



Regional Water Authority
BUILDING ALLIANCES IN NORTHERN CALIFORNIA



RWEPAC Meeting January 12, 2016

Welcome and Introductions

- Name
- Organization
- New Year's Resolution?

I just ran 5 miles and what a workout.
I didn't think that ice cream truck would ever stop.



somee cards
user card

Agenda

- **November 2015 Notes**
- **Budget and Grants Update**
- **Drought Continues...**
- **Mini Discussion: Customer Water Reports**
- **Urban Water Management Plans**
- **Informational Presentation**
- **Optional Lunch- El Tapatio**

November 2015 Meeting Notes

- Motion for approval
- Post to RWA website

Grant Update

- Wrapping up Prop 84 Round 2
 - Direct Installs, Waterfluence, Rebates
- Starting Water Energy Grant (\$2.5 M)
 - Sharon to help
 - Direct Installs, CII reimbursement, showerhead distr.
- Prop 84 Round 3 (\$810,000)
 - Recommended for award
 - Advanced Customer Systems, Water Loss, Public Outreach



Budget Update

- Reserves used for floating grant programs
 - Future grants may need funding pot
- Official budget meeting is March
- Requesting a 6% increase in dues (\$25,000)
 - No increase last year
 - Powerhouse Science Center
 - Lay off reserve funding
 - Consulting budget
 - Partial salary costs into RWA budget



The Drought Continues...

Regional Water School

- 10 classes since July 2015
- 73 students (63 for violations)
- Upcoming Classes
 - January 27th in Rocklin
 - February 17th in Lincoln
- More classes?



The Drought Continues...

Main Winter Messages

- Sprinklers off till Spring
- Don't water during or 48 hours after rain
- Upgrade fixtures with WaterSense products



REGIONAL WATER EFFICIENCY PROGRAM



The Drought Continues...

Extended Public Outreach Plan

- Continuing Cap Radio (Jan-Feb)
- Continuing Google and Facebook ads (Jan-Feb)
- Consistant with winter messages
- Using SOW visuals for online ads
- Saving remaining \$30,000 for later in 2016



REGIONAL WATER EFFICIENCY PROGRAM



The Drought Continues...

State Water Board Emergency Regulations

- Current regs expire mid-February
- New Executive Order to extend regs until Oct.
- New draft regs released in mid-January
- Expected approval at February State Water Board meeting



REGIONAL WATER EFFICIENCY PROGRAM



The Drought Continues...

New Draft Emergency Regulations Framework

- Adjustments for increased equity
 - YES-Climate, growth, drought resilient supplies
 - NO-Recycled water, groundwater, regional compliance
 - Climate adjustment –all RWA agencies get 4%
 - Cap at 4% per agency

Deviation from Average ET	Reduction in Conservation Standard
>20%	4%
10 to 20%	3%
5 to <10%	2%

Reference EvapoTranspiration (ETo) Zones

- 1 COASTAL PLAINS NEAR FOG BELT
Coolest ETo in California. Characterized by dense fog.
- 2 COASTAL MIXED FOG AREA
Less fog and higher ETo than zone 1.
- 3 COASTAL VALLEYS AND PLAINS AND NORTH COAST MOUNTAINS
More sunlight than zone 2.
- 4 SOUTH COAST INLAND PLAINS AND MOUNTAINS NORTH OF SAN FRANCISCO
More sunlight and higher summer ETo than zone 3.
- 5 NORTHERN ISLAND VALLEYS
Valleys north of San Francisco.
- 6 UPLAND CENTRAL COAST AND LOS ANGELES BASIN
Higher elevation coastal areas.
- 7 NORTHEASTERN PLAINS
- 8 PLAINS SAN FRANCISCO BAY AREA
Inland areas near San Francisco with some marine influence.
- 9 SOUTH COAST MARINE TO DESERT TRANSITION
Inland areas between marine and desert climates.
- 10 NORTH CENTRAL PLAINS AND CENTRAL COAST RANGE
Cool, high elevation areas with strong summer sunlight. The zone has several climate areas and the zones selection is somewhat subjective.
- 11 CENTRAL SIERRA NEVADA
Northern Nevada. Mountain valleys east of Sacramento with some influence from the delta basin in summer.
- 12 EAST SIDE SACRAMENTO SAN JOAQUIN VALLEY
Low elevation and high summer ETo with slightly lower ETo than zone 14.
- 13 NORTHERN SIERRA NEVADA
Northern Sierra Nevada. Mountain valleys with less marine influence than zone 11.
- 14 MID-CENTRAL VALLEY, SOUTHERN SIERRA NEVADA, FRENCHMAN & HIGH DESERT MOUNTAINS
High summer sunshine and wind in some locations.
- 15 NORTHERN & SOUTHERN SAN JOAQUIN VALLEY
Slightly lower summer ETo than 14 and slightly higher summer ETo than zones 12 & 14.
- 16 WESTSIDE SAN JOAQUIN VALLEY & MOUNTAINS EAST & WEST OF IMPERIAL VALLEY
- 17 HIGH DESERT VALLEYS
Valleys in the high desert near Nevada and Arizona.
- 18 IMPERIAL VALLEY, DEATH VALLEY AND PALM VERDE
Low desert areas with high sunlight and considerable heat advection.

Monthly Average Reference Evapotranspiration by ETo Zone (inches/month)

Zone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	0.93	1.40	2.48	3.30	4.03	4.80	4.95	4.03	3.30	2.48	1.40	0.93	29.0
2	1.24	1.66	3.10	3.90	4.65	5.10	4.96	4.05	3.90	2.79	1.80	1.24	28.0
3	1.86	2.24	3.72	4.60	5.27	5.70	5.58	5.27	4.20	3.41	2.40	1.86	48.3
4	1.86	2.24	3.41	4.50	5.27	5.70	5.89	5.58	4.80	3.41	2.40	1.86	46.8
5	0.93	1.68	2.79	4.20	5.58	6.90	6.51	5.89	4.50	3.10	1.50	0.93	43.3
6	1.86	2.24	3.41	4.80	5.58	6.30	6.51	6.20	4.80	3.72	2.40	1.86	49.7
7	0.82	1.40	2.48	3.90	5.27	6.30	7.44	6.51	4.80	2.70	1.20	0.82	43.4
8	1.24	1.68	3.41	4.80	6.20	6.90	7.44	6.51	5.10	3.41	1.80	0.93	49.4
9	2.17	2.80	4.03	5.10	6.69	6.63	7.44	6.63	5.70	4.03	2.70	1.86	55.1
10	0.93	1.68	3.10	4.50	5.89	7.20	6.66	7.13	5.10	3.10	1.50	0.93	49.1
11	1.05	2.24	3.10	4.50	5.99	7.20	8.06	7.44	5.70	3.72	2.10	1.05	53.0
12	1.04	1.96	3.41	5.10	6.80	7.80	8.06	7.13	5.40	3.72	1.80	0.93	53.3
13	1.04	1.96	3.10	4.80	6.51	7.80	8.99	7.75	5.70	3.72	1.80	0.93	54.3
14	1.56	2.24	3.72	5.10	6.62	7.80	8.68	7.95	5.70	4.03	2.10	1.56	57.0
15	1.24	2.24	3.72	5.70	7.44	8.10	8.68	7.75	5.70	4.03	2.10	1.24	57.9
16	1.05	2.52	4.03	5.70	7.75	8.70	8.37	6.30	4.34	2.40	1.55	0.82	52.5
17	1.86	2.80	4.65	6.00	8.06	9.00	9.82	8.68	6.60	4.34	2.70	1.86	66.5
18	2.48	3.36	5.27	6.88	8.68	9.65	9.61	8.68	6.90	4.96	3.00	2.17	71.8

Variability between stations within single zones is as high as 0.02 inches per day for zone 1 and during winter months in zone 13. The average standard deviation of the ETo between estimation sites within a zone for all months is about 0.01 inches per day for all 200 sites.

California Irrigation Management Information System (CIMIS) REFERENCE EVAPOTRANSPIRATION



STATE OF CALIFORNIA
GARY SAWYER GOVERNOR
THOMAS W. HANCOCK, DIRECTOR, DEPARTMENT OF WATER RESOURCES

Landscape Consultant David Peterson
©2007 North American Datum

Developed as a cooperative project between the

Department of Land, Air and Water Resources

University of California, Davis

Water Use Efficiency Office

California Department of Water Resources

Marjorie Davidson, California Irrigation Management Unit

Map Prepared by David M. Smith (2009)

Data developed by Richard L. Slinger, Simon Ewing, and Helena Gomez MacPherson
Background Data from State and USGS Sources



Zones 13
and 14

The Drought Continues...

Water Savings

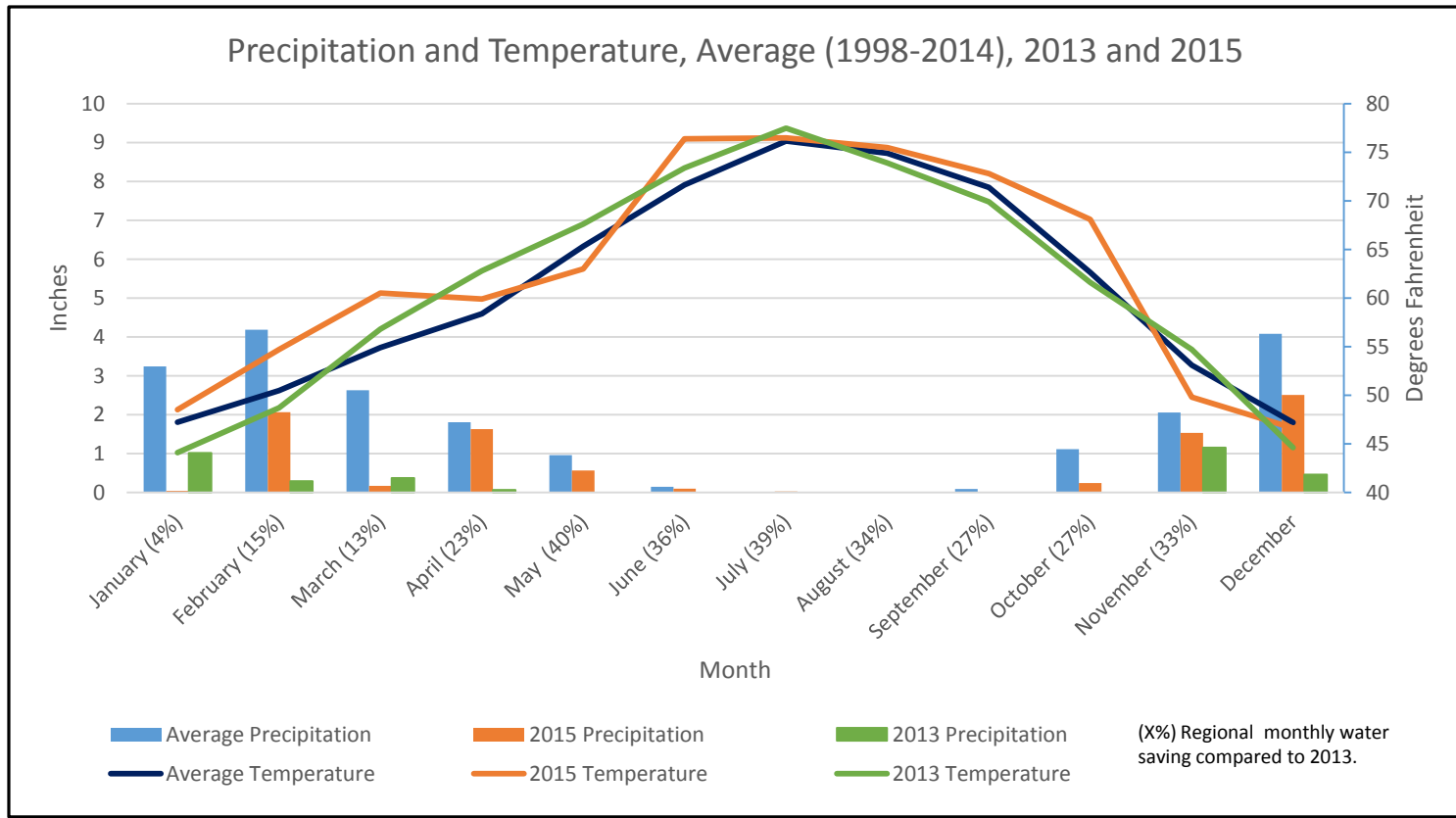
REDUCTION BY VOLUME (Million Gallons)													
	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
2015	6,714	6,179	8,781	9,282	10,536	12,419	13,789	13,866	12,560	10,759	7,131		112,017
2013	6,958	7,228	10,087	12,100	17,433	19,488	22,418	20,859	17,316	14,836	10,649		159,374
%	3.5%	14.5%	13.0%	23.3%	39.6%	36.3%	38.5%	33.5%	27.5%	27.5%	33.0%		29.7%

STATE WATER BOARD WATER SAVINGS TRACKING (Million Gallons)										
	Jan.	Feb.	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
2015/16			12,419	13,789	13,866	12,560	10,759	7,131		70,524
2013			19,488	22,418	20,859	17,316	14,836	10,649		105,567
%			36.3%	38.5%	33.5%	27.5%	27.5%	33.0%		33.2%

As of November, all agencies are within 5% of their cumulative targets. Saved 47 billion gallons or enough to serve 341,000 households for a year.

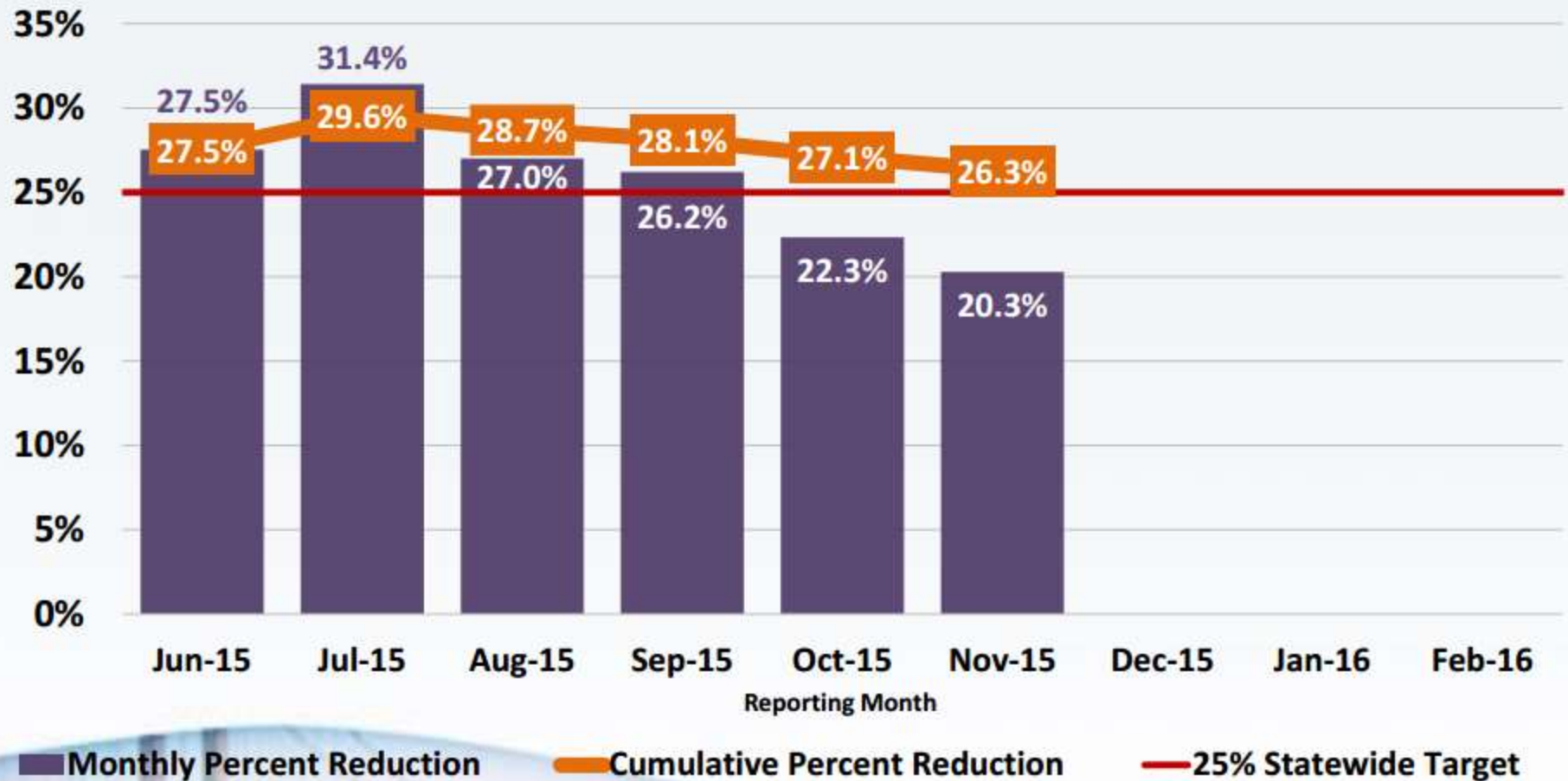


The Drought Continues...



Statewide Water Conservation Results Water Production Percentage Reduction

(Compared to 2013)

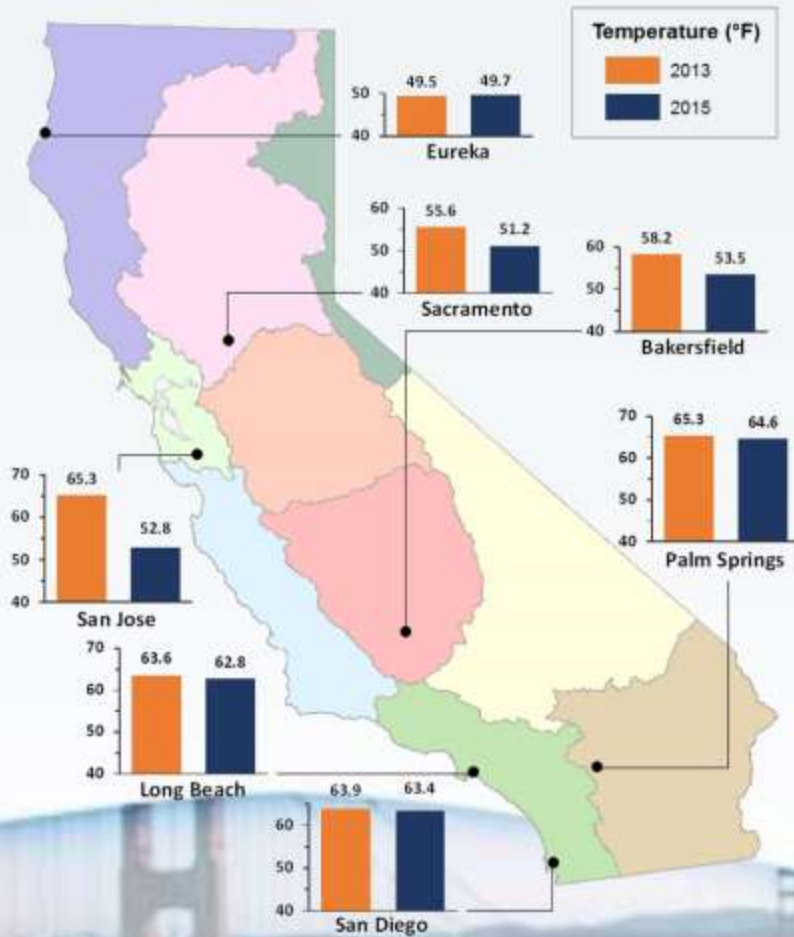


November 2015 savings (30.7 billion gallons) is two times greater than November 2014 savings (15.8 billion gallons)

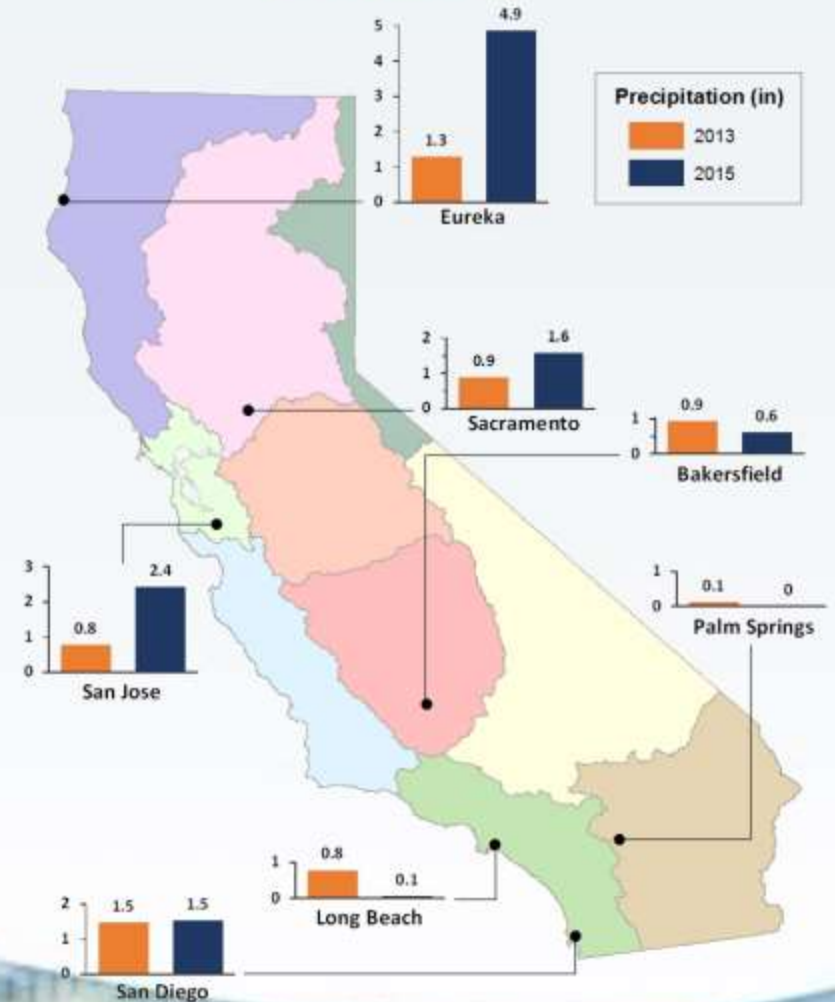
November Weather Conditions

(Select Cities)

Temperature

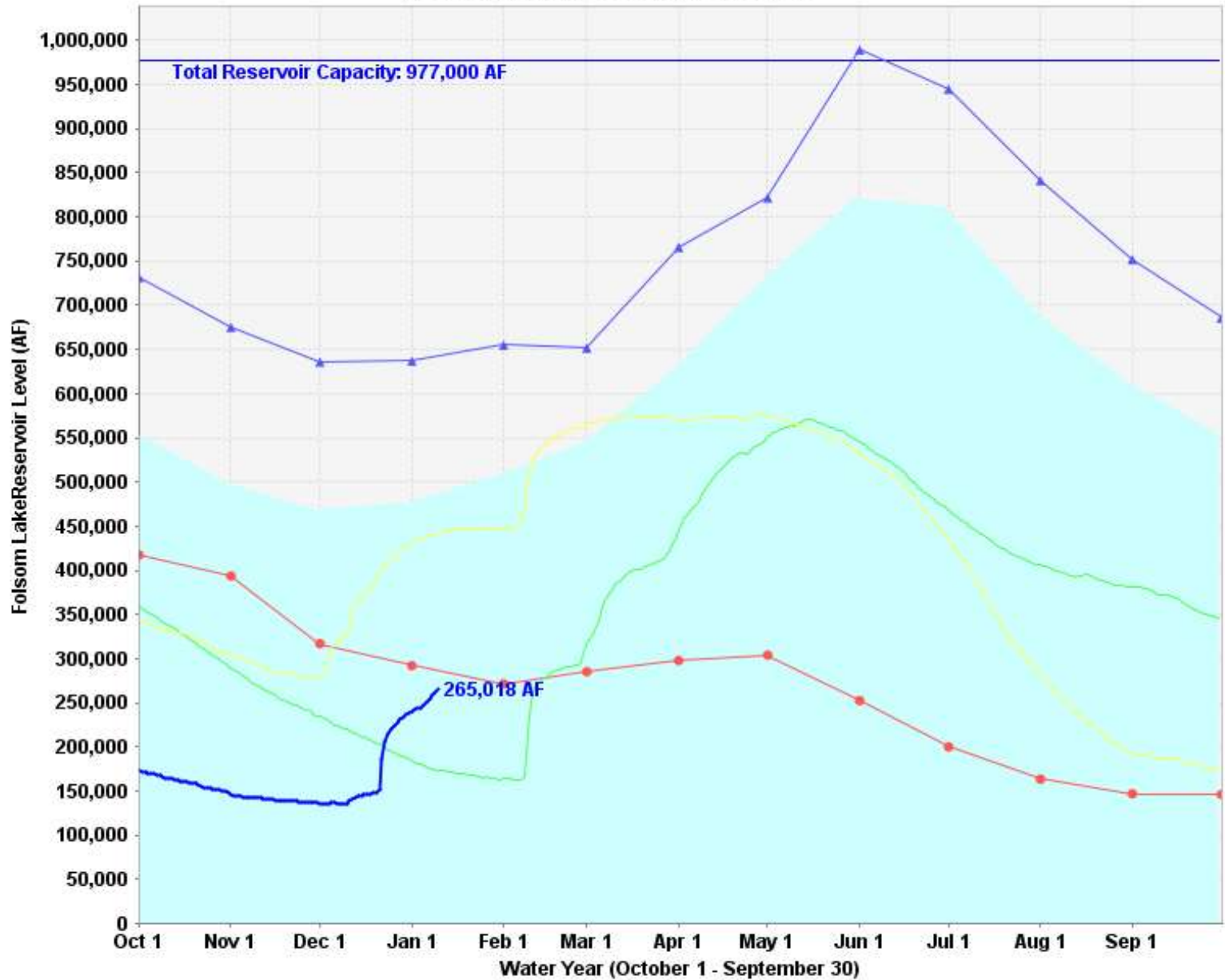


Precipitation



Statewide, November 2015 was cooler and wetter than November 2013.

Folsom Lake Storage Levels





The CA Precipitation Situation: 5 Station Index

How full is our 5 gallon bucket now? (As of January 1, 2016)



Every Water Year (Oct 1-Sept 30), the 5 Station Central Sierra Index averages 40.8" of water and is a good indicator of water supply in San Joaquin valley.

Note: NorCal's "Wet Season" is Oct - April

Map showing the 5 Stations and area it impacts



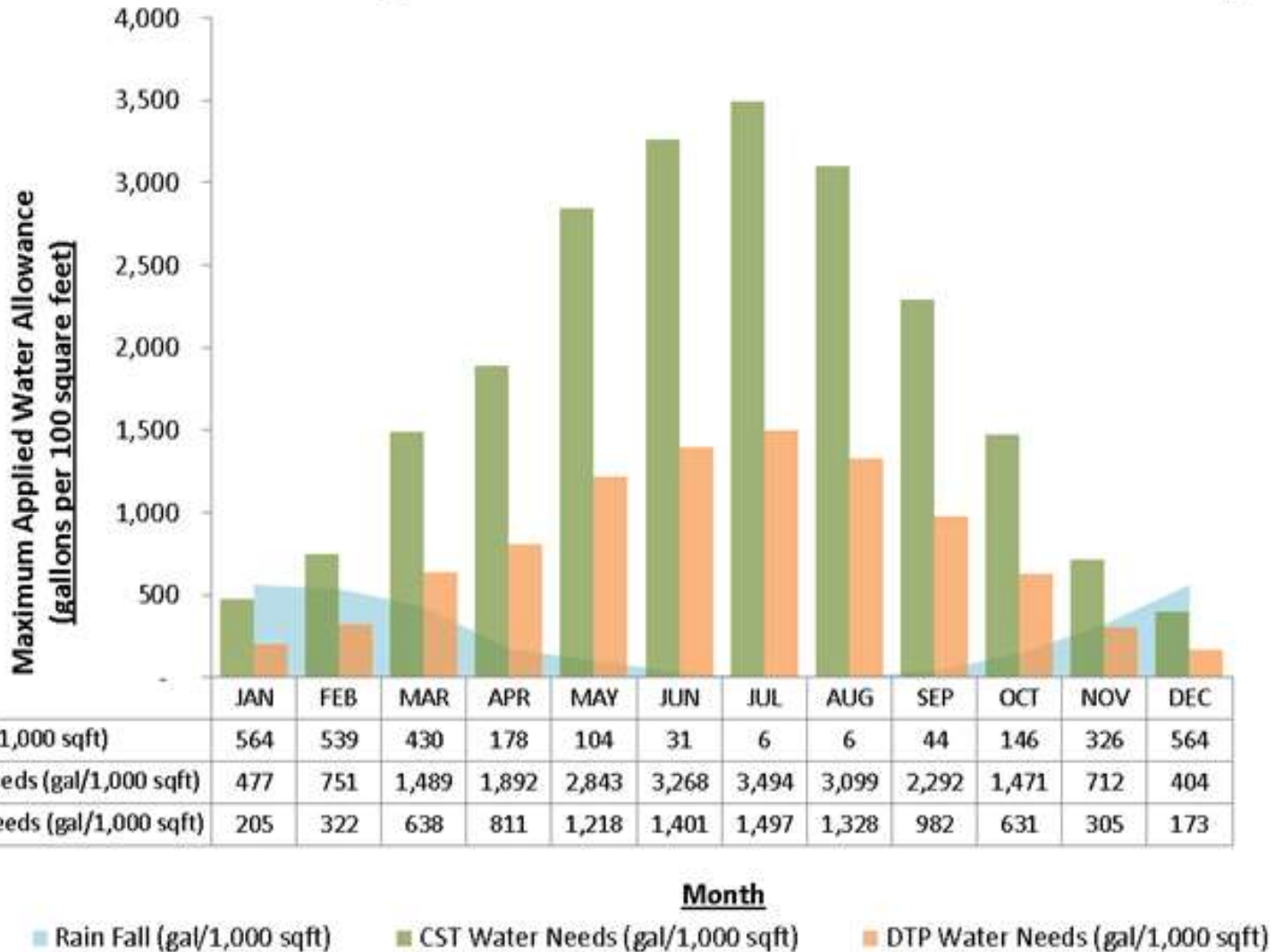
5 Gallon Bucket: represents the 40.8" we need this coming year plus the deficits from the past 4 water years 72.45" (113.25" total)

Red Arrow: What we need in the next year to reach normal precipitation in 2015-2016 WY AND make up the deficits since 2011-2012 WY

Blue shading: Where we are now ~14% full (15.8")

Cool Season Turf & Watershed Plants

Water Needs vs. Avg. Annual Rainfall for the Sacramento Region



Regional HET/ULFT Saturation Study

- **Several agencies are interested**
- **Potential opportunity for joint funding**
- **Pre 1992 single family homes, multi-family apartments and restaurants & gas stations**
- **Proposal for RWA be lead agency to select a consultant**
- **Completed by early/mid summer 2016**



REGIONAL WATER EFFICIENCY PROGRAM



Regional Mulch Madness

- **Expand PCWA's mulch madness event**
- **Mulch Madness Day in May**
- **RWA to coordinate media and promotion**
- **Local partnerships to get mulch**
- **Who is interested?**
- **Form a committee?**

Coming soon...

- Potential sponsor for decorating contest in partnership with SacBee
- Public Information Officer meeting
- 2016 tool kits for public outreach



Stretch Break



Mini Discussion: Customer Reports

- **Are these working?**
- **Customer feedback?**
- **Lots of companies-WaterSmart, Dropcountr, Aiqueous, Smart Utility Systems, etc. Is there confusion?**
- **Regional contracts?**



Urban Water Management Plans

- **DUE: July 1, 2016**
- **Draft Guidebook posted on DWR website**
 - Final to be posted this month
- **Metering, water shortage contingency plans and public education and outreach**
- **Update opportunities**
 - Population
 - Target/target method



Water Shortage Contingency Plan Regional Tool

Water Shortage Stage Template			
Stage	Public Announcement Stage Name	Recommended Conservation (Water Use Reduction)	Suggested Actions
Normal	Normal Conditions	Use Water Efficiently	<ul style="list-style-type: none"> Fix leaks or faulty sprinklers promptly/within X day(s). Decorative water features (water fountains, etc.) must recirculate water and shall be leak proof. All landscapes shall be watered during cooler morning and evening hours to reduce evaporation and minimize landscape runoff. Landscape watering shall be confined to a user's property and shall not runoff onto adjacent properties, roadsides or gutters. No landscape watering shall occur while it is raining or snowing. Use a shutoff nozzle on hoses. Washing down impervious surfaces such as driveways and sidewalks is prohibited unless for public health and safety purposes. Unauthorized use of hydrants is prohibited. Authorization for use must be obtained from water supplier. Commercial, industrial, institutional equipment must be properly maintained and in full working order. Encourage customers to wash only full loads when washing dishes or clothes. Encourage customers to use pool covers to minimize evaporation.
1	1	Water Alert	<ul style="list-style-type: none"> Up to 20% Fix leaks or faulty sprinklers within X day(s). Require restaurants to only serve water to customers on request. No restrictions on landscape watering with non-potable water. Up to 3 days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering.
2			<ul style="list-style-type: none"> Decorative water features that use potable water must be drained and kept dry. Car washing is only permitted using a commercial carwash that recirculates water or by high pressure/low volume wash systems. Require a construction water use plan be submitted to the water supplier that addresses how impacts to existing water users will be mitigated (such as dust control). With the exception of landscapes watered with non-potable water, limit the installation of new landscaping to drought tolerant trees, shrubs and groundcover. Prohibit installation of new turf or hydroseed. Customers may apply for a waiver to irrigate during an establishment period for the installation of new turf or hydroseed. Warm/Dry Season Up to two days per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering. Cool/Wet Season Turf shall not be watered unless utilizing non-potable water during extended dry spells. Plant containers, trees, shrubs and vegetable gardens shall be watered only by drip irrigation or hand watering.
3	Water Crisis	Up to 40%	<ul style="list-style-type: none"> Fix leaks or faulty sprinklers within X day(s). Existing pools shall not be emptied and refilled using potable water unless required for public health and safety purposes. No new permits for pools will be issued. No new landscape installations or renovations will be permitted. Previous waivers for watering during an establishment period will be revoked. Warm/Dry Season Up to one day per week turf watering when using potable water. Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering. Cool/Wet Season Turf shall not be watered unless utilizing non-potable water during extended dry spells. Plant containers, trees, shrubs and vegetable gardens shall be watered only by drip irrigation or hand watering.
4	Water Emergency	Up to 50%	<ul style="list-style-type: none"> Water use for public health and safety purposes only.



DWR Population Tool

- Especially useful for non-municipal systems
- Registration required
- Need help, call us

DWR Population Tool

A free, [online tool](#) for water suppliers to calculate their historical population using GIS and US Census data.



*PowerPoint Demonstration of
Population Tool*
[http://www.water.ca.gov/calendar/
index.cfm?meeting=25150](http://www.water.ca.gov/calendar/index.cfm?meeting=25150)

Reporting Energy Intensity (EI)

- Voluntary reporting
- SMUD study established EI for most agencies
- Need help, call us

Urban Water Supplier:

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Enter Start Date for Reporting Period End Date: 10/1/2014 9/30/2015	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	Non-Consequential Hydropower	
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	0	0	0
Energy Consumed (kWh)	0	0	0
Energy Intensity (kWh/AF)	0.0	0.0	0.0

Quantity of Self-Generated Renewable Energy
 kWh

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)

Data Quality Narrative:

Narrative:

Informational Presentation

Speaker: Bob Siebenhaar

Company: Siebe Innovations

Product: Shower Bootie

Website: myshowerbootie.com

Time: 10 minutes



Northern CA Home & Garden Expo

**January 29th-31st 2016
Cal Expo, Sacramento**

RWA will have a booth.

**We need volunteers!!!
Free admission and parking
Sign up today!**



REGIONAL WATER EFFICIENCY PROGRAM



Announcements and Events

California Irrigation Institute Conference

January 25-26th 2016

Hilton Sacramento Arden West

\$125 1 day, \$200 full conference

CEUs available

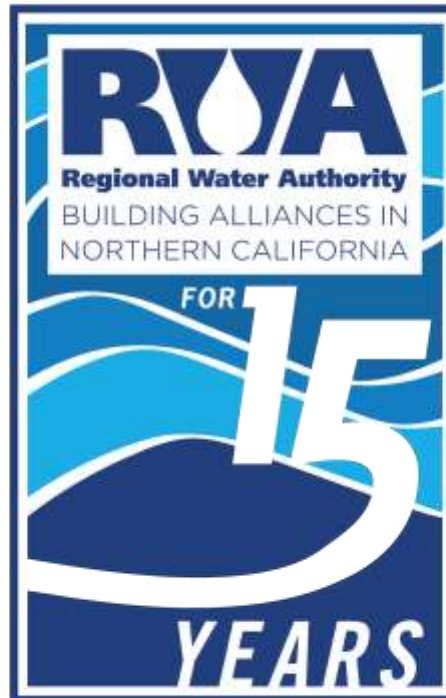
www.caii.org/



REGIONAL WATER EFFICIENCY PROGRAM



Celebrating 15 years



REGIONAL WATER EFFICIENCY PROGRAM



Next RWEPAC Meetings

January 12, 2016

March 8, 2016

May 10, 2016

July 12, 2016

September 13, 2016

November 8, 2016

December 13, 2016

January 10, 2017



Time for Lunch

