

**BAY AREA WATER SUPPLY AND CONSERVATION AGENCY
BOARD POLICY COMMITTEE MEETING**

February 6, 2015

Correspondence and media coverage of interest between January 26, 2015 and February 6, 2015

Correspondence

Date: January 30, 2015
From: Steven R. Richie, Assistant General Manager, Water
Re: Initial Water Supply Availability Estimate

Media Coverage

Conservation:

Date: February 6, 2015
Source: Calaverasenterprise.com
Article: Study: County, state could conserve much more

Date: February 3, 2015
Source: Associated Press
Article: Biggest California water savers, users at a glance

Date: February 3, 2015
Source: Sacramento Bee
Article: California cut water use more than 20 percent in December

Date: January 27, 2015
Source: KQED
Article: Drought Diary: Keeping up with the Joneses' Rain Barrels

Date: January 26, 2015
Source: City of San Jose
Material: Press Release: Recycled Water Filling Stations Now Available in San Jose and Milpitas for Commercial Trucks

Date: January 21, 2015
Source: Palo Alto Online
Article: Rain, rain, don't go away

Drought:

Date: February 3, 2015
Source: L.A. Now
Article: California make major water cuts in December, reach Gov. Brown's goal

Date: February 1, 2015
Source: US News
Article: California drought intensified in January

Date: February 1, 2015
Source: Reuters
Article: California suffers dry January, prolonging devastating drought

Drought, cont'd.:

Date: January 31, 2015
Source: Wired
Article: A new satellite will watch the western drought from space

Date: January 31, 2015
Source: LA Times
Article: Sierra Snow Disaster: Low snowpack, nonexistent rainfall exacerbate California drought

Date: January 29, 2015
Source: San Jose Mercury
Article: California Drought: Sierra snowpack measuring is a lot more complex than it looks

Water Supply:

Date: February 5, 2015
Source: Merced Sun-Star
Article: Stanislaus city, county, water officials tackle new groundwater law


Date: February 5, 2015
Source: Recordnet.com
Article: State undertakes more scrutiny on water users

Date: January 27, 2015
Source: WaterWorld
Article: WaterReuse releases how-to guide for building acceptance of potable reuse

Date: January 27, 2015
Source: BB&K Law
Article: State Board issues notice of potential curtailment of surface water rights diversions
Recent rainfall not enough to stop drought emergency measures

Date: January 27, 2015
Source: Recordnet.com
Article: Water managers propose emergency actions after driest January on record



TO: SFPUC Wholesale Customers 

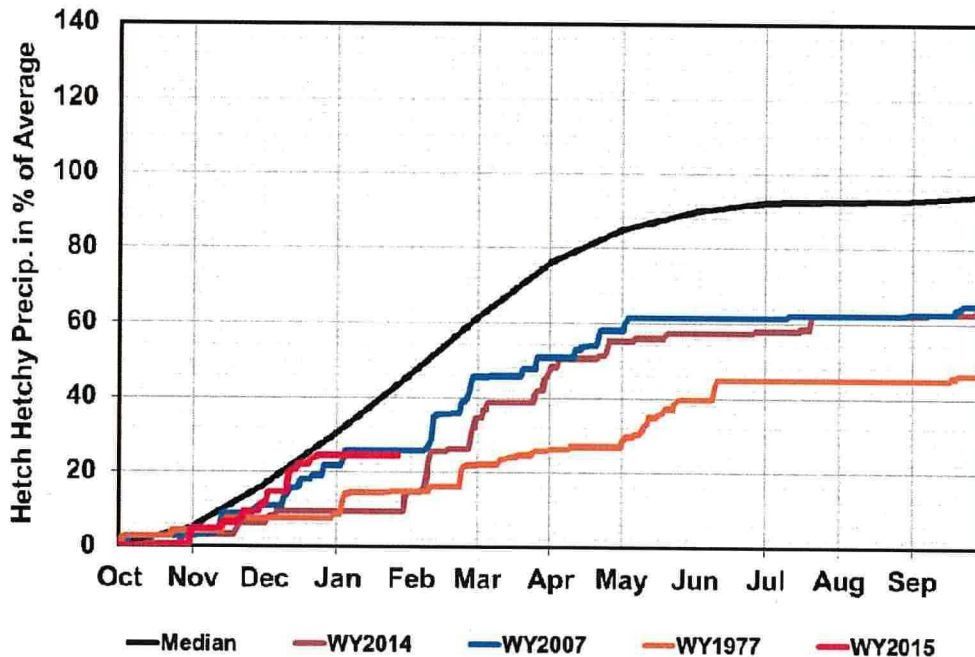
FROM: Steven R. Ritchie, Assistant General Manager, Water

DATE: January 30, 2015

RE: Initial Water Supply Availability Estimate

The SFPUC is continuing its call for a 10 percent voluntary reduction in water use throughout the SFPUC service area as a result of continuing dry conditions in Water Year 2015. The 10% reduction means achieving an annual average system-wide demand of no more than 209 MGD. While cumulative precipitation totals in the Bay Area through the end of January are above average, we are tracking well below normal precipitation in the Hetch Hetchy watershed with only 0.14 inches for the month of January. Snowpack in the watershed is also well below normal for this time of year. The plots below provide precipitation at Hetch Hetchy and snowpack in the watershed through January 26, 2015.

Precipitation at Hetch Hetchy - Water Year 2015



Edwin M. Lee
 Mayor

Ann Moller Gaen
 President

Francesca Vietor
 Vice President

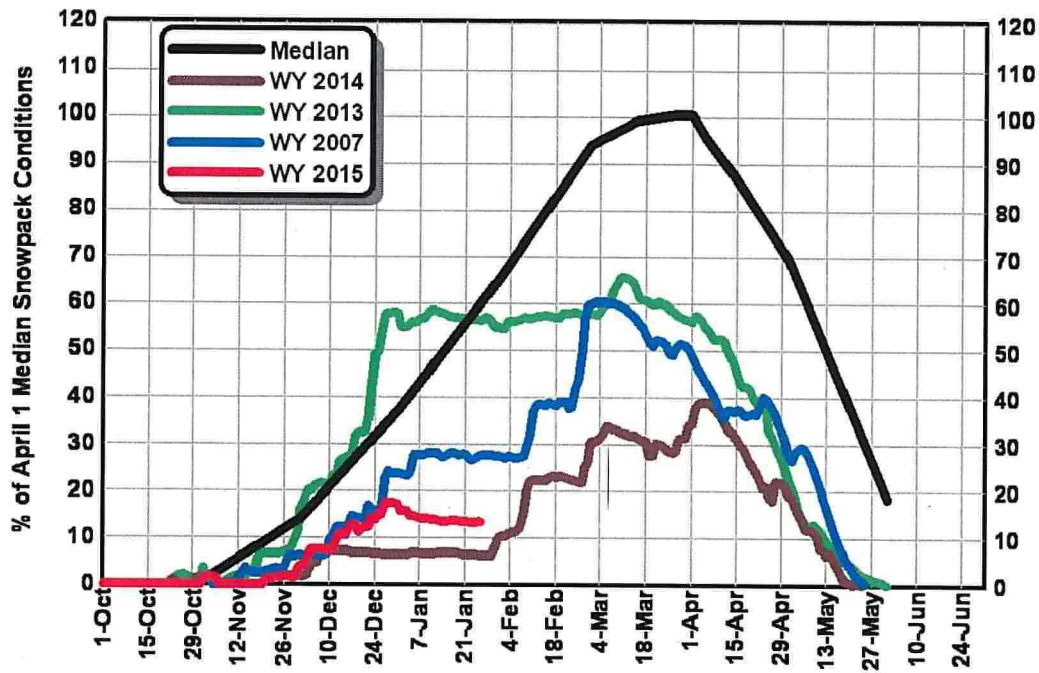
Vince Courtney
 Commissioner

Anson Moran
 Commissioner

Harlan L. Kelly, Jr.
 General Manager



% of Median April 1 Snowpack Conditions



Our success in achieving the service area water saving goal in Calendar Year 2014 demonstrates our customers' commitment to water conservation and adopting best practices for water use during this drought. At this time, we believe we will be able to maintain our water deliveries at the level provided in this last Calendar Year; however, if dry conditions persist, we may be required to ask for additional savings.

We will provide additional information regarding the hydrologic conditions at the Wholesale Customer meeting on February 12, 2015. We will also send an update on the water supply availability on or around March 1, 2015 with a final update on water supply availability on or around April 15, 2015. Of course, we are available to continue to present information at the monthly Water Management Representatives meetings and at BAWSCA Board meetings.

cc.: Nicole Sandkulla, CEO/General Manager, BAWSCA

Study: County, state could conserve much more

Calaverasenterprise.com | February 6, 2015 6:00 am

If Californians conserved like Australians, the state could save enough water every year to almost fill New Melones Lake.

That was the conclusion of a study by engineers at the University of California, Davis. The paper by graduate student Ryan Cahill and professor Jay Lund in the UC Davis Department of Civil and Environmental Engineering found that on average, Californians were using almost twice as much water per person every day as Australians.

They wrote the paper in 2011, before the present drought took hold. But now their findings have a new urgency, as even the rains forecast for the next few days seem unlikely to be enough to allow the state to recover.

And that means many residents will soon be making important decisions about how much to plant in their gardens, whether to add new landscaping, and whether to take new water-saving measures inside their homes.

“If the next two months are as dry as the last month, we are going to be into a very major drought this year,” Lund said during a telephone interview this week. “And even if the next two months are normal, we are going to be into a moderate drought.”

“So it is time for people to think about what to do,” Lund said.

One thing Californians could do is to look at what the Australians do. The paper by Lund and Cahill was titled simply “Residential Water Conservation in Australia and California.” It found that on average over a number of years, Californians were using between 105 and 118 gallons per day, and that the use had been stable around that level since the mid 1990s. Australians, in contrast, had been reducing their per-person water use and were at the time of the study using about 50 gallons per day less than Californians.

Take a look at United Nations figures for per-person water use by nation, and one might wonder why Cahill and Lund chose to look at Australia, since the United States and Australia are at the top of the list for per-person water use.

But Cahill and Lund noted in their paper that Australia is an appropriate comparison to California because the two places have similar climates, similar standards of living and other similarities. Comparing California to undeveloped rural economies in Africa or Latin America wouldn't be helpful, and Britain and nations in Europe typically have a far smaller water supply than does the United States.

“They still flush toilets,” Lund said of Australians.

The paper noted, however, that Australia has been even more aggressive than California at replacing toilets with lower-flow models. Many toilets in Australia now have two flushing options, with a lower-volume flush for more translucent waste.

There are other reasons Australians use less water. One is that they use a lot less municipal water for lawns and gardens. Australian governments keep restrictions on watering in place all the time, not just during droughts.

Australians, however, are allowed to water as much as they want from tanks that hold rainwater they collect from their roofs. As a result, 43 percent of Australian homes had rainwater tanks by 2010, according to the paper. And Australian water agencies also do one more thing to encourage conservation: They charge more for water, and they charge almost entirely by the amount used. In contrast, many utilities in California give a certain amount of water to users as part of a monthly base rate.

If Californians conserved as much as Australians, it would save about 2.1 million acre feet of water, according to the paper. New Melones, the state's fourth-largest man-made reservoir, holds 2.4 million acre feet when it is full.

As of Thursday, Melones was only holding 565,550 acre feet, about half of what it had on the same date a year earlier.

One acre foot is enough water to cover one acre of land, a foot deep. An acre foot is typically considered enough water to serve two urban homes for a year. By using that rule of thumb, the members of a four-person household would each have about 111 gallons per day to use.

The paper notes another interesting difference between California and Australia: "Australia has a consistent system for collecting urban water data."

California, in contrast, does not. That makes it challenging to compare the two places, or even to compare the different water agencies within California. Without any statewide data system, officials must rely on the reports of local agencies.

The California Department of Water Resources posts water use data reported by local agencies on its website, but warns readers that comparing the various water agencies may not be "appropriate" because different parts of the state vary wildly in terms of the age of homes, climate, the size of the lots that homeowners irrigate, climate, population density and "socio-economic" factors.

Those variations are clear in the data. The San Francisco Bay Area region in December was averaging 53 gallons per person per day. Stockton at the same time was 57 gallons per day. Calaveras County Water District reported its customers were using almost 78 gallons per day in December.

That sounds pretty good, and state officials trumpeted the fact that the state more than met its 20 percent conservation goal in December. But that happened, in part, because December was wet and residents didn't need to water outside.

In September, in contrast, Calaveras County Water District reported that its residential customers used an average of 161.54 gallons per day per capita. CCWD, like pretty much all agencies in the arid, inland parts of the state, reports higher levels of per-capita residential water use than do agencies in the coastal cities.

In July, for example, Ripon reported that its residential water customers used 328 gallons per day per person.

The big message in all this is that the fastest way to reduce water use if the drought worsens is to restrict outdoor irrigation, Lund said.

Calaveras County Water District and other agencies here already are imposing so-called "Stage 3" conservation measures that limit watering to certain days and hours. But if directing boards decide, they could go to more severe "Stage 4" measures that would ban hose and irrigation watering.

If that happened, people would be allowed only to hand water – that is carry a bucket to pour on each individual tree or plant.

"It is very inconvenient, which is why people don't like to do that," Lund said. "But it is a good way to save a lot of water really quickly."

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Biggest California water savers, users at a glance

Associated Press | February 3, 2015

SACRAMENTO, Calif. (AP) -- These large California water suppliers serving 40,000 or more reported the smallest per-capita water use (gallons per day) in December, and their December water usage is compared to the same month in 2013:

Agency County, Per-capita water use, Change

- California-American Water Company Monterey District, Monterey, 33, -23%
- Goleta Water District, Santa Barbara, 37, -42%
- California Water Service Company South San Francisco, San Mateo, 39, -14%
- California Water Service Company East L.A., Los Angeles, San Mateo, 40, -10%
- City of San Francisco, San Francisco, 40, -10%
- Golden State Water Company Bell Gardens, Los Angeles, 40, -10%
- City of Santa Cruz, Santa Cruz, 41, -24%
- City of Mountain View, Santa Clara, 43, -22%
- City of Sunnyvale, Santa Clara, 44, -23%
- California-American Water Company San Diego District, 45, -23%
- City of San Luis Obispo, 45, -21%

These large suppliers reported the highest per-capita water use in December, and their December water usage is compared to the same month in 2013. The Desert Water Agency says its per capita water use is skewed by seasonal tourists:

Agency, County, Per-capita water use, Change

- Desert Water Agency, Riverside, 235, -5%
- Coachella Valley Water District, Riverside, 232, 3%
- City of Rialto, San Bernardino, 154, 20%
- City of Bakersfield, Kern, 138, -8%

- City of Beverly Hills, Los Angeles, 132, -21%
- Las Virgenes Municipal Water District, Los Angeles, 125, 33%
- City of Arcadia, Los Angeles, 116, -25%
- California Water Service Company Palos Verdes, Los Angeles, 115, -36%
- Golden State Water Company Cordova, Sacramento, 114, -11%
- City of Redlands, San Bernardino, 112, -28%

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California cut water use more than 20 percent in December

Sacramento Bee | February 3, 2015

It took a whole year of trying, but in December California at last achieved Gov. Jerry Brown's directive to slash water use 20 percent in response to the continuing drought.

Californians collectively cut their water consumption by 22.2 percent in December compared to the prior year, based on reports filed by urban water agencies with the State Water Resources Control Board. It was the first time the state as a whole reached that goal since Brown ordered the 20 percent reduction as part of his January 2014 emergency drought declaration.

"That's good news, indeed," water board chairwoman Felicia Marcus said at a meeting Tuesday in Sacramento. "If I had a little sparkler, I would probably be lighting it right now."

The water board ordered local agencies to begin submitting monthly water use data in June so it could track compliance with the 20 percent order. It's been an uncertain path ever since, as conservation efforts improved through August – when water use fell 11.5 percent compared with August 2013 – then waned in October.

Amid California's drought, water chief preaches conservation – and balance

Satellite mission poised to help farmers and water managers, NASA says

Sierra snowpack dismal for January; fourth year of drought looks likely

Rain for Sacramento area on the way, but not much snow for the Sierra

For much of that time, the Sacramento River region – long known for profligate water use – has led the state in cutting consumption. It consistently has posted double-digit conservation progress each month since June. In some months, it was the only region to reach or exceed 20 percent. In December, the region cut water use by 21.4 percent compared to the same month in 2013.

A notable laggard has been the state's South Coast region – including Los Angeles and San Diego – which has not exceeded single digits. That changed in December, however, as the South Coast boosted its conservation progress to 23.2 percent. As the most populous region, this helped the state as a whole surpass the 20 percent goal.

The San Joaquin River region, which includes Fresno and Modesto, cut water consumption by 18.9 percent in December compared with the prior year.

The data also revealed that average per-capita water consumption across California fell to 67 gallons per day in December. That compares with 140 gallons recorded in June, and an annual average of 105 gallons reported in 2009.

Twenty percent of the state in December used less than 55 gallons per person per day. This is what the state Department of Water Resources considers the “performance standard” for indoor water use. The Sacramento River region used 77 gallons per capita per day in December, while the San Joaquin River region was at 74 gallons.

Among the lowest in the state were the cities of San Diego, at 46 gallons, and San Francisco, about 40 gallons.

Katheryn Landau, an environmental scientist at the water board, said Californians over the past seven months have saved more than 413,000 acre-feet of water. That is nearly half the volume of Folsom Reservoir and enough water to serve 1.8 million people for a year.

“It indicates how the water conservation efforts we’ve taken are having a really positive impact,” said Landau.

The data come with a number of caveats, however. The big one is that December 2014 was much cooler and wetter than the same month in 2013, which undoubtedly boosted water conservation by reducing the need for landscape irrigation. December also is typically one of the lowest water use months of the year, so it may not be a good indicator of long-term performance.

January data may not look as good, because the month that just ended was the driest January in recorded history for many locations in the state, including Sacramento. The capital city saw just .01 inch of rainfall in January. The monthly average is about 4 inches.

With that comes virtual certainty that California now faces a fourth straight drought year.

“Obviously, that raises a couple of concerns,” said Eric Oppenheimer, a member of the water board’s office of research and planning. “There’s a chance we could see the conservation numbers erode for January. We hope that people still will keep their outdoor irrigation off or to a minimum as we move through February, especially if it starts raining again this weekend.”

A series of wet storms is forecast to arrive late Thursday across Northern California, the first since before Christmas. But the storms are expected to be warm, meaning they may not add significantly to the mountain snowpack that helps California survive its long, dry summers.

Officials are turning their attention to revving up their conservation message for 2015. The water board on Feb. 17 plans to consider imposing additional rules on local water agencies to require more savings. This could include, among other things, stricter limits on outdoor landscape irrigation as the warm spring months approach.

Other efforts will focus on expanding the conservation message to target business and industrial users, and encouraging people to turn their newfound conservation practices into permanent habits.

“Our number one plan is making conservation a way of life for California,” said water board member Steven Moore. “Every citizen should know where their water comes from, how much they use, and where their water goes when they’re done with it. That’s going to take incredible effort.”

Read more here: <http://www.sacbee.com/news/state/california/water-and-drought/article9118931.html#storylink=cpy>

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Drought Diary: Keeping Up With the Joneses' Rain Barrels

KQED | January 27, 2015

Nini Argeris of Burlingame uses rain barrels to capture rainwater for use in the family garden.

Last weekend, I marched my husband and two kids around the corner, past bright green lawns to meet Burlingame neighbors. I asked the Argeris family if we could visit after reading an online community thread in which another neighbor posted pictures of his newly installed, 275-gallon rain-collection tank.

Nini Argeris responded, "I got you beat, Mike. We have four, 205-gallon Bushman tanks, and they are all full."

With my water consumption guilt as persistent as this drought, I had to see her cistern setup.

The Argeris house was easy to spot — it's the only one on the block with a front yard filled with drought-tolerant plants. Nick and Nini Argeris led us to the back, while our kids and theirs dashed off to play hide and seek behind the vegetable planters.

Their rainwater-catching tank setup is as simple as a marble run. Water from the roof feeds to the gutter, to the downspout, to a flexible extension, to a PVC sewer pipe and into a barrel. Another three barrels are daisy-chained at the bottom with spa piping. A garden hose snakes out of the bottom of one of the barrels, pressured only from gravity and the water inside the barrel — no electric pump.

How long did it take to capture 820 gallons?

"During that last big rain in December, it took less than an hour," Nini Argeris said.

Argeris says she stretched the water she collected early last year to nourish her vegetable garden all summer long.

"Instead of going in the gutters, it's going into the tanks, into my vegetables and feeding my family," she said. She swears the vegetables taste better when given rainwater instead of treated city water.

One of the Argerises' new neighbors is putting in a swimming pool, and the Argerises are countering with plans to add a couple more rain barrels.

Rationalizing Rain Barrels

Rain barrels seemed a logical step up from my current conservation hacks — including catching cold water in a bucket while waiting for hot water in the shower, then dumping the bucket into the toilet when it needs a flush.

But it's tough to make a strictly dollars-and-cents argument for rain harvesting if you're hooked up to municipal water.

The Argerises bought 205-gallon tanks for \$325 each with the whole setup costing a total of \$1,500 and four hours of their labor. (There are cheaper options. For instance, Alternative Solutions in Campbell sells recycled barrels for about \$100 and a DIY rain barrel starter kit for \$30.

Stack that cost up against the price you're paying for tap water. That supply is really cheap — less than a penny a gallon in many districts. So your savings for filling up a 205-gallon rain barrel don't amount to much.

But of course the argument for rain barrels, and for household water conservation, isn't about the low price we're paying — though maybe it should be. Instead, it's about recognizing how precious and precarious our water supply really is.

After what's looking like the driest January on record for much of the state, California is headed into a fourth year of drought. One barrel might not seem like much, but as California's population grows, and our dwindling supply needs to serve more people, it's in everyone's interest to relax our grip on the faucet.

All Sorts of Ways to Conserve

And that leads to a point that folks with Bay Area water districts made to me when I asked them about rain barrels: It's probably more water-wise for me and most Bay Area residents to focus on the demand side of the water equation than on the supply side.

Barrels are “a great way to capture rainwater,” said Nelsy Rodriguez of the East Bay Municipal Utility District. “The trick is, it has to rain, and we don't have a lot of control over that.”

EBMUD doesn't offer rebates for rain barrels, Rodriguez says, focusing instead on getting people to check their plumbing for leaks. The East Bay district and others throughout the region also promote other familiar tools and strategies: high-efficiency toilets, washing machines and dishwashers, and low-flow shower heads.

“I love them because other people love them,” said Dan Carney of the Marin Municipal Water District of new water-saving appliances. “When they put them in, they work better so people are happy with them. They save water and money, so they are the best of all worlds. Good for people, the environment and the pocket book — a great triple bottom line.”

So, am I going to go out and buy rain barrels now?

A year ago, I made the easy water conservation fixes: low-flow plumbing, short showers and implementation of the “If it's yellow, let it mellow” toilet-flushing rule. I also took out a lot, but

not all, of the grass in the yard. Ripping out the remaining grass would save water more reliably than waiting to capture rain.

So my first move now will be to replace the remaining grass with more drought-tolerant vegetation. My neighbor, Nini Argeris, said she'd help.

When the rain does come, I'll miss out on the thrill of the fill and neighborhood rain-barrel boasting rights. And I'm OK with that.

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For Immediate Release

January 26, 2015

Contact: Jennie Loft, Public Information Manager

Office Phone: (408) 535-8554

Email: jennie.loft@sanjoseca.gov

Recycled Water Filling Stations Now Available in San José and Milpitas for Commercial Trucks

Instead of drinking water, trucks using water can use recycled water for approved uses

SAN JOSE, Calif. - As one more step to conserve precious drinking water, San José's Environmental Services Department is making recycled water from its South Bay Water Recycling (SBWR) system available at truck fill stations for three approved uses: construction trucks that spray water to keep down dust at construction sites, city trucks that perform sewer cleanouts, and street sweeping trucks that mist the street surface as they sweep.

Recent storms are encouraging but likely will not solve California's water crisis resulting from four years of severe drought. City staff have expanded the use of recycled water to help save drinking water. For instance, the BART project construction site uses recycled water to keep down construction dust, which saves about 75,000 gallons per day of drinking water.

"We're committed to continue to find solutions to ensure a stable water supply; every drop of drinking water still counts," said Kerrie Romanow, director of the San José Environmental Services Department which operates SBWR. "We now can make recycled water available to commercial trucks that have appropriate water tanks and comply with permitted uses for recycled water."

The use of recycled water is regulated by the State. SBWR is San José's recycled water wholesaler, serving the cities of San José, Santa Clara and Milpitas, through retailers who deliver recycled water for approved uses including commercial and civic irrigation; industrial cooling towers; flushing toilets in dual-plumbed commercial buildings; and now, water truck uses.

Seven filling stations are now operational in San José. Five recycled water filling stations are available in the Milpitas area. A filling station in Santa Clara is planned to open sometime in 2015.

About San José Environmental Services Department (ESD) and San José Green Vision

San José, Capital of Silicon Valley, is the largest city in Northern California and the 10th largest city in the nation. The San José Environmental Services Department (www.sjenvironment.org) manages garbage and recycling services; watershed protection and pollution prevention;

municipal drinking water and recycled water; community sustainability initiatives; and the San José-Santa Clara Regional Wastewater Facility. ESD's programs and initiatives align with the San José Green Vision (www.sjenvironment.org/greenvision), a long-term plan to create a sustainable future for our community. Follow us: Facebook: SJEnvironment Twitter: @SJEnvironment Instagram: @SJEnvironment Notifications: Receive news, events, and announcements at Notify Me (www.sanjoseca.gov/list.aspx); select keyword Environment and choose from the topics list.

###

Rain, rain, don't go away

Rainwater catchment is an easy, cheap way to conserve

Palo Alto Online | January 21, 2015

During heavy storms urban residents work to expel excess rainwater away from their properties and into the gutters. But amidst the not-so-sporadic dry weeks, city dwellers rely on pumping water back in from outside sources to keep their landscapes lush.

According to Palo Alto resident and Acterra Senior Ecologist Claire Elliot, an observer from outer space would think we are totally bonkers -- and she agrees. Her view of the backwards water system is why she takes advantage of torrential storms by catching rainwater in barrels.

"I was able to collect 400 gallons of water last December and this December too," Elliot said of the 2-year-old system set up at her Ventura neighborhood home. "And I am hoping this winter we get more rain coming."

Elliot's main catchment system is comprised of six barrels lined up like bowling pins in a three-two-one formation in the corner of her backyard. She supplements that with a repurposed wine barrel that connects to the downspout in her front yard. Elliot uses the water she collects to hydrate her garden.

Advocates of rain harvesting say rain barrels and cisterns conserve water, reduce flooding and minimize pollution. Reusing water for landscaping reduces the use of the Hetch Hetchy supply and minimizes the amount of road runoff that reaches local water sources during floods, Elliot said.

Collected rainwater is not safe to drink, but it is useful for lawn and garden watering. And, according to Elliot, as long as containers are properly screened to keep out organic debris, the rainwater can be stored indefinitely.

As of October 2014, Bay Area community members can receive rebates for installing rainwater catchment systems on their properties. Palo Alto residents and businesses are eligible for rebates from the city; rebates are also available through the San Mateo Countywide Water Pollution Prevention Program for San Mateo County residents.

The combined rebates total \$100 maximum per storage device. Barrels and cisterns must hold at least 50 gallons and be newly purchased to qualify for the rebates. A full list of requirements and installation guidelines are available on the Bay Area Water Supply and Conservation Agency website (bawasca.org).

Just under 100 residents have taken advantage of the rebates since the program rolled out, according to Michael Hurley, BAWSCA water resources manager. Elliot said a six-barrel system such as hers cost less than \$300, which could be covered entirely by the two rebates.

Rain catchment systems vary in volume and style but are generally simple enough for residents to set up themselves. Typically, barrels are connected to a roof downspout with a small screen-covered opening. A spigot near the bottom releases the collected rainwater, which can then be transferred to other receptacles for watering.

Due to the limited local rainfall, residents should consider building large enough systems to collect a significant amount of water at a time, according to Kit Gordon, GreenTown Los Altos watershed stewardship chair.

"We get our water at almost all the same time of the year, so you need a pretty big system in order to be sufficient," Gordon said.

Multiple barrels can be connected with hoses to aggregate higher volumes of water. Elliot calls the method she used to fasten her six barrels the "daisy chain," and it allows her to hold onto a larger volume of water during dry weeks.

When installing barrels, residents should be wary of mosquitoes and the setup location. Barrel openings must be fitted with screens to avoid creating a bug haven, and residents should avoid placing barrels on impervious ground surfaces, as significant overflow could topple them. Elliot suggests building systems on permeable ground, such as gravel, which allows excess water to sink in.

Residents who want to take their barrels to the next level can hook up pumps and hoses to create a rainwater sprinkler system, which Elliot plans to do in the near future. Residents hoping to make a bigger impact on flooding can also plant perennial grasses and install absorbent driveways, which hinder impure water from reaching the local creeks.

For hillside properties like hers, Gordon said planting trees can prevent large quantities of urban runoff pollution from hitting the storm drains. Local environmentalists also advocate for the use of greywater systems, which allow residents to recycle water from baths, sinks and laundry machines for different uses.

For people interested in creating a rainwater collection system of their own, Hurley suggests looking at information posted on the BAWSCA website, or participating in a free workshop hosted by the agency.

"We have landscape education courses," Hurley said. "As part of those classes there's a segment that discusses the use and operation of rain barrels."

Occasional workshops are also hosted by Greentown Los Altos and Acterra. The City of Palo Alto website also provides more information about rebates, barrels and rainwater uses.

To see a catchment system in action, Elliot suggests visiting the Arastradero Preserve where a row of barrels are on display behind the gateway buildings.

"We need to work on changing policy and peoples' perspectives on the safety of rainwater," Elliot said. "There's still a lot of room for us to be increasing the amount of recycled water."

###

Californians make major water cuts in December, reach Gov. Brown's goal

L.A. Now | February 3, 2015, 1:53 PM

For the first time in seven months of state monitoring, Californians surpassed Gov. Jerry Brown's water-conservation goal, reducing water use by more than 20% in December 2014 compared to the same month the year before.

The 22.2% statewide reduction came after months of conservation stagnation, which had prompted concern from some water officials. In August 2014, the state cut its water use by 11.5%, but water conservation lagged in the months that followed and leveled off around 10%.

MORE: [Chronicling California's drought](#)

The encouraging cuts in water use come as the state suffered through a dry January in which San Francisco got no rain for the first time in 165 years. In a statement, State Water Board Chairwoman Felicia Marcus called the 22.2% reduction "welcome news."

"It appears we are entering a fourth year of drought, which is awful to contemplate, but we must," Marcus said. "Conservation is still the smartest and most cost effective way to deal with this difficult drought."

Water officials have said Southern California's large population makes the region's water use a significant driver in the state's overall efforts. The South Coast Hydrologic Region, which includes Los Angeles, cut its use 23.2% in December 2014 versus the year prior.

In a presentation Tuesday morning, state water officials named 18 South Coast water suppliers that cut use by more than 20% and whose residents used less than 60 gallons of water per person per day.

Los Angeles Department of Water and Power customers cut their use by 20.9% in December, and used 62 residential gallons per person per day. Overall, California residents averaged 67 gallons of water use per person per day. That was down from as much as 140 gallons in June 2014.

"CA is doing its part to #SaveOurWater, but the drought is far from over," Brown tweeted Tuesday afternoon. "Careful stewardship & conservation must be our way of life."

Officials had said they were concerned that a wet winter would discourage people from conserving.

"This was a wet December in most of the state, and people got the message not to water on top of the rain – that is good news," Marcus said. "Our challenge will be to keep outdoor irrigation to a minimum as we move into the warmer spring months."

Since the state water board began collecting comparative data last summer, Californians have saved more than 134 billion gallons of water – enough to supply 1.8 million California residents for a year, officials said.

###

California Drought Intensified in January

San Francisco Among Places in the State That Got No Rain During What Is Normally the Wettest Month

US News | Feb. 1, 2015 3

SAN FRANCISCO—For the second year in a row, California recorded the driest January in its history. No rain fell in many parts of the state in what is normally its wettest month, stoking fears that a four-year drought may not end anytime soon.

San Francisco received no measurable January rain for the first time since record-keeping began during the 1849 Gold Rush, according to the National Weather Service. In January 2014, San Francisco recorded just six hundredths of an inch of rain in a month when it averages 4.5 inches, forecasters said.

The dry weather comes after the Golden State was drenched by unusually heavy storms during December, raising hopes the drought was finally easing.

That prompted the California Department of Water Resources to increase its expected water deliveries to most customers of the State Water Project in 2015 from 10% of their requested amounts to 15%. Farmers have been especially hard hit by the cutbacks, which in some cases have meant not getting any water shipments.

But a ridge of high pressure that settled over the state near Christmas essentially hasn't budged since, pushing Pacific storms farther north. A similar high-pressure ridge also shielded California from storms last year. "Something is happening in the atmosphere that is causing the high pressure to lock in position in the middle of winter," said Duane Dykema, meteorologist with the National Weather Service office in Monterey, Calif.

Ski resorts have suffered in January, though they got enough snow to enjoy big crowds during the December holiday season.

Shrinking reservoirs also have been partially refilled. California's largest reservoir, Shasta Lake, has risen from 39% of its historical average to 65%. And state surveys show Californians are largely heeding a call by Gov. Jerry Brown last year for conservation measures.

Unusually warm temperatures since the end of December have helped melt much of the snow in the Sierra Nevada, said Doug Carlson, spokesman for the Department of Water Resources. The water equivalent in the statewide snowpack was 25% of its historical average on Jan. 29, down from 50% on Dec. 30.

State and local water officials are preparing for the worst, even as they hold out hope for storms before the rainy season ends this spring. Long-term climate models call for a better than average chance of above-normal precipitation in Southern California from February to April, and an even

chance in the rest of the state. Rains are forecast to return to many parts of the state next weekend.

Drought restrictions, which include bans on outdoor watering in some communities, are likely to remain in place for some time, since water officials say the state would have to receive 150% of its annual average rainfall to begin exiting drought conditions.

“I wake up every morning and do a rain dance,” said Jason Burnett, mayor of Carmel-by-the-Sea.

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California suffers dry January, prolonging devastating drought

Reuters | February 1, 2015

LOS ANGELES (Reuters) - California has experienced one of the driest Januarys on record, and the lack of rain during a time of year when the weather is usually wet indicates the state is likely headed for a fourth straight year of drought, officials said.

A prolonged drought could portend further economic and environmental setbacks for the nation's most populous state, which has already lost both crops and jobs to the dry weather.

The state's driest January on record was in 1984, when the 30-day average precipitation in the state reached 0.33 of an inch (0.84 cm), under one method used to gauge rainfall statewide, said National Weather Service meteorologist Jim Mathews.

With the official measurement of this January's rainfall coming within a few days, it is shaping up to be the fourth driest January on record in the state, Mathews said.

The low rainfall combined with warmer-than-average temperatures have resulted in a meager snow pack, the California Department of Water Resources said in a statement.

A survey conducted on Thursday at a site called Echo summit in the Sierra Nevada mountain range, which normally constitutes the state's largest store of fresh surface water, showed the snow pack at just 12 percent of normal, the statement said.

The survey findings make it "likely that California's drought will run through a fourth consecutive year," it said.

Climatologists expressed cautious optimism in December when they observed above-normal precipitation in the northern part of the Sierra Nevada mountain range, but little rain has fallen there in the past month.

Northern California's Lake Oroville, which is the State Water Project's principal reservoir with a capacity of 3.5 million acre feet (432,000 hectare meters), stands at about 60 percent of the average for this date, officials said.

Sacramento recorded only 0.01 of an inch (0.03 cm) of rain in January, the lowest since record-keeping began in 1877, the Sacramento office of the Weather Service said on Facebook. Stockton and Modesto also set records for the month, it said.

California Governor Jerry Brown, a Democrat, declared a drought state of emergency a year ago and state officials have encouraged people to refrain from watering their lawns.

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A New Satellite Will Watch the Western Drought from Space

Wired | January 31, 2015

The launch of a small satellite won't fix the drought in the American West—now entering its fourth year—and it won't change the fact that January was the driest month in recorded California history. But the Soil Moisture Active Passive mission might at least tell scientists and farmers something new about that drought, and maybe how much worse it'll get.

Winds and mechanical issues delayed the SMAP launch for two days, but on Saturday morning a Delta II rocketed it from Vandenberg Air Force Base to about 400 miles above the planet. After three months of “commissioning”—when ground control makes sure all the instruments are working—SMAP will spend three years taking the most accurate readings ever of soil moisture around the world. That's right: It will measure how wet the dirt is. From space.

For understanding water on Earth getting a good handle on dampness is crucial. SMAP can see through atmospheric moisture, plants, and a couple of inches of dirt to measure wetness over an area of about 3.5 square miles. Damp soil, it turns out, emits subtle microwave signals—the wetter the dirt, the weaker the signal. SMAP can see those, and it also fires microwave pulses at the ground (dampness affects how they bounce back) for more accuracy. What sets SMAP apart from other satellites is its 20-foot-wide rotating antenna, big enough to pick up more subtle signals for better resolution.

The data will feed computer models that forecast weather, climate, and agricultural production, says John Bolten, a hydrologist at NASA's Goddard Space Flight Center. Even better, says Bolten, “it's really a game-changer for drought assessment.” For the first time, researchers will have direct measurements of soil moisture from around the world, enabling computer models to be more accurate in their forecasts. “Having SMAP observations every two days, we'll have a global picture of soil moisture,” Bolten says. “We'll be able to steer our forecast toward reality.”

It's true that SMAP won't do much for day-to-day water management. “It's not one that was designed to provide operational support for water agencies,” says Jeanine Jones, the interstate resources manager for the California Department of Water Resources. Which is to say, SMAP is good for researchers, but not so much for farmers and water agencies—at least, not yet. Jones' agency, she says, is mainly concerned with surface water, keeping track of precipitation, stream flow, and reservoir levels. The soil moisture that SMAP measures can affect stream flow—when the soil has soaked up as much water as it can handle, the water ends up in streams—but most of the computer models water agencies use don't use soil moisture. The DWR only has 40 stations that monitor soil moisture across the state, Jones says. But SMAP's numbers could turn out to be more useful down the road. “We don't use this kind of data because it hasn't been available before,” Jones says. “People may modify or develop new models to use that data. But that won't be happening until the data has been out there for a while.”

Meanwhile, SMAP's numbers will point more toward global water use. And Westerners will go back to hoping for rain.

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Sierra Snow Disaster: Low Snowpack, Nonexistent Rainfall Exacerbate CA Drought

LA Times | January 31, 2015

Sierra Nevada snowpack levels and practically non-existent rainfall totals are converging to push California into a fourth straight year of drought.

On Thursday, the California Department of Water Resources (DWR) trekked up the Sierra Nevada mountain range for its annual measurement of the region's snowpack, a critical source of water for the northern and central parts of the state. The agency measures the thickness and water content of the snow in an attempt to determine the state's water supply for the upcoming year.

The snowpack is at just 25% of normal levels, according to the San Francisco Chronicle. Many parts of the region reportedly did not even have enough snow to measure.

"It's a dismal result, and it continues the dry period that California has been in for three years now," DWR spokesman Doug Carlson told the Chronicle. "We have pretty much flatlined as far as winter precipitation is concerned."

Record temperatures in many California cities are exacerbating the problem. According to the Weather Channel, the temperature in Death Valley reached 87 degrees on Sunday, January 25, the highest temperature ever recorded there in January. Redding recorded a high temperature of 80 degrees, breaking the record set last year in that city. Several other California cities have seen their January temperature records matched or broken. According to the National Oceanic and Atmospheric Administration, 2014 was the hottest year on record in California.

The warm weather is slowly chipping away at the already alarmingly low Sierra Nevada snowpack levels.

And it's still not raining.

San Francisco has not recorded a single drop of rain in January, and with no rain forecast through the end of the month, the city could be on track to record its first rainless January since record-keeping began in 1850, according to the Weather Channel. That would break the city's previous record for driest January, recorded last year. Sacramento is not faring any better; one hundredth of an inch of rain was recorded downtown.

The numbers are a little better for Southern California, but still lag far below average. Los Angeles saw 1.36 inches of rainfall in January, and San Diego saw less than half an inch. Both totals are less than half of their respective averages in January.

Despite a string of storms that brought torrential rain to most of the state in December, the outlook for the rest of winter is not promising. Earlier this month, two federal agencies predicted the drought would continue for a fourth year after forecasting minimal to zero rainfall for most of California.

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California drought: Sierra snowpack measuring is a lot more complex than it looks

SJ Mercury News | January 29, 2015

As California caps what may be its driest January on record, Frank Gehrke will lead a bevy of surveyors on Thursday to a predetermined spot on Echo Summit in an exercise that has become a monthly downer in the documentation of the state's historic drought.

As a thirsty state anxiously stands by for the results, the crew will drive some aluminum rods into the snow to measure how deep it is then weigh the white powder to calculate its water content.

At least that's how the monthly winter ritual will play out on the nightly news. But the photo-op belies the complexity of the coordinated effort to size up the state's snowpack around the clock.

Frank Gehrke, chief of California Cooperative Snow Surveys Program for the Department of Water Resources, left, pulls the snow depth survey pole from the

Frank Gehrke, chief of California Cooperative Snow Surveys Program for the Department of Water Resources, left, pulls the snow depth survey pole from the snow pack as he conducts the first snow survey of the season at Echo Summit on Dec. 30, 2014. (Rich Pedroncelli-Associated Press)

Today, snow sensors scattered through the Sierra, satellite imagery and aerial flybys augment the 106-year-old "manual survey." The technology helps to provide a clearer update of California's water conditions that water agencies depend on to perform the increasingly crucial job of managing our diminishing water supply for the rest of the year.

"I think they'd be amazed," Gehrke, chief of California's Cooperative Snow Surveys Program, said of his predecessors. "The capabilities are much greater than anyone could have imagined back then."

What won't amaze Gehrke this year is the predictability of Thursday's results. This year, the Sierra snowpack -- which usually provides 30 percent of California's water -- is critically low, less than 30 percent of normal for this time of year, the snow sensors show. December's storms began filling up reservoirs, but they were too warm to turn rain into an abundance of snow.

The public sees only one of the many manual surveys done last week and this week, when a small army is fanning out to over 200 sites across the Sierra range to extract "snow cores." The teams are part of a cooperative of 53 municipalities, public utilities, federal agencies, water districts, irrigation districts and private companies with vested interests in predicting the spring melt of mountain snow into California rivers and reservoirs.

The snow cores the teams collect and weigh will reveal the amount of frozen water held in the mountains. Their main tool, a hollow metal cylinder, differs little from what their predecessors used over a century ago to sample the snow. "The manual snow surveys program are still the backbone of our water supply forecasting," Gehrke said.

Like dozens of other water providers, the San Francisco Public Utilities Commission, the Bay Area's primary water supplier, relies on the snowpack data to predict the amount of snow melt that will flow into Hetch Hetchy Reservoir.

In years when the snowpack is robust, the agency will pump water from Hetch Hetchy to other reservoirs or directly to Bay Area customers in anticipation of the aquatic glut, said Steve Ritchie, the agency's assistant general manager for water. In a normal year, Hetch Hetchy fills three times. But after three years of drought, Hetch Hetchy is down to 55 percent full. And it would have been a lot more empty if Bay Area residents hadn't done such a good job conserving, Ritchie said.

Snowpack records stretch back to 1909, when the snow surveys began near Lake Tahoe. The first surveyors used snow sampling techniques pioneered by James E. Church, a humanities professor at the University of Nevada at Reno. California agencies and utilities quickly recognized the value of a yearly snowpack record and immediately pooled their efforts to sample the Sierra each winter.

Early in the 20th century, most snowpack surveys occurred only in April, as winter snowfalls subsided and the spring melt began. But the large dam and reservoir projects of postwar California necessitated more frequent samplings.

Reservoir operators found it difficult to balance the competing demands of flood control and water supply as they decided just how much water to keep behind high dam walls.

"Operators wanted more than just one number a year," Gehrke said.

By 1955, there was interest in automating at least parts of the snowpack survey. But it took nearly two decades for accurate snow sensors to roll off the factory floor. These flat-panel sensors, known as "snow pillows," weigh snow as it accumulates over the winter months.

A NOAA satellite monitoring station in Virginia compiles snow pillow data for the California Department of Water Resources, which puts it all online.

There are currently more than 130 snow pillows spread across hundreds of miles -- which Gehrke calls "pretty sparse."

The automated stations require continual maintenance. Indeed, only 103 were fully functional as of Monday.

"The Sierra Nevada can be pretty harsh," said Dave Rizzardo, chief of the department's snow surveys section. "You stand in a meadow at 9,000 feet every day for a year, and let's see how you look."

In addition to the punishing climate causing electronic malfunctions, snow pillows have been incapacitated by avalanches and fallen trees. Bears have torn them out of the ground, and "mice like to chew on our cords," Rizzardo said.

But help has also come from the heavens above. The cooperative, in partnership with NASA and the Jet Propulsion Laboratory in Pasadena, began limited aerial surveys of snowpacks in the central and southern Sierra in 2012.

The cooperative currently uses a Beechcraft King Air 90 twin-engine turboprop outfitted with laser-emitting sensors to map snowpacks near Hetch Hetchy Reservoir. By comparing the data collected by flyovers to baseline contours mapped the previous summer, scientists can calculate the height of the snowpack.

"You can determine snow depth very, very accurately" from the air, Gehrke said.

The aerial survey uses the same technology, called Lidar, that Apollo astronauts used to map the moon and the California Highway Patrol uses to zero in on the one speeding car in a group of vehicles and clock how fast it's going.

Lidar helps predict when the snow will begin to melt by measuring the energy it reflects. The fresher the snow, the smaller the crystals and the more of the sun's energy they'll reflect. By reflecting, instead of absorbing the light, the crystals stay colder and melt more slowly.

"How the snowpack melts is very important to our supply," said Ritchie of San Francisco's PUC.

If the data show that the snow will be melting quickly, reservoir operators can pre-release water from the dam to capture as much runoff as possible. But this year, that scenario is unlikely because of the huge water deficit.

The cooperative expanded its Lidar flights in 2014 to include parts of the Merced and Kings River watersheds. Despite the promise of the Lidar flights, costs will keep the state dependent on data collected by surveyors and automated stations.

"The dream would be to expand those," Rizzardo said, "but it's an expensive endeavor."

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Stanislaus city, county, water officials tackle new groundwater law

Merced Sun-Star | 02/05/2015 8:42 PM | Updated 02/05/2015 11:14 PM

Local officials agreed Thursday that carrying out California's new groundwater law will be a challenge, but it's better than the alternative – letting the state impose the rules.

Hosted by Stanislaus County and the Turlock Irrigation District, experts met near Modesto to talk about how to document what is happening in the aquifers and to ensure they are reliable sources for farms and cities well into the future.

The law, signed by Gov. Jerry Brown in September, allows irrigation districts and other local entities to carry out the measures. If they fail to do so, the state could step in.

“Now local control is granted, and you're all here to try to figure it out,” said Kate Williams, program manager for the California Water Foundation in Sacramento. It was among the sponsors of the meeting, held at the Stanislaus County Agricultural Center, off Crows Landing Road.

Participants said local control would ensure that specific water conditions are addressed and the concerns of farmers, city dwellers and other interests are heard.

“What we've realized is that the only way this happens is from the grass roots up,” said Walt Ward, water resources manager for Stanislaus County.

The law requires that plans be drafted on how groundwater can be sustainably used. Temporary overdraft during a drought is allowed, but “significant” damage is not. That can include loss of water volume, land subsidence, saltwater intrusion, and high drilling and pumping costs.

A plan is required for each groundwater “subbasin.” Those deemed to be “critically overdrafted” need it by January 2020. Those with less urgency get two more years. The law mandates that the aquifers be sustainable within 20 years of plan adoption.

Stanislaus County contains all or part of four subbasins, bounded generally by rivers. The state has 515 in all. A local entity can manage one or more.

The county's effort is building on about 20 years of data collected by the Modesto and Turlock irrigation districts and other parties. The districts contend that flood irrigation, which critics regard as wasteful, has helped to recharge groundwater. They warn that this benefit would be much less if the state goes through with a proposal to increase rivers flows for fish at the expense of farms.

The cost of drafting and carrying out the plans is not known, experts said, but they could qualify for grants from the water bond issue approved by state voters in November.

The planning can take into account past efforts to boost groundwater. Among them is the treatment plant completed in 1995 to provide Tuolumne River water to Modesto and a few other communities, supplementing their wells.

“In the last 20 years, we’ve seen groundwater levels in the city of Modesto rise 40 feet,” said John Davids, irrigation operations manager for MID. A similar plant is being studied for Turlock, Ceres and south Modesto, supplied by TID river water.

The meeting was co-sponsored by the Association of California Water Agencies, the Rural County Representatives of California and the California State Association of Counties.

“It’s complicated for those of us who are in the middle of it,” said Stanislaus County Supervisor Vito Chiesa, president of CSAC. “We don’t have all the answers, but we will continue to strive for the answers.”

Read more here: <http://www.mercedsunstar.com/news/local/article9380930.html#storylink=cpy>

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State undertakes more scrutiny on water users

Recordnet.com | Feb. 5, 2015 @ 8:00 pm

Farmers and other water users across the Central Valley soon will be required to share more details about their water rights and how much they are diverting, as state officials sort through allegations of illegal water use in this time of scarcity.

The State Water Resources Control Board issued an order late Wednesday requiring water users who collectively have more than 1,000 senior rights to provide more information starting in March.

Those required to report will receive notices, said Katherine Mrowka, a senior engineer with the water board.

“If they do not respond, we could issue draft cease and desist orders,” requiring them to address the problem or stop taking water altogether, Mrowka said.

The board’s action was spurred in part by a complaint filed last year by the state and federal governments, alleging that Delta farmers were illegally diverting water that had been stored in upstream reservoirs and had been intended for other portions of California. The complaint asked for more information about how much water Delta farmers actually are using.

Notably, however, the new order is not limited to the Delta. It seeks information from many more diverters in the Sacramento and San Joaquin river drainages.

That makes it an “important step” toward bringing California’s actual water supply in line with how much has been promised on paper, said Barbara Barrigan-Parrilla, director of Stockton-based Restore the Delta.

“We think the board has to do this,” she said Thursday. “We’re never going to get to the end of this until the board pushes for a complete look at the system.”

The order also comes in response to a second complaint filed last year by Stockton environmentalist Bill Jennings, who argued that it is the state and federal water projects that are illegally diverting water from streams where they have no rights. In his complaint, Jennings called for an evaluation of all Central Valley water rights.

Mrowka said the goal of the new order is to gain information needed to judge both complaints.

For many years, those with senior rights dating back more than a century were not required to report their water use at all to the state. That changed in 2009, and Wednesday’s order will require even more information as long as the drought persists.

It might be a hassle, but water users should not ignore the order, said Dante Nomellini, a Stockton attorney representing central Delta farmers. The order requires them to report the total

amount of water diverted each month, the maximum rate of diversion, how the water is used, water-rights documentation and other things.

“We’ve got a pretty short time frame on this, and they want a lot of information,” Nomellini said Thursday. “They didn’t talk to us ahead of time, and this is going to be more difficult. But we’re going to make a good-faith effort to accomplish it.”

The battle, Nomellini said, will come down the road if officials attempt to stop Delta farmers from diverting water. Delta advocates argue that since there always is water in the tidal Delta, they always have a right to divert.

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WateReuse releases how-to guide for building acceptance of potable reuse

WaterWorld | January 27, 2015

The WateReuse Research Foundation, a non-profit water reuse research organization, recently announced that it has released a how-to guide for building support for potable reuse (PR) on the statewide and community level.

Titled "Model Communication Plans for Increasing Awareness and Fostering Acceptance of Direct Potable Reuse (WRRF-13-02)," the publication provides a roadmap for advancing public acceptance of PR projects by establishing support and awareness of existing and planned PR programs and by fostering an understanding of the great need to continue to expand water supply sources.

This resource provides those involved with planning a PR project with a catalog of promising and proven methods and messages for advancing the process. A combination of literature review, face-to-face meetings and public opinion research indicated that public acceptance of PR can be achieved by implementing a coordinated, consistent and transparent communication plan.

"We know that potable reuse projects use safe and proven technology, but how a project sponsor engages the community is critical to the success of a project," said WateReuse Executive Director Melissa Meeker. "These model communication plans are extremely important."

This project is the first of a two-phase approach toward fostering acceptance of PR. To develop the communication plans for the first phase, a team led by Mark Millan of Data Instincts, Patricia A. Tennyson of Katz & Associates and Shane Snyder of the University of Arizona first conducted an extensive literature review of previous research related to PR acceptance and attempted approaches at communication. Next, a series of one-on-one meetings was held with legislators, special interest groups and individuals involved with PR projects in their communities.

The findings from the literature review and interviews were used to develop a set of messages that were then tested in focus groups and in telephone surveys in two communities. A key finding from these approaches showed that after receiving additional information about PR and the multi-stage treatment process used to make the water safe to drink, most participants became more comfortable with the idea of it.

"This has been an incredibly robust research effort involving scores of people with various disciplines," Millan said. "The good news is that communication plans developed will be useful for any potable reuse project, whether indirect or direct, large or small."

Completion of the model communication plans provides the strategic groundwork for Phase II of the WateReuse approach to fostering public acceptance of PR. Phase II will take the information gleaned from Phase I and use it to begin creating and refining outreach materials and methods.

Phase I drew the outline of the plans, and Phase II will create the tools that can be used immediately at the statewide level and in local communities that are considering direct potable reuse.

This project was funded by the WateReuse Research Foundation in cooperation with the Metropolitan Water District of Southern California.

"WateReuse Association honors two innovative water reuse partnerships"

"WRRF selects CA American Water test slant well for national research project"

About the WateReuse Association

The WateReuse Association works to advance the beneficial and efficient uses of high-quality, locally produced, sustainable water sources. It was formed in December 1990 as a state association in California. Today, the WateReuse Association has grown to include more than 400 organizational members in the United States and around the world. The Association convenes conferences and events, produces publications, sponsors legislation in Washington, DC and in California, and has been successful in obtaining substantial federal funding for the WateReuse Research Foundation. For more information, visit www.watereuse.org/association.

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**State Board Issues Notice of Potential Curtailment of Surface Water Rights Diversions
Recent Rainfall Not Enough to Stop Drought Emergency Measures**
BB&K Law | JANUARY 27, 2015

Despite some rainfall and the temporary lifting of certain 2014 surface water curtailment notices during the fall, the drought emergency in California continues. On Jan. 23, the State Water Resource Control Board issued a [Notice of Surface Water Shortage and Potential for Curtailment of Water Right Diversions](#) for the coming year. The Notice warns that, unless precipitation conditions substantially improve, surface water supplies in 2015 will continue to be low. As a result, the State Board expects that curtailment notices may again be issued in the spring or summer, with potential impacts to more than 9,000 water right holders in California. Under California law, the most recent or junior water right holders are required to discontinue diversion in times of water shortage, before more senior, riparian and pre-1914 water right holders have to do so. While the new Notice does not specify when such curtailment notices will be issued to the affected water rights holders, it is expected that the State Board will follow similar procedures as it did in curtailing water diversions in 2014.

Prior to issuing diversion curtailments in May 2014, the State Board conducted analyses of the Sacramento-San Joaquin, the Russian River and the Eel River watersheds to determine water supply, demand and availability. Similar analyses were conducted after the 2014 curtailment notices were issued to monitor these watersheds and to determine if and when to lift the curtailments.

For the past few months, the State Board has been soliciting [recommendations](#) from the public on how to best implement the water rights priority system in times of drought. State Board staff is expected to present its findings and suggested improvements to the State Board by Jan. 31. It is possible that curtailment procedures may change in 2015 based on the staff recommendations.

For more information about how the potential curtailments will affect your agency, please contact one of the attorney authors of this legal alert listed at right in the [Environmental Law & Natural Resources](#) or [Special Districts](#) practice groups, or your [BB&K attorney](#).

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Water managers propose emergency actions after driest January on record

Recordnet.com | January 27, 2015

STOCKTON — A city that normally sees well over 2 inches of rain in January will likely finish the month with two-hundredths of an inch.

But Stockton won't be the only community to record its driest January ever. Indeed, hopes that the drought was loosening its grip on California are quickly evaporating.

While some areas saw slight improvement after a wet December, the San Joaquin River watershed is in even worse shape than when the drought was officially declared one year ago.

Water managers are proposing a new round of emergency actions that may be starting to sound familiar:

- Late Monday, operators of the vast state and federal water projects asked for permission to store more water in reservoirs over the next couple of months, rather than allowing that water to flow through the Delta for fish, as would ordinarily be required.
- Letters have been sent to farmers warning that unless storms arrive, they could be ordered later this year to stop diverting water. About 9,000 such orders were issued last year to those with younger, "junior" water rights.
- State officials said Monday they are once again considering building temporary rock barriers in three locations to prevent saltwater from creeping into the Delta from San Francisco Bay.

Some of the state's reservoirs bumped up a bit in December. But as Mark Cowin, director of the state Department of Water Resources, put it earlier this month: "We've gone from really, really, really bad to really, really bad."

Either description certainly applies to New Melones Lake, the largest reservoir in the San Joaquin River drainage and one source of Stockton's water.

New Melones was 40 percent of normal on Tuesday, down from about 74 percent this time last year. This winter's early storms "kind of petered out once you got south of Lake Tahoe," said Maury Roos, a hydrologist with Water Resources.

Two water districts east of Stockton contract with the federal government for water from New Melones. Last year those districts were pleased to receive about 55 percent of their contracted water.

But an official with the city of Stockton, which buys water from the Stockton East Water District, says that might not be the case this time.

"We're expecting the worst from Stockton East, which is no allocation from New Melones," said Bob Granberg, assistant director of the city's Municipal Utilities Department.

Stockton does have other sources of water but might need to tap its groundwater “savings account” more heavily this year — a tactic the city would rather avoid.

“We’re confident we’re not going to be in panic mode,” Granberg said. “We have a diverse supply.”

As always during dry years, Delta farmers will be keeping a close eye on water quality as winter turns into spring.

When little fresh water flows from the mountains, salty water tends to spread into the Delta from San Francisco Bay. When farmers irrigate with that lower-quality water, salt builds up in the soil over time. The current drought appears to be no exception.

“Farmers have said they’re seeing more salt damage in the fields,” said Dante Nomellini, a Stockton attorney representing farmers in the central Delta.

Hoping to prevent the Delta from becoming even saltier later this year, the state and feds are asking the State Water Resources Control Board for permission to bypass normal rules in the Delta over the next couple of months.

They’re requesting lower-than-normal flows coming out of the Delta and on the San Joaquin River at Vernalis, among other measures.

The request acknowledges that sensitive fish could benefit from those flows. The tiny Delta smelt is at its lowest number on record.

But releasing that water through the Delta now could cause “substantially worse impacts” later, if dry conditions continue and saltwater invades the estuary from the west, officials argue. Keeping more water in reservoirs helps officials maintain control over Delta water quality later this summer and also increases the amount of cold water available later for migrating fish.

Like similar changes that were approved at the end of January last year, the latest emergency proposal would bypass the normal public process. A hearing on the plan has been scheduled for Feb. 18, but that's only after the request — if approved — will have already taken effect.

Of course, there is still time for winter to show up. Losing January is a blow, but a wet February and March could spare the state some of the same difficult decisions that it had to make last year, and some of the conflict, too.

“I’m still hopeful,” said Roos, the state hydrologist. “I don’t expect an above-average year, it’s too far gone for that, but it still might turn out that there’s enough to make the situation bearable.”

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