NEWS CLIPS

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Resource Conservation and Public Outreach

Organized by date

WATER CONSERVATION:

FROM VOLUNTARY TO MANDATORY

Time for bucket lists

Entities mull how to cope with state order

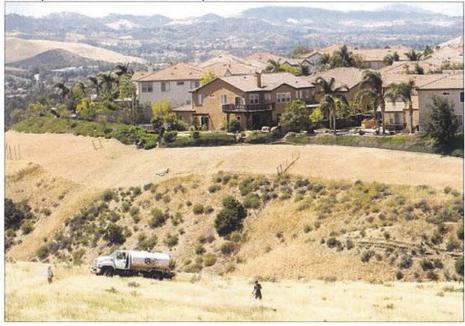
By Mike Harris Ventura County Star 4/3/2015

Ventura County's cities, park districts and water providers Thursday were analyzing Gov. Jerry Brown's statewide mandatory water restrictions — a first for California as it grapples with a severe drought.

"We'll do what we need to do to get in line with the governor's declaration and its requirements," Simi Valley Assistant City Manager Jim Purtee said.

"For us, it wasn't a matter of if we were going to look at even more water conservation, but only of when."





PHOTOS BY KAREN QUINCY LOBERG/THE STAR

Adam Pence (left) and his brother Justin Pence tend to what is left of saplings on a hillside in Simi Valley for Resource Conservation Partners. A new state executive order requires places with large landscapes to significantly cut water use.



Adam Pence (left) and his brother Justin Pence water a sapling that is still alive on a Simi Valley hillside for Resource Conservation Partners, which tends to newly planted trees, many of which have died during the drought.

Like other cities and park districts in the county, Simi Valley already has taken steps in response to Brown's 2014 emergency drought declaration urging all Californians to voluntarily cut water use by 20 percent.

Those efforts will need to be stepped up.

Brown issued a more stringent executive order Wednesday after surveyors found the lowest snow level in the Sierra Nevada snowpack in 65 years of record-keeping. The governor's order mandates that the state water board require cities and towns to cut usage by 25 percent comparedwith 2013 levels — a measure that will affect people and businesses in a number of ways.

The order also requires campuses, golf courses, cemeteries andother places with large landscapes to significantly cutwater use andbanswateringof grass on public street medians.

The Ventura City Council in March approved a water-shortage contingency plan and a new rate structure tied to the severity of a drought or other water emergency.

It set six stages of a water-shortage event. The city is at stage 3, which mandates a 20 to 29 percent cut in water use, Ventura Water General Manager Shana Epstein said.

"We feel we're on track with what the governor's doing," she said.

The council in June will vote to approve new rates for drought periods. The rates would penalize high users of water.

The city is developing an incentive program to reimburse part of the costs to homeowners who convert from lawns to landscapes with permeable materials such as native plants.

Ventura County has cut watering at its facilities for months to "life-support" levels — just enough to keep trees and shrubs alive, said Paul Grossgold, director of the county General Services Agency.

Less than 6 percent of county parkland, including three golf courses, is irrigated, he said. Most of the watering is done with recycled or reclaimed water, he said.

Turf around the Todd Road Jail has been removed, and a water fountain in front of the main jail in Ventura has been converted to a planter, Grossgold said.

Low-flow restroom fixtures have been installed in the county Hall of Administration, which contains general government offices. They also are being installed in the Hall of Justice, which contains courts and county attorneys' offices.

The Simi Valley City Council likely will take up water issues at its next meeting April 13, Purtee said.

The city already has a three-tier water rate system for single-family residences that charges more for greater usage: \$2.58 per billing unit up to 36 units, \$3.09 per billing unit up to 60 units and \$4.02 per billing unit above 60 units. A billing unit is 748 gallons.

Simi Valley is reviewing the Metropolitan Water District's current water conservation ordinance to see whether changes are needed in light of Brown's declaration, Purtee said.

The city's public works staff is preparing an inventory of landscaped medians to comply with the ban on watering median turf, he said. The planning staff will review the declaration's requirements regarding irrigation of landscaping for new homes to determine the effect on current projects, he said.

Even before Brown's executive order Wednesday, the Metropolitan Water District's board was scheduled to discuss water-conservation tactics at its April 14 meeting, district spokesman Bob Muir said.

"For us, it wasn't a matter of if we were going to look at even more water conservation, but only of when," Muir said.

The district supplies water to the Calleguas Municipal Water District, which serves much of Ventura County. It also supplies water to Las Virgenes Municipal Water District, which serves areas that include Agoura Hills and Westlake Village.

Metropolitan is looking at a 10 to 20 percent cutback in water delivery to its member agencies, Muir said. Metropolitan is doing so even though Brown's order only applies to retail water agencies and not to wholesalers such as Metropolitan, he said.

Water reductions soon will become noticeable at parks, if they're not already obvious.

The Rancho Simi Recreation and Park District plans to go beyond voluntary efforts to comply with Brown's mandatory restrictions.

"Our challenge will be reducing water usage and how to go about that without letting all the parks go brown," Manager Larry Peterson said. "But there may be other parts of parks that aren't as heavily used where we can consider either converting them to wood chips or just let it turn to dirt."

The district already has replaced some turf in parks with wood chips and added drought tolerant plants.

In response to Brown's executive order Wednesday, the Conejo Recreation and Park District is holding a special meeting at 7:30 p.m. Thursday to discuss possible water conservation measures.

The district turned off irrigation affecting 30 acres of grassy park areas about two years ago and began planting drought tolerant plants, officials said. Some grassy areas were replaced with chips or bare soil.

The district also implemented a Do Report Irrigation Problems — DRIP — program, allowing residents to report irrigation issues.

Farm Bureau of Ventura County CEO John Krist said the mandatory water restrictions are unlikely to have any immediate effect on the county's farmers.

"The great majority rely on local groundwater for irrigation, not municipal suppliers or the state project, and nearly all are already required to measure and report their water use to a local agency," he said.

Krist expressed concern that the governor's order would lead to increased public scrutiny of growers, who have invested substantially in state-of-the art irrigation management and delivery systems, making them highly efficient water users.

The county's agricultural commissioner, Henry Gonzales, said local growers who don't have water meters will need to purchase them.

"It will be a necessary cost in the thousands of dollars depending on the particular irrigation system," he said.

Staff writers Stephanie Hoops, Wendy Leung, Arlene Martinez, John Scheibe, Kathleen Wilson and The Associated Press contributed to this report.

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4/3/2015

Starve the lawn, save the water

Brown grass may have to cut it for the time being

By Ellen Knickmeyer and Gillian Flaccus Associated Press Ventura County Star 4/3/2015

LONG BEACH — What's it going to take to get people to use a lot less water in a state known for its Technicolor landscape of lush yards, emerald golf courses and aquamarine swimming pools?

Residents may be about to find out, as drought-stricken California imposes the first mandatory statewide water-use restrictions this year.

Gov. Jerry Brown on Wednesday ordered a 25 percent overall cutback in water use by cities and towns, but not farms, in the most sweeping drought measures ever undertaken by the nation's most populous state.

The crackdown comes as California and its nearly 40 million residents move toward a fourth summer of drought with no relief in sight. State reservoirs have a year's worth of water, and with record low snowfall over the winter, there won't be much to replenish them. Wells in some parts of the state are going dry as groundwater levels fall.

On Thursday, retired secretary Brenda Johnson stood in the doorway of her Sacramento home contemplating her lovingly tended lawn and azalea bushes.

Johnson did not love the idea of brown as the new green.

"With the money I put into it, I don't want it to go dry," said Johnson, who got a warning letter from the city last year for watering her front yard on the wrong day.

"I don't want a dead lawn," she said. "But change is hard, and you do adjust."

In Southern California's sunbathed city of Long Beach, homeowner Katherine Rusconi stood among the bright red, pink and yellow succulents and desert plants that make up her front yard, basking in the knowledge of being ahead of the game.

The city of Long Beach gave her \$3,000 in rebates for ripping out her lawn less than two years ago. Some of her neighbors have since followed her lead, making the block a showpiece of water-saving, wildlifefriendly yards. "You know, this is a desert climate. This should have been in place for some time," Rusconi said.

Brown's move to get tough on water use came after his push for voluntary conservation yielded mixed results. Asked by Brown in January 2014 to cut their water consumption by 20 percent, Californians achieved only about half that.

Affluent Southern California communities with lots of landscaping on automatic timers were some of the worst offenders, topping 300 gallons of water per person a day compared with 70 gallons for some San Francisco Bay Area communities.

State water officials will now draw up the emergency regulations to carry out the governor's order and hope to have them ready for enactment in May, said George Kostyrko, spokesman for the state Water Resources Control Board.

The governor's order requires the roughly 400 water agencies across the state to cut

water use by onequarter from the 2013 level.



A home with a swimming pool sits near a hillside Thursday in Altadena. California Gov Jerry Brown on Wednesday ordered a mandatory 25 percent overall cutback in water use by cities and towns, but not farms, in the most sweeping drought measure in history by the United States' largest state economy. The water crackdown comes as California moves toward its fourth summer of drought after record low winter snowfall, leaving the state with a year's worth of water stored in its reservoirs. ASSOCIATED PRESS

Homeowners will get rebates for replacing lawns with greenery more suited to the semiarid state and for installing more water-thrifty appliances and plumbing fixtures. The state also will press water agencies to impose higher, graduated rates to discourage water guzzling.

Cemeteries, golf courses and business headquarters must cut back significantly on watering the grass and shrubs. And new homes will not be allowed to use drinking water for irrigation unless they have waterstingy drip systems.

Homeowners and water districts that violate the rules will be subject to fines, but many of the enforcement details have yet to be worked out.

State water officials stress it's the lush, green blades of grass they are after.

"When it is all said and done, what we are asking is that they cut back dramatically on their outdoor watering," Kostyrko said.

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Q&A: Cuttingwater use in face of state's drought

By Alicia Chang Associated Press Ventura County Star 4/3/2015

LOS ANGELES — The stubborn drought grippingCalifornia is dragging into a fourthyear, prompting Gov. Jerry Brown this week to call formandatory cutbacks in water useacrossthe state.

The drastic action marked the first time in California's history that involuntary water restrictions have been ordered, underscoring the seriousness of the drought. Here are key things to know about the current dry spell:

Q: How bad is the drought?

A: California is in the midst of one of itsmost severe droughts in modern history. The state has experienced below-normal precipitation the past several winters, taking a toll on reservoirs.

The Sierra Nevada snowpack is at 5 percent of normal, thelowest sincerecordkeepingbegan in 1950. With the wet season over and with no major rainfall in theforecast, parched conditions will continue.

Q: How does California get its water?

A: TheSierrasnowpackis akey elementofCalifornia's water supply. About onethird of the state's water comes fromsnowpack that melts in thespringand summer, recharging groundwater sources and replenishing reservoirs. But with hardly any snow recorded during the last survey of the year, therewill be little runoff to refill reservoirs.

Many Southern Californiacitiesget theirdrinking water from the Colorado Riverbasin, which supplies water to about 40 million people and 4 million acres of farmland in seven states.

Brown's order called for investment in new water technologies and the streamlining of water projects such as desalination plants that turn ocean water into drinking water. Suchfacilities, however, are expensive tobuild.

Q: What has been done already to try to curb wateruse?

A: Before the executive ordercalling formandatory water conservation, Brown in January 2014 asked residents to voluntarily slash water use by 20 percent. Many places around the state failed to meet that goal.

In November, voters overwhelming approved a \$7.5 billion water bond, which aims to expand the state's water storage capacity to better weather droughts. Muchofthe money is earmarked forspecific uses such as water recycling and treatment projects and cleaning up contaminated groundwater. About \$2.7 billion is still up for grabs.

Q: Why weren't more stringent restrictions put in place earlier?

A: Since voluntary water cutbacks failed to make a dent in the state's drought problem, the next step was to call for mandatory water savings.

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4/3/2015

LETTERS

Ventura County Star 4/3/2015

Drought plan

Joe Zuback, Camarillo

Re: Dan Walters' March 27 column, "What if California's drought is permanent": If the prevailing opinion becomes that California's drought is permanent, then the state should consider creating a new California State Water Project (SWP) that guarantees longterm water security by tapping into our only drought-proof source of water — the Pacific Ocean.

Let's assume that water delivered by a new SWP matched the original SWP in terms of urban water supply, about 2.1 billion cubic meters per year. This is equivalent to the water produced by 12 plants with the same capacity as Israel's Hadera desalination plant. Six to 15 plants comparable in size to Hadera would be located near urban areas along the California coast as part of an integrated SWP water supply strategy.

The new SWP, not the private sector, should take financial and project management responsibility for all project development, siting, permits, seawater intake structures, waste brine discharge, and product water distribution infrastructure. These requirements will be capital-intensive and common to all plant locations so state government collectively managing and financing these activities for all projects should be more efficient than local governments or the private sector.

However, decisions regarding the technologies and operations required for desalination and energy supply, where the bulk of project operating costs are encountered, are best managed by private sector consortiums. The proven best practice globally is selection via long-term, competitively bid, design-build-operate contracts, where each consortium is responsible for determining and guaranteeing their most competitive technology supply, integration and operations strategy.

In the event of a permanent California drought, a new SWP with a public-private partnership feature could be the most economical option for California to ensure long-term water security at the lowest cost to Californians.

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4/3/2015

Readers React

Time for another massive California water project



Patterns are created and reflected from water receding on the bed of Folsom Lake. As the state ends the fourth-driest water year on record with no guarantee of significant rain and snow this winter, Californians face the prospect of stricter rationing and meager irrigation deliveries. (Allen J. Schaben / Los Angeles Times)

LA Times 4/3/2015

To the editor: The California drought is not simply the state's problem. It's a national problem and most likely an international problem, as California is one of the most important food-producing regions in the world. ("Brown orders California's first mandatory water restrictions: 'It's a different world," April 1)

Rather than pointing fingers at farmers, pool owners or yard waterers, we need to think outside the box (way outside) for solutions. The water is still here, on planet Earth; it's just being redistributed.

I keep reading about the Keystone pipeline, the bullet train, even the futuristic hyperloop — all controversial, expensive projects. I keep waiting for someone (are you listening, Elon Musk?) to propose a viable method for bringing water from a place that has an overabundance to our state.

The California Pipeline — now, that's a project I could get behind.

Ralph Cooley, Los Angeles

To the editor: Instead of an across-the-board percentage in reduction, which effectively rewards people who have used more than their fair share, each resident of California should be allocated a specific number of gallons per day.

In addition, farmers should not send huge sprays of water up in the air during the middle of the hottest part of the day. When I drive up Interstate 5 through the Central Valley, I see ridiculous amounts of water being wasted.

Yes, let's all be cautious and aware in our use of water, but let's not force those who have been frugal with this precious resource to be further punished.



Now in its fourth year, the drought in California has reached record-breaking levels of dryness, with more than half of the state under the most severe level of drought. In some of the hardest hit communities, taps have run completely dry, leaving hundreds of households with no access to...

Elaine Herold, Rancho Palos Verdes

..

To the editor: Why wait any longer? Mandatory water cuts should be even deeper than Gov. Jerry Brown's 25% reduction.

There is no indication that global warming and drought in the western states will be reversing.

Watering parkway strips or city-owned property should be outlawed. Cities should take back ownership of that land and begin demonstrating the benefits of mulch on these areas. Extra mulch on parkways will benefit our trees.

All mulch should be used as nature intended, to retain the water in the soil.

Therese Brummel, Pasadena

To the editor: When do we start looking farther down the road on this drought? With global warming a fact of life, California's water plight is not likely to go away.

Is it not reasonable and prudent to start considering desalination seriously?

David B. Housh, Glendora

To the editor: Brown wants to cut California's water usage 25%. One way almost everybody can cut water usage in their home is by better management of toilet water.

At my cottage near Lake Michigan, where there is still ample water, we often conserve well water by using this reminder: If it's yellow, let it mellow; if it's brown, flush it down.

Ernest Ryan, Temperance, Mich.

To the editor: Brown's water restrictions might have more credibility if at the same time he called for a halt to all building permits for the state.

Or does he not believe that new buildings, apartments and houses will use any water?

Linda Forsythe, West Hills

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Zip line, anyone? Drought pushes skiers, resorts to seek alternative fun



Skiers ride a chairlift over dry ground at Squaw Valley Ski Resort in March. Some Southern California ski resorts have closed early because of low snowfall. (Max Whittaker / Getty Images)

By <u>HUGO MARTIN</u> LA Times 4/3/2015

Ski resorts are investing in zip lines, mountain bike trails and other activities to make up for lack of snow

The Sierra Nevada snowpack measured April 1 near Lake Tahoe was only 5% of the historical average

The Beach Cities Ski Club had eight ski trips planned for Mammoth Mountain this winter but paltry snowfall forced the cancellation of about half of those excursions.

With their snow-centric fun melting away, the club's members had to come up with an alternate plan.

"When the conditions were not great at Mammoth, we would just go to the beach and play volleyball," said Bruce Lee, president of the Hermosa Beach-based club.

California's unrelenting drought has meant four straight years of below-average snowfall, forcing more skiers and snowboarders to find alternative activities. The dry conditions have also prompted more resort operators to invest in zip lines, mountain bike trails and other ways to draw visitors during snow-free months.



Skiers make their way around patches of dirt at Squaw Valley Ski Resort. (Max Whittaker / Getty Images)

"We've realized that we have to be in the mountain recreation business," said Bob Roberts, chief executive of the California Ski Industry Assn. "You can't just be in the ski business only."

An estimated 5.2 million skiers visited ski resorts in the Golden State this winter season, far below the 7.4-million-visitor average over the last several years, Roberts said.

When state officials measured the Sierra Nevada snowpack on April 1 near Lake Tahoe, they found the lowest water content for any early-April reading since 1950, measuring only 5% of the historical average, according to the California Department of Water Resources.

"Mother Nature was not into miracles this year," Roberts said.

Ski resort operators nationwide predict overall visitation numbers will be about 57 million, about the same as last season, partly because good snow conditions in Colorado, Utah, Wyoming and Montana were offset by extreme weather that kept skiers away from the slopes in the Northeast, said Michael Berry, president of the National Ski Areas Assn.

National sales numbers for snow sports equipment and apparel have been mixed.

Ski and snowboard equipment sales were down 3% to 6% in the six months that ended in December compared with the same period the previous year, but the sale of snow apparel rose 2% to 4%, according to the Snowsports Industry of America, a trade group for snow sports equipment and clothes.

Ski resort operators had hoped for heavy snowfall in March to extend the season into the spring and, perhaps, the first weeks of summer. But the storms never materialized, forcing Southern California resorts such as Bear Mountain and Snow Summit to close March 30, about two weeks earlier than the traditional end of season.

Mammoth Mountain, the most popular resort for Southern California skiers, plans to operate until June, thanks mostly to its extensive snow-making system. During heavy snow seasons in the past, Mammoth Mountain has run its ski lifts as late as July 4.

Skiers and snowboarders are adjusting to the new "normal" weather conditions.

The Long Beach Ski Club scheduled several weekend trips this winter to Mammoth Mountain, but toward the end of the season the members noticed that the snow was patchy.

"Not all runs were open and you could tell coming down some of the slopes that they were starting to have problems covering the ground," club President Kris Flaig said.

The group plans to return to Mammoth Mountain next year. But in search of better snow, he said, the group is considering adding a weeklong trip to a resort in Canada, where snow is plentiful.

"You just don't know what is going to happen," Flaig said of next winter's snowfall.

The good news for ski resort operators in California is that cold weather and snow arrived this season at the perfect time to cover the ski slopes with real or artificial snow just before the busy Christmas holiday period and the Presidents Day weekend.

"It wasn't a lot of snow but it fell at the right times," said Pete Sonntag, chief operating officer for Heavenly Mountain Resort in South Lake Tahoe.

Thanks to the opportune timing of the snow, Bear Mountain and Snow Summit in the San Bernardino Mountains expect to draw about 15% more visitors this season than the previous season, said Bear Mountain spokesman Chris Riddle.

At Mammoth Mountain, the skier visitation numbers are "a couple percent above" last year's total, said Mammoth Mountain spokeswoman Lauren Burke.



Frank Gehrke has been measuring the snowpack at this site south of Lake Tahoe for nearly two decades, but Wednesday was unique. It was the first time he was joined by California's governor, and the first time he was watched by a phalanx of television cameras. (Chris Megerian)

But those increases were offset by a dramatic drop in visitors at many smaller resorts around Lake Tahoe and Mt. Shasta, Roberts said.

Resort operators are hedging their bets against more dry winters by investing in summer activities.

Snow Summit hopes to get approval next month to build a new beginners mountain biking trail from the top of the peak, set to open by July 4.

In addition, Riddle said the resort, which was recently bought by Mammoth Mountain, hopes to soon add zip lines, climbing walls and bungee jumping attractions.

"Our goal is to have more activities that will engage a wider range of people," he said.

The resorts around Lake Tahoe also are investing in summer attractions.

Heavenly Mountain Resort opened last summer with a new 3,300-foot zip line and three adventure rope courses and plans to add a 1,000-foot zip line this summer, along with a rock climbing structure, Sonntag said.

The upgrades are part of a \$25-million commitment made by Vail Resorts to expand summer activities at its resorts. Vail operates Heavenly, Northstar and Kirkwood in the Lake Tahoe area of California and Nevada.

The U.S. Forest Service is supporting such efforts. The agency approved new policy guidelines last year to allow resorts operating on forest land to build year-round recreation activities. The federal government estimates that the new summer activities already proposed on forest land will draw up to 600,000 additional visitors a year.

Despite California's four dry winters and the extreme weather across the country, ski industry officials say the future of the nation's snow sports looks bright.

"People are pretty passionate about skiing and snowboarding," Berry said. "They may not buy new equipment but they will come back with a vengeance."

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Gov. Brown's drought plan goes easy on agriculture



A farmworker sprays herbicide on an almond farm. Agriculture has suffered severe cutbacks as a result of the drought but critics of Brown's plan say more regulation of groundwater use is needed. (Marcus Yam, Los Angeles Times)

By <u>BETTINA BOXALL</u> LA Times 4/3/2015

Gov. Brown's drought restrictions focus on urban water use, but agriculture is by far the biggest water user

Urban water use such as lawns and golf courses makes up less than 25% of California's overall water use

Gov. Jerry Brown's historic order to curb California's water use largely bypasses agriculture, the state's biggest water user, setting off debate about whether growers are getting a pass.

The vast majority of Brown's plan focused on urban water use — such as lawns, golf courses, parks and public medians — which makes up less than 25% of Californians' overall water use.

For critics of Brown's plan, it's ineffective policy to crack down on watering suburban yards while largely ignoring the vast, still-green expanses of the state's fruit and vegetable garden.

"The government's response to this growing crisis has been behind the curve," said Jonas Minton, water policy advisor for the Planning and Conservation League and a former state water official. He argued that state officials should clamp down on groundwater pumping and plantings of thirsty new crops.

Other water experts and growers say that agriculture has already suffered severe cutbacks as a result of the drawn-out drought, now in its fourth year. For the second year in a row, Central Valley farmers without senior water rights are expecting no deliveries from the valley's big federal irrigation project.

Growers who get supplies from the State Water Project will receive only 20% of requested deliveries this year. Farmers left more than 400,000 acres unplanted last year, dealing a \$2-billion blow to the state's agricultural economy.

"I think much of California is all of a sudden waking up to the fact that the drought is not theoretical. It's going to manifest itself in ordinary Californians' lives for the first time.

"Well, our farmers have been feeling it for a while," said Chris Scheuring, a water attorney for the California Farm Bureau Federation.

Brown's seven-page executive order, issued Wednesday, outlined the first statewide mandatory water use restrictions in California's history.

Among them: He ordered a 25% reduction in urban use statewide compared to 2013 levels. The directive also bans the use of drinking water to irrigate median strips in public roads, initiates the removal of 1,150 football fields worth of grass to be replaced with drought-tolerant plants; and orders golf courses, campuses and cemeteries to significantly cut their water consumption.

Agricultural mandates were fewer and milder. Irrigation districts were directed to develop drought management plans that include supply and demand data. Agencies in basins where groundwater has been overpumped must immediately monitor groundwater levels. And the State Water Resources Control Board was told to crack down on illegal water diversions and "those engaging in the wasteful and unreasonable use of water."

Jeffrey Mount, a senior fellow at the Public Policy Institute of California, said growers have been dealing with water cutbacks for years.

As for regulating which crops growers plant, Mount said that could distort the market and have unintended economic consequences. "It's our view that government probably is not going to do a very good job of deciding what should and should not be grown."

Moreover, Mount said that while the state could ban certain plantings under its constitutional powers to stop the unreasonable use of water in a drought, growing high-value crops such as almonds would not be considered unreasonable.

The Legislature approved a statewide groundwater law last year intended to end decades of overpumping from aquifers in the Central Valley.

But it won't take full effect for more than two decades, a timetable that critics say is far too generous. The rules are expected to limit withdrawals in some basins, forcing farmers who have increasingly relied on pumping groundwater to permanently retire cropland. Experts say change that significant requires time.

Government's response to this growing crisis has been behind the curve.- Jonas Minton, Planning and Conservation League

"You do that overnight and there is extraordinary disruption," Mount said.

"In some basins, this is going to be very painful, economically and socially, and you have to be careful about forcing that pain too quickly."

Scheuring, noting that at least 40% of residential water use in the state is for landscaping, said that urban cuts don't have the same economic impact as slashing irrigation deliveries.

"Folks are still going to brush their teeth," he said. "They're still going to run their dishwashers ...flush their toilets. It's just that their lawn might be brown and they're going to have make some hard choices about landscaping.

"That's a different thing from telling a farmer goodbye to 25% of what little [water] you may have. That has direct economic consequences."

While farmers are moving to more efficient irrigation practices, they still practice wasteful flood irrigation on about 40% of irrigated acreage, said Heather Cooley of the Pacific Institute, an Oakland think tank. "We have a long way to go," she added.

Phil Isenberg, vice chairman of the Delta Stewardship Council, said the sections of Brown's order demanding more water use data from agriculture are "a very dramatic change."

Not only does the state lack information on all water diversions by farmers, groundwater pumping in the Central Valley has gone largely unmonitored for more than a century. "You gotta know who's using what," he said.

"Should it do more?" he said of the order. "Yes, but the seriousness of seven pages of executive order with specifics is quite unusual."

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Drought will prove a formidable opponent in Brown's final term



Gov. Jerry Brown talks to reporters in Echo Summit, Calif., about his new executive order mandating cities and towns to cut water usage by 25%. (Rich Pedroncelli / Associated Press)

By CHRIS MEGERIAN LA Times 4/3/2015

In his last term, Gov. Jerry Brown's most critical tasks will focus on navigating and managing the drought

Gov. Brown's recent executive order mandating water restrictions is first step in battle against Mother Nature

During the drive from the Capitol to Lake Tahoe this week, Gov. Jerry Brown could see the damage wrought by four years of drought. Rivers have turned to dribbles, parched forests threaten to ignite with a fateful spark, and meadows where snow should be piled high are instead completely bare.

When Brown stepped out of the car, he made history by announcing the first statewide mandatory water restrictions, ordering Californians to slash their water use by 25%.

It wasn't the way he intended to make his mark in his final term as governor, but Mother Nature had other plans. With no relief from the drought in sight, his most critical tasks will be rallying Californians to conserve water, navigating the state's fractious water politics and preparing for what could be a much drier future in America's most productive agricultural region.

"It's going to require every ounce and every moment of his political attention and his political skill," said Sonoma State political science professor David McCuan.

The governor also is dealing with stark regional differences, and the drought threatens to inflame an urban-rural divide in California. Conservationists have already raised concerns that Brown isn't doing enough to curb agricultural water use, which accounts for 80% of the state's total.

"This is not going to be the kind of coalition that's going to be easily built," said Raphael J. Sonenshein, executive director of the Pat Brown Institute of Public Affairs at Cal State L.A.

Brown has faced drought before: There was a two-year dry spell in 1976 and 1977 when he was governor the first time. But that lasted only half as long as the current drought, and it didn't lead to the same mandatory restrictions on water use.

In addition to those limits, Brown's executive order includes stricter enforcement and the removal of 50 million square feet of lawns.

"We're in a historic drought, and that demands unprecedented action," he told reporters Wednesday. "People should realize we're in a new era. The idea of your nice little green grass getting water every day — that's going to be a thing of the past."

Brown is determined to manage the drought while pursuing other goals such as building the bullet train and expanding renewable energy generation — "government is not just one thing," he said.

But there's no doubt that he faces a heavy burden in the months and years ahead.

Mark Cowin, director of the California Department of Water Resources, said administration officials were working out details with the governor late into the night before the announcement.

Brown had asked residents last year to cut water use by 20%, but they consistently fell short even as the drought persisted. When February conservation statistics continued to lag, officials said, it drove home the need for a more restrictive approach.

In addition, snow in the Sierra Nevada, which usually provides a third of California's water when it melts in the spring, has been nearly nonexistent.

"Considering the potential for a fifth or sixth year of drought, we want to start pulling up the stick of the plane so we don't have a crash landing," Cowin said.

Brown will need Californians' cooperation to save water, and it appears that residents are increasingly aware of the drought's toll. A March survey by the Public Policy Institute of California showed that water issues have become as important in voters' minds as jobs and the economy. Two-thirds of respondents said water supply is a big problem in their area and more should be done to respond to the drought.

"It's been frustrating that it's taken this long to get on the public's radar," said Annie Notthoff, director of California advocacy for the Natural Resources Defense Council. "But now people are starting to see this is not business as usual."

The governor said Wednesday that he's trying to do his part by "turning off that faucet a little quicker, getting out of the shower a little faster, not flushing the toilet every time."

The idea of your nice little green grass getting water every day -- that's going to be a thing of the past.- Gov. Jerry Brown

Pushing for water conservation is nothing new for Brown, who has railed against environmental dangers throughout his political career. He battled Los Angeles smog in the 1970s, ran for president in 1980 by promising to "protect the Earth" and has since traveled the world to urge action on climate change.

"He has always said, right from the start, we have to pay attention to environmental impacts, that natural resources are not unlimited," said Bruce Cain, professor of political science at Stanford University. "These are Jerry Brown's themes."

Given Brown's record, Cain said, the drought is "in his wheelhouse."

But Cain and other analysts warned that the problem could quickly grow timeconsuming and politically treacherous. Implementing Brown's executive order will require new and extensive regulations and careful monitoring of thousands of local water agencies to ensure restrictions are being enforced.

Even while Brown faces the short-term consequences of the drought — including the potential for budget-draining wildfires and decreased agricultural production — he is pursuing long-term projects that he says will strengthen California's highly engineered water systems.

The most controversial is his proposal to dig two massive tunnels under the Sacramento-San Joaquin River Delta to send water from Northern California to farms and cities farther south.

Richard Frank, director of the California Environmental Law and Policy Center at UC Davis, said the issue remains "the single toughest political nut to crack."

"The status quo in the Delta is completely unsustainable," with aging canals and ecological damage, he said. "But the consensus really ends there."

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District OK with new water regulations

David Pedersen, general manager of the Las Virgenes Municipal Water District, issued a statement saying the district plans to comply with new water conservation measures adopted by the State Water Resources Control Board as soon as the regulations become effective.

"As we enter the fourth year of an unprecedented drought, every resident in the LVMWD service area has a role in seeking new ways to improve their water-use efficiency," Pedersen said. "While we have notable reductions in use, some residents can do more. There are still a number of properties that are overwatering lawn areas."

Pedersen said that the current three-day irrigation schedule for LVMWD customers will remain in place. The state's limit of two days per week only applies to agencies that have not yet adopted a water shortage contingency plan.

On March 17, the state board announced additional mandatory conservation measures to supplement those already in effect. The new regulations include:

No irrigation may occur during a rain event or in the 48 hours following rain.

Restaurants may only serve water upon request.

The new items join the list of the following conservation measures already in place:

Irrigation restricted to no more than three days per week, based on address.

No irrigation between 10 a.m. and 5 p.m.

Hoses used for car washing must use a trigger nozzle.

Irrigation may not run off the property into streets, gutters or onto adjacent properties.

The washing down of sidewalks, parking areas and driveways is not permitted, unless an approved water broom is used.

Fountains or water features must use a recirculating system.

Hotels and motels must provide multi-night guests with the option to use towels and linens for more than one day.

Pedersen said the district's "Mow no Mow" lawn replacement program that pays \$2 per square foot for turf removal is generating numerous applications.

The district is also offering customers free water-wise garden design and landscaping classes.

Registration information and additional conservation suggestions can be found at the district's website, www.LVMWD.com.

Calabasas Chamber of Commerce supports water awareness



MIXING IT UP—Jacqueline Souza, left, Calabasas Chamber of Commerce board chairperson, and husband Michael attend the Las Virgenes Municipal Water District's headquarters for a Chamber mixer on March 26. While networking, attendees also viewed an art exhibit featuring the works of students from throughout Southern California. The display showed posters advocating water conservation. About two dozen people attended the event.



Photos courtesy of LVMWI

CLEVER CREATION—Third-grader Riley Jackson from Round Meadow Elementary School in Calabasas created this water-wise masterpiece for a 2014 regional water awareness poster contest.

Page 16

April 2, 2015

The Acorn



The Acorn

Conservation

Two letters recently called for leadership on water conservation and planning in the Conejo Valley.

As an Oak Park resident, I too have concerns that our community leaders continue to maintain grass and nonnative plants along miles of Kanan and Lindero roads, requiring expensive maintenance and thousands of gallons of water to maintain a Disneyesque fantasy that we live in a water-rich environment naturally capable of supporting lush lawns and water thirsty plants.

I see more and more homeowners replacing their lawns with low- to no-water alternatives, but have yet to see our community leaders getting out in front on this issue.

By replacing the grass stretches along Kanan and Lindero with drought tolerant landscaping, not only would the Municipal Advisory Council be doing its part to reduce water waste—not to mention reducing noise and particulate pollution caused by the landscaping crews—but they would also be showcasing ideas for homeowners who may be hesitant to rip out the grass and try something more environmentally sustainable.

Even if we are using nonpotable water to landscape the median plantings, watering these areas sends a message of plenty in a time of critically low supply.

Let's stop flushing both money and water down the drain and implement low maintenance and low-water landscaping along these two main thoroughfares.

John Montgomery Oak Park

Oak Park storm water project spurs opposition

Kanan Road would be uprooted

By Sylvie Belmond The Acorn

A March 24 Oak Park Municipal Advisory Council meeting was attended by some 60 residents who say they are against a proposed water pollution project being planned for their community.

Ventura County wants to install two in-ground filters along busy Kanan Road between Mae Boyar Park and Smoke Tree Avenue. The project also includes the installation of 10 other biofiltration systems throughout Oak Park.

Because tree roots would interfere with the filters along Kanan Road, 600 square feet of turf and 24 trees would have to be removed and replaced with drought-resistant plants.

MAC Chair Alon Glickstein said the community is upset that the project was begun before residents were made aware of it.

People don't know the purpose of it, or the way it's going to look, he said.

Residents are concerned the project will change the look of the area, and that's "unacceptable to them," Glickstein told *The Acorn.*

Residents only objected to the two bioswales. They did not oppose the underground filtering systems that would become part of the sidewalks in other parts of the community.

County representatives said all the filtering systems are critically needed to reduce bacteria and other pollutants in the Medea Creek watershed.

Oak Park and other communities must comply with strict federal guidelines in eliminating contaminants from the watershed. The filtering units will be placed in areas where E. coli levels exceed allowable limits. Over-watering, pet waste and swimming pool discharges are among the most common sources of pollutants.

If the county doesn't take action, the regional water quality control board could impose fines of up to \$10,000 per day, Jeff Pratt, director of the Ventura County Public Works Agency, told *The Acorn*.

"We don't have any more time to dance," he said.

Oak Park officials and residents also expressed concerns about public safety, aesthetics, health, impact on property values, cost and ongoing maintenance, Councilmember Mike Paule said.

Installation of the biofilters will cost \$1.8 million. The state will contribute \$1.4 million, and the county will pay the rest.

Some people questioned the choice of location, the science behind the process and the impact of construction on the neighborhood and on traffic along Kanan Road.

"Nobody wants a sewer system next to their house," Glickstein said.

"They don't know what it's going to look like and they think it's going to degrade property values."

But county officials say the water at the filtration sites will not be any dirtier than rainwater gathering along curbs and in puddles after a storm.

The project has been designed to eliminate standing water; the water will filter down at a rate of 10 inches an hour.

To get the state grant, the county must build all filtering sites, including the two on Kanan Road.

"Not doing the bioswales won't meet the regional water quality control board's requirements," Pratt said.

Officials are exploring other options to allay residents' concerns.

The county will plant two large oak trees at the south end of each bioswale on Kanan Road. A big pine in the middle of the west median would stay.

"They've done a lot to try to accommodate us," Paule said, "adding trees, putting bushes in to make it more aesthetically pleasing, but it will still funnel all this (dirty) water into a residential area."

He also said residents and council members are worried about the effects of construction on Kanan Road traffic during peak hours.

Glickstein said the estimated costs to maintain the biofilters remain unclear.

"What happens if it's damaged? Who will fix that and pay the cost for that?" he asked.

County officials said Oak Park will be responsible for a third of the maintenance costs, estimating the community's share would be \$10,000 per year to maintain the filtering systems.

Due to the controversy, Paule said, construction for the bioswales was postponed until

Residents and the MAC concluded they don't want the two large biofiltration systems on Kanan Road. The county should go back to the drawing board and return with a better system, Glickstein said.

The council can only make recommendations.

"The issue is, do the MAC and the community have the power to stop this from going forward?" Glickstein said, urging residents to write letters to the Board of Supervisors.

If concerns persist, Ventura County Supervisor Linda Parks said, she will not push the project forward—although the Board of Supervisors could still approve the contract without her vote.

"We have to make it acceptable to the community," Parks told *The Acorn*.

Governor orders cuts in water use

Survey finds least snow in 65-year period

By Fenit Nirappil Associated Press Ventura County Star 4/2/2015

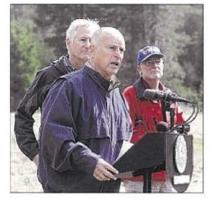
ECHO LAKE, Calif. — California Gov. Jerry Brown ordered officials Wednesday to impose statewide mandatory water restrictions for the first time in history as surveyors found the lowest snow level in the Sierra Nevada snowpack in 65 years of record-keeping.

Standing in dry, brown grass at a site that normally would be snow-covered this time of year, Brown announced he had signed an executive order requiring the State Water Resources Control Board to implement measures in cities and towns to cut the state's overall water usage by 25 percent compared with 2013 levels.

The move will affect residents, businesses, farmers and other users.

"We're in a historic drought and that demands unprecedented action," Brown said at a news conference at Echo Summit in the Sierra Nevada, where state water officials found no snow on the ground for the first time in their April manual survey of the snowpack. "We have to pull together and save water in every way we can."

After declaring a drought emergency in January 2014, Brown urged all Californians to cut water use by 20 percent from the previous year. Despite increasingly stringent regulations imposed on local water agencies by the state, overall water use has fallen by just half that amount, prompting Brown to order the stronger action by the water board.



Gov. Jerry Brown answers a question Wednesday concerning the executive order he signed requiring the state water board to implement measures in cities and towns to cut water usage by 25 percent compared with 2013 levels. ASSOCIATED PRESS

"We're in a new era; the idea of your nice little green grass getting water every day, that's going to be a thing of the past," Brown said.

The executive order will require campuses, golf courses, cemeteries and other large landscapes to significantly cut water use; direct local governments to replace 50 million

square feet of lawns with drought-tolerant landscaping; and create a temporary rebate program for consumers who replace old water sucking appliances with more efficient ones.

It calls on local water agencies to be more aggressive in charging for high water use, including extra fees for the highest water consumption. It also requires farming communities to report more data on how much water they use to state regulators.

Brown's office said that will boost the state's ability to enforce laws against illegal water diversions and waste. Officials previously approved fines of up to \$500 a day for water wasters, but few agencies have opted to issue them.

The order also prohibits new homes and developments from using drinkable water for irrigation if the structures lack water-efficient drip systems. In addition, the watering of decorative grasses on public street medians is banned.

The snow survey on Wednesday showed the statewide snowpack is equivalent to 5 percent of the historical average for April 1 and the lowest for that date since the state began record-keeping in 1950.

Snow supplies about a third of the state's water, and a lower snowpack means less water in California reservoirs to meet demand in summer and fall.

"It is such an unprecedented lack of snow, it is way, way below records," said Frank Gehrke, chief of snow surveys for the California Department of Water Resources, at the snow survey site about 90 miles east of Sacramento.

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4/2/2015

Fox Canyon agency added to water complaint

Santa Clara seen as degraded

By Timm Herdt Ventura County Star 4/2/2015

Four environmental and civic groups that claim water diversions conducted by the United Water Conservation District have irreparably degraded the Santa Clara River have expanded their complaint, alleging the agency responsible for managing the underground basins of the Oxnard Plain is also complicit in harming the river.

The groups on Thursday amended their complaint with the State Water Resources Control Board to include the Fox Canyon Groundwater Management Agency. The original complaint asks the board to review United's permits that allow for diversions and require that additional water be allowed to flow in the river.

The amended complaint further asks the state board to order the Groundwater Management Agency "to implement measures necessary to protect the Santa Clara's public trust resources and to achieve reasonable use of the water" in the basins it manages.

The issues raised by the complaint are academic for the time being, as the lack of rainfall during a drought now entering its fourth year has resulted in so few river flows that almost no water is available for natural purposes, aquifer replenishment or any other uses.

The two agencies named in the complaint have had "a long-standing disregard" for implementing responsible polices that would balance agricultural and municipal water uses with environmental considerations, and have thus deprived residents of the Santa Clara Valley "of the benefits a live Santa Clara has to offer," said Jason Weiner, general counsel for the Wishtoyo Foundation and its Ventura Coast keeper Program.

Those groups, joined by the Center for Biological Diversity and the Ventura based community organizing group CAUSE, filed their original complaint in late 2013.

In March2014the United Water District formally responded, asserting there "is no credible evidence" to support allegations that the district's diversions harm wildlife and violate the public-trust doctrine that underlies water rights in California.

Because the state water board's staff has been directed to focus its efforts on droughtrelated issues, the agency has yet to investigate the allegations or decide whether to schedule hearings on the complaint.

At issue are a series of permits dating from the 1950s that allow United to divert water from the river so that it can be directly used by farmers to irrigate fields or directed into spreading grounds to replenish aquifers.

The agency's authority to divert water was expanded in 1991 when it completed construction of a concrete dam near Saticoy, called the Vern Freeman Diversion Dam.

United officials assert their ability to divert water is essential to replenish underground basins and hold back the intrusion of seawater from the coast.

The public-interest groups allege the diversions have threatened the survival of the endangered Southern California steelhead trout, contributed to the growth of nonnative riparian vegetation that has driven out plants that had historically been habitat to various species of birds, and eliminated the possibility for recreational use of the river.

"The entire Santa Clara's state of decline can be traced directly to the state permitted and - licensed activities and operations of the United Water Conservation District that result in the diversion of almost all of the Santa Clara's flows," the complaint says.

The amended allegation asserts the Groundwater Management Agency is complicit in stopping the river's flows because its policies "do not require or adequately incentivize" farmers and cities from doing all they can to conserve water or to promote the use of reclaimed water to recharge aquifers.

The agency last year ordered a 20 percent reduction in pumping from the basins beneath the Oxnard Plain as part of its efforts to reach a sustainable level of pumping.

United officials assert they are already taking multiple, expensive steps to address environmental issues.

After the Southern California steelhead was listed as endangered in 1997, district officials were required by the federal Fisheries Service to develop a recovery plan to facilitate the fish's upstream migration to spawn.

The plan, still in development, will require modifications to the Freeman Diversion and the district's Santa Felicia Dam at Lake Piru. The plan will require that millions of dollars be spent for construction of a fish passage, habitat improvements and extensive monitoring.

District officials estimate they will spend about \$80 million to comply with the federal requirements and that the steps they take will reduce the district's ability to divert water by 15,000 to 30,000 acre-feet per year.

If the state water board were to find merit in the complaint, it could order diversions be reduced by an even greater amount.

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4/2/2015

Water rules' effects studied

Efforts going from voluntary to mandated

By Gretchen Wenner Ventura County Star 4/2/2015

A concerned group of farmers, water district officials and others gathered in Fillmore on Wednesday to hear how new state laws requiring management of local groundwater supplies will play out in Ventura County.

By coincidence, the special meeting of the United Water Conservation District unfolded at the same time Gov. Jerry Brown announced California's first mandatory water cutbacks from a snowless Sierra Nevada meadow.

Water continues making headlines as the state heads into a fourth consecutive year of drought. But the grand task of implementing a suite of new laws known as the Sustainable

Groundwater Management Act will take years, likely long after rainfall resumes and washes away the urgency brought by extended drought.

"They've called our bluff," joked Tony Morgan, a groundwater manager with United, saying state lawmakers listened to agencies calling for local control and told them: "Do it."

The legislation signed into law last fall generated the acronym SGMA with its own pronunciation, "sigma."

It requires, for starters, the creation of local agencies charged with defining how groundwater basins can be pumped and replenished over time in a manner sustainable in the long run. The agencies will monitor and report results to the state.

One thing that's new, Morgan told the group, is that such efforts are no longer voluntary.

Other changes require participation of stakeholder groups beyond the usual agricultural and municipal entities, including environmental users — a vaguely defined group in the legislation, Morgan noted.

The new "groundwater sustainability agencies," or GSAs, have been granted a basket of new powers to do their jobs, including the ability to collect fees and limit pumping.

A major task will be creation of a management plan for each basin.

"There's going to be a tree or two killed to prepare those documents," Morgan said of the complex plans.

In Ventura County, two existing entities have already become sustainability agencies for their areas: the Fox Canyon Groundwater Management Agency, which covers much of the Oxnard Plain and some inland areas; and the Ojai Basin Groundwater Management Agency.

But some groundwater basins fall outside those entities' boundaries, including the Fillmore and Piru basins in the eastern county and parts of the Mound basin in Ventura. Other basins have portions outside existing GSA boundaries.

Those areas will be the focus of discussions in coming months as stakeholders determine who will regulate them. Some dissent was evident Wednesday when some attendees supported the idea of United becoming the GSA for the Fillmore and Piru basins, while others sought more control for mutual districts and farmers.

Rich Juricich, an engineer with the state Department of Water Resources, also gave a generalized presentation to the group as part of ongoing outreach to help locals enact the new laws.

"We're not trying to go back to 100 years ago," he said of the state's baseline for achieving sustainable basins. Status as of early 2015 is considered the starting point for determining adverse impacts, Juricich told the group.

The GSAs will need to be in place by June 2017, and management plans for each local basin turned over to the state in January 2020, Morgan said. Sustainability itself must be attained 20 years after plans are turned in, with five-year checkups along the way.

Morgan warned that formation of GSAs could "turn into a food fight" if participants don't cooperate. The five years allotted for completing plans might seem leisurely, he said, but actually creates a "relatively short fuse" for dealing with complex issues.

"That time frame will shrink rapidly as we get started," Morgan said.

Information presented at the meeting can be found at http://tinyurl.

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4/2/2015

Community Briefs

NEWBURY PARK

Drought landscaping to be showcased

Dee Lyon and Laura Maher, who have transformed dozens of lawns into drought-friendly showcases, will present a program on drought tolerant landscaping for beginners from 1-4 p.m. April 11 at 3327 Old Conejo Road.

Lyon is conservation chairwoman for the Conejo Valley Audubon Society and Maher is an organic gardener and seed-saving advocate.

Participation is free. Donations are welcome. Visit http://www.forum. cvuuf.org or call 374-9818 for more information

Staff reports

THURSDAY 04/02/15

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Tom Elias

Desalination looks better as water prices rise

"Water, water everywhere, nor any drop to drink ..." Samuel Taylor Coleridge, 1798, in the "Rime of the Ancient Mariner."

The reality confronting millions of Californians as they cope with yet another lengthy episode in a seemingly endless series of droughts is that — like Coleridge's mariner — this state has billions of acre feet of water clearly visible every day in the form of the Pacific Ocean and its many bays and estuaries.

But that's briny salt water, containing an array of minerals that make it almost as inaccessible today as it was to that parched, fictitious sailor of 200 years ago.

But it doesn't have to stay that way. As the price of water goes up, desalinating Pacific waters becomes ever more enticing and it will become more so if the price of taking salts and other impurities out of salt water falls. In short, if the rising price of fresh water ever comes to match a falling cost for purified seawater, expect desalination to begin on a large scale in California.

It appears things are moving that way now. Over the winter, the Metropolitan Water District of Southern California — largest urban water district in the state — paid Sacramento Valley rice farmers an average of \$694 per acre-foot of water for 115,000 acre feet to be sent south via the state Water Project. For some farmers, selling water is now more profitable than growing crops.

This sounds like a lot to pay for one acre-foot, the amount needed to cover an acre one foot deep and about the quantity used by two typical urban families in the course of a year. But at that price, water still costs only about one-fifth of a cent per gallon. Well water, by comparison, averages about \$293 per acre-foot.

Meanwhile, ideas for new methods of desalinating water arrive frequently at the state Department of Water Resources, where analyst Michael Ross checks to see which might have real promise.

"The cost of desalination will come down," Ross says. "The price of other water is coming up, as we can see from the Met's purchase. Right now I have a basket-full of proposed processes on my desk."

Traditional desalination via the process of reverse osmosis (RO) will vastly increase later this year, when Massachusetts based Poseidon Water opens a \$1 billion facility at Carlsbad in northern San Diego County. The plant will make 48,000 acre-feet yearly, about 7 percent of San Diego County's supply, at a cost of about \$2,200 per acre foot. A smaller RO plant opened four years ago in Sand City, near Monterey. Santa Barbara plans to reopen a similar plant that was mothballed for years.

But some believe reverse osmosis, which uses a series of membranes to filter seawater, is too expensive.

One idea Ross has reviewed comes from a Texas firm called Salt of the Earth Energy, which would use water from perforated plastic pipes eight to 15 feet beneath the ocean floor, mixing gases and chemicals into seawater from which ocean-bottom silt has filtered almost all marine life. The process would also produce industrial chemicals like phosphates, carbonates and hydroxides, helping bring down the cost of the water produced.

The firm's consultant, James Torres, of Rancho Cucamonga, says the high end of water cost using this process would be \$650 per acre-foot, less than the Met is now paying for some of its supply.

"This idea is at a proving stage," said the DWR's Ross. A test facility is planned along the Gulf Coast of Texas and if it proves promising, the method could solve many current problems with RO, including the fact only half the water RO plants take in eventually becomes potable; the rest is returned to the sea as heavy brine harmful to marine life.

"Our process uses 90 percent of the intake," said Torres. "And we'll use only about half the power of an RO plant."

Another possibly promising technology called "Zero Discharge" is currently being tested in the Panoche Water and Drainage District in Central California, using solar power to evaporate and then collect water from irrigation discharge, with about a 93 percent recovery rate.

Which means drought has not brought despair. Instead, it's spurring an inventiveness that may soon put the lie to the Rime of the Ancient Mariner.

Thomas D. Elias, of Santa Monica, is an author and columnist. Email him at tdelias@aol.com.

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4/2/2015

LETTERS

Halt development

John Kramer, Oxnard

Re: your March 29 editorial, "Time for all of us to turn off the spigot, now": The Star editorial admonishes all of us, including farmers, to find ways to decrease the use of water. I agree with this. What I am having a hard time understanding is why cities in Ventura County, including Oxnard, continue to allow residential developments with hundreds if not thousands of brand new water connections, all drawing on the meager water supply.

The building contracts involved may have been approved decades ago when there was no drought, but if we are truly in a crisis, that should not matter. New development projects in Ventura County and for that matter all of Southern California should be at least postponed until the drought is declared over. If cities do not have the power to temporarily break these contracts, then the governor should step in. If we are truly in a crisis mode with water, then stop new connections to the system.

Reducing usage

Dave Hetzel, Port Hueneme

There are several things that citizens can do to help with our use of water.

Place buckets under all roof drain spouts to collect rainwater and use that water to water plants and things that we grow. Recently, with the marine layer, I heard the roof run-off hitting my buckets.

Install sink faucet aerators in faucets. These devices reduce the amount of water coming from the faucet, but add air to it to make it feel like you are getting the volume. They are not expensive and available at most hardware stores and help save our water supplies. I understand that some faucets allow up to 2.5 gallons of water per minutes to flow. The ones we put in cut that back to about 1/2 gallon per minute, quite a savings.

Use an old vacuum or shop vacuum to clean our porches and patios. My wife had an old vacuum she was not using, and I've taken to cleaning the patio with it. It picks up the dust and debris very nicely and makes the patio look nice. This saves many, many gallons of water that I used to waste cleaning my patio.

Check out w w w. <u>socalwatersmart.com</u> for other ideas. They are offering some rebates for replacing older water using appliances with more efficient units.

And yes, I'm the guy who wrote awhile back about saving much more water by giving the clean, drinkable water from the sewer treatment plant to farmers, instead of just putting it into the rising oceans.

We can all help in small ways and some of us in bigger ways. We all care about this and need to do everything we can to help save water and fight drought.

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Brown orders California's first mandatory water restrictions: 'It's a different world'



Skiers make their way around patches of dirt at Squaw Valley Ski Resort. (Max Whittaker / Getty Images)

By <u>CHRIS MEGERIAN</u>, <u>MATT STEVENS</u> AND <u>BETTINA BOXALL</u> LA Times 4/2/2015

Early data show snowpack in the Sierra Nevada is lower than any year since 1950 Abysmal snowpack is another foreboding sign for a state languishing in drought

Standing in a brown field that would normally be smothered in several feet of snow, Gov. Jerry Brown on Wednesday ordered cities and towns across California to cut water use by 25% as part of a sweeping set of mandatory drought restrictions, the first in state history.

The directive comes more than a year after Brown asked for a 20% voluntary cut in water use that most parts of the state have failed to attain, even as one of the most severe modern droughts drags into a fourth year. It also came on the day that water officials measured the lowest April 1 snowpack in more than 60 years of record-keeping in the Sierra Nevada.

Wearing hiking shoes and a windbreaker in an area that normally requires cross-country skis this time of year, Brown announced the executive order in a Sierra Nevada meadow that provided a dramatic illustration of the state's parched conditions.



Californians confront mandatory water restrictions

"We're standing on dry grass," Brown said. "We should be standing on five feet of snow."

Emphasizing that the drought could persist, Brown said Californians must change their water habits. "It's a different world," he said. "We have to act differently."

The order focused on urban life even though agriculture accounts for roughly three quarters of Californians' water usage. Cities have to stop watering the median strips that run down the middle of roads. The state will partner with local agencies to remove 50 million square feet of grass — the equivalent of about 1,150 football fields — and replace it with drought-tolerant landscaping.

State agencies will create a temporary rebate program to encourage homeowners to replace water-guzzling appliances with high-efficiency ones. Golf courses, campuses and cemeteries must cut their water use. New developments will have to install drip or microspray systems if they irrigate with drinking water. Water agencies will discourage water waste with higher rates and fees.

The order aims to reduce the amount of water used statewide in urban areas in 2013 by 25%.

Some critics of Brown's order said it didn't do enough to address agricultural uses. Adam Scow, director of Food & Water Watch California, called the order disappointing.

"The governor must save our groundwater from depletion by directing the state water board to protect groundwater as a public resource," Scow said in a statement.

Felicia Marcus, chairwoman of the State Water Resources Control Board, said the measure isn't about "finger-pointing"... "It's about everybody having to step up in these tough times."

The water board will release draft regulations in mid-April to implement the order. It plans to approve the regulations in early May.

Marcus said local agencies will receive targets for cutting water use based on how well they've done so far



Patterns are created and reflected from water receding on the bed of Folsom Lake. As the state ends the fourth-driest water year on record with no guarantee of significant rain and snow this winter, Californians face the prospect of stricter rationing and meager irrigation deliveries. (Allen J. Schaben / Los Angeles Times)

that have been slow to conserve since then will feel the order's effects most dramatically, Marcus said.

"You're rewarding the early adopters ... and you're saying to the laggers, 'You have to make a change," she said.

Most of the burden of enforcement will fall on local agencies.

If they don't follow the governor's order, the state can fine them as much as \$10,000 a day.

Many Southern California agencies are already taking steps called for in Brown's order. For instance, under a turf rebate program administered by the Metropolitan Water District of Southern California, spokesman Bob Muir said homeowners are planning to remove almost 89 million square feet of turf, the equivalent of more than 59,000 frontyards. It's unclear whether Brown's mandate for 50 million square feet of lawn replacement includes work already done by local agencies. Similarly, Los Angeles already has a tiered water-rate structure to encourage conservation.

Although Southern California water managers said it might be tough for some cities to meet the 25% target, they welcomed Brown's action.

"It's the right time. It's a proper directive," said Rob Hunter, general manager of the Municipal Water District of Orange County.

Los Angeles Mayor Eric Garcetti praised the executive order, noting that last year he called for a 20% cut in the city's water use by 2017.

In Long Beach, Water Department General Manager Kevin Wattier said the order would have the biggest effect on water districts that use much more water per capita than Long Beach and Los Angeles.

"The governor understands we don't have time to allow any voluntary measures to work," said Mark Gold of UCLA's Institute of the Environment and Sustainability. "This is such a growing crisis that mandatory conservation was absolutely necessary."

Lester Snow, executive director of the California Water Foundation and former state secretary of natural resources, said even more restrictions may be necessary in the future, such as banning all outdoor water use. "We're probably going to need more action before we're through the summer," he said.

Brown issued his order at Phillips Station, about 90 miles east of Sacramento, where state workers conducted a manual snow survey as part of statewide readings that revealed that the water content of the Sierra Nevada snowpack was only about 5% of the average for April 1. That is the lowest for the date in records going back to 1950.

The Sierra snowpack accounts for about 30% of the state's water supply, and although major reservoir storage is better than it was last year, there will be little snowmelt to replenish reservoirs this spring.

Nurit Katz, UCLA's Chief Sustainability Officer and co-chair of a UC system-wide water task force, said every campus has created a water action plan focused on reducing consumption. UCLA is installing artificial turf on its intramural field, retrofitting fixtures such as toilets and developing a smart water filtration system.

Combined with other efforts, the campus expects to save millions of gallons of water each year, she said.

Brown's order requires agricultural districts in depleted groundwater basins to share data on groundwater use with the state.

"The agricultural community is already being hit very hard," Marcus said.

For the second year in a row, Central Valley growers without senior water rights are likely to get no supplies from the valley's big federal irrigation project. Last year farmers idled about 500,000 acres for lack of water, and this year they may be forced to leave even more cropland unplanted.

"Some people want to say, 'What about the farmers?' And farmers want to say, 'What about those people watering their lawns?'" Brown said. "We all have something to do, and we can all do a little better."

ALSO:

169 drought maps reveal just how thirsty California has become



Yosemite National Park is bracing for its driest year on record, with visitor bureaus downplaying the allure of the park's most famous waterfall and instead touting the park as a destination for hiking, bicycling and photography. (Louis Sahagun)

State drought relief package falls short, conservation advocates say

Opinion: California has about one year of water stored. Will you ration now?

Editorial

California's mandatory water cutbacks are a good move



Gov. Jerry Brown speaks during a news conference on mandatory water restrictions Wednesday from an elevation above 7,000 feet in California's Sierra Nevada mountains, which would normally have several feet of snow this time of year. (Max Whittaker / Getty Images)

By <u>THE TIMES EDITORIAL BOARD</u> LA Times 4/2/2015

Calif. Gov. Jerry Brown did the right thing by ordering statewide mandatory water cutbacks amid the drought

Residents of large urban areas have weathered California's current drought, well into its fourth year, without making many substantial changes. Los Angeles was shielded from the full impact by water stored in reservoirs. Many Sacramento residents still have no water meters.



Patterns are created and reflected from water receding on the bed of Folsom Lake. As the state ends the fourth-driest water year on record with no guarantee of significant rain and snow this winter, Californians face the prospect of stricter rationing and meager irrigation deliveries. (Allen J. Schaben / Los Angeles Times)

It's different now, and good for Gov. Jerry Brown for saying so — and for doing something about it. The governor used Wednesday's survey of the shockingly paltry Sierra snowpack to underscore the urgent need for water conservation and to impose the first-ever statewide mandatory water cutbacks.

His executive order calling for actions to reduce water consumption 25% follows a rather low-key action last month by the State Water Resources Control Board to restrict lawn watering, home carwashing and other less-necessary uses of California's increasingly scarce commodity. And it precedes an expected announcement, later this month, by the Metropolitan Water District of Southern California that it will ration water among its member agencies, including Los Angeles. Consumer price hikes are likely to follow.

The water delivered by aqueduct to cities is generally referred to as "drinking water," a euphemism that invokes images of health and virtue and obscures the fact that about half of urban water, in Los Angeles and elsewhere, is used to water lawns. What flows from the tap is at least as much garden and parking strip irrigation water — or flushing water or showering water — as it is actual drinking water. That leaves plenty of room for conservation measures with relatively small changes in lifestyle that don't leave urban populations parched.



Given the historic low temperatures and snowfalls that pummeled the eastern U.S. this winter, it might be easy to overlook how devastating California's winter was as well. (Jay Famiglietti)

Los Angeles has grown by about 1 million people since 1970 but today uses about the same amount of water as it did then. Savings were accomplished by a variety of conservation efforts, the greatest of which was simply changing the code requirements for plumbing. Toilets, once the city's biggest guzzlers, became the vanguard of conservation.

There remains a virtual river of water that could be captured by making smarter use of the water we have. Brown announced a rebate program to encourage consumers to replace water-hogging washing machines and other appliances, and that will help.

As the state deals with the drought, there will no doubt be pressure to continue the great water-delivery construction projects of the type that made California grow in the last century. In the short term, though — and perhaps in the long term as well — the most effective projects may come in the form of software to better manage home water use, landscape design to better capture rainwater, and a greater respect for the value of the state's most precious resource.

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Ventura to appeal latest decision in dispute with United Water

City's supplier of groundwater won court ruling

By Arlene Martinez Ventura County Star 4/1/2015

The city of Ventura is appealing a ruling in its ongoing rate dispute with its groundwater supplier.

The Ventura City Council unanimously voted in a closed session Monday night to file the appeal in the case against United Water Conservation District.

The 2nd District Court of Appeal sided last month with United's interpretation of the state water code and property tax laws, ruling it had charged commercial, residential and agricultural customers fair rates.

Ventura has sued over the past four years of groundwater pumping charges, starting with the 201112 fiscal year.

The decision overturned a lower court ruling that had agreed with Ventura's argument that United failed to show that nonagricultural customers received three times the benefit as agricultural customers. United, per the state water code, charges based on a 31 ratio.

The city argued Proposition 218, which set restrictions on when an agency or government body can increase fees, taxes and rates, superseded the water code.

The court of appeal disagreed, saying the pumping charges were neither a tax nor property related fee. "We feel very good about the decision the 2nd Court of Appeal made," United General Manager Michael Solomon said. "We feel it's a strong decision, and we'll see where this goes."

Ventura first will approach the court of appeal to ask whether it will rehear the case, City Attorney Gregory Diaz said. If it declines, the city will ask the state Supreme Court to hear the case.

"We believe the trial court (decision) was the appropriate reading of the law and it was misapplied by the court of appeal," Diaz said.

From the time the city files, the court of appeal has roughly two weeks to decide whether it will rehear the case. The city will file the request this week, Diaz said.

Solomon said he felt the court of appeal issued a "well thought out, well written decision."

Local Briefs VENTURA COUNTY

New names sought for drain channels

If infrastructure catches your fancy, it's time to get creative.

County officials want your help renaming the J Street Drain and the Oxnard Industrial Drain. Both flood control channels carry local runoff to the ocean via the Ormond Beach Lagoon.

The J Street Drain, as its current moniker suggests, runs along J Street in Port Hueneme and Oxnard, from Redwood Street to the coast. The concretelined channel is getting an upgrade to reduce flooding and protect the lagoon.

The Oxnard Industrial Drain starts at Wooley Road and cuts between Saviers Road and Rose Avenue, jogging southwest at Pleasant Valley Road to connect with the lagoon south of the J Street Drain.

The Ventura County Watershed Protection District is looking for suggestions that recognize historical significance and ecological connections to the coastal wetlands.

"We want to bring awareness to where water comes from and how it gets to the Ormond Beach wetlands," said the district's Zoe Carlson.

The district has created a brochure that shows the channels within historical habitats outlined in a study funded by the state Coastal Conservancy. Visit http://www.sfei.org/ projects/venturacountyhistoricalecologystudy for the full study.

Suggestions for drain names can be submitted to Carlson at 6542032 or zoe.carlson@ventura.org.

Suggestions are due by 5 p.m. April 14. Earlier that day, at 10:30 a.m., you can comment on the renaming project before the Ventura County Board of Supervisors at 10:30 a.m.

The public can vote on nominees from April 24 to May 22 at http://vcwatershed.org/surveys.

Staff reports

4/1/2015

Hydrant testing in Oxnard starts today, with discolored water on tap

Ventura County Star Apr 1, 2015



Oxnard residents may notice discolored tap water when the city tests fire hydrants Wednesday and Thursday.

OXNARD, Calif. - Oxnard residents may notice discolored tap water as the city tests fire hydrants Wednesday and Thursday.

The water is safe to drink, city notices say, although the appearance could be "unpleasant."

The high mineral content could also stain laundry, officials warn. They advise those who see discolored water to turn off faucets and wait 20 to 30 minutes until the supply settles. Then run an outdoor faucet until the water is clear. You can capture the supply in a bucket or other container and use it to water plants.

The testing involves measuring pressure and flow in the city's pipelines. That means fire hydrants must be turned on full blast.

The city says it will try to minimize wasted water because of the drought, although residents might notice hydrants discharging water into streets.

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Public safety briefs THOUSAND OAKS

Sheared fire hydrant sends water pouring

The Ventura County Fire Department responded after a vehicle hit a fire hydrant Tuesday in Thousand Oaks, officials said.

The incident was reported about 3:55 p.m. in the 1200 block of Alessandro Drive.

Crews said the fire hydrant had been sheered and water was flowing abundantly.

The city's water company was notified of the incident and fire crews were no longer on the scene, officials said.

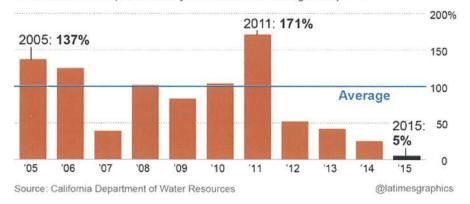
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4/1/15

8 images that explain how bad the California drought has become

California's thin snowpack

Readings taken at about 100 stations Wednesday showed the water content of the Sierra Nevada snowpack was only about 5% of the average for April 1.



By SHELBY GRAD LA Times 4/1/2015

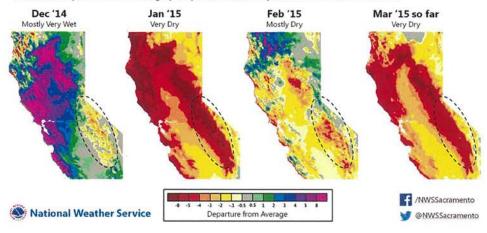
Here are some charts and maps that illustrate the drought and lack of snow in California

Gov. Jerry Brown's sweeping water conservation order Wednesday comes amid more grim news about the state's snowpack.

Electronic readings on Wednesday at about 100 stations across the Sierra Nevada showed that the water content of the snow was only about 5% of the state average for April 1, the date on which the snowpack is normally considered at its peak.

DRY NORCAL WINTER 2015

With the exception of two wet events, this winter has been a dry one for Northern California. This graphic shows the departure from average precipitation. Note in particular the Southern Sierra.



Early data show the snowpack is lower than any year since 1950, when record keeping began. Never before has the amount of water in the snow on April 1 dipped lower than 25% of the historical average for that day.

The snowpack accounts for about 30% of the state's water supply. Other sources, including reservoirs and rainfall totals, have recently improved. Still, officials from the Department of Water Resources say the state of the snowpack, which melts and replenishes California's reservoirs, means there will be virtually no runoff this spring or summer when the rain stops and temperatures rise.

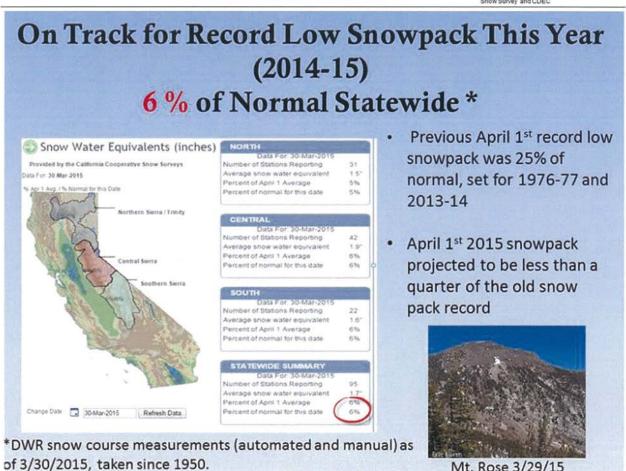
Above, take a look at some maps and charts that illustrate the drought and the lack of snow.

ALSO:

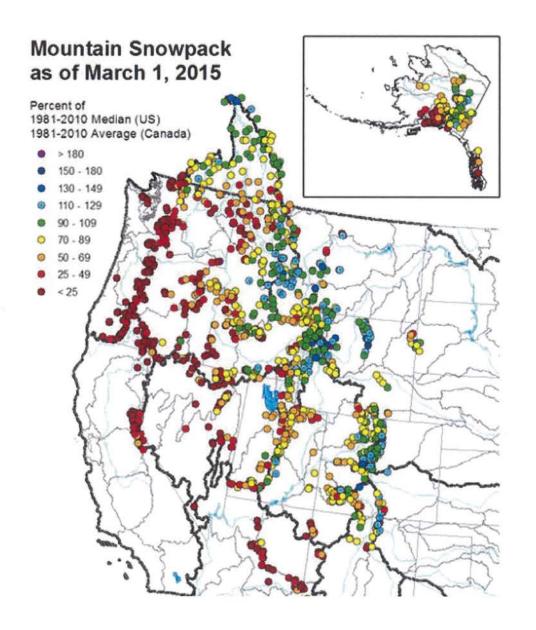
169 drought maps reveal just how thirsty California has become

No, California won't run out of water in a year

How Much Water is There in the CA Snowpack Compared to Last Year? March 12, 2014 March 12, 2015 Normal for this Date % Central Sierra



Mt. Rose 3/29/15



Seattle's Bullitt Center is flush with green features, including toilets



Permanent workstations at the Bullitt Center are all within 30 feet of a window, and the sun is the main source of light. (Steve Ringman / Seattle Times)

By MARIA L. LA GANGA LA Times 3/31/2015

A building in Seattle recycles rainwater, composts waste, adjusts windows automatically. Green with envy yet?

Most building tours do not highlight the sewage system. They don't encourage visitors to flush the toilets. There is no bragging about the path traveled by what are delicately known as biosolids.

But then, most buildings aren't the Bullitt Center, a six-story monument to all things environmentally correct. And these aren't just any toilets.

"This is our composting toilet system," Bullitt Center spokesman Brad Kahn said proudly as he showed off the bright blue, high-tech bins in the bowels of the building Tuesday. "We believe this is the world's only ... six-story composting system in a Class A office building." Class A buildings are considered the highest quality with state-of-the-art systems.

It is by far the most energy-efficient office building in the United States, by almost a factor of two, and one of the most efficient any place in the world.- Bullitt Foundation President Denis Hayes

Ever since the Bullitt Center broke ground four years ago, its owners have been boasting of its deep green credentials. This week, they finally have evidence that the

sleek structure is probably the most environmentally correct building of its type in the world.

During a three-day conference that begins here Wednesday, the International Living Future Institute will announce that the \$32.5-million office building meets standards it says are stricter than those administered by the U.S. Green Building Council, best known for its Leadership in Energy and Environmental Design, or LEED, rating system.

Structures that meet the institute's Living Building Challenge standards — the Bullitt Center the biggest among them — are graded for at least a year on their actual performance in areas including energy consumption and water use.

Jason McLennan, chief executive of the institute, calls the Bullitt Center "revolutionary in many ways." Not only does it meet exacting environmental standards, he said, but it also "has to get normal market rental rates. It has to compete in the market."

"Instead of minimizing environmental damage, we're trying to define what good looks like," McLennan said. The Bullitt building "is a pretty big achievement. It shows how close we are to a fossil-fuel-free world.... People said it's too hard, too expensive. It's nice to prove these people wrong."

Among the building's highlights are 14,303 square feet of solar panels that extend beyond the roofline. There also is an automated window system that is controlled by a computer, which is fed information from a weather system on the roof. When the weather is warm, the windows automatically open at night to cool the building when the sun is down. Window coverings on the building's exterior are raised and lowered to keep glare off tenants' computer screens.

In the average Seattle office building, Kahn said, 30% to 40% of the energy used is for heating and cooling. In comparison, the Bullitt building uses only 2% to 3% of its energy for heating and cooling. Windows are triple-paned for greater insulation.

Permanent workstations are all within 30 feet of a window, and the sun — yes, even in gloomy Seattle — is the main source of light.

As a result, the building far exceeded its goal of zero net energy use, generating 60% more electricity from its solar panels than it used in its first full year of operation — even here in what Bullitt Foundation President Denis Hayes called "the cloudiest major city in the Lower 48 states."

"It is by far the most energy-efficient office building in the United States, by almost a factor of two, and one of the most efficient any place in the world," said Hayes, cofounder of the original Earth Day. The Bullitt Foundation, which financed the building, is based in Seattle and focuses on environmental advocacy in the Pacific Northwest.

Once it is fully approved by public health officials, the Bullitt Center will be the first major office building in the country to capture rainwater from the roof, purify it and use it for all purposes including drinking.

The building is equipped with a 52,000-gallon cistern, which Bullitt officials say is a 104-day supply, enough to get tenants through the dry summer season.

"We're doing this because some day, as a region, we'll have to think about where our water comes from," Kahn said. "That day is getting closer. We wanted to drive that conversation."

Oh, and about the composting toilets?

Every flush mixes between one tablespoon and one cup of water with biodegradable soap into a foam that helps waste make its way through the system more easily. Once that waste enters the blue bins, it hits a series of ramps. A hand crank turns the material, much like a home compost system for a backyard garden.

After 18 months, the compost goes through the King County secondary treatment facility. It is later bagged and sold in garden supply stores as GroCo compost.

"And because no one wants a Class A office building that smells like an outhouse, we're constantly pulling air down through the toilets," Kahn said. "If you sit on a toilet, you can feel a little breeze.

"It's refreshing."

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Funding for water projects dries up

Costs could reach \$600B in next 20 years

By Susan Montoya Bryan Associated Press Ventura County Star 3/31/2015

ALBUQUERQUE, N.M. — A pipeline project intended to bring billions of gallons of water a year to a drought-stricken section of eastern New Mexico represents a lifeline to parched communities that are quickly running out of water.

The lifeline, however, might not reach the region for more than a decade, even though officials say some areas don't have that long before wells dry up.

The slow pace of construction in what would be the state's most expensive infrastructure project to date underscores the challenges faced by a number of states eyeing such projects.

During the widespread drought, officials are struggling to finish large scale water infrastructure projects while populations are growing, drinking water resources are dwindling and federal dollars are diminishing.

The federal government is responsible for paying about \$3 billion to complete several rural water projects around the country. The amount — expected to grow by the time the work is done — represents a fraction of the more than \$600 billion needed to address the nation's water and wastewater needs over the next 20 years.

That has left states and local water authorities scrambling to fill the financial void. Of the many pipeline proposals in the West, one calls for moving water from four remote valleys in eastern Nevada to Las Vegas to reduce the region's reliance on the

Colorado River. Others call for piping water from Lake Powell to southeastern Utah and for taking water from Wyoming across Colorado's Front Range and on to Denver.

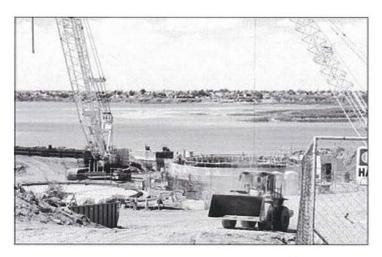
In New Mexico, officials are desperate to head off the shrinking of the Ogallala aquifer, an underground supply of water that stretches through eight states and is being rapidly depleted along the Texas-New Mexico border.

"People are going to have to understand that in the West, that old saying 'whiskey is for drinking, water is for fighting' — that's where we are right now," said Gayla Brumfield, chairwoman of the Eastern New Mexico Water Utility Authority.

Funding for rural projects managed by the Bureau of Reclamation has been shrinking, forcing Brumfield and others to make regular trips to Washington, D.C., to fight for whatever money is left.

In January, Vice President Joe Biden announced steps the administration would take to attract private investment. He told reporters: "It's one of the hardest things to deal with because it costs so much money, and it is not anything that the people can see."

The federal Bureau of Reclamation has about \$36 million for rural water projects for the next fiscal year. In its most recent analysis, the agency estimates the projects could be completed by 2029 with a total federal investment of about \$3 billion.



Construction crews in Logan, N.M., work in May 2014 on the first of a \$550 million pipeline project. New Mexico officials are desperate to head off the shrinking of the Ogallala aquifer, which is being rapidly depleted along the Texas-New Mexico border ASSOCIATED PRESS FILE

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Tribe fights Coachella Valley water agencies for aquifer rights



Irrigation water floods the floor of a date palm grove in the Coachella Valley. (Don Bartletti / Los Angeles Times)

By MATT STEVENS L A Times 3/31/2015

Worried about their aquifer's future, the Agua Caliente Band of Cahuilla Indians is suing two water agencies

In drought-ravaged California, the vast freshwater aquifer beneath the Coachella Valley is a rare bright spot.

The U.S. Geological Survey once tried to measure how much water it held but gave up because the supply was so plentiful.

But there is growing concern by some that local water agencies are drawing too much out of the aquifer, which supplies water for more than 260,000 people. The two water providers that control the aquifer, the Coachella Valley Water District and the Desert Water Agency, acknowledge that they have drawn down the water supply but say they replace some of it with water from the Colorado River.

That's not enough for some critics, including leaders of an Indian tribe that is now suing to wrestle water rights from the districts.

It's one of several legal disputes over water being fought across California, fueled by a drought that is making groundwater a more precious resource than ever.



Coachella Valley Water District zanjero Ken Gray kneels at a flume at a water-replenishment basin. (Don Bartletti / Los Angeles Times)

"No one cares about water rights except when there's a shortage — and then people care a whole lot in a hurry," said water law expert Eric L. Garner. "If there's a shortage, you tend to get some finger-pointing. And, frankly, this drought is scary."

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The Coachella Valley's aquifer sits partly under tribal land controlled by the Agua Caliente Band of Cahuilla Indians.

Tribal chairman Jeff L. Grubbe passed his childhood days playing tag in these canyons, where majestic rocks and wavy palm trees shaded him from the relentless desert sun. He didn't think twice about slurping up the reservation's clean tap water after a day tramping through the dirt.

But these days, Grubbe says, the tap water doesn't taste as good, because the Colorado River water being pumped into aquifers is not as pure as the groundwater. He and others worry the water districts are using too much water, creating the possibility of shortages for future generations.

Grubbe and his tribe filed suit against the two districts in 2013, asking a court to recognize its water rights and give its members a say in how the water is managed.

In court documents, the tribe argues that because the reservation was established by executive order in 1876, it has rights to groundwater "sufficient to accomplish the purposes of the Reservation." The tribe contends it should get a formal say on decisions about how to distribute and protect the dwindling resource.

The water agencies dispute that the tribe has or needs "reserved rights," and in legal documents they deny that they are wasting or contaminating the water.

Earlier this month, a U.S. district judge ruled on the first part of the tribe's lawsuit, declaring that it has reserved rights to the groundwater. In coming months, the court will also decide whether to stop the local water agencies from taking more water from the aquifer than they put back in and whether to prevent them from recharging it with Colorado River water, as the tribe demands.

The U.S. Department of Justice had filed a complaint supporting the tribe, requesting that the court acknowledge its water rights and prevent the water agencies from overdrafting.

The water agencies Monday filed a petition for permission to appeal the court's initial ruling. They say that Colorado River water meets drinking standards and that treating it would drive up customers' bills by as much as \$450 annually.

There is much dispute about whether the districts are pumping out too much water, which supplies Coachella Valley. The water goes to 120 golf courses that suck up 37 billion gallons annually.

The Coachella Valley Water District has taken out more water than it has put back in from the Colorado River all but five years since 1990, according to district data.

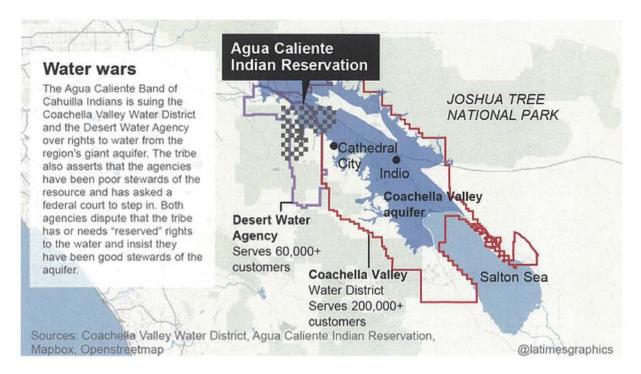
But officials say that's not a major problem because the water supply is so vast.

"We're not in a situation where the groundwater supply is in any immediate jeopardy," said district spokesman Jack Porrelli. "But that doesn't mean we don't take it seriously."

Officials also note that the rate of annual overdraft is slowing, in part, because water use is decreasing. In a 2014 report, Coachella Valley Water District officials predicted that overdrafting could be eliminated by 2021 if reductions continue.

The tribe, citing Coachella Valley Water District statistics, says the aquifer lost about 35 billion gallons of water each year between 2000 and 2009.

The tribe is among the water districts' customers. About 70% of its more than 450 members still live on the reservation. The tribe also employs about 2,500 people who help run casinos, golf courses and other businesses. A breakdown in communication and concern about water scarcity prompted the tribe to file suit, Grubbe said.



Priya Krishnakumar

"The water agencies didn't respect the tribe's claims to water rights at all," he said. "We wanted to have a voice."

At times, the dispute has become testy.

In one Coachella Valley Water District news release, an official said the tribe used "scare tactics and makes false accusations in an attempt to take away the public's water rights." In a tribe statement, Grubbe called the agency arrogant and said its statements were "rife with fabrications, lies and misstatements."

Legal water warfare is being waged in courtrooms elsewhere in Southern California too.

A battle over an unregulated Antelope Valley basin wound through the courts for 15 years until water providers announced a settlement this month outlining how the aquifer will be managed.

In San Bernardino, water agencies have been fighting over the Rialto-Colton groundwater basin since 2013. A decades-old court decree limits pumping from the basin during times of drought, and a group of local agencies sued Fontana Water Co., alleging it has been pumping more water than the decree allowed.

New groundwater laws passed last year could bring yet another wave of water litigation.

The laws, which require local agencies to create groundwater management plans, apply to hundreds of groundwater basins that are not already subject to court orders, experts

said. And in Central and Northern California, where far fewer aquifers have been divvied up, the new rules are likely to ignite additional fights.

It will take years for new plans to develop, but when they do, some parties are likely to feel slighted. There will be arguments over pumping limits, over which local agencies will make decisions, and over who can impose fees and how much, said Henry S. Weinstock, an attorney representing the Fontana Water Co. in its case.

"Things are heating up," Weinstock said. "Water lawyers are already more busy than they were a few years ago."

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LETTERS

Drinking water needed

Gloria M. Krafft, Ventura

Too many people don't seem to worry about drinkable water becoming extremely rare. Too many green lawns, flowers, fruit and vegetable gardens. Also too many acres of thirsty strawberries and other heavy drinkers we like to eat.

Our governments have all sorts of costly "fixes" that woulddomore to make their supporters richer than to supply something to drink; like building dams on streams and rivers where a mere trickle might puddle up.

It's expensivetobuild water treatment facilities that clean used water, but it can be done. It is being done in a few places. I remember years ago when the head of a water treatment plant that had been upgraded filled a glass from the final product and drank it.

Political decision-makers should stop pandering to their gift-givers and develop projects that have been proved to work. Willweever be able to elect officials who will work for the majority?

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3/30/2015

Through historical droughts, acanthus lives on

By Maureen Gil Mer Tribune news service (Tns) Ventura County Star 3/29/2015

As a second generation native of dry Los Angeles, the plants that stand out in my memory are those that have survived our periodic droughts. Many of these were remnants of earlier eras — first the beloved species of the pueblo's Victorian gardener, then the bungalow era. These homes define my half-century-old memories, those hulking dark wood homes that featured the beautiful craftsmanship and the naturalistic imagery of the art nouveau years.

I have always equated a certain perennial with the craftsman style bungalow, one that seemed everywhere in my life, an herbaceous perennial with great stalks of bloom far more urban and elegant than that of rural hollyhock. The plant that grew next door to our home in swanky Hancock Park was Acanthus mollis, a dark green beauty that seems unfazed by a perpetual stream of droughts. They grew most often in the side yards between stucco Spanish bungalows or the English cottage style homes just off Highland Avenue.

In these side yards, the great broad leaves of acanthus are protected from hot Santa Ana winds that tear through LA, igniting the worst of our firestorms. Hot wind is brutal on large thin leaves, tattering them to crispy ribbons. Those acanthus plants that did survive became well established in these enclaves, their traveling rhizomes spreading underground to create massive strips or colonies.

Their prevalence is due to early residents who shared their newfound exotics with neighbors, or their hired gardeners did when planters were thinned or cleared of these often invasive species. But when a plant can survive when drought cuts perennials to the ground like frost, it deserves a second look.

It was a surprise to visit Rome and find this familiar perennial happy in the dry unkempt ruins of the eternal city. It may have originated in Greece, and like so much of that classical culture, it was borrowed by the Romans later on. The ancient story of its genesis tells of a classical architect who found an acanthus in a graveyard growing from beneath a basket set upon a grave. He was so taken with the picture of this scrolled leaf and flower stalks he was inspired to design a new capital for the stately columns of Greek architecture. This elaborate capital of Corinth would forever bear the name of Corinthian, a name learned by every young student of architecture today.

In these years of drought in the West, I return to its miraculous survival at abandoned homes in the oldest, most derelict parts of LA. Today these enclaves of vintage architecture are being reborn, and no other plant is as suitable to the craftsman era as this one. After all, acanthus experienced its own renaissance in art nouveau, wherein natural plant forms proved the popular inspiration.

While so many of the thirsty plants in California homes are fading or being ripped out in lieu of exotic succulent drama, the succulents do not abide deep shade. Yet acanthus thrived in shady and sheltered locations, most often the side yards between old multistory homes. Roots removed can be obtained for next to nothing and then recycled

into new yards to create lush deep green beauty for free. Nothing is better for north side foundation planting where the tall flower stalks rise up to window height, where they can be enjoyed from indoors. As an herbaceous perennial, acanthus will not crack or heave paving and foundations like woody plants.

In time, the rains will return as they always have. A gardener will trim its ranginess to something more manageable, then spade up the remnants and share them with others on her block. Once again that ancient plant I love will grace another generation who, like the previous gardeners before, must learn the truth of Southern California. It is a desert, like the one in Corinth, and Carthage and Cartagena, a land of little rain that graces us with decades of plenty, always followed by inevitable years of drought.

Maureen Gilmer is an author, horticulturist and landscape designer. Learn more at www.MoPlants.com. Contact her at mogilmer@yahoo.com or P.O. Box 891, Morongo Valley, CA 92256. 2015 Tribune Content Agency, LLC Distributed by Tribune Content

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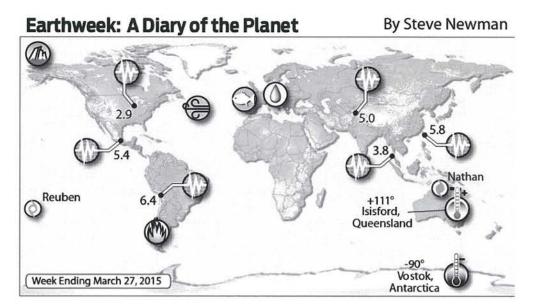


Acanthus grows like weeds in the crumbling ruins outside the Colosseum in Rome's Mediterranean climate. Photos courtesy of tNs



The tall spires of muted flower colors are strong forms yet subtle and elegant.

Science & Environment



Water Warnings

The United Nations says the world is on the brink of at least a 40 percent shortfall in water supplies due to climate change and an accelerated use of the precious commodity to feed a surging global population. A report by the world body says that the demand for water will exceed its rate of replenishment by 40 percent in just the next 15 years. "The fact is, there is enough water to meet the world's needs, but not without dramatically changing the way water is used, managed and shared," the report says. It points to improvident use of rapidly disappearing groundwater sources, pollution and erratic weather patterns caused by manmade climate change as the major challenges for future water

Ventura County Star 3/29/2015

Local Briefs

Oxnard

Discolored water is still safe to drink

Oxnard residents may notice discolored tap water starting Monday as the city tests fire hydrants.

The water is safe to drink, according to notices mailed to residents, although the appearance could be "unpleasant."

The high mineral content could also stain laundry, officials warn. They advise those who notice discolored water to turn off faucets and wait 20 to 30 minutes until the supply settles. Then run an outdoor faucet until the water is clear. You can capture that supply in a bucket or other container and use it to water plants.

The hydrant testing to be done during the week of March 30 involves measuring pressure and flow in the city's pipelines. That means hydrants must be turned on full blast.

The city says it will try to minimize wasted water because of the current drought, although residents might notice hydrants discharging water into streets.

Staff reports

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3/29/2015

GUEST COLUMNIST

Ventura needs moratorium on water connections

Robert Chianese Ventura County Star 3/29/2015

When we look at the big picture, it quickly becomes apparent how much pain the drought and new higher water rates could cause if we do not concurrently establish a moratorium on water connections.

We need to remember that 4,289 additional residential units are already in the "pipeline" (strange word here) to be built in Ventura, and Ventura already needs emergency water from Oxnard wells.

Obviously, the City Council needs to halt additional new residential development when our water supply cannot meet existing demand.

The big picture has Ventura's businesses suffering because residents have lost expendable income to drought-driven higher water rates even after substantial household reductions.

The big picture foresees a significant loss of tourism because we give new development priority over keeping our parks, trees and street medians alive with our limited, drought-depleted water resources.

The big picture includes imaginative use and city support of expensive xeriscaped redesigns to conserve water for existing residences.

The big picture has huge future capital costs placed on city taxpayers to replant, reseed and redesign our city's green spaces, our parks, playing fields and our urban landscape, once again employing water-stingy installations where possible.

Give us maintained parks and trees and medians over new development.

Give us attractive city landscapes that draw tourism over new development.

Give us full occupancy in hotels and restaurants over new development.

Give us higher property values because landscapes are not dead or dying over new development.

Give us citizens with expendable income and merchants with full tills over new development.

Give us good sales tax, hotel tax and property tax revenues that help keep the city safe and maintained over new development.

Give us a diverse and lively city that has lower-income working families and fixed-income seniors still able to afford their water bills over new development.

The Camarillo City Council has just rescinded a building permit for a 290-unit housing development based on its water shortage and a strategic assessment that the city is already built out enough.

Ventura needs common sense policies in place that, when the city's water supply cannot meet existing demand, require halting development of new projects that draw down the system even more.

Furthermore, we need to wean ourselves from supporting ongoing city services with new development fees (which then prompt more city services).

We are a 90 percent built-out city, and at this point in our growth, that model is not a sustainable one, just as our current water policy is out of date with contemporary climate realities.

Robert Louis Chianese, of Ventura, is a past president of the American Association for the Advancement of Science, Pacific Division.

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3/29/2015

Brown Signs drought law

Bill speeds spending on infrastructure

By Fenit Nirappil 3/28/2015 Ventura County Star Associated Press

SACRAMENTO — Gov. Jerry Brown signed legislation Friday that speeds up \$1 billion in water infrastructure spending amid the worst drought in a generation, although much of the plan was drawn with future dry years in mind.

"This funding is just one piece of a much larger effort to help those most impacted by the drought and prepare the state for an uncertain future," Brown, a Democrat, said in a statement. But headed that no area of the state has rain in the forecast "and every Californian must be doing their utmost to conserve water."

The bills he signed, AB 91 and AB 92, will offer some aid to residents hurt by the drought, but the vast majority is expedited spending on water infrastructure. The projects will take months or even years to make a difference in California's vast water delivery system, which is struggling under a fourth year of little snow and rain in the nation's most populous state.

Nearly two-thirds, or \$660 million, of the water package goes to shore up flood protection structures to prevent mudslides and sudden storms from overtaking communities. Voters first approved this spending in 2006 after Hurricane Katrina.

An additional \$267 million from a water measure approved at the ballot last year would help boost local water supplies. It would fund grants for water recycling programs and help small and poor cities provide drinking water by funding new wells and wastewater treatment facilities.

Lawmakers said they need to kick start water projects early, especially as fear mounts that California is in the middle of a long term "mega drought."

"Part of it is about preparing for tomorrow and the continuing drought if it gets worse," Assembly Speaker Toni Atkins, D San Diego, said after the vote Thursday. "I hope this is not the new normal, but we need to act as if it is."

Republican lawmakers, who mostly supported the \$1 billion plan, say the best way to deal with California's long-term water woes is by speeding up construction of reservoirs. Voters last year approved \$2.7 billion for water storage as part of a sweeping bond measure, but eligible projects may not be chosen until 2022.

"We have to work together to expedite projects that will increase long term supply," said Assembly Minority Leader Kristin Olsen, a Modesto-area Republican.



Volunteers appeal to community members for donations at the Porterville Water challenge in September. Several locals started their own water challenges to help east Porterville area residents whose well went dry for months. A plan to pump \$1 billion of water spending into drought-stricken California got Gov. Jerry Brown's signature Friday. Associated Press file

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3/28/2015

5THINGSTOKNOWABOUTTHE \$1 BILLIONWATER LEGISLATION

By The Associated Press Ventura County Star 3/28/2015

SACRAMENTO— Gov. Jerry Brown on Friday announced that he signed legislation speeding up \$1 billion in water spending in drought stricken California. The bills were fast-tracked in response to the state's fourth dry year.

Some key things to know about the legislation:

WHEREDOESTHE MONEYGO?

The money is divided into three areas of water infrastructure: \$660 million for flood-protection projects, \$132 million for water recycling projects, and \$135.5 million to make more drinking water available in small and poor communities. There's no list of which cities and plants will benefit because state agencies will decide later.

SO WHAT'S THE RUSH?

Lawmakers said the ongoing drought forced them to act quickly, although the projects they're paying for will take months or years before they boost local water supplies. Communities can start applying this spring.

WHYSPENDON FLOODS IN A DROUGHT?

Brown says extreme weather means that sudden storms can overtake communities, even in dry years, and flood safeguards protect drinking water supplies. But there's another reason: Lawmakers have until summer 2016 to set aside leftover money from a bond measure approved after Hurricane Katrina to help prevent mudslides, levee failures and flash floods in California.

WHAT ABOUT THE CURRENT DROUGHT?

The proposal was called "emergency drought legislation," but only a small portion offers immediate relief to drought victims: \$24 million to food banks in communities where farmworkers are losing jobs as fields go fallow, \$20 million for emergency drinking water in communities where wells are going dry, and \$16 million to protect fish and wildlife threatened by vanishing streams.

WHAT'S CONTROVERSIAL?

State rangers can fine people who illegally take water from streams and rivers, particularly for marijuana farms, up to \$8,000 per day. Republicans who supported the funding plan objected to this provision, saying property owners and farmers may get unfairly penalized.

Community



Classes Teach How to Let Go of Your Lawn

Las Virgenes Municipal Water District is offering two free classes on garden "re-design."

Learn how to replace your lawn with water saving landscaping. In the courses you will learn strategies for lawn removal, garden design, the challenges and solutions inherent, and a list of watershed wise plants.

G3-certified sustainable landscape professionals Marianne Simon of Poetic Plantings and Marilee Kuhlman of Comfort Zones Garden Design will be on hand to guide you through the process.

Courses will be offered Thursday, April 9 and Thursday, April 16 from 6 to 8 pm. A light supper will be served. Register online at www.lvmwd.com/forcustomers/conservation/gardenclasses.

For more information call the Water District at 251-2100.

Free Garden re Design Workshop Series

Thursday, April 9 and April 16, 6:00 - 8:00 pm

Want to replace your lawn with a beautiful water-saving garden but don't know how? Learn how to create your own landscape design!

In this two-part series, we'll begin with strategies for lawn removal and follow with critical steps for successful garden design. You will develop design objectives, identify challenges and solutions, create a "Watershed Wise" list of plants and learn how to apply key design principles.

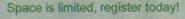


As part of this workshop, G3 Certified Sustainable

Landscape Professionals Marianne Simon of Poetic Plantings and Marilee Kuhlman of Comfort Zones

Garden Designs will be available to offer suggestions and recommendations for designing your

personal garden at the end of each class.





How to Register

When registering for this class, you will automatically be signed up for both dates. Please double check your calendar to be sure you are available for both Thursday classes.

Register online at www.LVMWD.com / For Customers / Conservation / Garden Classes.

Due to the high demand for these classes, preference is given to LVMWD customers; walk-ins will not be admitted.

Problems registering online? Call 818-251-2100 during business hours.

A complimentary light meal will be provided at each class.



www.LVMWD.com



http://www.lvmwd.com/ for-customers/conservation/garden-classes