

NEWS CLIPS

Published December 18, 2014



Resource Conservation and Public Outreach

Organized by date

California drought weakens, forecasters have 'cautious optimism' for future



Brandon Arthur, 10, crawls out of the gooey muddy tailings left by his father Steve Arthur's water well drill site in Terra Bella. (Bob Chamberlin / Los Angeles Times)

By JOSEPH SERNA
LA TIMES 12/19/2014

California's drought condition improves after series of December storms December rain lessens California drought; gives optimism for future, forecasters say

For the first time in five months, a majority of California is no longer considered to be in an exceptional drought, the most severe level possible under federal guidelines, the U.S. Drought Monitor announced Thursday.

About 32% of California, however – most of it in the Central Valley – remains under the exceptional drought category. Last week the total was at more than 55%.

“The wet weather finally allowed ample runoff (while producing stream and river flooding) that raised major reservoir levels...in most of northern and central California,” the report said.

“Cautious optimism, but still a long way to go’ would be the very short summary for this week’s California drought picture,” the report said.

The good news is tempered by the fact that the entire state remains in some degree of drought and more than three-quarters of it, about 78%, is in “extreme” drought, the second-highest category available, the report said.

In addition, the state's major reservoir capacities are still below normal.

California must receive three seasons of above-average rainfall to get back to a "manageable situation," said Jay Famiglietti, senior water cycle scientist of NASA's Jet Propulsion Laboratory in La Cañada Flintridge.

"We need 11 trillion just to get back to our normal, dry conditions," he told The Times on Tuesday.

But with the rainy winter season just beginning, the storms have given California a "foothold for drought recovery" and left open the chance to gradually chip away at three years worth of drought, the report stated.

The third storm of the week is predicted to settle over Southern California on Friday.

Copyright © 2014, Los Angeles Times

Op-Ed

Flood, drought risks must be managed, with or without climate change



A dock sits high and dry at the end of a boat ramp yards away from the edge of Folsom Lake near Sacramento last October. (Rich Pedroncelli / Associated Press)

By ADAM SOBEL AND RICHARD SEAGER
L A TIMES 12/19/2014

California's water allocation system doesn't work in a chronically drought-prone region
Much housing and infrastructure was built in low-lying areas with little or no defense
against rising waters

We're poorly prepared for events like Superstorm Sandy and the California drought,
even in today's climate

In one case a major metropolis was flooded within hours, leaving thousands homeless, millions without power, transportation and businesses shut down, and a mass human crisis. In the other case, three years of sunshine and blue skies have left water supplies at record lows, crops shriveled and, for the most unfortunate, taps dry. It may seem that Superstorm Sandy in the New York area and the current California drought do not have anything in common, but they do. Understanding why can teach us how to reduce the future risks we face.

In California and the wider American West and in New York and the Northeast, there is a history of development without regard to environmental risk.

In New York and New Jersey, much housing and critical infrastructure was built in low-lying, flood-prone areas, with little or no defense against rising waters. These include barrier islands (the Rockaways, the Jersey Shore), former coastal wetlands (the areas that flooded in Staten Island, South Brooklyn and Queens) and landfill (the fringe of lower Manhattan).

In California, water has been allocated since the 19th century on a first-come, first-served basis, with no rational pricing — or no price at all. This allocation system was not designed for the current levels of population and agricultural use in a chronically drought-prone region. Agriculture accounts for more than 70% of water use in California, although it is less than 2% of California's economy.

In both cases, it will be challenging to overcome the legacy of poor planning and to move toward a more sustainable future. Powerful interests are vested in the status quo.

In the East, protecting flood-prone areas — whether through physical measures such as flood walls or dunes, or financial ones such as continued government subsidies for flood insurance — will be expensive, while moving people and facilities away from those areas is very difficult politically. In the West, investment is needed to build a sustainable water supply system that meets multiple, competing needs. In the process, those who get large allocations of cheap water stand to lose a lot from any system that distributes it more rationally.

In California and the wider American West and in New York and the Northeast, there is a history of development without regard to environmental risk.

In both cases, human-induced climate change is increasing the risks of future disasters, and reductions in greenhouse gas emissions are critical to avert the worst. Yet neither the drought nor the hurricane can be blamed on the warming to date.

In the New York area, there has been about a foot of sea level rise since preindustrial times, the better part of which is because of the warming climate. That rise added a small but significant increment to Sandy's 9-foot storm surge. Beyond that, current science doesn't justify any strong statements about a role for greenhouse warming in the storm itself. The current drought in California also appears to be largely explainable as a result of natural variability in the climate system.

But we can gain clarity if we understand that many of the actions we need to take to adapt to climate change are similar to ones we would be wise to take even if the climate were not changing.

Climate change is increasing the risks of future droughts and floods. The sea will continue to rise, increasing flood risk along the East Coast, perhaps made worse by intensifying hurricanes. And the best science indicates that California's wet season will become shorter and sharper. Spring drying will be exacerbated as more water is lost to evaporation into a warmer atmosphere and less is stored as winter snow.

There are significant uncertainties in the details of these predictions, including how rapidly they will occur. But certainty is not needed to justify stronger measures to manage the increasing risks of flood and drought. Sandy and the California drought make clear that we are poorly prepared to handle such events when they occur in the current climate, let alone the future climate.

How do we reduce the harm that results when the climate delivers too much or too little water?

First, by bringing science into the political process and not allowing political leaders to duck their responsibilities with "Well, I'm not a scientist" excuses. It also requires the political will to make job-creating public investments in infrastructure upgrades whose payoffs in protection come in the long term.

Building a proper accounting for climate change into these investments would mandate stronger measures than would be needed if the climate were staying constant. That would mean, for example, higher flood barriers or more retreat from inundated coastlines in the East, and stricter water management and more rational allocation in the West.

What nature can throw at us already has us reeling from coast to coast.

Improving on that score now would prepare us better for the graver risks ahead.

Adam Sobel, a professor at Columbia University's Lamont Doherty Earth Observatory and School of Engineering and Applied Sciences, is author of "Storm Surge: Hurricane Sandy, Our Changing Climate, and Extreme Weather of the Past and Future." Richard Seager is a professor at the Lamont Doherty Earth Observatory and the lead author of the NOAA report on the 2011-14 California drought.

Water board reorganizes

The Acorn 12/18/2014



IN SERVICE—Reelected board members Lee Renger, center, and Glen Peterson take the oath of office from Las Virgenes Municipal Water District manager Dave Pedersen. Not pictured is the newly elected Jay Lewitt. **Courtesy of LVMWD**

Las Virgenes Municipal Water District board members were sworn into office at LVMWD's Dec. 9 meeting.

Incumbent board directors Glen Peterson (Division 2) and Lee Renger (Division 3), along with the newly elected Jay Lewitt (Division 5) began new four-year terms.

Lewitt replaces former board member Barry Steinhardt after defeating him in the Nov. 4 election. Incumbent board members Charles Caspary and Leonard Polan continue their terms until December 2016.

Peterson was elected to serve as president of the board.

He joined the LVMWD board in 1987 and is beginning his eighth term. He is a 47-year area resident and was the owner of Cornell Realty, a former member of the Mountains Conservancy Foundation, a treasurer of the Community Center Foundation, a former president of the Las Virgenes Homeowners Federation and a founder of the Friends of Peter Strauss Ranch.

Peterson also represents LVMWD on the board of the Metropolitan Water District of Southern California, a position he has held since 1993.

Renger was appointed to the LVMWD board in October 2005, filling a vacancy. He was then elected in 2006 and is now beginning his third full term of office.

An area resident since 1967, Renger is a retired scientist/ electrical engineer with experience in NASA projects as well as bio-electronics.

While with the Jet Propulsion Laboratory, Renger's NASA experience included work on the Mariner Venus probe. Renger later moved on to biomedicine and is named as an inventor or coinventor on 22 different patents.

Lewitt is a 25-year resident of Agoura Hills, where he lives with his spouse. Born in Los Angeles, Lewitt earned a bachelor's degree at the University of Southern California and a law degree at the Pepperdine University School of Law.

He is the founder and president of Every Promotional Product, a promotional goods firm which is headquartered in Agoura Hills.

Lewitt also served as president of the board at Heschel West Day School. He is a former board member of the Specialty Advertising Association of California.

Rain falls, but water rationing continues

By Becca Whitnall
The Acorn 12/18/2014



HOW DARE THEY!—Vinny, a year-and-a-half-old Vizla, is not happy to find the Oak Park Dog Park closed due to rain on Dec. 12. Below, workers unclog a drain that caused flooding on Agoura Road in Agoura. Courtesy of Rick Neigher

The recent precipitation the area has experienced will help temper the state's water crisis but won't put any major dents in California's record drought.

Despite the rain, local water agencies are putting plans into place to begin rationing water.

"It's still grim at this point, and while we're encouraged by this initial series of storms, we have no reason we shouldn't plan for a dry year," said Eric Bergh, Calleguas Municipal Water District manager of resources.

Calleguas provides water to nearly all of southern Ventura County.

Bergh said the prevailing opinion is the state needs 100 more rainy days like the peak days it had Dec. 3 and 4 to push it out of danger.



MARY MCGINNES/Acorn Newspapers

In a statement issued Dec. 9, Metropolitan Water District, which distributes water to Calleguas and 25 other agencies, announced its updated allocation plan, initially drafted

in 2008. The plan outlines distribution to its member agencies during shortages and establishes a surcharge for excess water use.

MWD chair Randy Record said restricting supplies is a tough decision and one of the hardest things the water board has to do.

“By taking this action today, we are better prepared to manage water shortages should the situation worsen,” he said.

The revisions end nearly six months of discussion, collaboration and negotiation among Metropolitan, its member agencies and affected local purveyors.

According to Metropolitan’s statement, the board could consider triggering the allocations as early as the first quarter of 2015 if the drought continues.

“The bottom line is the purveyors are all going to take a hit and they’re going to have to pass it down to the customer level. If you exceed your allocation, you pay the penalty rate,” he said.

During the last major drought in 2008 and 2009, Calleguas didn’t have to assess any penalties.

“People really stepped up,” Bergh said.

He said it may be harder for people to stay below the threshold this time because they’re already using conservation methods learned during the last drought. Water use is still down between 13 and 14 percent from then, he said.

Though cutting back further may be difficult, Bergh said, there are ways customers can conserve and there’s even rebate money available. Metropolitan’s board has boosted funding for watersaving rebates from \$20 million to \$100 million this year.

Residential products qualifying for rebates include high efficiency washing machines and toilets, weather-based irrigation controllers, rotating sprinkler nozzles, soil moisture sensor systems and rain barrels. Calleguas and Metropolitan also offer a turf replacement rebate program for those removing grass from their yards and replacing it with drought-resistant plants or other approved landscape options.

For more information about the rebate programs, visit www.socalwatersmart.com.

Bergh offered a simple suggestion for cutting water use: shut down the irrigation for a week or two if it rains.

“If your soil is damp or wet an inch down, you’re good to go,” he said.

[Return to top](#)

Local briefs

THOUSAND OAKS

Water main break dampens park fun

Weekend events planned for Wildwood Park in Thousand Oaks have been canceled after a water main break damaged some facilities.

A break in a 39-inch pipe on Monday caused water to shoot up into the air for about an hour.

After assessing the damage, officials from the Conejo Recreation and Park District decided Tuesday to close Indian Creek Trail and the trail between Wildwood Neighborhood Park and Wildwood Regional Park. It is not known when the trails will reopen.

"It has washed quite a bit of the hillside away," said Matt Kouba, parks superintendent.

Weekend events, including a s'mores hike, the Saturday Outdoor Adventure Club, the Hike 'n' a Movie featuring "The Polar Express" and an archery class are all canceled.

Kouba said the restroom and storage facilities have been inundated with more than 4 feet of mud.

"There's no easy way to get in there with a bulldozer," Kouba said. "The area is extremely muddy."

Staff reports

Copyright © 2014 Ventura County Star 12/17/2014

Government is being a drip on the drought

George Skelton

LOS ANGELES TIMES



A Pacific Sod field is flooded in Oxnard as a major storm moves through the Southland on Dec. 12. (Anne Cusack, Los Angeles Times)

California's recent rainstorms should be praised, not downplayed

There are two things very annoying about the deluges that have been drenching California. And neither involves nature.

Both involve government.

One is that the downpours are routinely dismissed by bureaucrats and water professionals as not very important. It would have to rain buckets for 40 days and 40 nights to be meaningful, we're invariably told.

Comments like this: "It takes a long time to get out of a drought this severe.... It will take at least months of above-normal rain."

And: "Rainfall would have to duplicate what we're seeing this week and last week over and over again."

Yeah, we get it. But how about showing some gratitude for the heavenly gifts? Reflecting what I suspect is the dominant public mood of optimism and cheer? Water managers should be grateful for the good fortune and shouting, "Thank you, Lord."

Instead — and this is my second gripe — they keep talking down to us like we're children. Like we can't see what's falling from the sky. They keep spinning a drought.

As I'm writing this, hydrologists are predicting that the big, broad Sacramento River will rise 8 feet at the capital city within two days because of rampaging stream runoffs. Even before the last storm, the normally green-hued river was running chocolate brown from mud flows.

Highways have closed because of flooding. Cars have been hydroplaning and been swept off roads. Creeks are leaping their banks. The Los Angeles River has become a real river.

That's hardly a drought. My Webster's defines drought as "a period of dryness, especially when prolonged."

Yes, I know. It's the driest three-year period in four decades. But it hardly has been dry lately. Come up with a better word, one between drought and flood, something that doesn't keep corrupting the English language and eroding government credibility.

How about simply calling it a water shortage?

It's true, the big reservoirs are still way down. Shasta — California's largest — was at 30% capacity Friday. Oroville, 31%; Trinity, 28%; Folsom, 36%. But Diamond Valley near Hemet was half full.

In Northern California, there was enough water flowing into the Sacramento-San Joaquin River Delta that state and federal agencies were pumping the legal limit into the south-bound aqueducts: 11,300 cubic feet per second. Think 11,300 basketballs each second. Much of that was being dumped into San Luis Reservoir, only 29% full last week.

What's really aggravating — and a turnoff for the ears — is being continually lectured about conservation. About the need to turn off faucets, limit showers and flushing, rip out lawns and keep cars filthy.

Yes, conservation is important now and in the future. But be intellectually honest about it.

The reason droughts hardly ever officially end is because they're seen by government minds as necessary to shape public policy and achieve a political agenda. Drought is a scary, motivating word.

But hey, government people, we voters just approved a \$7.5-billion water bond. Get cracking on spending that money for worthwhile projects.

There's \$2.7 billion available for water storage projects, presumably dams. It'll take at least three years, I'm told, to choose the projects and commence construction.

Most of the other billions are for such sorely needed local projects as wastewater management, storm water capture, groundwater cleanup and recycling. Local agencies need to expedite their project priorities and apply for state grants.

Also, Gov. Jerry Brown and the Legislature finally this year enacted legislation to eventually regulate California's rapidly declining groundwater. That will mainly be a chore for local agencies, and they need to hurry it up. This is the only western state, unbelievably, that doesn't manage groundwater. You can sink wells willy-nilly.

When are Brown and the Legislature, incidentally, going to get serious about desalination? Some local communities — particularly San Diego — are starting to. State government has been lagging.

And if California is to ever truly meet its water needs without further stealing from one region — the Owens Valley, the delta — for the benefit of essentially arid lands, it eventually must reprioritize water usage and regulate crops.

Government long has regulated land use for shopping malls, factories and dumps. Why not also for crops based on their water use? Agriculture claims 80% of the state's developed water. And 55% of exported delta water goes to two irrigation districts in the San Joaquin Valley.

But "farm production and food processing only generate about 2% of California's gross state product," according to the Public Policy Institute of California.

With row crops — vegetables — the land can be fallowed during a drought. Not so with orchards. Almonds especially are water-gulpers and they've proliferated to 940,000 acres, mainly in the San Joaquin Valley. One estimate is that it takes more than a gallon of water to grow a single almond.

You also can add pistachios and wine grapes to water-sucking crops that can't be fallowed. They're all cool when there's ample water. When not, some rural folks are forced to haul in their own water for cooking and cleaning. That's not sustainable politically or socially.

Meanwhile, stop preaching to me about fallowing my little lawn.

Shout hallelujah, what a glorious day in California! It's raining in sheets. Praise the Lord.

Shush the Bah Humbug.

george.skelton@latimes.com Copyright © 2014, Los Angeles Times

Readers React

Re-thinking how we talk about California's drought

LA Times 12/17/2014

To the editor: George Skelton rightfully harangues California officials for their framing of the water issues facing the state. (["Government is being a drip on the drought," Dec. 14](#))

Perhaps a more uplifting approach by those writing about and dealing with the drought would be to look at the reservoirs, long described as perilously growing more and more empty, in a more positive light. With the recent rains, we should talk of the reservoirs as being half-full instead of half-empty.

Both viewpoints are true, but only one puts the problem in a more positive perspective and celebrates the progress made with more rain and our efforts in dealing with California's water woes.

Michael Bruen, Valley Village

..

To the editor: Skelton thinks California shouldn't produce almonds for export because they require lots of water. It also generates 97,000 Central Valley jobs and \$11 billion for California's economy. We should be proud that America produces something the world wants.

We bemoan America's trade deficit and we celebrate other industries that produce something desired around the globe. Silicon Valley's microchips require a lot of water to make; about 10 gallons for one chip.

In February, President Obama said, "Over the past five years, thanks to the hard work and know-how of America's farmers, the best in the world, we've had the strongest stretch of farm exports in our history," adding, "What we grow here and what we sell is a huge boost to the entire economy, but particularly the rural economy."

Skelton may want to think more about the farmworkers, farmers and communities who created this American success story.

Tom Nassif, Irvine

The writer is president and chief executive of Western Growers.

..

To the editor: Sounding much like the prodigal son, Skelton wants permission for us all to return to our wasteful water ways.

Apparently, he does not read his own newspaper if he does not understand that a few rainstorms overnight cannot cure a crippling drought any more than a few meals can save a starving man.

Kathy Harty, Sierra Madre

Follow the Opinion section on Twitter [@latimesopinion](https://twitter.com/latimesopinion)

Copyright © 2014, Los Angeles Times

Earthquake could destroy L.A.'s water lifeline



Water flows through the Los Angeles Aqueduct in Sylmar. (Brian van der Brug, Los Angeles Times)

By ROSANNA XIA AND RONG-GONG LIN II
LA TIMES 12/16/2014

Mayor Eric Garcetti seeks proposals to strengthen 3 aqueducts carrying water to Southern California

Los Angeles gets 88% of its water from three major aqueducts, flowing from the Colorado River, Owens Valley and the Sacramento-San Joaquin River Delta.

But as they make their way into the region, the aqueducts cross the San Andreas fault a total of 32 times.

Officials have long warned that a massive temblor on the San Andreas could destroy key sections of the aqueducts, cutting off the water supply for more than 22 million people in Southern California.

L.A. officials are for the first time taking concrete steps to address the problem. Making L.A.'s water supply less vulnerable in a huge quake will probably cost billions, and it remains unclear where that money would come from.

How an earthquake can sever an aqueduct

Aqueducts: Tunnels can carry water into the city through a mountain range.

Slip: An earthquake causes one block of earth to move from the other, slicing the tunnel in half.

Dip: The movement can also occur vertically. The tunnel is dammed up and can suffer a collapse.



Source: Times reporting, U.S. Geological Survey

Doug Stevens / @latimesgraphics

Mayor Eric Garcetti has asked for proposals aimed at better protecting the water supply and developing alternatives in case a quake blocks the aqueducts. The ideas range from strengthening the waterways to developing an emergency supply for firefighters using ocean water and reclaimed water.

Los Angeles is behind the San Francisco Bay Area in this effort.

The East Bay Municipal Utility District has built backup tunnels, stronger pipes and new waterways to ensure water continues flowing from the Sierra Nevada even if one of its three main aqueducts is blocked. The efforts have cost more than \$350 million, paid for by water customers, bonds and government grants.

The San Francisco Public Utilities Commission built a new water tunnel under San Francisco Bay and even installed a specially designed pipe that crosses the Hayward fault. The pipe is connected by accordion-like joints that allow it to flex and swing, even as a quake moves the earth in two directions. The projects are part of a \$4.8-billion effort funded by a surcharge on water bills.

Compared with other large cities, Los Angeles is critically dependent on water sources far from the city center, said U.S. Geological Survey seismologist Lucy Jones, the mayor's science advisor on earthquake safety.

"We're the first city that's really bet its life on outside water," Jones said. "We have to cross the faults. There's no way to not go over the fault."

Garcetti acknowledged that the high cost of the water projects, along with his proposals to retrofit thousands of vulnerable buildings and preserve access to the Internet after an

earthquake, would have a total price tag in the billions. But failing to act now will exact an even greater toll economically after the Big One hits.

Water is "one of L.A.'s greatest earthquake vulnerabilities," Garcetti said. "If it were to take six months to get our water system back ... residents and businesses would be forced to relocate for so long that they might never come back."



Thomas Suh Lauder

A first step would be for the three agencies that manage the Los Angeles, California and Colorado River aqueducts to work together to come up with an earthquake retrofit plan.

Another would be to add fire hydrants to a recycled water pipe system already being planned for certain parts of the city to irrigate golf courses and parks. The "purple pipe" system would be connected to treatment plants that sanitize wastewater. Equipped with quake-proof pipes, the system could act as a backup water system like the one San Francisco built after the 1906 earthquake.

After the 1994 Northridge quake, hydrants ran dry in large swaths of the San Fernando Valley, forcing firefighters to switch to water-dropping helicopters using swimming pool water to fight blazes.

None of the aqueducts have gone through a large San Andreas earthquake in Southern California. The last time the fault unleashed a Big One in the Southland was in 1857, when a magnitude 7.9 earthquake hit.

The Los Angeles Aqueduct, built a century ago by William Mulholland, crosses the San Andreas fault through the five-mile Elizabeth Tunnel under the mountains north of Santa Clarita. Experts said the San Andreas fault can move as much as 33 feet in a big earthquake and could slice the tunnel, dam it up and collapse some of its concrete sections.

The most expensive solutions include building a wider, stronger tunnel; another is to use electricity to pump water over the mountains toward L.A. But the Department of Water and Power hasn't had the resources to extensively study various retrofit options until now, said Craig Davis, an earthquake engineering expert for the utility.

The DWP has already begun sketching out an interim solution — placing a 3-foot-wide, strong plastic pipe through the tunnel. Even if the tunnel collapses, it's hoped the plastic pipe might keep enough of the passageway intact to keep some water flowing through, Davis said.



Heavy storm clouds roll across the Mojave Desert over Jawbone Canyon and the second Los Angeles Aqueduct, which was built in the 1970s. (Brian van der Brug, Los Angeles Times)

Davis warns that the Edmund G. Brown California Aqueduct could be pulled apart by the San Andreas fault in the Palmdale area, allowing large volumes of water to escape.

The 1940s-era Colorado River Aqueduct has a different problem. A section of the aqueduct in the mountain pass west of Palm Springs could be lifted 13 feet in a San Andreas quake, stopping the water flow. There's no backup pumps there to keep the water moving toward Los Angeles, Davis said.

Representatives for the California and Colorado River aqueducts said they have been studying the seismic vulnerabilities of their systems.

"There should be a serious dialogue among the agencies that are responsible for the three sources of water to Southern California," said Thomas O'Rourke, a Cornell University engineering professor and longtime seismic consultant for the DWP. "Sometimes it's very difficult to go beyond those institutional barriers.... Somebody just has to take it up."

Although authorities have been studying the seismic risks for many years, it was only in about 2008 that water officials began to understand that all three aqueducts could be choked off in the same magnitude-7.8 San Andreas earthquake, based on the research Jones and a large research team published that year.

O'Rourke said the consequences of failure would far exceed the bill to prevent calamity.

"The price tag for protecting the incoming water supply might not be as high as people think," he said, pointing to the projects already completed in the Bay Area.

Garcetti last week instructed city officials to give him a plan by July on many of these issues. He expects the reports to come with proposals for strengthening the Los Angeles Aqueduct, a bond measure to fund water-related seismic safety projects and prioritizing which of L.A.'s century-old pipes should be replaced first with quake-proof pipes.

The mayor also asked for the managers of all three major aqueducts — the DWP, state Department of Water Resources and Metropolitan Water District of Southern California — to begin working together to find a solution.

If nothing is done, Southern California could be left with less than six months of stored water on the L.A. side of the San Andreas fault. It could take more than a year to get all three aqueducts flowing again after a major quake.

"This is a regional issue, with significant infrastructure costs," Garcetti said. "We all know how precious water is these days with our historic drought.... Water is also one of L.A.'s greatest earthquake vulnerabilities, too."

Copyright © 2014, Los Angeles Times

Quagga poses farm worries

Mussels can affect irrigation

By Gretchen Wenner
Ventura County Star 12/16/2014

It's been almost a year since invasive quagga mussels were discovered in Lake Piru, and some farmers are getting worried.

"Pleasant Valley and its growers have invested millions of dollars in pipelines, transmission facilities and irrigation appurtenances, and therefore we cannot allow those facilities to be impaired by the quagga," wrote John Mathews, attorney for the Pleasant Valley County Water District south of Camarillo, in a letter last month to the agency that owns Lake Piru. His letter said Pleasant Valley would be "unwilling to purchase any water that is not quagga-free."

The freshwater coinsized mollusks reproduce rapidly and cluster on pumps, pipes, motors and other infrastructure, creating costly maintenance problems. They have proved almost impossible to eradicate.

Lake Piru was created in the 1950s with construction of the Santa Felicia Dam to manage groundwater supplies for downstream users.

The United Water Conservation District owns the dam, reservoir and major facilities on the Santa Clara River that replenish groundwater for Oxnard Plain farmers and provide some drinking water to Oxnard, Port Hueneme and Naval Base Ventura County.

Some of the water is piped directly from the Santa Clara River to the Pleasant Valley district — which gets roughly 40 percent of its supply, on average, from United, according to Mathews — and to a nearby irrigation pipeline. That so-called surface water is the source of Pleasant Valley's concerns.

The quaggas' microscopic young, known as veligers, could travel in the river water and colonize on pipes and other hard surfaces.

The veligers cannot survive in the ground for long periods, however, so experts believe water pumped from groundwater wells would be safe.

Michael Solomon, United's general manager, said his district has been working with Pleasant Valley on a solution. United plans to put the surface water in the ground and pump it up later. The pumped water might not be available right away because groundwater levels are currently low, but the supply would be quagga-free.

“We’re not going to deliver any surface water to farmers,” Solomon said.

The potential threat to agriculture and drinking water systems is also of “great concern” to the California Department of Fish and Wildlife, according to a United staff report. Solomon said his district is creating a technical panel to explore options that will have state Fish and Wildlife staff as well as representatives from the National Marine Fisheries Service and other federal, state and local agencies.

The infestation at Lake Piru, discovered Dec. 18, 2013, is the first in Ventura County. So far, quagga mussels have also been found below the dam in Lower Piru Creek but not in the Santa Clara River, where little water has flowed this year because of the drought. United is working on plans to deal with further colonization expected downstream.

While quaggas may not have infested — yet — agricultural systems in Southern California, that’s no indication of safety, said Ted Grosholz, a UC Davis professor and Cooperative Extension Service specialist whose expertise includes invasive mussels. Quaggas and their close relatives, zebra mussels, have affected such systems in many other regions, he said.

“The fact they have not infested these areas does not mean they can’t,” Grosholz said. “There is so much evidence from other areas of zebras and quaggas just spreading all over the place.”

Copyright © 2014 Ventura County Star 12/16/2014

The mystery of Earth's water origins deepens

By Seth Borenstein Associated Press
Ventura County Star 12/14/2014

WASHINGTON— The mystery of where Earth's water came from got murkier Wednesday when some astronomers essentially eliminated one of the chief suspects: comets.

Over the past few months, the European Space Agency's Rosetta space probe closely examined the type of comet that some scientists theorized could have brought water to our planet 4 billion years ago. It found water, but the wrong kind.

It was too heavy. One of the first scientific studies from the Rosetta mission found that the comet's water contains more of a hydrogen isotope called deuterium than water on Earth does.

"The question is who brought this water: Was it comets or was it something else?" asked Kathrin Altwegg of the University of Bern in Switzerland, lead author of a study published in the journal Science.

Something else, probably asteroids, Altwegg concluded. But others disagree.

Many scientists have long believed that Earth had water when it first formed, but that it boiled off, so that the water on the planet now had to have come from an outside source.

The findings from Rosetta's mission to the duck-shaped comet 67P/ Churyumov-Gerasimenko complicate not just the question of the origin of Earth's water but our understanding of comets.

While asteroids are a good suspect — they probably had more water on them 4 billion years ago than they do now — another possibility is that Earth kept some of its original water in its crust or in ice at the poles, Altwegg said.

Copyright © 2014 Ventura County Star 12/14/2014

Water plan is stalemated again

Dan Walters
COLUMNIST

Ventura County Star 12/14/2014

As the most severe winter storm in at least a half-decade bore down on California on Tuesday, 3,000 miles away in Washington, the House voted, largely along party lines, for a California drought relief bill.

It was immediately declared dead on arrival in the Senate, and President Barack Obama threatened to veto it.

It is, in other words, gridlock as usual in the nation's capital and, it would appear, gridlock as usual in the nation's largest congressional delegation.

Led by Majority Leader Kevin McCarthy of Bakersfield, Republican members, along with San Joaquin Valley Democrat Jim Costa, voted for the bill, while other California Democrats opposed it.

Afterward, not surprisingly, harsh words were exchanged between the two factions. McCarthy, et al., pointed out that much of the measure mirrored a plan that Democratic Sen. Dianne Feinstein had floated, while Democrats said it was a secretive water grab that would damage the Sacramento-San Joaquin Delta.

It was, in effect, Washington's version of California's internal battle that predates the drought by decades: How much Northern California water should flow southward to San Joaquin Valley farmers and Southern California cities?

The in-state version is over the plan, championed by Gov. Jerry Brown and water users south of the Delta, to bore tunnels beneath the Delta to make such shipments more reliable. Most environmental groups oppose the project as creating the plumbing that could be used to divert so much water that the Delta's fragile environment would be irreparably damaged.

It implies that the stalemate in Washington is not so much over temporarily easing restrictions on water exports due to drought as it is over whether the federal government will participate in the twin tunnels project, and the construction of more water storage facilities, as Brown also wants.

Feinstein, meanwhile, is caught in the middle. She tried, but failed, to forge a compromise. But then she opposed the GOP's drought plan this week.

Republicans have accused her of backing away, disavowing provisions that she had previously proposed, under pressure from fellow Sen. Barbara Boxer and other Democratic liberals, while Boxer has accused Republicans of torpedoing the efforts by

demanding too many changes in environmental protections.

And that's where the issue sits. Not only will there be no immediate drought relief for farmers, but the decades-long battle over more reservoirs, the tunnels and the shipment of water southward will continue indefinitely.

Dan Walters writes for the Sacramento Bee. Follow him on [Twitter@WaltersBee](#).

Copyright © 2014 Ventura County Star 12/14/2014

LETTERS

Drought research

Bill Berger, Ventura

Re: your Dec. 9 article, "Drought: Force may not be man": A study just issued by the National Oceanic and Atmospheric Administration states that there is little or no correlation between global warming and California's present drought.

I guess that one of the 5 percent of the scientists who are not global warming zealots, Richard Seager of Columbia University, says that the drought is a phenomenon that is prone to happen naturally, regardless of what all of us rotten carbonburning folks do. Of course, you will hear the predictable howls from the global warming cabal stating that the author is a crackpot and not a real scientist.

This all raises the question: does this mean that the science is not settled? I am shocked.

Copyright © 2014 Ventura County Star 12/13/2014