22 AFY (2 projects)	63.02 AFY (5 projects)
Projects 1-5 AFY	7.88 AFY (5 projects)	18.17 AFY (6 projects)	6.66 AFY (4 projects)	32.71 AFY (15 projects)
Projects < 1 AFY	9.76 AFY (25 projects)	0.98 AFY (1 project)	2.99 AFY (13 projects)	13.73 AFY (39 projects)
TOTAL	19.94 AFY (31 projects)	58.95 AFY (10 projects)	32.87 AFY (19 projects)	111.76 AFY (60 Projects)

If the City Council were to restrict issuance of permits for new development, it could affect approximately 129 development projects, representing a net new water demand of 179 AFY, depending on the effective date of such a prohibition. Affordable Housing is a top priority for the City, and the General Plan includes policies supporting Affordable housing. If development restrictions were imposed, the City Council could consider allowing a certain number/type of projects to continue moving forward, including Affordable housing and other Community Benefit Projects. There are currently three pending or approved Affordable housing projects with a total net new water demand of 23.77 AFY, which represents 13% of the total pending and approved development.