



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: March 10, 2015

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Stage Two Drought Update

RECOMMENDATION:

That Council receive an update on the status of the current drought and related efforts.

DISCUSSION:

On February 11, 2014, Council declared a Stage One Drought and asked customers to reduce water use by 20 percent. Council requested that staff keep them informed and report back monthly with a status update on the City's water supplies, conservation efforts, and current work efforts. On May 20, 2014, Council declared a Stage Two Drought in response to a continued water shortage forecasted for next year, and the inability of the community to reduce water usage by 20 percent. This report will cover the following items:

- Water Supply Outlook/Weather Forecast
- Drought Response Capital Projects
- Conservation Efforts

Water Supply Outlook

Despite some promising rainfall in the first part of this water year, our water supply outlook remains unchanged. We need prolonged wet weather to make a significant impact on our current water supplies. The National Oceanic and Atmospheric Agency (NOAA) is projecting equal chances of above and below average rainfall throughout the remainder of the rainy season. We have seen below average rainfall in January and February, and to further compound the matter, we have seen above average temperatures, which has significantly diminished the benefits of the small amount of rain we have received. Due to the uncertainty in projected rainfall, staff is planning for continued drought conditions. Staff continues to work on securing additional supplemental water, accelerating drought related capital projects, and sustaining a

strong message for extraordinary conservation. The most recent water conservation numbers for January 2014 show a 24 percent reduction in water use as compared to average water use in January. This positive news means that the community continues to be responsive to the request for conservation, and that we remain on target with our goal of a 20 percent reduction in water use.

Drought Response Capital Projects

Staff is moving forward with the design and construction of capital work projects to assist with the water supply during the drought. Highlights include beginning construction of a new Alameda Well, and operation of all three downtown wells, Corporation Yard, Vera Cruz, and City Hall.

On March 5, 2015, proposals were received for the reactivation of the Desalination Plant. Staff is reviewing the proposals now in preparation for interviews in late March. Negotiation with the top firm is anticipated to start during the first part of April. Award of a contract is tentatively scheduled for June 2015, when we are anticipating confirmation of loan funding. The current schedule would have the desalination plant operational in Fall 2016.

Efforts to secure supplemental water for next year are going well. We are anticipating having 4,500 acre-feet of additional water under contract by May 2015.

Conservation Efforts

Staff has increased the Water Conservation Outreach Program through an enhanced drought media campaign: additional targeted outreach, including increased weekly messaging through social media, online news outlets and industry contacts; presentations to community and industry groups; additional printed materials with drought messaging; targeted utility bill messaging; drought signage at City facilities; and additional trainings and workshops.

PREPARED BY: Joshua Haggmark, Water Resources Manager/JH/mh

SUBMITTED BY: Rebecca J. Bjork, Public Works Director

APPROVED BY: City Administrator's Office



Stage 2 Drought Update



City Council
March 10, 2015



Overview

- ◆ Rainfall Totals & Weather Forecast
- ◆ Community Conservation & Water Supply Outlook
- ◆ State/Supplemental Water
- ◆ Drought Response Capital Projects
- ◆ Water Conservation Program

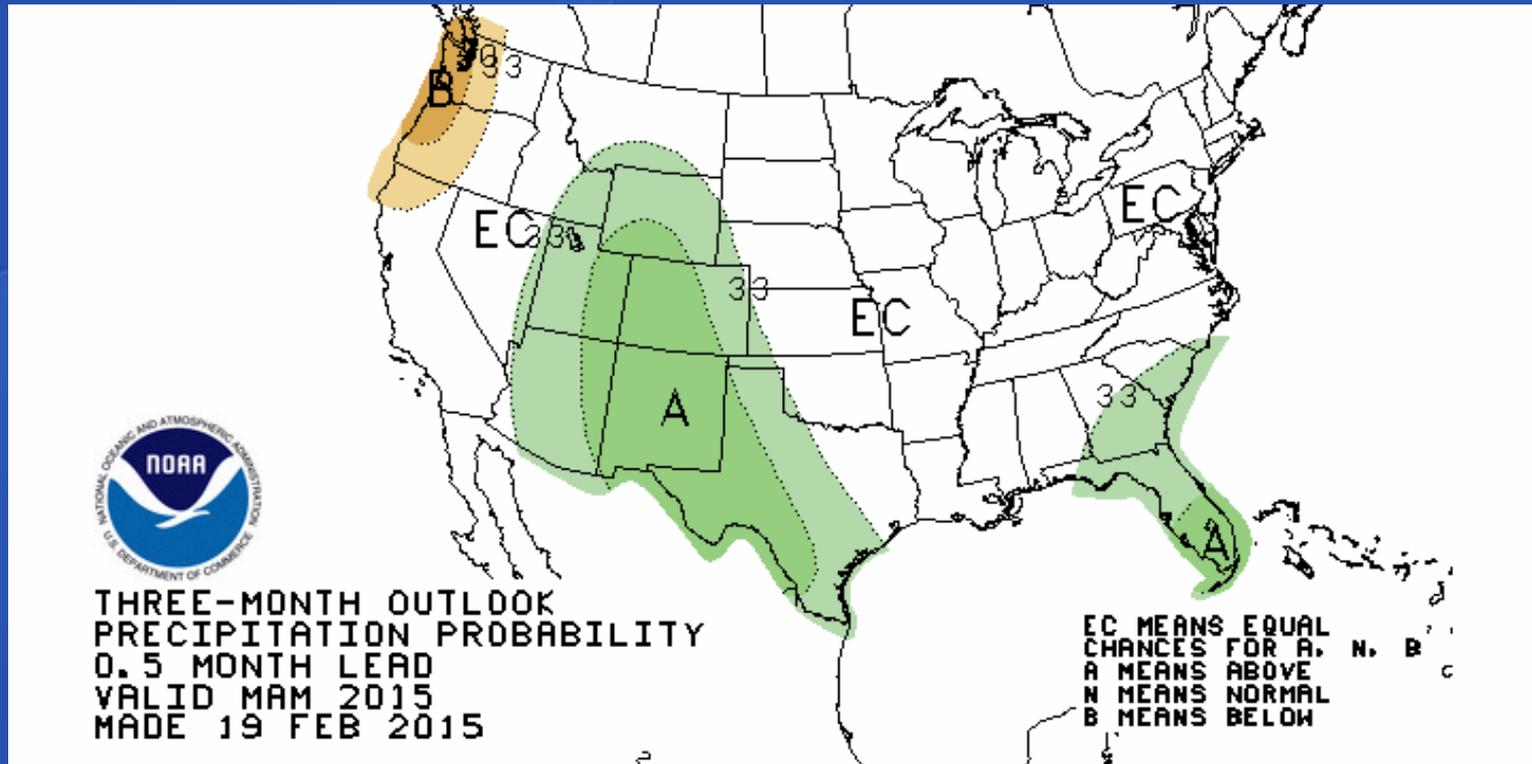
Rain Totals for WY 15

- ◆ Rainfall for the Water Year as of 3/2/15:
 - Gibraltar Lake – 10.97” (55% of Normal)
 - Lake Cachuma – 8.14” (55% of Normal)
 - Santa Barbara – 8.93” (65% of Normal)
- ◆ Still no measurable runoff into local lakes
- ◆ Above average rainfall is required to have a significant impact on our water supply planning



National Weather Forecast

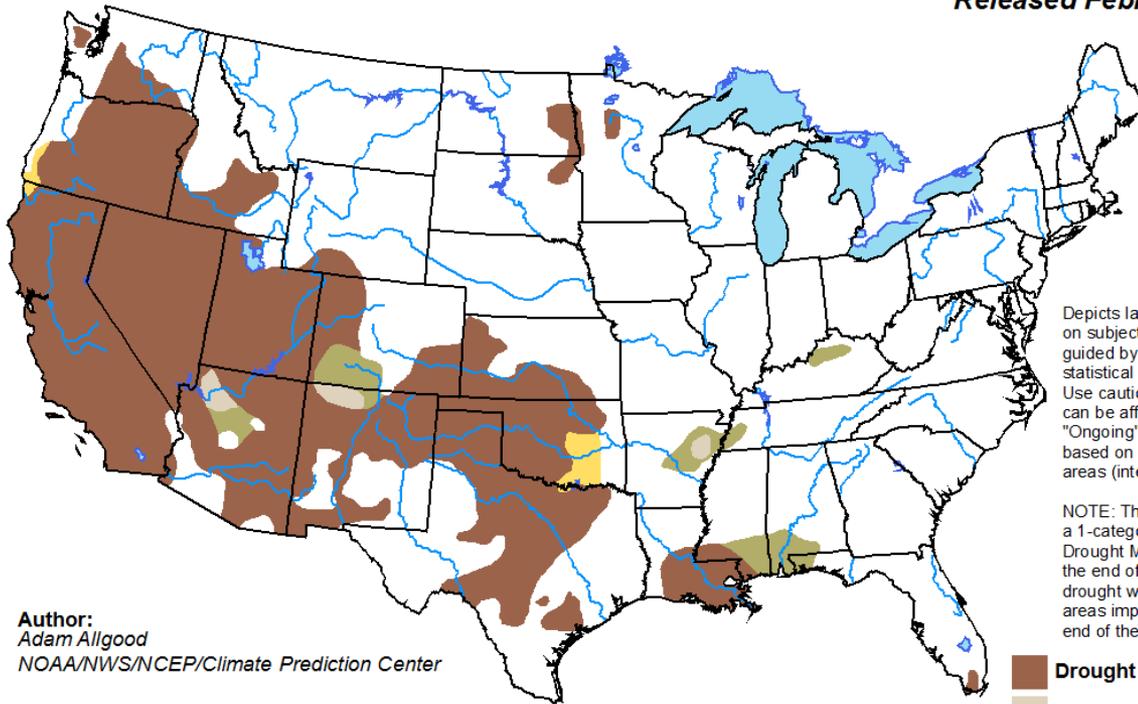
- ◆ Next three months: Equal chances of above, normal and below average precipitation



Outlook for Continued Drought Conditions

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for March 2015
Released February 28, 2015

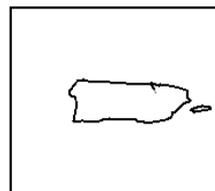
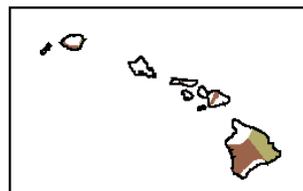
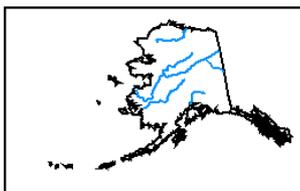


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center

-  Drought persists/intensifies
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/h6jh>

Drought Intensity Monitor

U.S. Drought Monitor West

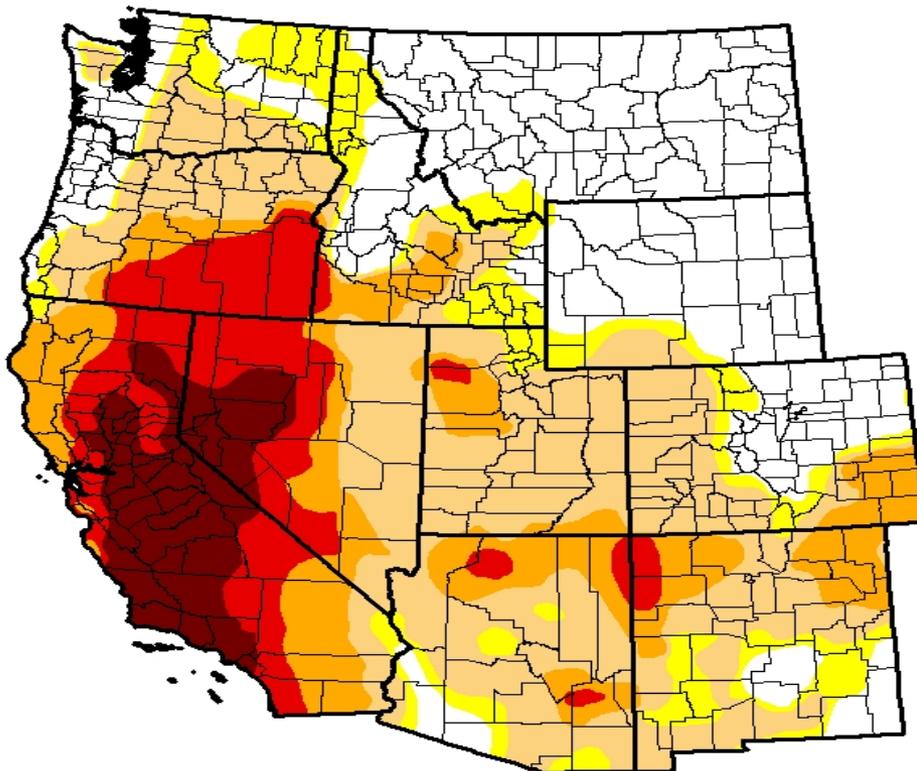
February 24, 2015

(Released Thursday, Feb. 26, 2015)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	30.07	69.93	59.91	31.06	17.38	7.04
Last Week 2/17/2015	31.20	68.80	58.53	30.61	17.23	7.21
3 Months Ago 11/25/2014	34.72	65.28	54.99	33.88	18.75	8.45
Start of Calendar Year 12/31/2014	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year 9/30/2014	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago 2/25/2014	22.41	77.59	59.61	40.34	15.67	4.12



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

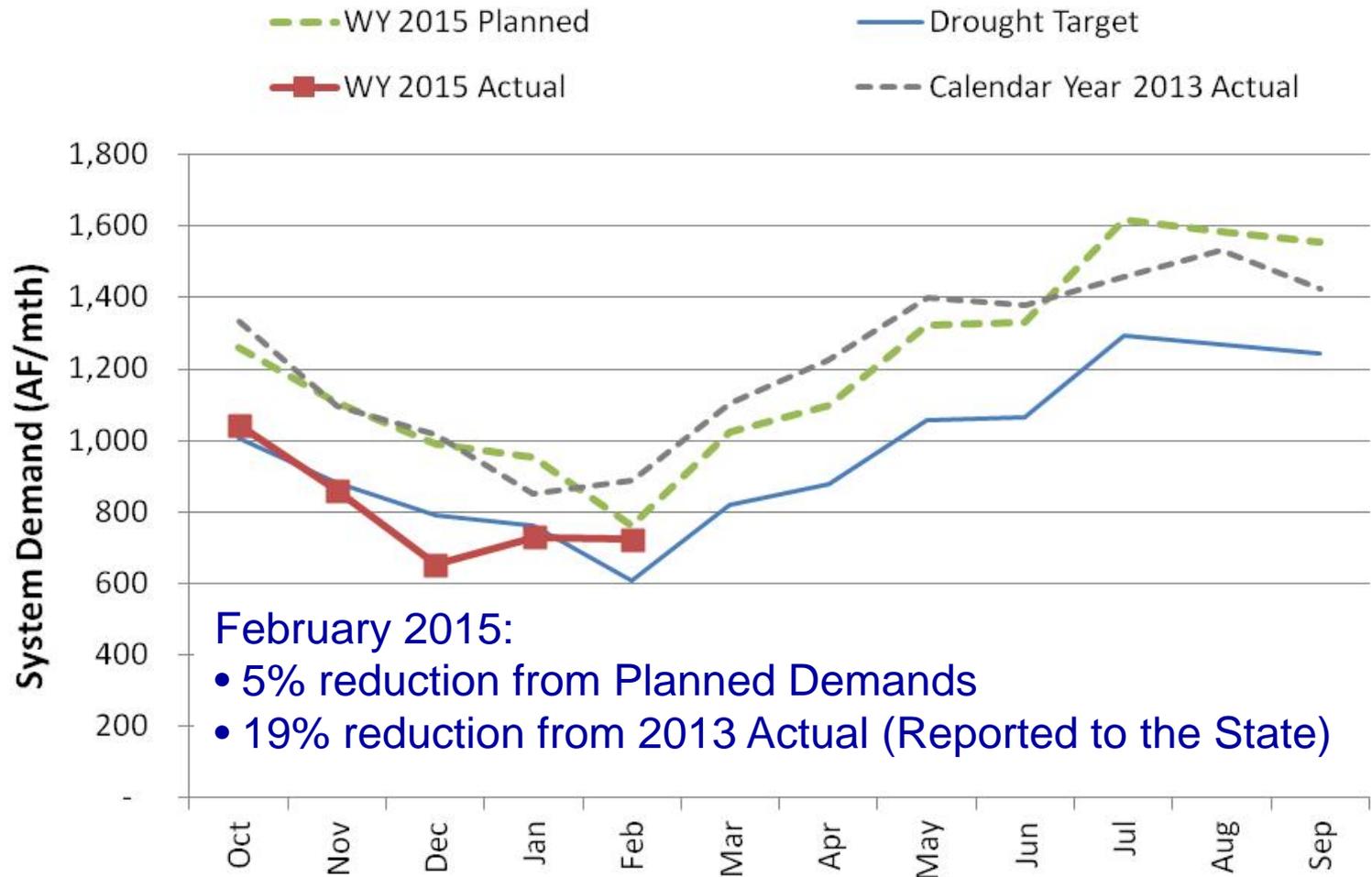
Richard Heim
NCDC/NOAA



<http://droughtmonitor.unl.edu/>

Monthly Demands

Water Year 2015

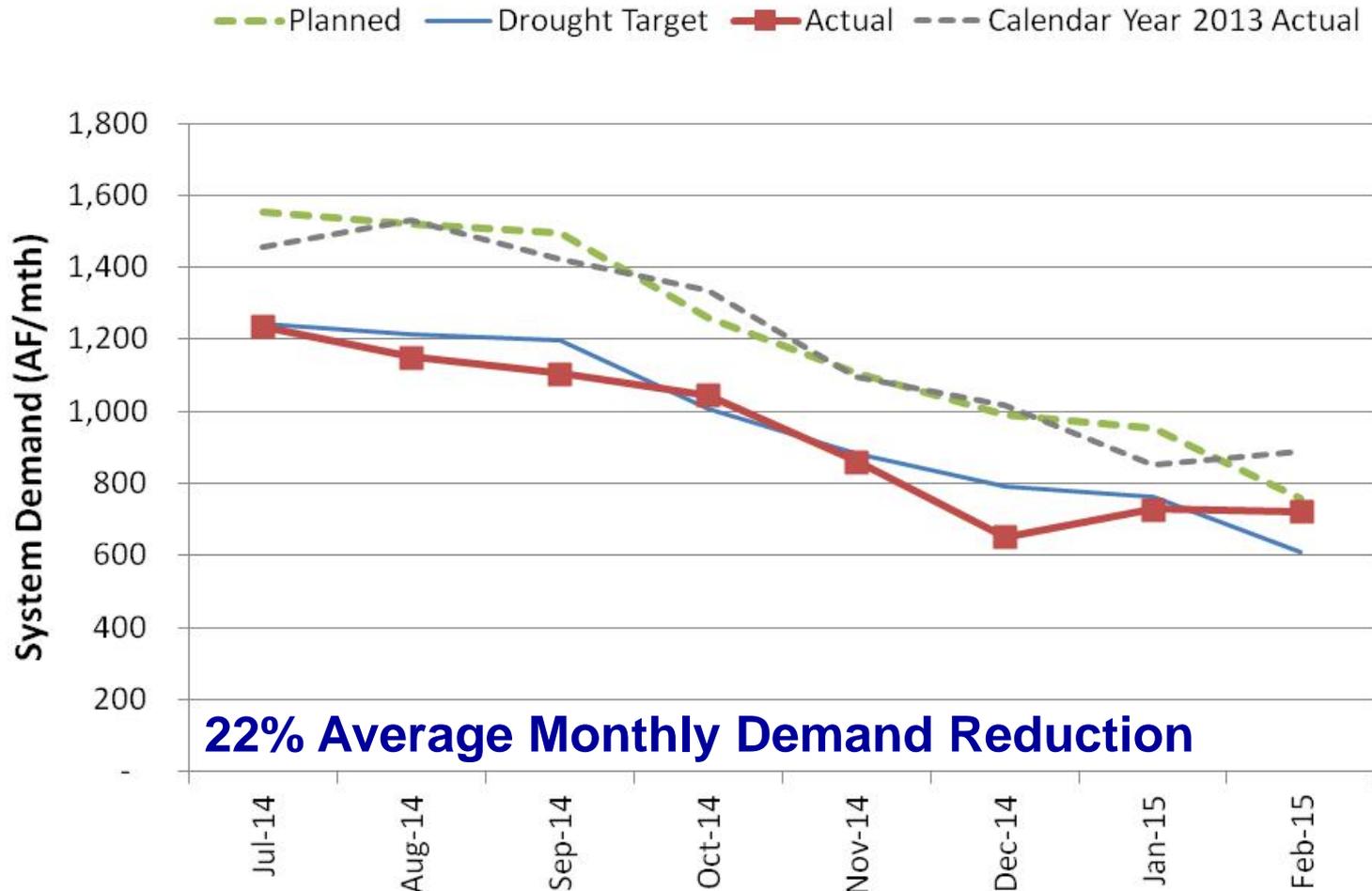


February 2015:

- 5% reduction from Planned Demands
- 19% reduction from 2013 Actual (Reported to the State)

Water Conservation

Fiscal Year 2016

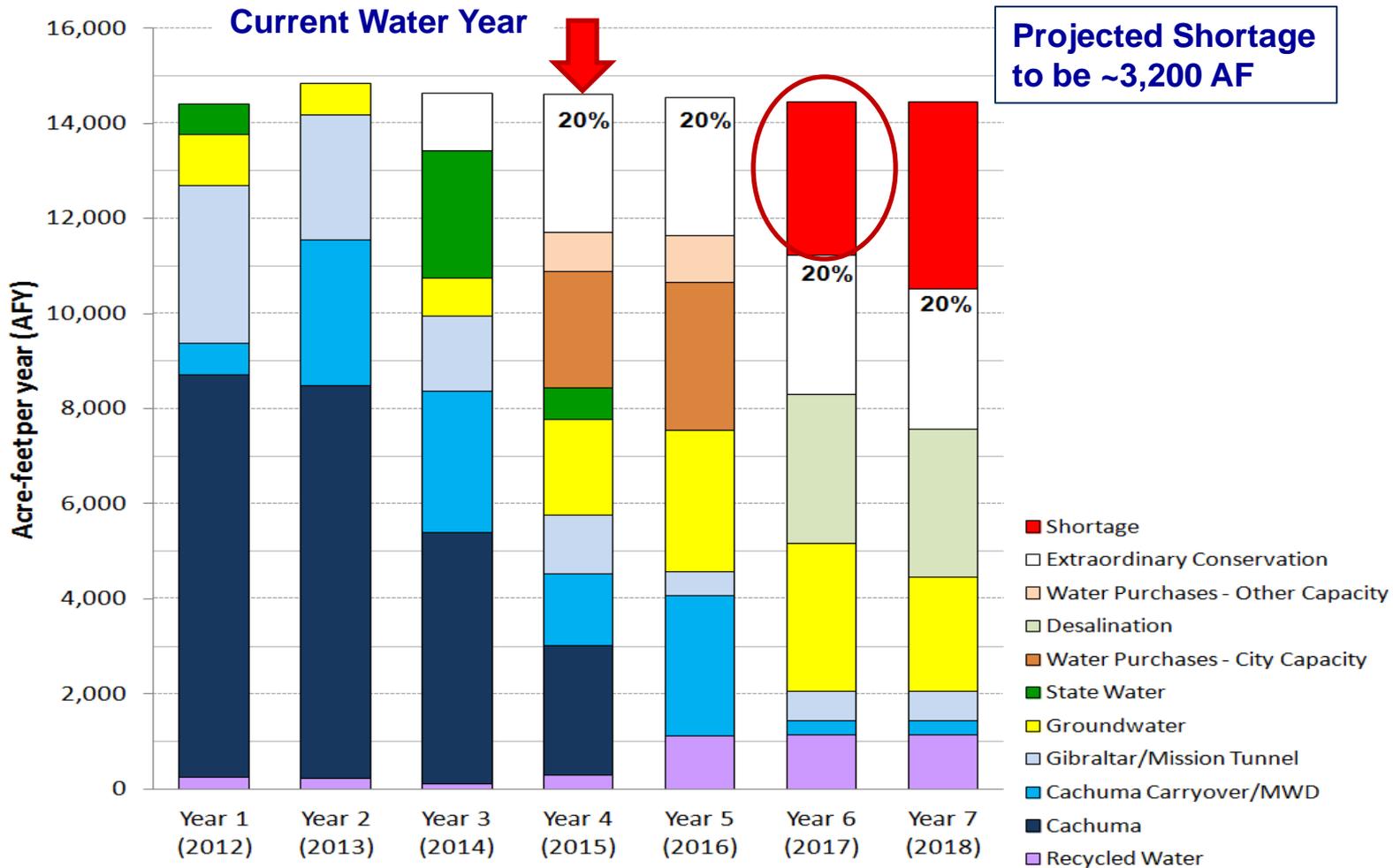


Water Usage for City Accounts

	Potable	Recycled	Total
Golf Course	16%	33%	30%
Parks	26%	38%	33%
City Facilities/Buildings	40%	29%	39%
Recreation	26%	29%	21%
Total % Change	31%	34%	32%
Total HCF Saved	25,866	45,952	71,818

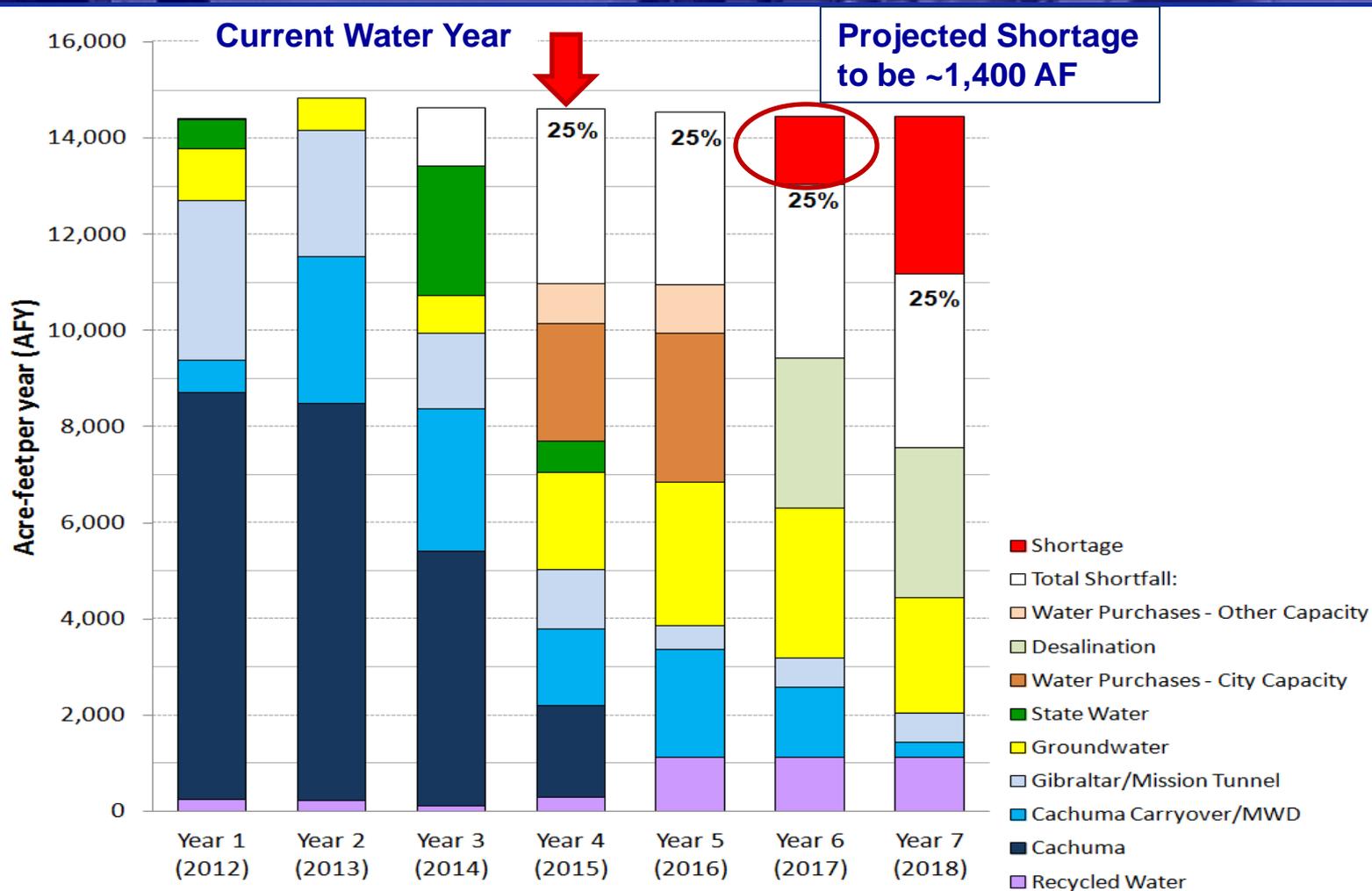
Current Supply Strategy

(based on no reservoir inflows, no State Water)



Proposed Supply Strategy

(based on no reservoir inflows, no State Water)



Stage 3

Demand Reduction Strategy

- ◆ Water rates designed to incentivize conservation
- ◆ Water Use Regulations
 - Minor changes to current regulations;
 - More stringent regulations as needed (if 25% target not achieved)
 - Compliance with upcoming March 17th State regulations
 - Policy Input postponed to April
- ◆ Will need to address financial impacts

State & Supplemental Water

- ◆ Secured Water Supply for 2015 (based on 20% City-wide demand reduction)
- ◆ 2015 State Allocation increased to 20% (~600 AF)
 - Final Allocation determined in May
- ◆ 2016 Water Purchase Goal: 4,500 AF
 - Budgeted \$3.5 M in FY 2015 Water Purchases
 - Utilizing additional capacity in State Water system

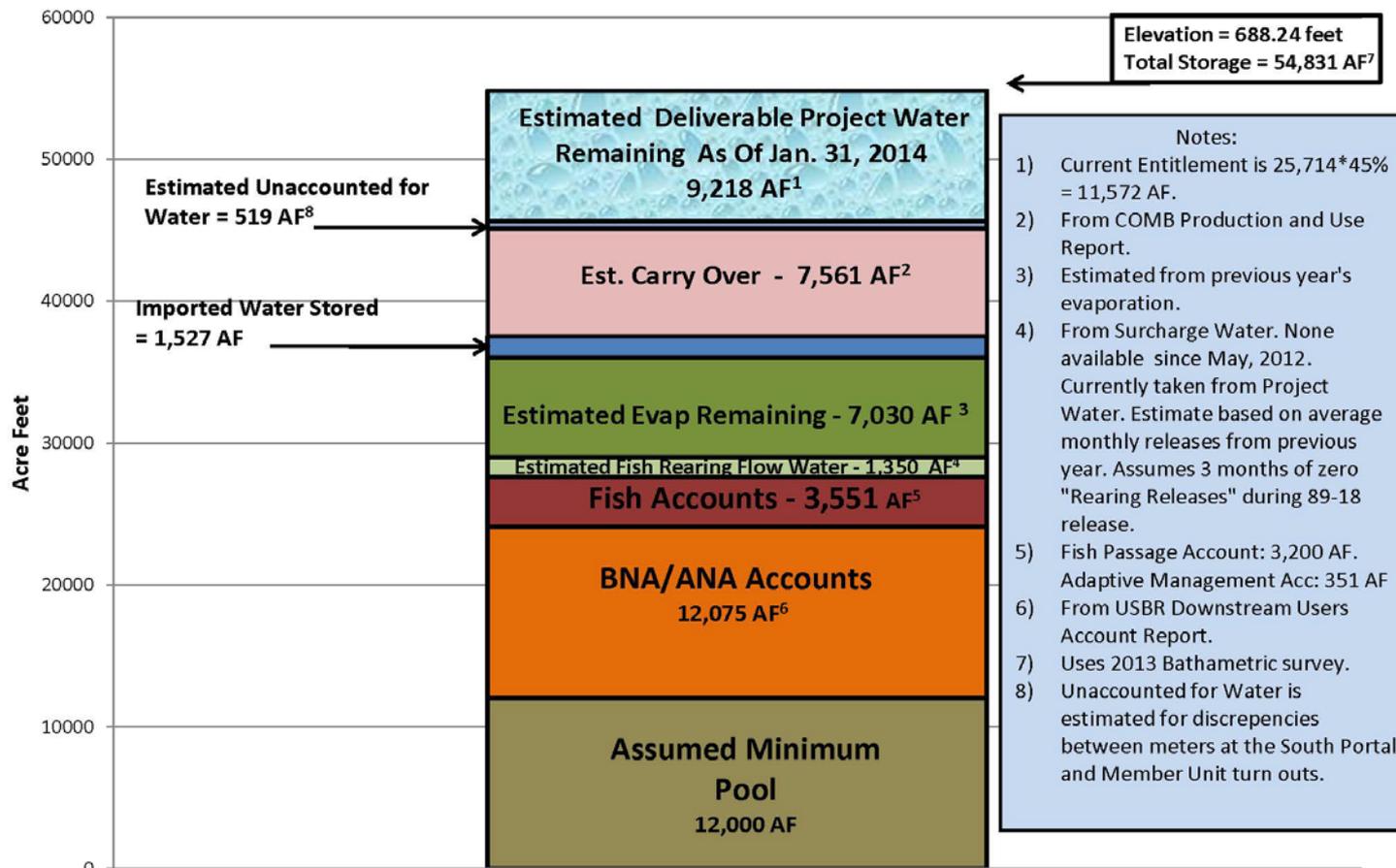
2015 Supplemental Water

- ◆ Purchase goal - 4,500 AF
 - Antelope Valley East Kern (AVEK) Water District – 4,219 AF
 - \$500/AF; plus 1:1 exchange repayable over 10 years
 - Biggs West Gridley - ~300 AF
 - Carriage Losses from last year were reduced to 20% (estimated 35%)
 - Contract requires additional compensation (\$200,000)
 - Dry Year Transfer Program - ~500 AF
 - ~\$700/AF; total delivered costs would be around ~\$1,100/AF
 - Total: 5,000 AF
- ◆ Banked Water – Dudley Ridge (1,200 AF)
 - Do not have the capacity to return this water
 - Planning to utilize this water to repay AVEK in future years

Remaining Water in Cachuma

Remaining Water in Lake Cachuma as of January 31, 2015
with continued Drought Conditions

DRAFT



Lake Cachuma Operations

- ◆ Cal Trout vs. USBR Lawsuit Update
 - Hearing pushed back to April 16, 2015
- ◆ Hilton Creek Fish Water Releases
 - USBR now concurs we have reached 30,000 AF of Project Water threshold in the BO.
 - USBR has reentered re-consultation with NMFS

Drought Response Capital Projects

- ◆ Recycled Water System
- ◆ Groundwater Projects
- ◆ Desalination Plant



Recycled Water System Projects

- ◆ Recycled Water Facility
 - Scheduled to go online in July 2015
- ◆ Valle Verde Well (Non-Potable)
 - Online
 - Meeting the majority of customer demands for Recycled Water



Groundwater Well Project Highlights

- ◆ Alameda Well
 - Begin Drilling this week
 - Scheduled to be Online – July 2015
 - Major work to be complete by Earth Day (April 17)
- ◆ City Hall, Corp Yard, Vera Cruz are operational



Desal Project Highlights

- ◆ Written proposals received on March 5
- ◆ Cost proposal due on March 12
- ◆ Begin Negotiations with top firm in April
- ◆ Tentative Award – June 2015
- ◆ State Revolving Fund Loan
 - Holding bi-weekly meetings
 - Loan terms: 1.6% Interest for 20 years



Desal Permitting Highlights

◆ Central Coast RWQCB

- Approved findings that our Intake Facility is “Existing” per the proposed Ocean Plan Amendment
- Shall submit a Feasibility Study workplan for staff review and approval before August 31, 2015
- Report back to RWQCB with findings of Feasibility Study by June 30, 2017
- NPDES Permit Renewal

Desal Permitting Highlights

- ◆ Coastal Development Permit (CDP)
 - Existing CDP with CCC is still valid
 - CCC has approved permit for Maintenance and Repair Activities
 - Local CDP is still valid

Conservation Outreach: Mulch Madness!

- Mulch helps reduce evaporation and increases permeability
- New countywide campaign for free mulch
- English and Spanish ads on TV, movie theatres, radio, online, print, social media
- [Mulch Madness commercial](#)



It's Mulch Madness!

**SAVE WATER
BY ADDING
MULCH TO
YOUR GARDEN**

[Click Here](#)
to learn about
free mulch

 **waterwise**
Let's Save Together
IN SANTA BARBARA COUNTY

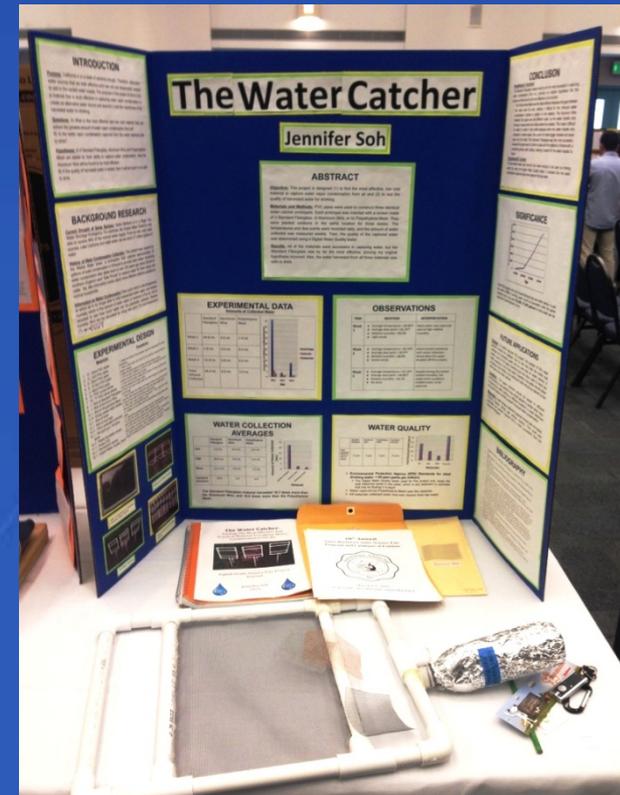
Mulch Madness!

- Free mulch is available for pickup at County Transfer Station 4430 Calle Real
- Free mulch delivery for City water customers twice a year
- Since 2012, 532 customers have participated in the free mulch delivery program



2015 Science Fair Awards

- Partner with County & other water providers on the WaterWise Science Fair Award
- 2015 Winner: Jennifer Soh, La Colina Jr High, “The Water Catcher”
- Runners up:
 - “Comparing Evapotranspiration Rates of Different Types of Plants”
 - “Resistance to Drought Stress and Salinity Stress in Plants”
 - “Can Chemically Altered Water be a Drought Solution?”



Questions?

(805) 564-5460

SantaBarbaraCA.gov/WaterWise



An aerial photograph of a vast, winding reservoir nestled in a mountainous landscape. The foreground shows a large dam structure on the left. The middle ground is dominated by the reservoir's blue waters, which reflect the sky. The surrounding terrain is rugged and green, with some low-lying clouds or mist rising from the valleys. In the background, a range of dark mountains is topped with snow, set against a clear blue sky with wispy white clouds.

Vision for a Wetter Tomorrow