



SOLANO AVENUE ELEMENTARY SCHOOL
The Owls of Solano are always on the lookout for water saving ideas!

Conservation News

615 Solano Avenue, Los Angeles CA 90012

Graduation Week, May 28 2015; Vol 1

California's Precipitation

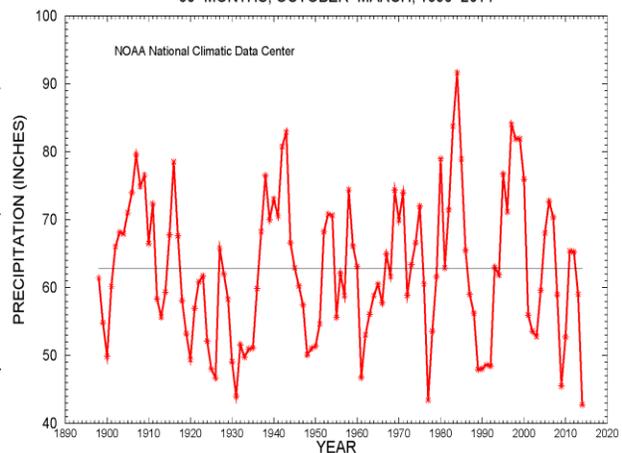
by Room 11

Knowledge of California's precipitation is essential to understanding how to manage one of our state's most important resources -WATER! By gathering information on precipitation rates from year-to-year and from region-to-region, we can better comprehend how to handle our current drought. And, precipitation data can be used to help with water management and policy.

California precipitation rates change from year-to-year and across the state. California is a Mediterranean climate, which means it has cool, wet winters and warm, dry summers. Our state gets 90% of our rain between October and April, but this precipitation is highly variable. The southeast deserts receive less than 5 inches of precipitation each year, while the north coast gets over 100 inches of rain per year.

(continued on page 6)

CALIFORNIA STATEWIDE PRECIPITATION
30-MONTHS, OCTOBER-MARCH, 1895-2014



Do You Know Your Water Bill?

The students at Solano Elementary want to be responsible citizens and conserve water. We learned how to read a water bill so that we could be more aware of our water usage and how much our families are paying for water.

If you want to figure out your water bill, you need to see how many days your water bill covers. Then, you subtract your prior usage from your current usage to determine the number of units you used during this billing cycle.

Our class average for water usage was 9 HCF units. One (HCF) unit is equal to 748 gallons of water. When figuring out your water bill, there are two tiers to help determine the cost. If you use between 0-22 units, it will cost \$4.83 per unit. If you go over 22 units, you will pay \$6.16 for the remaining units. So, to figure out our water bill, we multiplied the current water usage (9 units) with the tier 1 cost per unit. Since we did not go over 22 units, we put zero for our tier 2 units. Finally, we added the tier 1 and tier 2 totals to find the total amount due. A sample bill is below:



Los Angeles Department of Water & Power
www.ladwp.com

BILL DATE
Dec 4, 2014

ACCOUNT NUMBER
984 890 1000

DATE DUE
Dec 23, 2014

AMOUNT DUE
\$ 1,495.10

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Los Angeles Department of Water & Power
www.ladwp.com 1-800-342-5397
Hours of operation - 7 am to 7 pm



Water Charges

BILLING PERIOD **DAYS**
9/30/14 - 12/3/14 64

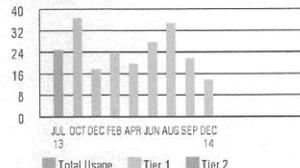
RATE SCHEDULE
Water Schedule A - Single-Dwelling Unit Residential

NEXT SCHEDULED READ DATE
2/3/15

TIER 1 ALLOTMENT **TEMP ZONE**
37.23438 HCF HIGH

SA # : 9848901545

USAGE HISTORY (Total HCF)



	Prev Yr	Dec 14
Total HCF used	18	14
Average daily gallons	214	164
Days in billing period	63	64
Your average daily cost of water		\$1.09
Your average cost per gallon of water		\$0.01

1 Hundred Cubic Feet (HCF) = 748 Gallons

DEFINITIONS

HCF – (Hundred Cubic Feet) the units in which water usage is measured. One HCF equals 748 gallons.

Rate Schedule – rates, based on type of use, approved by the Board of Water and Power Commissioners and adopted by the City Council. For a list, visit www.ladwp.com

Temp Zone (Residential) – Three groupings of zip codes, based on generally common average temperatures (low, medium, or high), used as one of the factors that determine a customer's first tier rate allotment.

Tier (Single Family) – One of two usage ranges used in a pricing method that provides an incentive to conserve water. The first usage range (Tier 1) is based on lot size, temperature zone, and household size. Usage in the first tiered is billed at the lowest rate. Any usage over the first tier allotment is billed at the higher rate (Tier 2). During shortage year water rates the Tier 1 allotment is reduced by 15%.

METER NUMBER	CURRENT READ	PREVIOUS READ	TOTAL USED
96175399	559	545	14 HCF
Tier 1 Water		14 HCF x \$4.96357/HCF	69.49
Subtotal Water Charges			\$69.49
Total Water Charges			\$ 69.49

Your Water Usage by Tier

Tier 1 Water Allotment \$4.96357/HCF	Tier 2 \$0/HCF
37 HCF	More than 37 HCF

Usage is billed at different rates, depending on how much you use. The graph shows how your water usage relates to these tiers, and the rate you paid in each tier. For more, visit www.ladwp.com/res_water



Statewide Water Regulations

by Room 9

Spring has brought new water restrictions to the state of California and our city of Los Angeles. The State Water Board voted unanimously on Tuesday, May 12 2015 to mandate a 25% reduction in water use in this state. Beginning on April 2, 2015, Governor Jerry Brown issued the first water restrictions statewide.

On CNN News, Brown, standing on a patch of dry grass in the Sierra Nevada Mountains which usually are covered with at least 5 feet of snow at this time of year, exclaimed “We’re in a new era. The idea of your nice little green grass getting lots of water every day, that’s going to be a thing of the past. This historic drought demands unprecedented action.” Here in Los Angeles, Mayor Eric Garcetti has directed the citizens of Los Angeles to reduce their use of water by 20% by 2017. So far the reduction has only been 8.3% according to the Los Angeles Times on May 10 2015.

Why must we slash water usage? For the past 4 years we haven’t received as much rain and snow as we usually get. We are in a major drought. The state water regulators describe it as “The most serious challenge our generation has ever faced.” Two thirds of California is suffering “exceptional” drought; that is the most extreme category of the U.S. Drought Monitor, California. **(continued on page 6)**



Flushing Water Away

HOW MUCH WATER DOES A LOW-FLOW TOILET SAVE?

The current federal standard for toilets in the U.S. is **1.6 gallons** per flush (gpf), but many old toilets use much more water. Older models typically use 3-5 gpf, or even up to 6 gallons potential.

CONSERVATION TIP:

If you replace your grass lawn you can get a rebate of \$3.75 for up to 1500 square feet, and \$2 for amounts above that!

WATER USE TIPS	
Shower:	New - 2-2.5 gallons per minute. Old shower heads use as much as 4 gallons per minute.
Brushing Teeth:	1 gallon, especially if water is turned off while brushing. Newer bath faucets use about 1 gallon per minute, whereas older models use over 2 gallons.

The California Drought

by Room 8

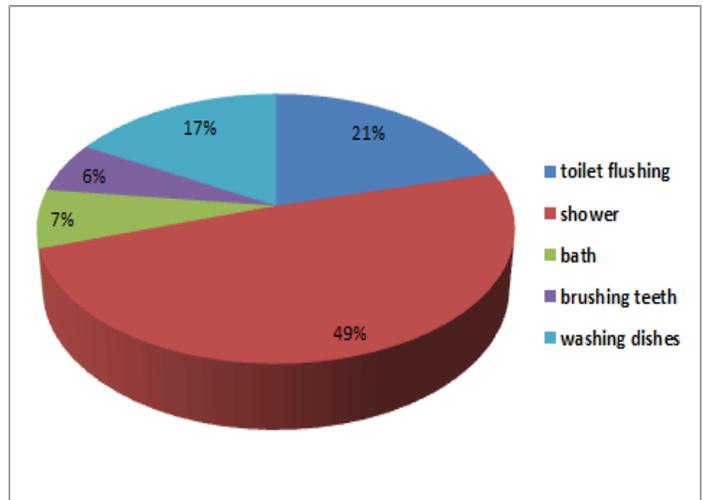
The problem with California's drought is it can keep going for years. A drought is a period of dry weather, especially a long one that can be injurious to crops, and can threaten our water supplies. California's drought has been going on for four years and is endangering lots of crops, and is a serious problem. The problem with the drought is that we need to have a dependable water supply, if not wildlife habitats can be damaged, food supplies interrupted and the way we live will be very different. In the city, we use a lot of water by taking long showers, car washes, wasting electricity, etc. If this keeps on going, we will have less water than we do now. We need to all get together and put first things first, by conserving water, a critical resource.

Every year snowpack has been dropping in California. From 2011 until 2015, the snowpack in the Sierra Nevada has been dropping. It is now under 5% of normal levels. This year, 2015, had the lowest level of Sierra Nevada snowpack in 60 years. If you compare 2011's percentage of snowpack in the Sierra Nevada, 171% measurement, to 2015's percentage of snowpack, 5%, you will see the dramatic impact of the drought. Electronic readings at about 100 stations across the Sierra Nevada in April revealed the threat to our water supply. A low snowpack is a big problem, because when it melts there will be less water for everyone in the State of California.

Reduce Water by 25%

In order to save more water, the State of California and the city of Los Angeles are setting goals to reduce water use during the current drought. Homeowners are helping by replacing old water guzzling appliances with new high efficient appliances. (continued on page 6)

AVERAGE DAILY WATER USAGE FOR FAMILIES, SOLANO AVENUE ELEMENTARY



Here are some water saving tips we learned from the DWP Thirsty City presentations and from *L A Water: The Next 100 Years!*

- Keep a pitcher of water in the refrigerator instead of running the tap until the water gets cold. That saves time and water.
- Always sweep your driveway with a broom; don't use water to wash the leaves away.
- Washing the dishes while leaving the water running can use up to 20 gallons of water, but filling the sink or a bowl and closing the faucet saves 10 of those gallons.
- If you turn off the water while brushing your teeth you save water. Newer faucets use about 1 gallon per minute, while older models use over 2 gallons.

An often-cited 2011 study of California single-family water consumption estimated that the average California household used more than 360 gallons of water per day. Given that figure, the average house in California would need to use 90 fewer gallons a day to meet the 25 percent reduction goal. The average water usage for a Solano Elementary family in 2015 is just less than 100 gallons per day.

Nationwide losses from the U.S. drought of 1988 exceeded \$40 billion. This is more than the losses caused by the San Francisco Earthquake in 1989, Hurricane Andrew in 1992 and the Mississippi River Floods of 1993.



Water leaks account for 12% of water use in California homes. Check faucets & toilets often.

HOW WILL WE BE CONSERVING WATER IN THE NEXT 100 YEARS?

SOLANO STUDENTS USE THEIR IMAGINATIONS

1) A futuristic droid will help conserve water by giving plants the precise amount of water the plant needs. The droid does this by scanning the plants' water levels to see just how much the plant needs. The purpose of this droid is to prevent people from watering too much or too little. Its all-terrain wheels allow it to water lawns and gardens without damaging plants. It also has a solar panel to save energy, too.

2) One amazing way to conserve water in the future is making a duplicate machine. This machine gets a gallon of water each day and doubles its atoms. It goes around each day delivering water to everyone's house. There would be a gallon each day for everyone and if there is a drought every duplicate water machine could go and double the amount of water.

3) In 50 years people might have a house that is also a robot. The robotic house will transform into a robot that has water in its mouth when needed. Then it will open its mouth and water will spread on the garden. If there is not enough water for the plants and bushes, the robotic house will send a tube underground and spread water into their roots.

4) The name of this plant is Water 911. It is called Water 911 because it helps save water just like an ambulance saves people. The Water 911 plant absorbs all the rainwater that falls. When it stops raining people can come and get all the fresh water from the plant by draining the water from it.

5) One way that people in the future might save water is with a stone garden. There can be small stones covering the ground, and places where stone statues, as well as large stone sculptures sit. It will look nice, and it won't use any water.

MORE WATER SAVING TIPS

CALIFORNIA PRECIPITATION

(continued from Page 1)

Facts and figures from an 8-station precipitation index tell us that about 50% of California's rainfall occurs between December and February. Winter storms from the Pacific Ocean deliver rain and snow to California during this time: "On average 5-7 larger storms contribute most of the precipitation that falls during the wet months" (Dettinger et al., 2011). As California's climate begins to warm due to climate change, it is going to be even more important to track the snow versus precipitation rates.

Wash fruits and vegetables in a pan of water instead of continuously running water from the kitchen tap. Then use the water on indoor and outdoor plants.

Spreading a 3 inch layer of good organic mulch around plants, bushes, and trees helps them retain moisture and saves water, time, and money.

Choose appropriate plants and flowers for outdoor display use. Succulents and cacti need far less water than do broad leaf decorative and flowering plants.

REDUCING WATER

(continued from Page 4)

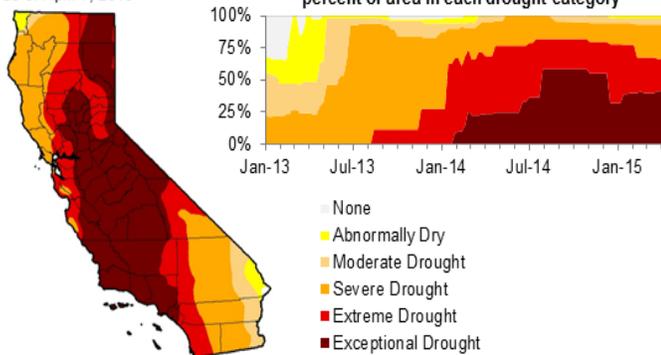
This is one way that people have been helping at home. Businesses are developing new water technology systems for toilets and other fixtures. Another way of saving water is to remove grass lawns and replace them with drought tolerant plants. To persuade more people to save water, the state will fine people who waste water. These are just some ways to save water, but what can YOU do to save water where you are?

STATEWIDE WATER REGULATIONS

(continued from Page 3)

Here in Room 9, the fifth grade students of Solano Avenue School took home a water usage chart to see how much water each family uses. We found that our average use of water per day for a shower (student) was 9 ½ minutes. If we reduced the use of water for a shower by 25%, we would reduce the amount of time we use to take a shower by 2 ½ minutes. So our average shower would be 7 minutes. How did we figure this out? We found that in a shower we use about 2 gallons of water for every minute. However, there is a problem - one student takes a shower for 4 minutes and uses 8 gallons of water and two students shower for 15 minutes and use 30 gallons of water. Is it fair to ask the student who showers for 4 minutes to reduce her shower to 3 minutes and then allow the 2 students who shower for 15 minutes to reduce their showers to 11 minutes? We think that people who don't use that much water should not have to reduce as much as the people who use a lot of water. What do you think?

California drought status
as of April 7, 2015



THEATRE OF WILL EXTENDS ITS DEEPEST GRATITUDE TO THIS TRIO OF DEDICATED TEACHERS AT SOLANO AVENUE ELEMENTARY SCHOOL. THEY WERE TRUE VISIONARIES IN ASSISTING OUR DEVELOPMENT OF THIS IMPORTANT NEW PROGRAM THAT HELPS STUDENTS LEARN AND SHARE WITH THEIR PARENTS AND THEIR COMMUNITY THE IMPORTANCE OF SAVING WATER, AND HOW SAVING WATER HELPS FAMILIES SAVE MONEY. SOLANO STUDENTS ARE NOW COMMITTED STEWARDS OF WATER & ENERGY CONSERVATION OF THE FUTURE AS A RESULT OF THEIR TEACHERS' COMMITMENT:

SHANNON GARRISON

LARRY RAMIREZ

PATRICIA SCHWARTZ

PRINCIPAL WILLIAM BERTRAND ALSO DESERVES A HUGE ROUND OF APPLAUSE FOR HIS LEADERSHIP AND DEDICATION TO HIS STUDENTS & TEACHERS.

THIS PROGRAM WAS MADE POSSIBLE BY THE ENTHUSIASTIC PARTICIPATION OF THE 4TH, 5TH AND 6TH GRADERS OF SOLANO. WE ARE EVER GRATEFUL FOR YOUR SPIRIT AND IMAGINATION!

"L.A. WATER - THE NEXT 100 YEARS" IS A THEATRE OF WILL CONSERVATION PILOT PROGRAM GENEROUSLY SPONSORED BY THE LOS ANGELES DEPARTMENT OF WATER & POWER. WE TRULY APPRECIATE THEIR COMMITMENT TO CREATIVE LEARNING.

SINCERE THANKS AND RECOGNITION FOR THEIR TREMENDOUS SUPPORT:

MELINDA RAMOS-ALATORRE - Field Deputy, City Council District 1 - COUNCILMAN CEDILLO

WALTER ZEISL - Education Director, Los Angeles Department of Water & Power



THE THEATRE OF WILL TEAM IS:

DR. LEIGH KENNICOTT - CSUN, Theatre of Will CURRICULUM DEVELOPMENT

DAVID GUERRA - Theatre of Will TEACHING ARTIST

WILLARD SIMMS - Theatre of Will PRODUCING DIRECTOR

RANIA PALLAD - Theatre of Will EXECUTIVE DIRECTOR

www.theatreofwill.org

818-620-1186

23369 Erwin St, Woodland Hills, CA 91367