



Water Supply Update Sustainability Commission

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April 16, 2018



Presentation Overview

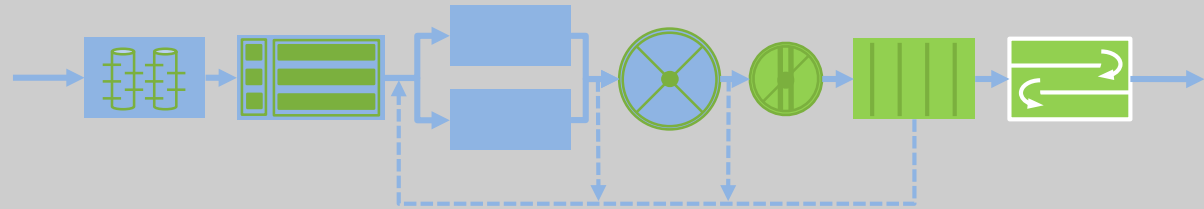
- Recycled Water Distribution
- Water Supply Update
- Drought/Water Conservation Update



Recycled Water

Continuous Recycled Water Production Facility

- Provides parallel production of recycled water and San Francisco Bay discharge
- Currently produced in batches
- More reliable production
- Proposition 84 State funded



<http://www.sunnyvalecleanwater.com/>

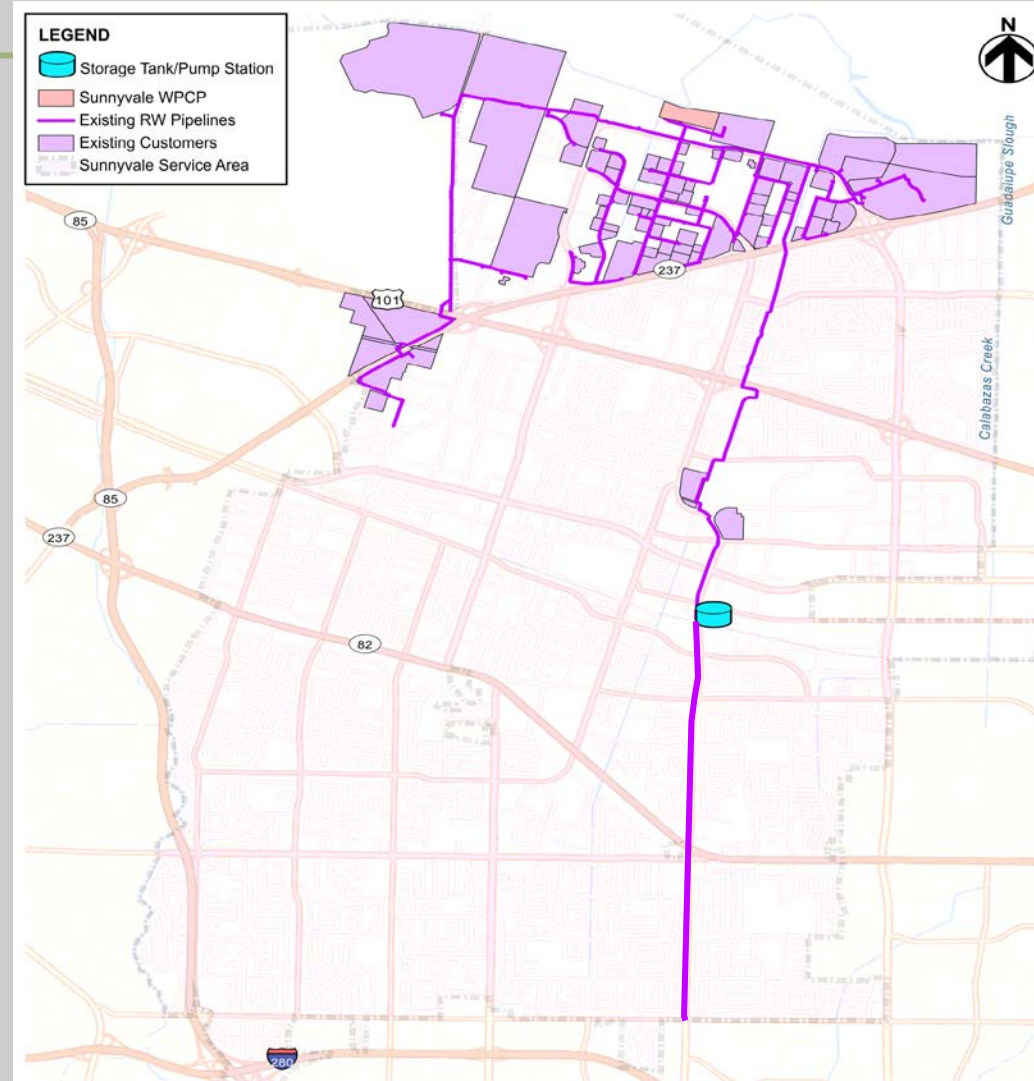
Recycled Water – Continuous Production



Recycled Water

Sunnyvale Distribution System

- Approximately 75,000 ft of distribution “purple” pipes
- Service provided to more than 100 sites
- San Lucar Storage and Pumping Facility provides 2.5 million gallons of storage
- Flexibility of adding potable water as a backup source of supply

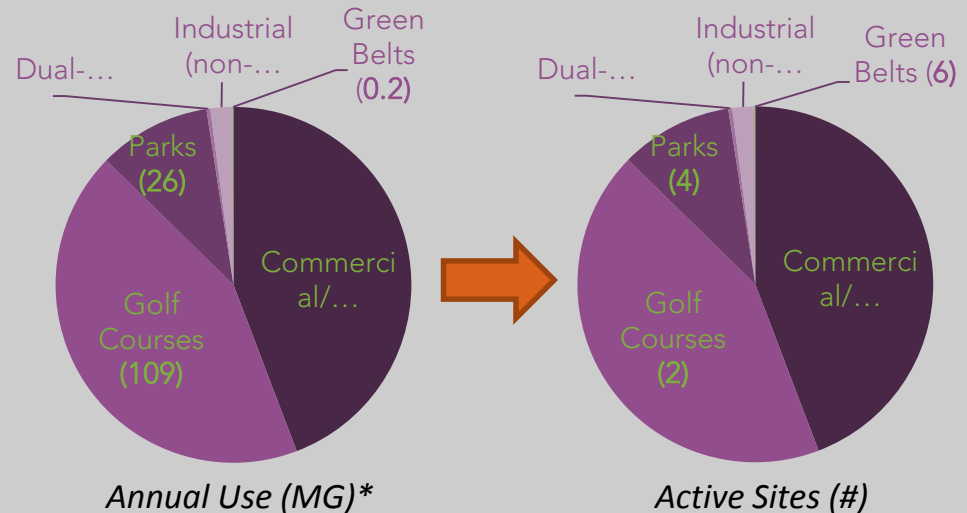
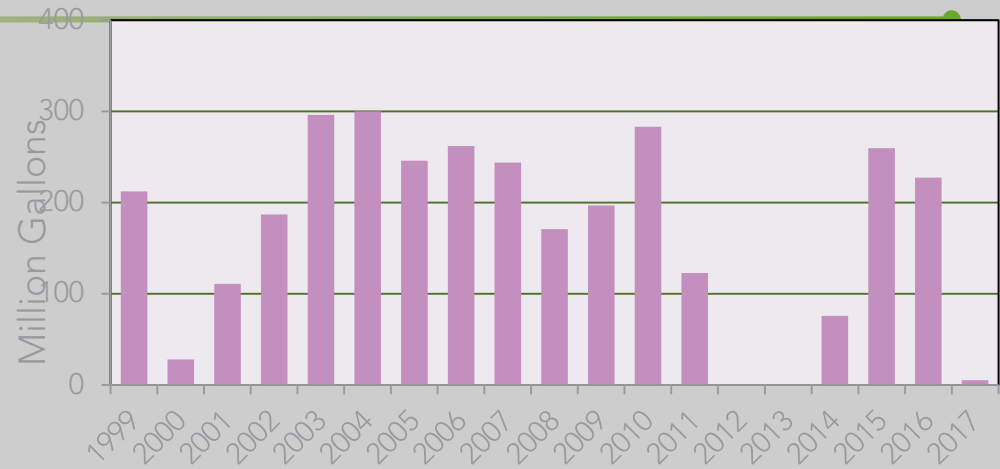




Recycled Water

Production and Uses

- Roughly 250 million gallons (770 acre feet) of recycled water produced in an average year
- Majority of use from Commercial/Industrial Irrigation and Golf Courses
- Handful of dual-plumbed sites but more anticipated
- No production in 2012-2013 and most of 2017 due to maintenance, capital projects, and operational challenges at the WPCP

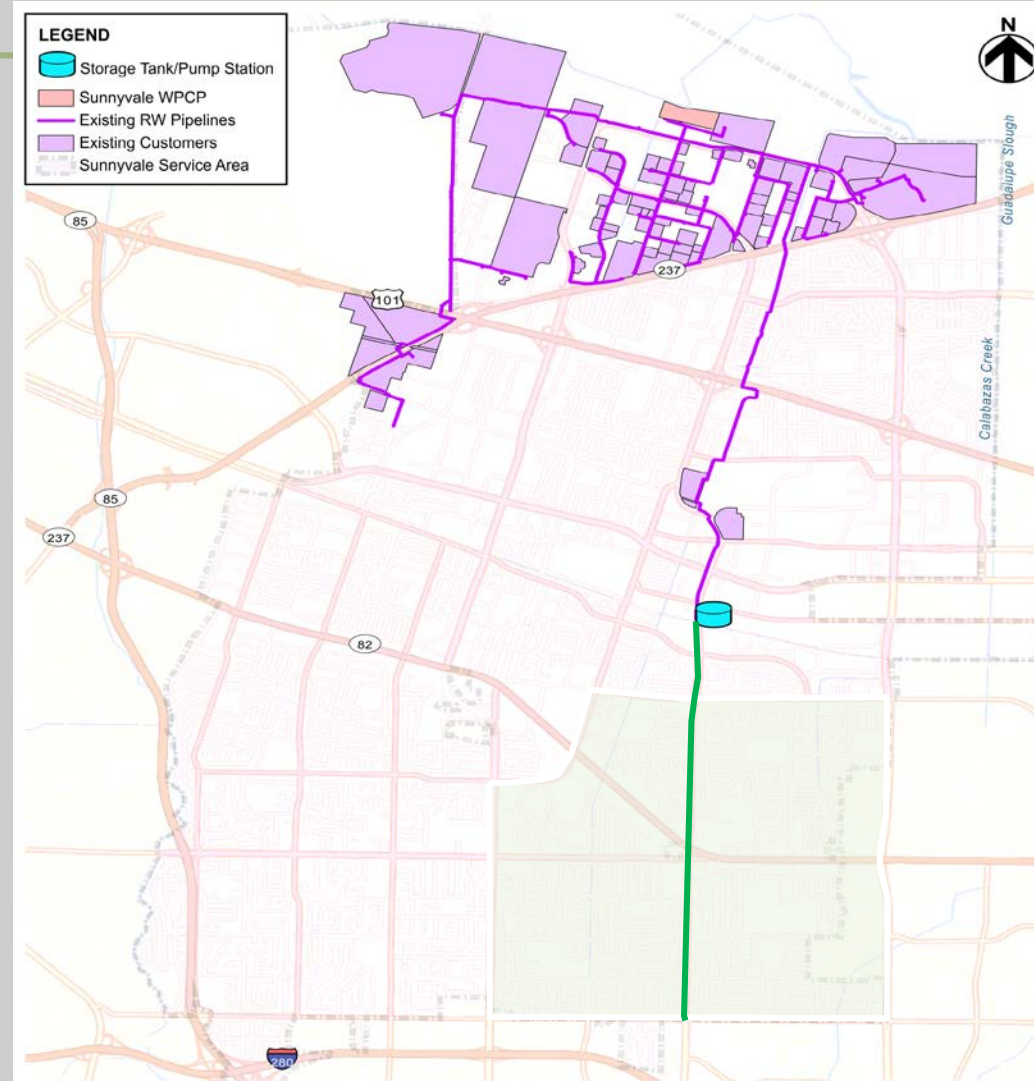


*2016 Annual Recycled Water Report

Recycled Water

Recycled Water Expansion

- Wolfe Road Pipeline Extension Project (green line)
- Completed in late-2017, delivery mid-2018
- Approximately 13,300 linear feet extending from Kifer Rd to Homestead Ave
- Partnership with Santa Clara Valley Water District, Apple, Cal Water

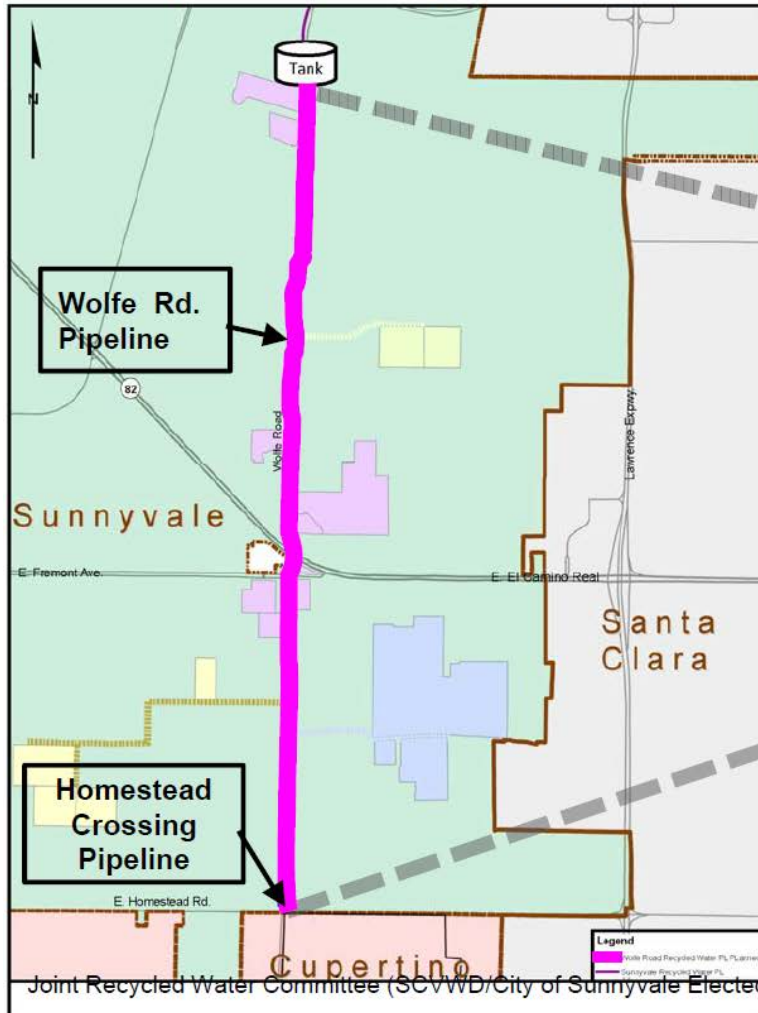


Recycled Water Projects – Wolfe Road

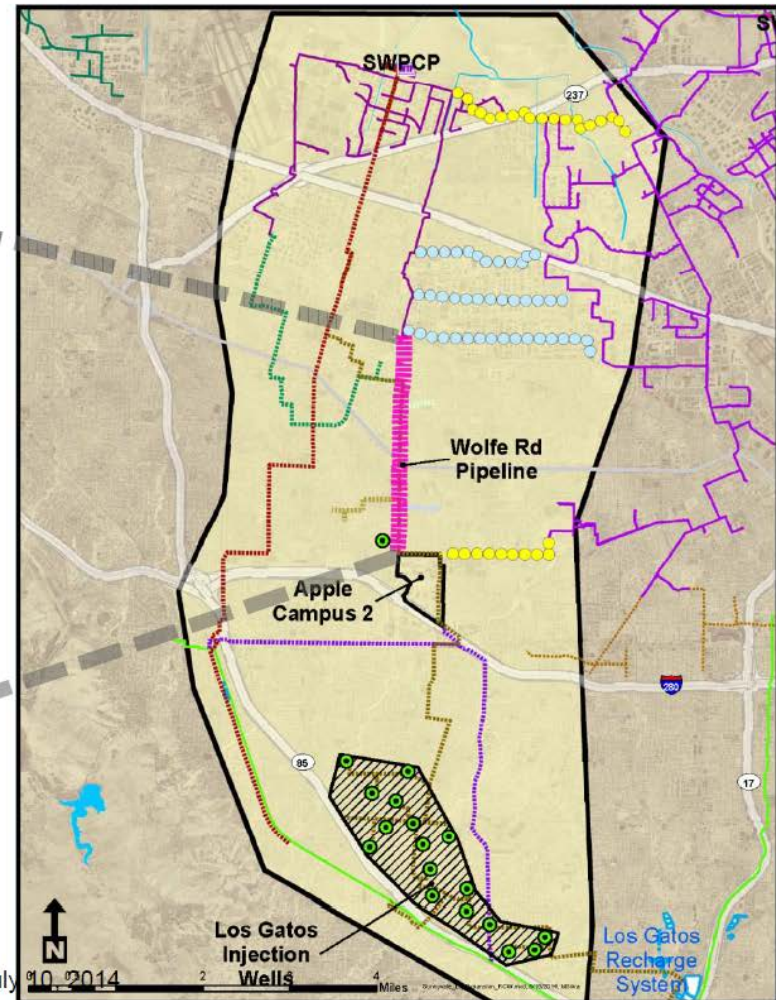


Wolfe Road Pipeline

Short-Term Expansion Wolfe Road Recycled Water Pipeline (1mgd)



Long-Term Expansion of Recycled Water West Side of the County (11mgd)





Potable Water Supply



Sources of Supply for Santa Clara County

Shasta Lake

Federal Central Valley Project



Lake Oroville

State Water Project



Hetch Hetchy

San Francisco



Sacramento-San Joaquin River Delta

Santa Clara County

by the numbers

30% local water

15% natural groundwater

10% from reservoirs to groundwater

5% from reservoirs to drinking water treatment plants

55% imported water

15% thru Delta to replenish groundwater

25% thru Delta to drinking water treatment plants

15% from Hetch Hetchy system

5% recycled water

90%

10% Water Conservation

100%

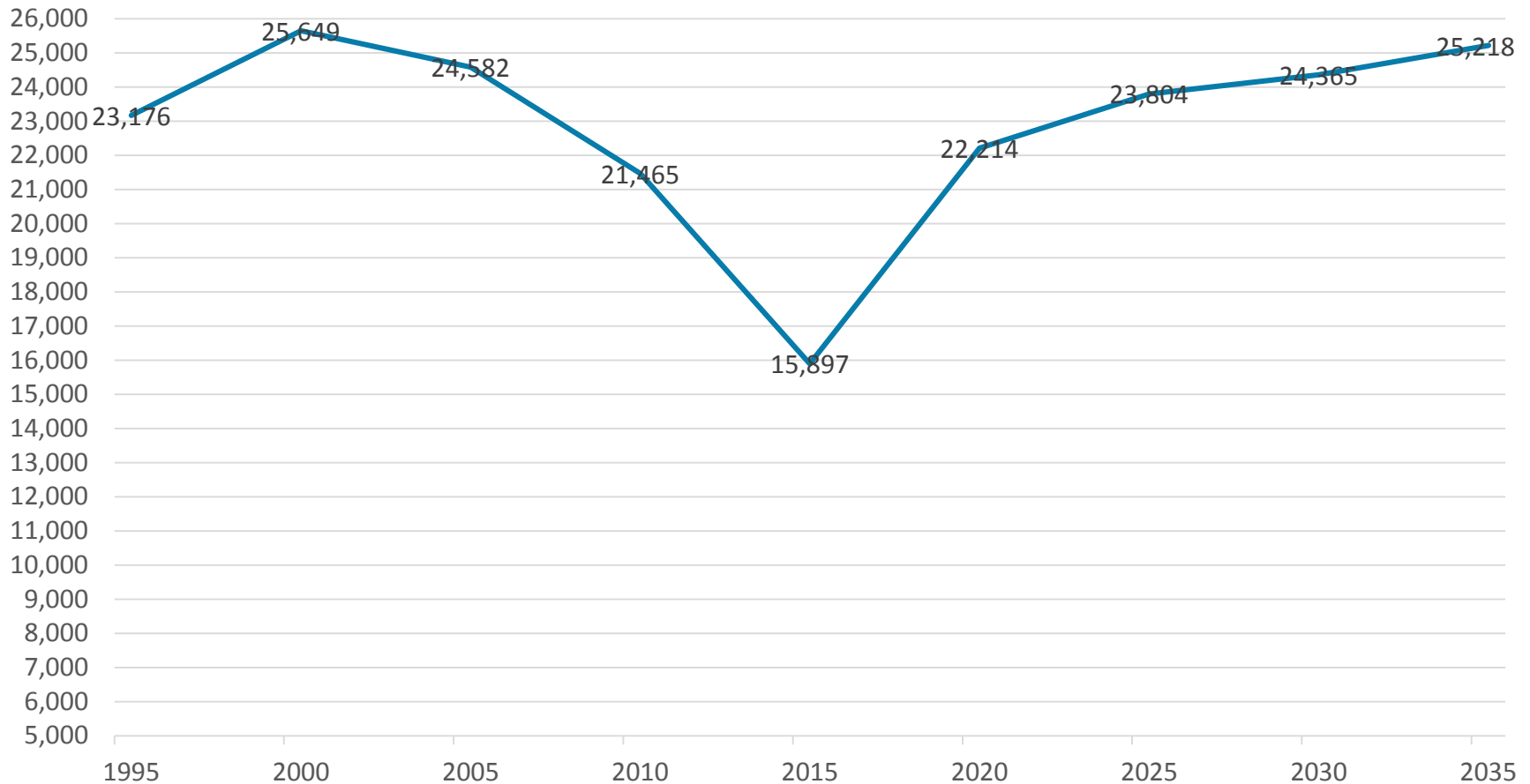
Water supplies

Sunnyvale Sources of Supply

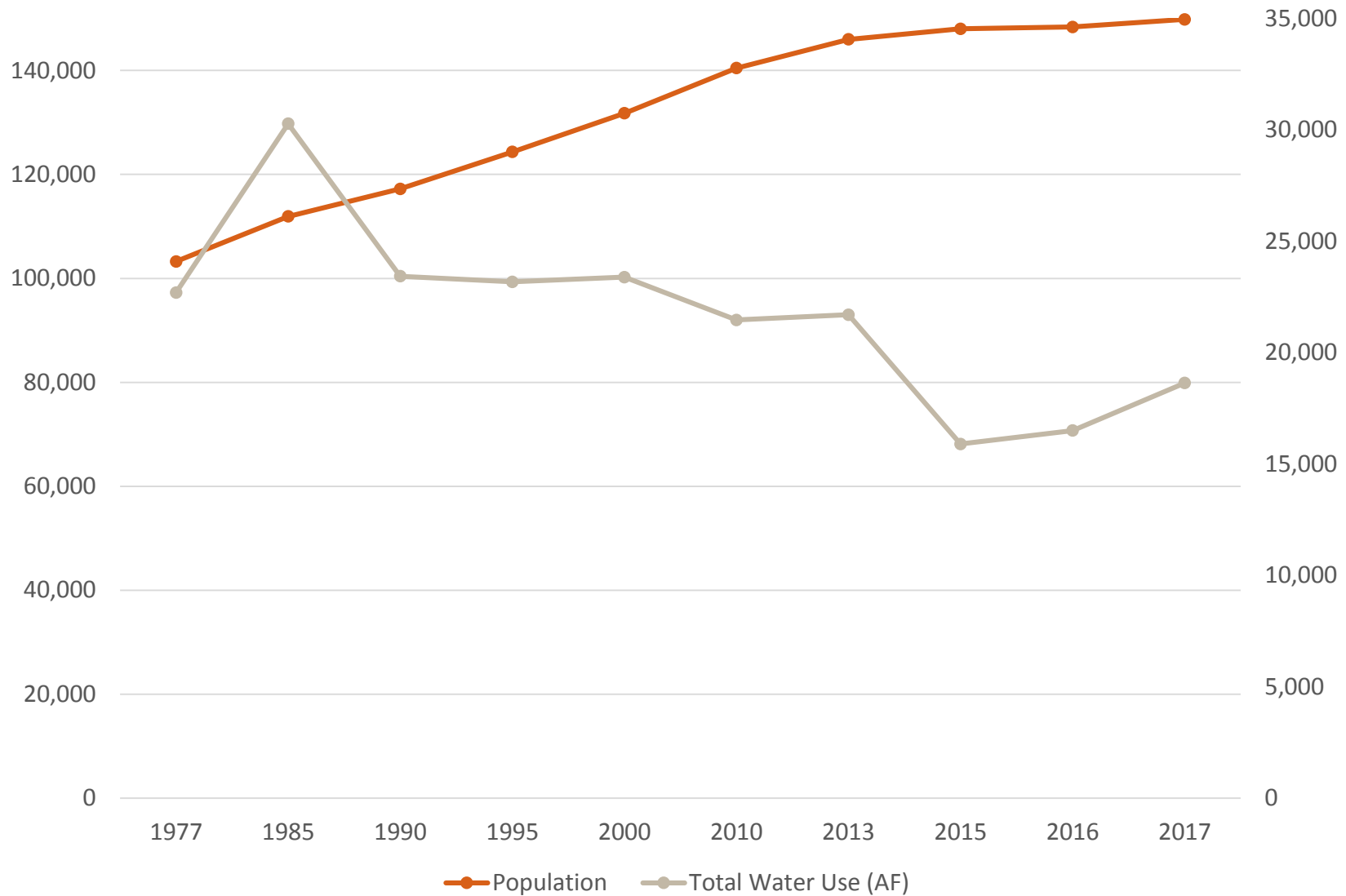
- San Francisco's Hetch Hetchy Reservoir
- Santa Clara Valley Water District
 - 1 - Delta
 - 2 - Central Valley Project (San Luis Reservoir)
- Wells
- Recycled Water

Potable Water Demands

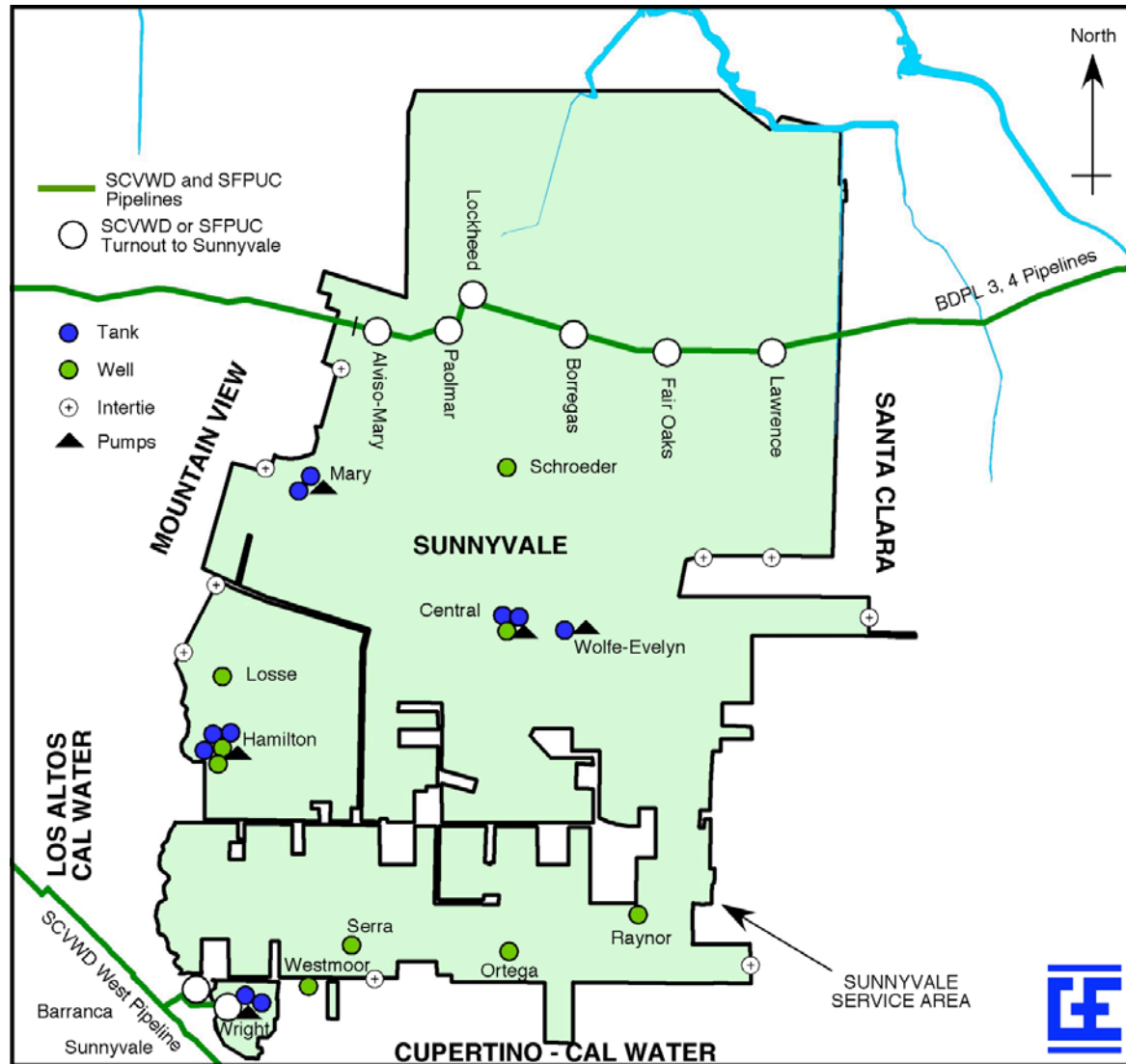
Historic/Projected Water Usage (AF)



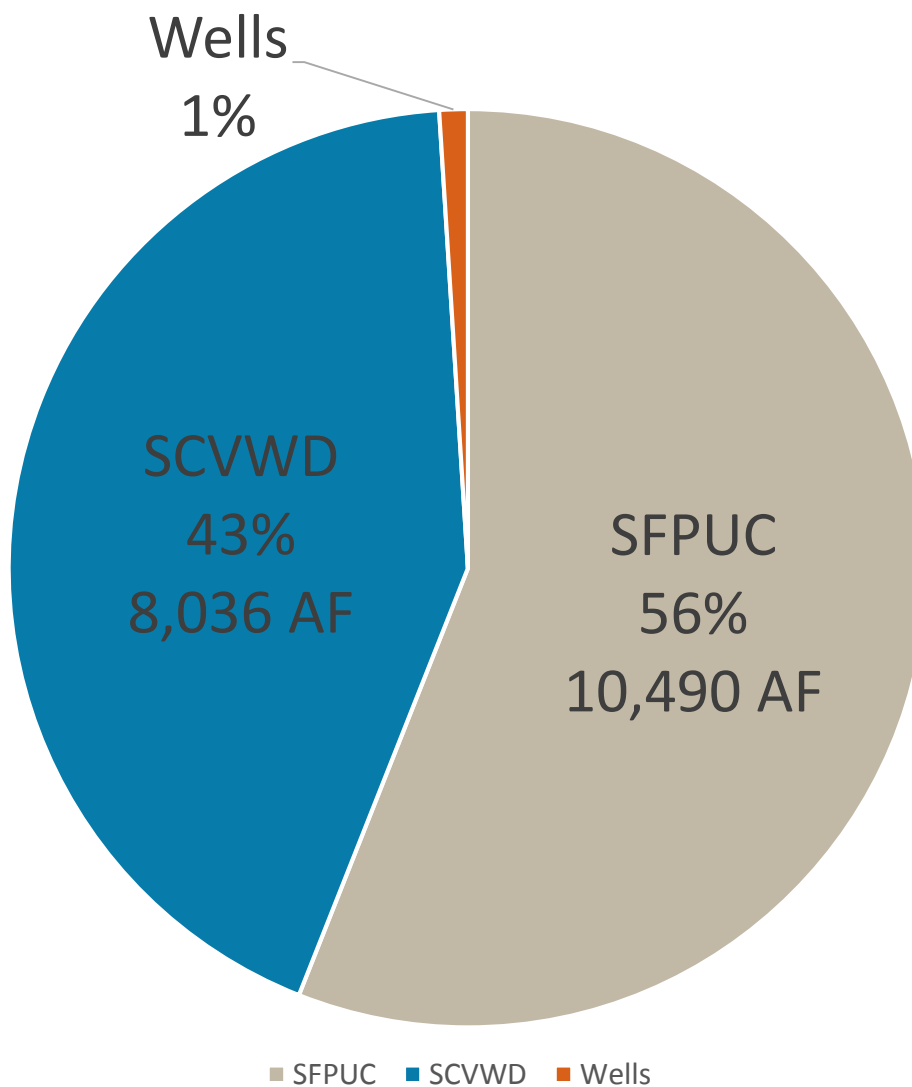
Water Use vs. Population



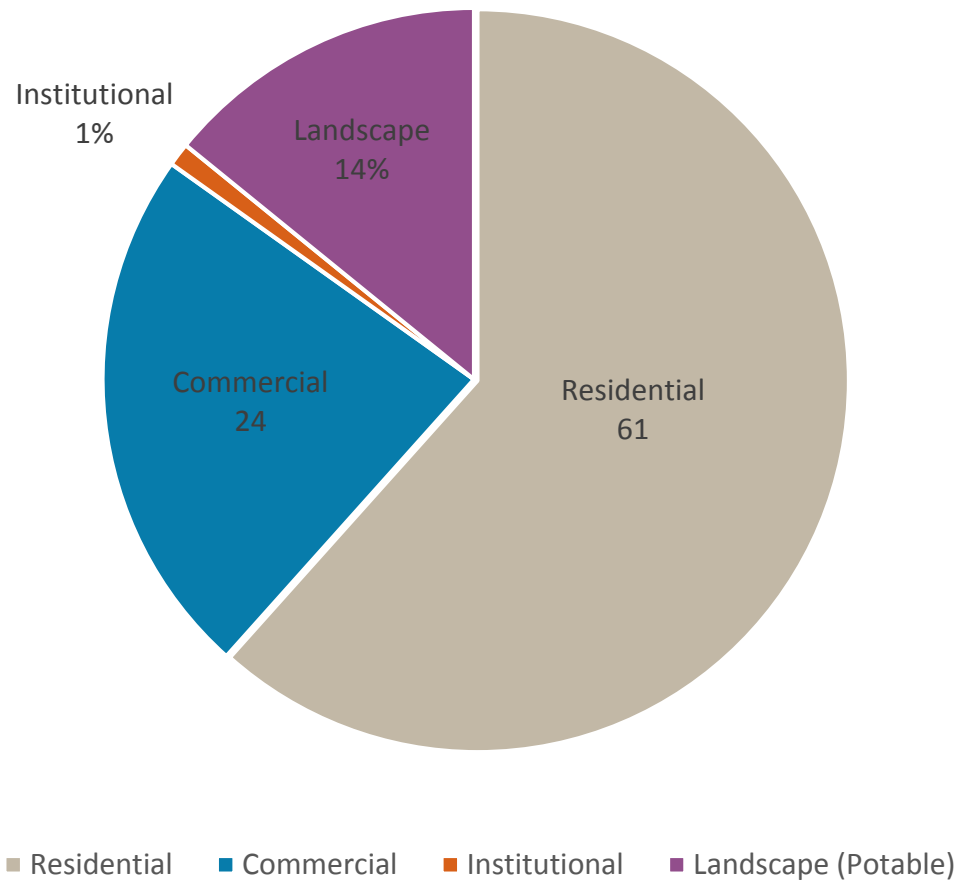
Sunnyvale System with Facilities



2017 Sources of Supply



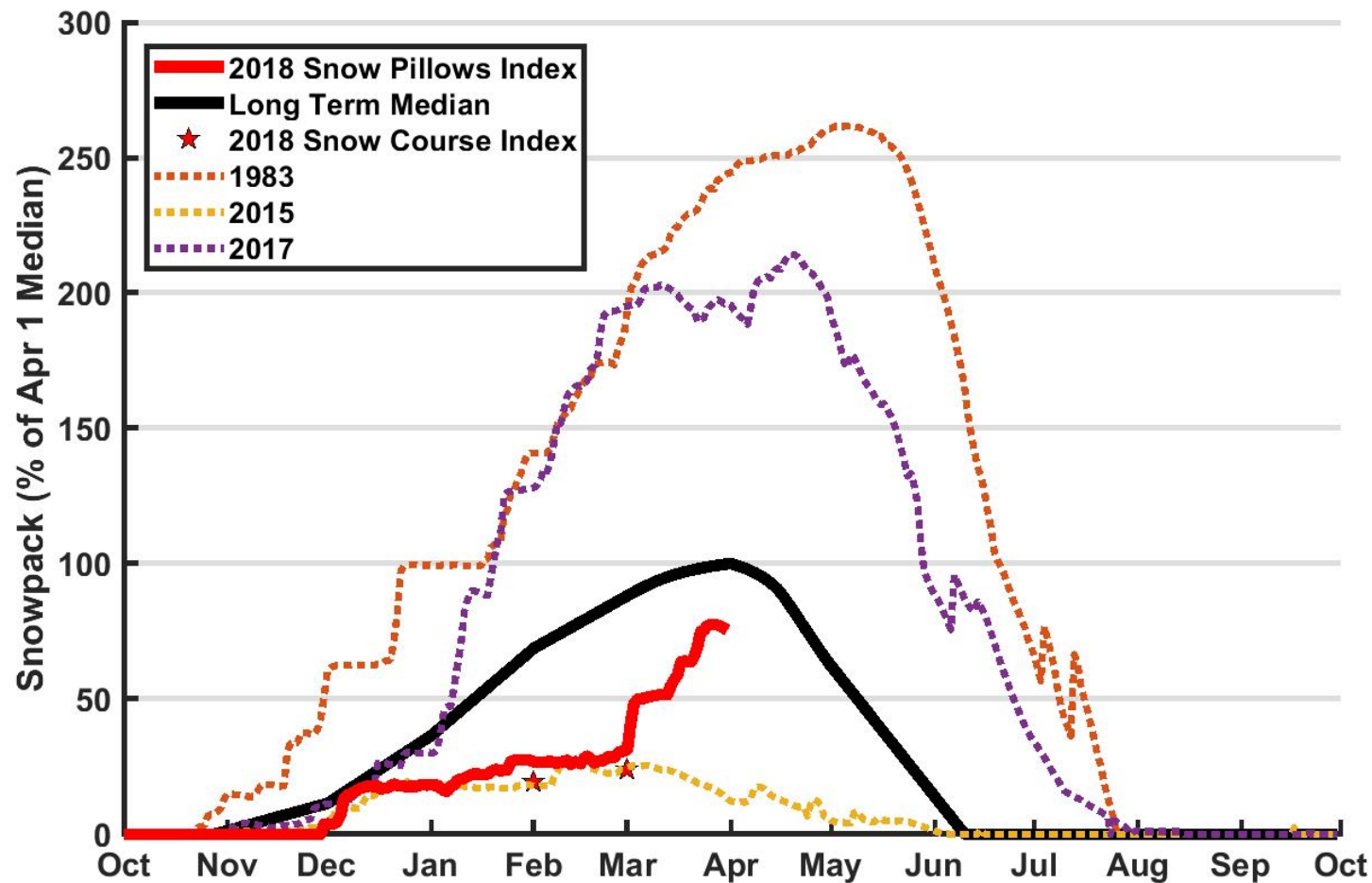
2017 Water Sales



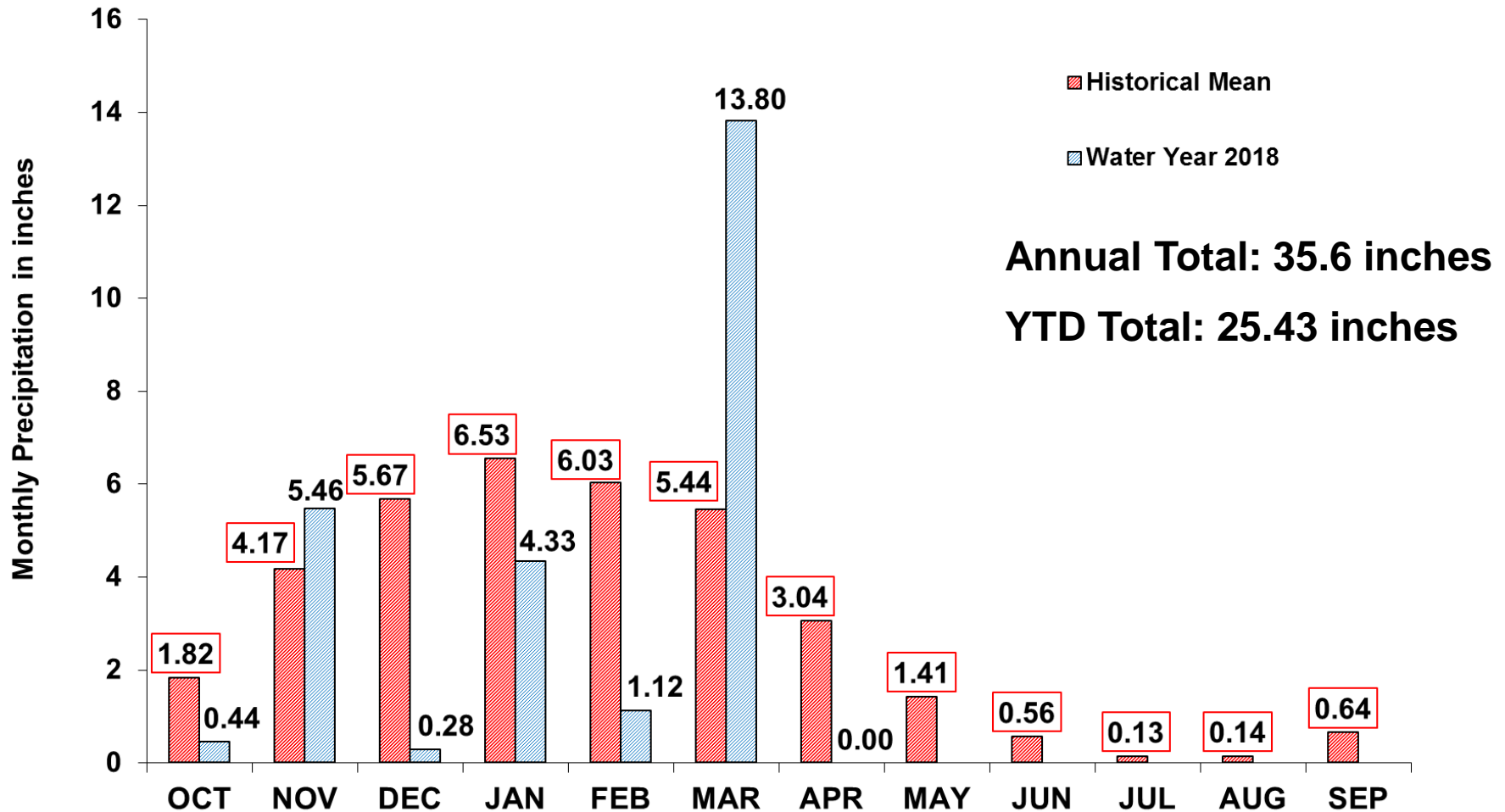
April 1, 2018 Reservoir Storage

Reservoir	Current Storage ^{1,2,3} (AF)	Maximum Storage ^{3,4} (AF)	Available Capacity (AF)	Percent of Maximum Storage	Normal Percent of Maximum Storage ⁵
<u>Tuolumne System</u>					
Hetch Hetchy	288,940	360,360	71,420	80.2%	54.1%
Cherry	121,570	273,500	151,930	44.4%	-
Eleanor	13,290	27,113	13,823	49.0%	-
Water Bank	570,000	570,000	0	100.0%	99.7%
Total Tuolumne Storage	993,800	1,230,973	237,173	80.7%	-
<u>Local System</u>					
Calaveras	25,850	96,670	70,820	26.7%	-
San Antonio	40,320	50,637	10,317	79.6%	-
Crystal Springs	48,972	58,309	9,337	84.0%	-
San Andreas	17,250	19,027	1,777	90.7%	-
Pilarcitos	2,650	3,030	380	87.5%	-
Total Local Storage	135,042	227,673	92,631	59.3%	-
Total System Storage	1,128,842	1,458,646	329,804	77.4%	81.3%
Total without water bank	558,842	888,646	329,804	62.9%	-

Upcountry Snowpack



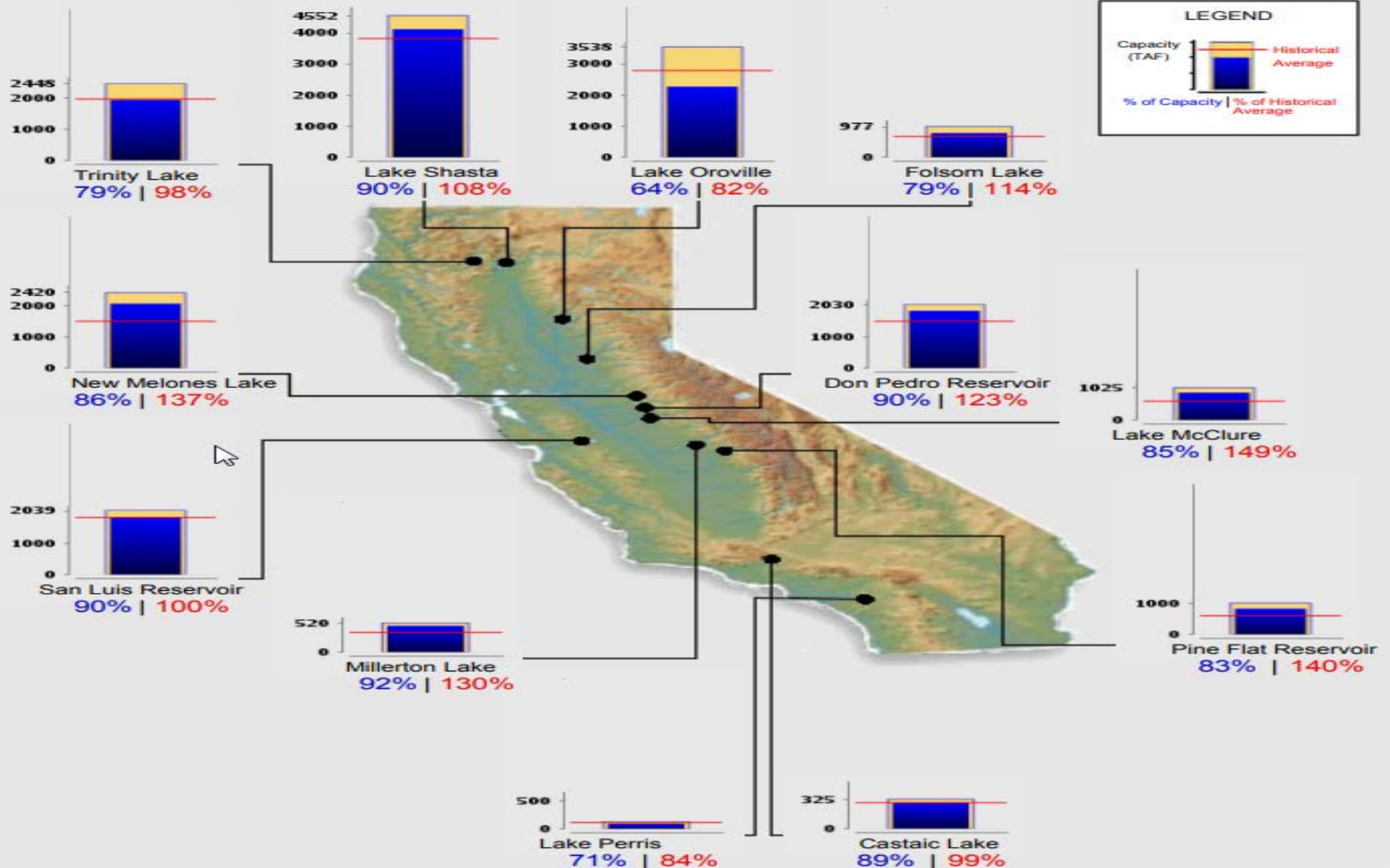
Upcountry 6 Station Precipitation Index as of April 1, 2018



State Reservoir Levels as of April 15, 2018

Ending At Midnight - April 15, 2018

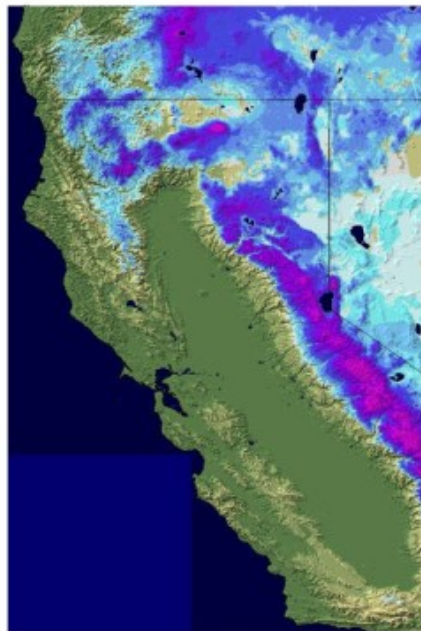
CURRENT RESERVOIR CONDITIONS



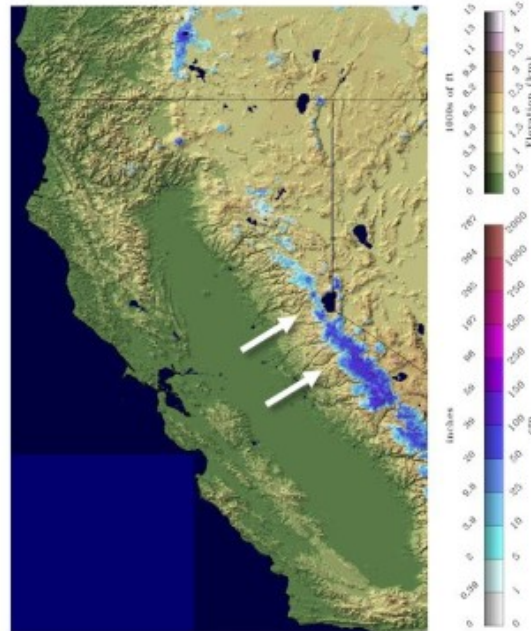
2018 Initial Local Outlook

20% - Current SWP Allocation (20 TAF)
 20% (ag), 70% (M&I) - Initial CVP Allocation
 ~250 TAF - Semitropic Storage
 330-340 TAF - End of Year Groundwater Storage

Snow Depth 01-18-2017



Snow Depth 01-18-2018



Water Shortage Contingency Plan Stages

Normal (Stage 1)
 No water use reductions

Projected
 2018 EOY
 Storage



Above 300,000 AF

Alert (Stage 2)
 0-10% reductions

250,000 – 300,000 AF

Severe (Stage 3)
 10% -20% reductions

200,000 – 250,000 AF

Critical (Stage 4)
 20% -40% reductions

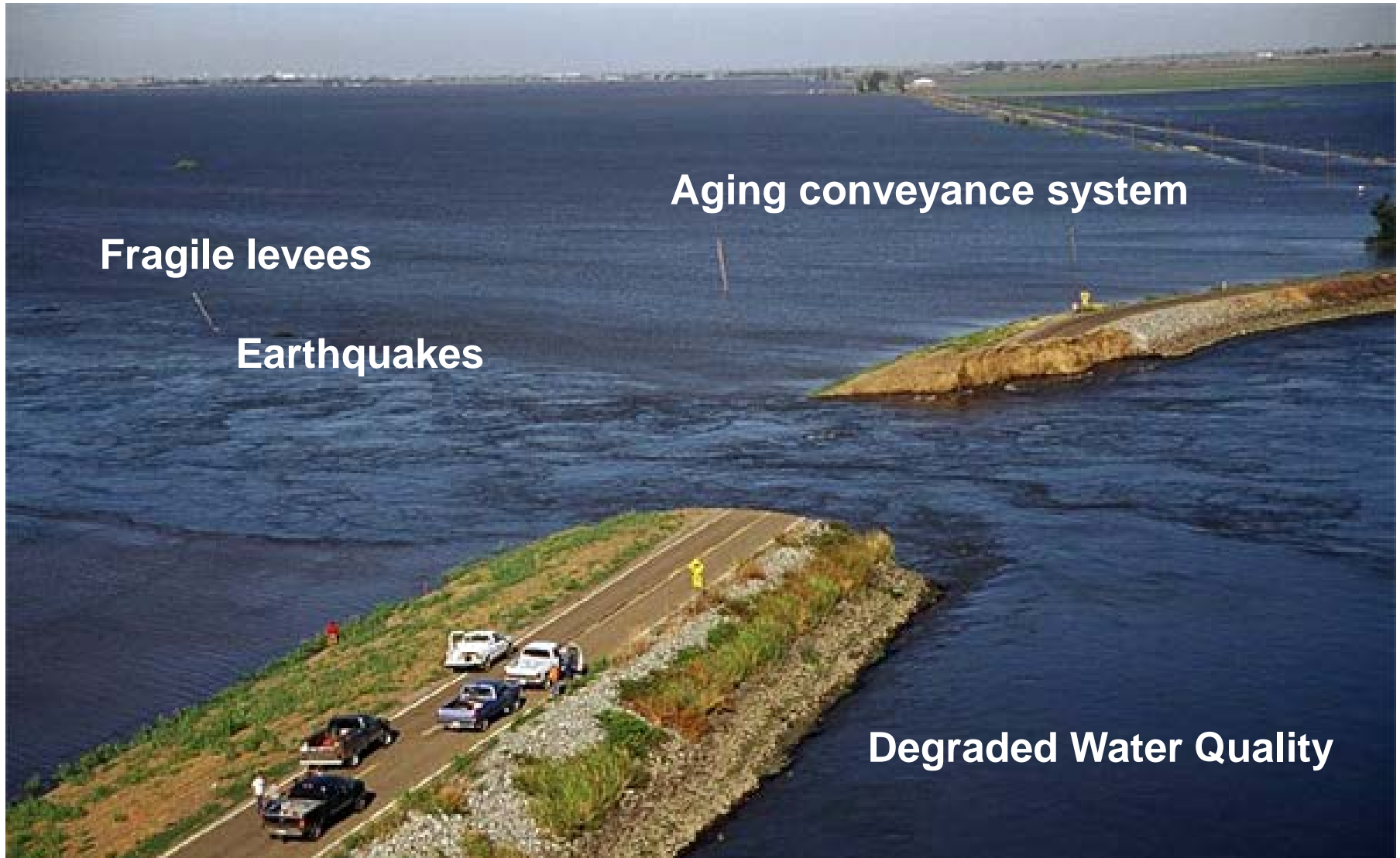
150,000 – 200,000 AF

Emergency (Stage 5)
 40% -50% reductions

Below 150,000 AF

End of Year (EOY)
 Groundwater Storage

Delta Risks to Water Supply



Aging conveyance system

Fragile levees

Earthquakes

Degraded Water Quality

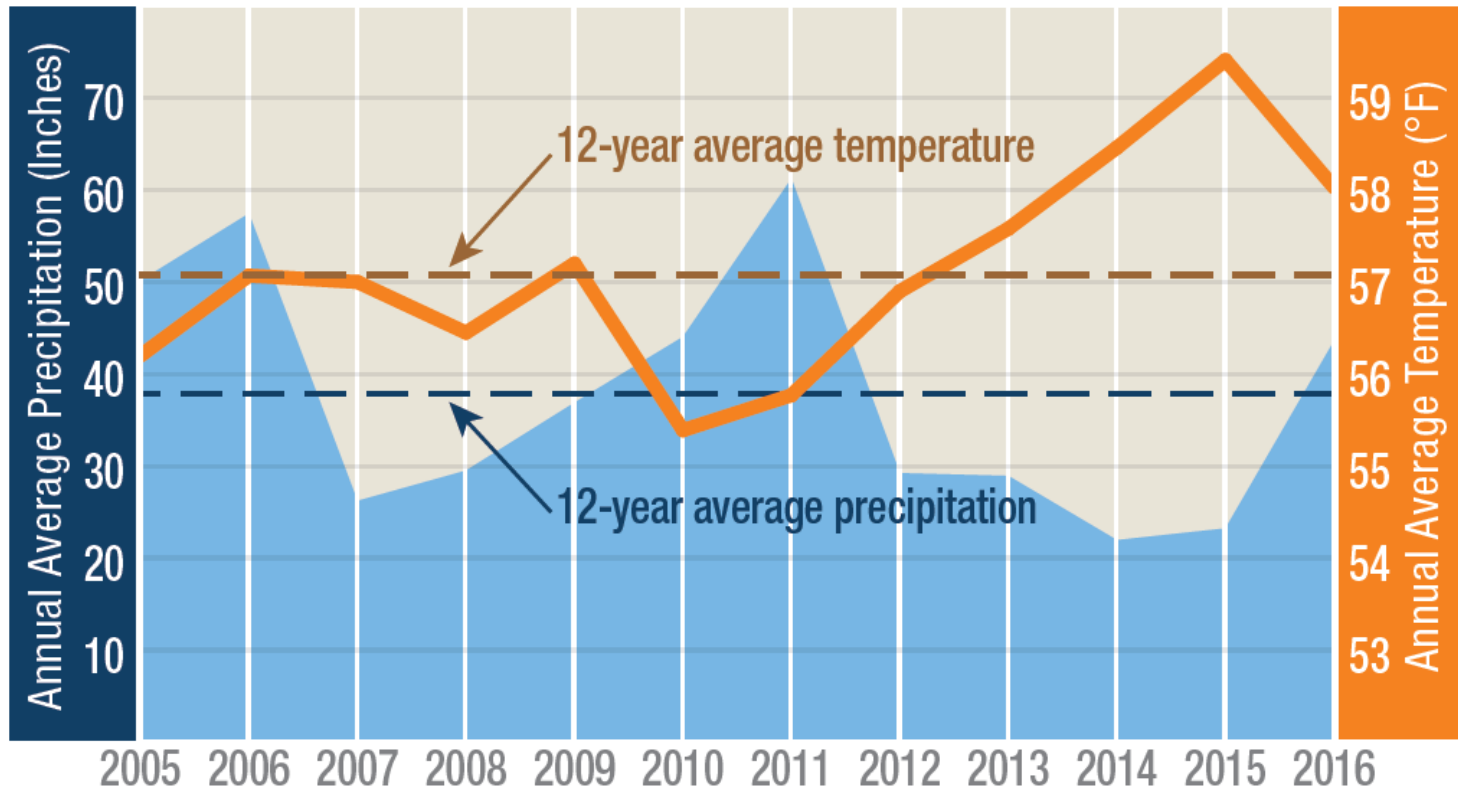


Sunnyvale

Drought Update Water Conservation



California's Historic 5 Year Drought



California has experienced near-record temperatures in recent years.
Source: California Department of Water Resources

State Transitions to Conservation as a Way of Life

Governor Executive Order

State Board **transitions away from monthly and annual percent reductions**

Move towards water use efficiency and water budgeting targets after 2020-performance based targets will be in place.



Making Water Conservation a California Way of Life

Implementing Executive Order B-37-16

FINAL REPORT
April 2017



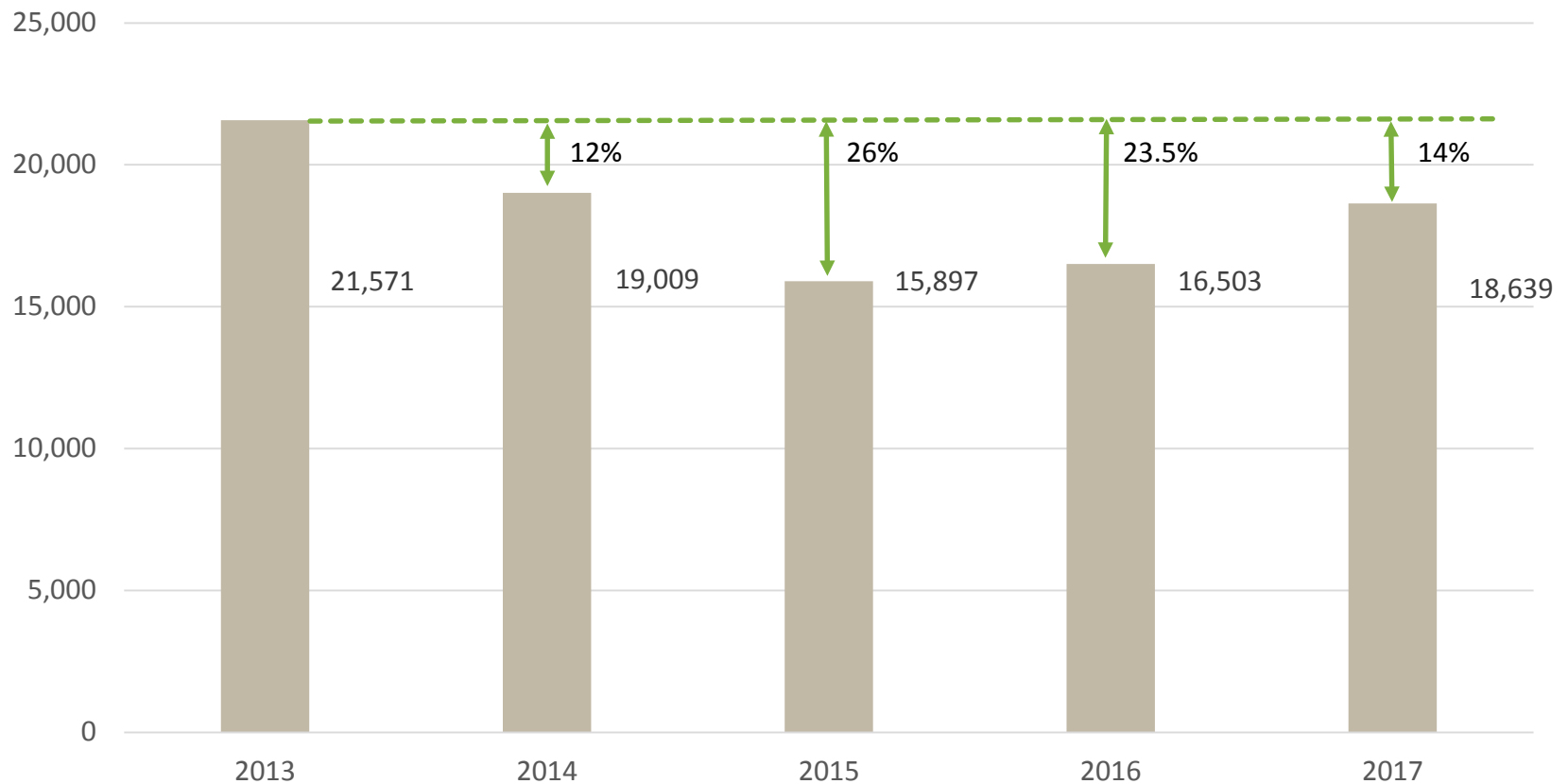
Potential Permanent Prohibitions State-Wide

▶ Prohibitions Under Consideration Include:

- ▶ Hosing off sidewalks, driveways and sidewalks;
- ▶ Application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall;
- ▶ Watering lawns in a manner that causes runoff;
- ▶ Irrigating turf on public street medians (with certain exceptions);
- ▶ Using non-recirculated water in a fountain or other decorative water feature;
- ▶ Using a hose without a shut-off nozzle (or equivalent)

Sunnyvale's Response to the Drought

Acre Feet (AF) of Water Usage



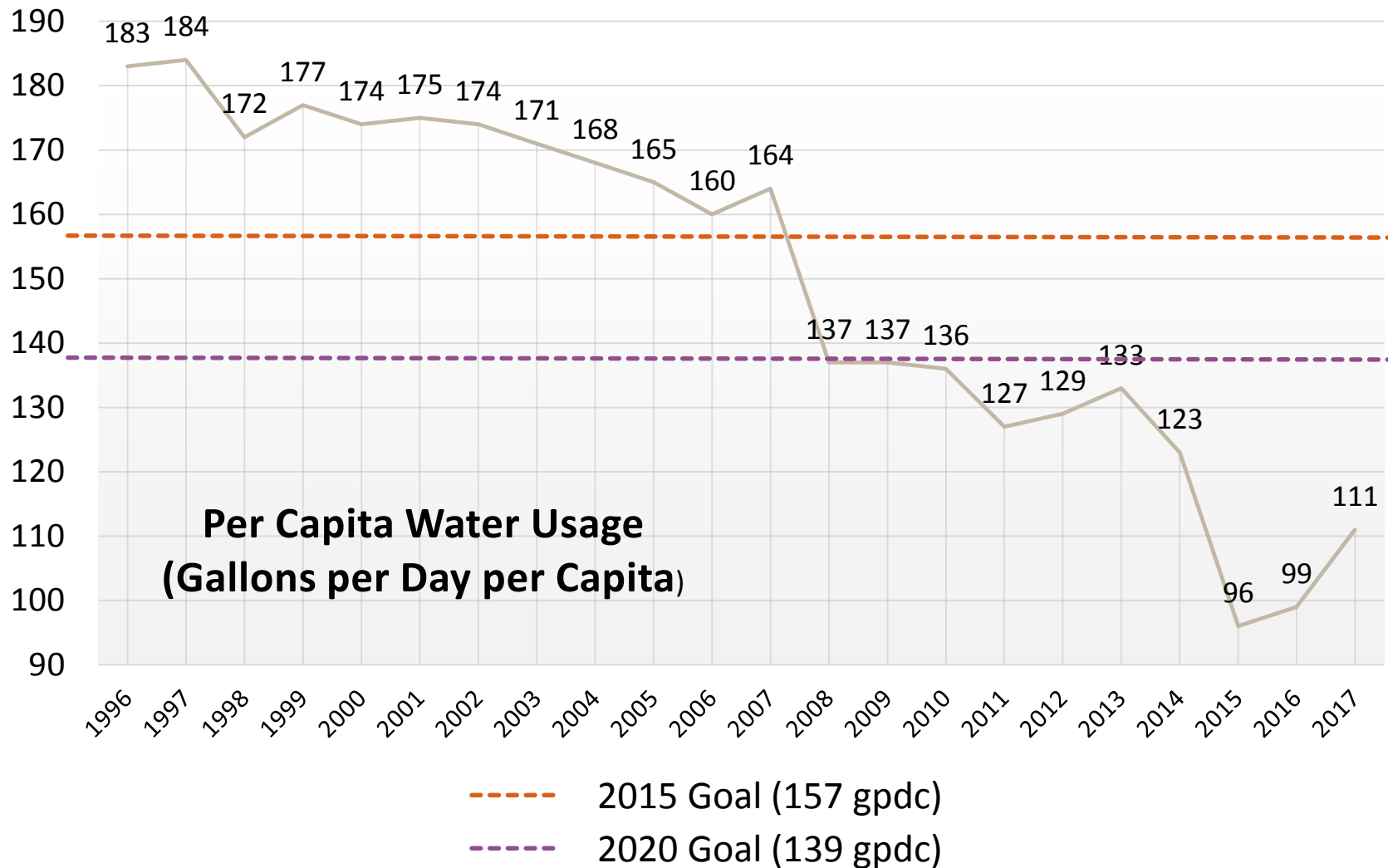
% shown represents reduction from 2013 base year

SBx7-7 Water Conservation Act

- Requires a 20% water reduction by 2020
- Uses 10-Year (1995-2004) as baseline – 174 gpcd
- 2015 reduction target is 10% – 157 gpcd
- 2020 reduction target is 20% – 139 gpcd
- Progress tracked by actual usage

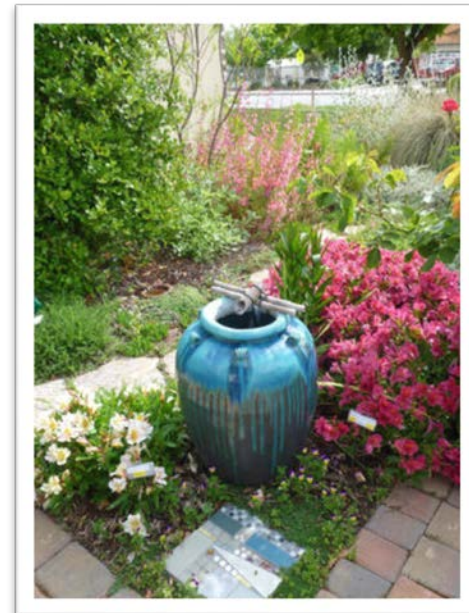


SBx7-7 Compliance



Water Conservation Programs

- ▶ **Residential Programs**
- ▶ **Landscape Programs**
- ▶ **Commercial, Industrial, Institutional Programs**
- ▶ **Agricultural Programs**
- ▶ **Outreach/Education**



Public Education and Outreach



Go to valleywater.org



Once it's on it's gone.

California is in a drought.
We all need to pitch in and conserve.

Valley Water is calling for an immediate 15% mandatory cutback.

Reducing water use is easy. For water-saving tips, a free Water-Wise House Call, and rebates on high-efficiency toilets, washers and irrigation hardware, go to valleywater.org or call 408.265.2607, ext 2554.

Start saving now. Because once it's on, it's gone.

Outreach and Education

Events: District attends or supplies materials to over 100 community events per year

Workshops: workshops offered for homeowners and landscape professionals

Literature: District offers a wide variety of educational literature

Website: www.valleywater.org



Programs for Residents

- Water Wise Survey Program
- Water Wise Outdoor Survey Program
- Do It Yourself Indoor Survey Kit
 - Free Low Flow Showerheads and Aerators, Toilet Flappers, etc.
- Graywater Rebate Program
- Landscape Rebate Program



Reporting Water Waste

4 ways to report water waste in Santa Clara County



Call (408) 630-2000



E-mail drought@valleywater.org



Download our Access Valley Water app



Use Access Valley Water at valleywater.org





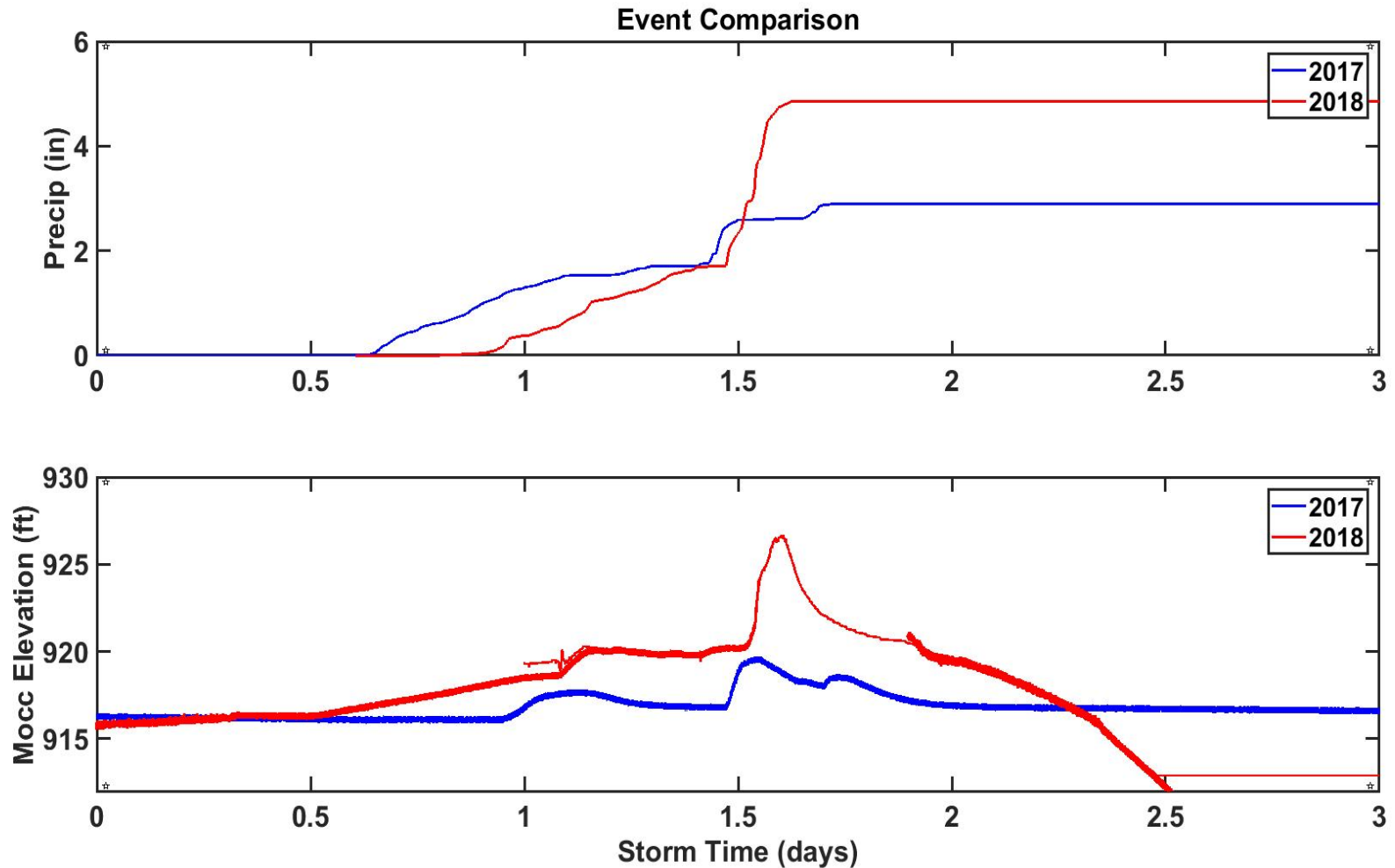
Sunnyvale

Questions?

Moccasin Area



2017 Overflow to 2018 Overflow: Major Differences



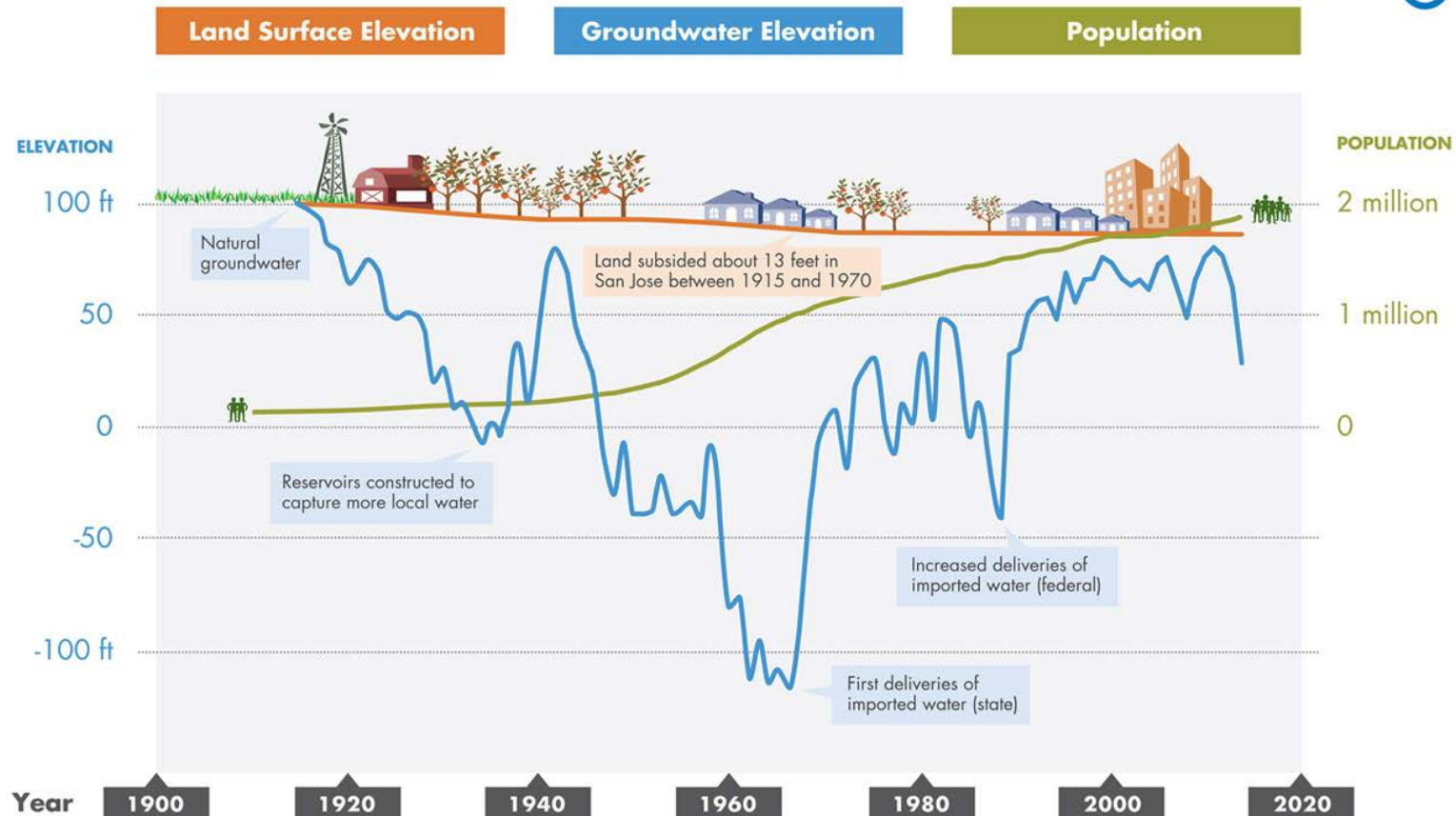
Moccasin Creek Fish Hatchery



Groundwater Levels

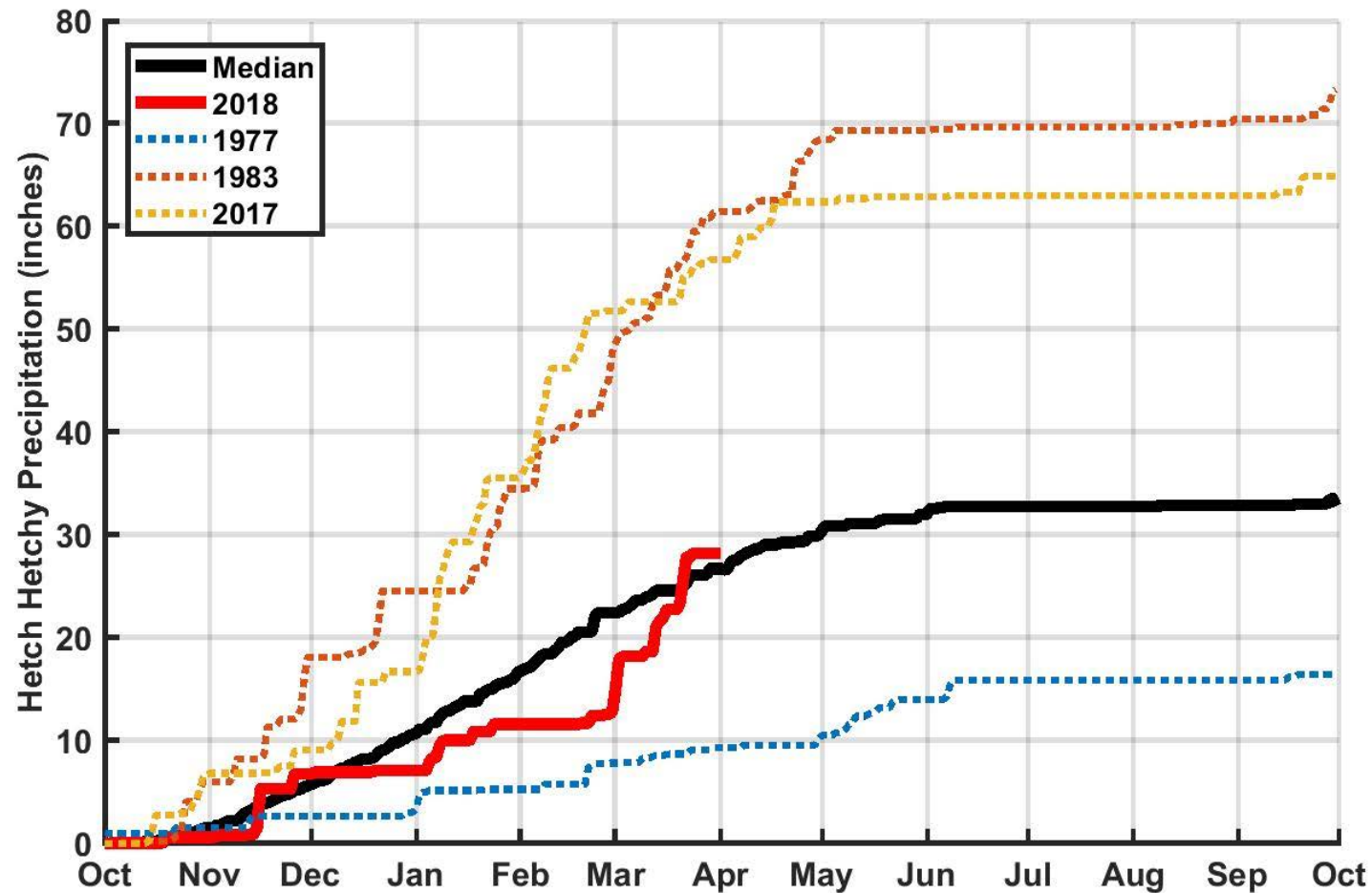
SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit



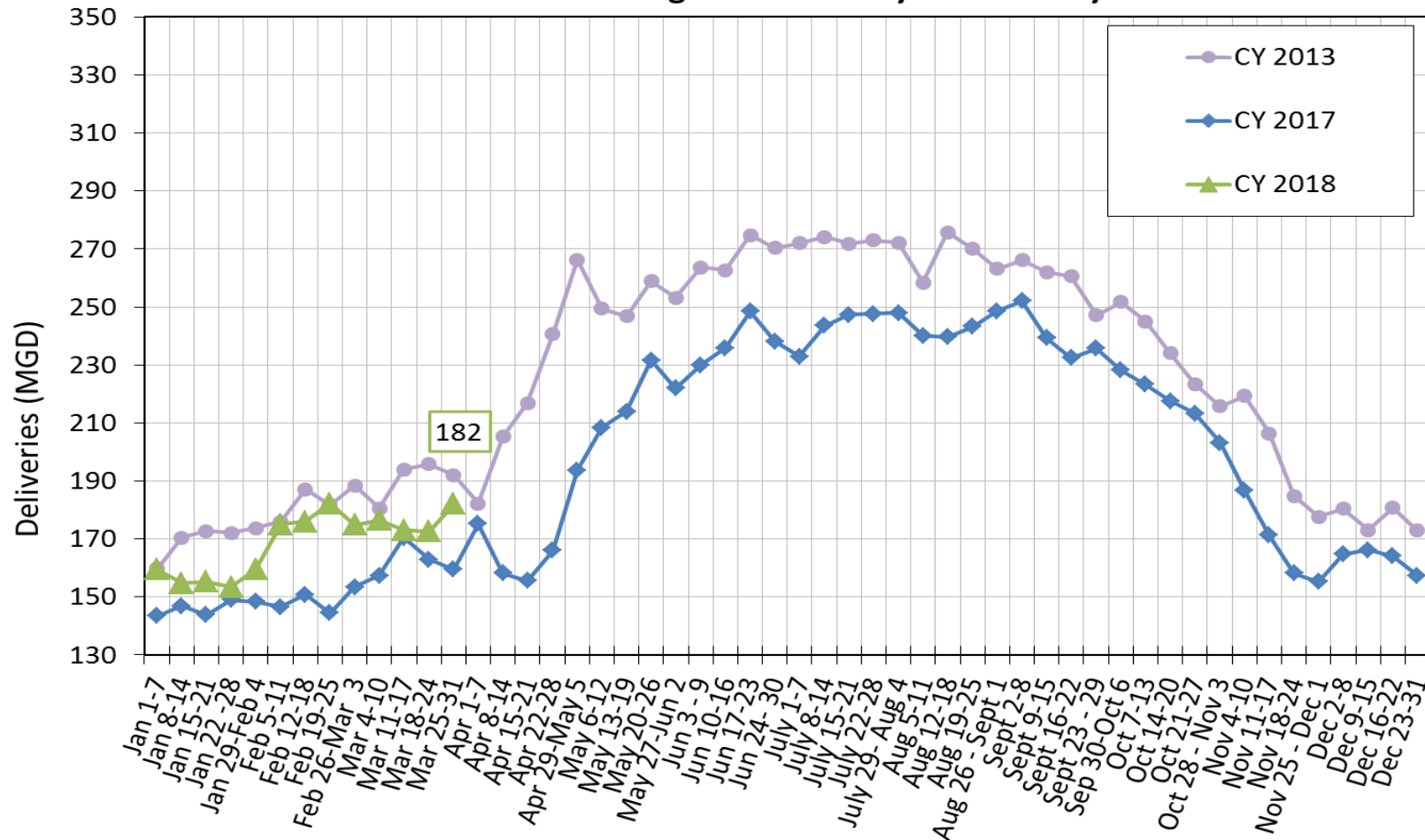
Last updated January 26, 2015

Hetch Hetchy Precipitation



Total Deliveries

Regional Water System Total Deliveries
Source: SFPUC Regional Water System County Meters



Permanent Water Use Restrictions

- The use of broken or defective plumbing, sprinklers, watering or irrigation systems
- Using potable water in a manner where it floods premises and runoff into the street
- Using a hose to wash vehicles without a shutoff valve
- Using a hose to wash hard surfaces (except for health and safety reasons)
- Service of water to restaurant patrons without being requested
- Installation of single pass cooling process in new construction
- Sprinkler irrigation between 9 a.m. to 6 p.m. when daylight savings is in effect
- Irrigating more than 15 minutes per day each station
- Application of potable water to outdoor landscapes while it is raining or with 48 hours after measurable rainfall (0.2 inches)
- Using potable water to irrigate ornamental turf on public street medians
- Hotel/motel operators shall provide guests with the option of not having towels and linens laundered daily

Already in Effect in Sunnyvale



Grey Water and Turf Assistance

