

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

December 9, 2016

Correspondence and media coverage of interest between November 23, 2016 and December 9, 2016

Media Coverage

Water Quality

Date: December 6, 2016
Source: Mercury News
Article: Hetch Hetchy work leaves Palo Alto with 'musty' water

Date: December 5, 2016
Source: San Francisco Chronicle
Article: Why has the tap water in San Francisco tasted strange lately?

Water Supply:

Date: December 7, 2016
Source: Daily Post
Article: Thirsty city may get help

Date: December 2, 2016
Source: Water Deeply
Article: The Coming California Drought in 2017

Date: November 30, 2016
Source: Associated Press
Article: Thanks to heavy rains, state may increase water delivery allocations

Date: November 28, 2016
Source: East Bay Times
Article: Rain season off to fast start, but drought worries linger

Water Management:

Date: December 5, 2016
Source: San Francisco Chronicle
Article: Boxer slams water bill rider backed by Feinstein

Date: December 4, 2016
Source: Las Vegas Review Journal
Article: California's new water conservation plan focuses on cities

Date: November 30, 2016
Source: Department of Water Resources
Article: Press Release: State Plan Seeks to Make Water Conservation A Way of Life

Date: November 29, 2016
Source: Capital Public Radio
Article: Concerns Raised Over California's Plan to Provide More Water for Fish

Date: November 29, 2016
Source: Recordnet.com
Article: About that 40 percent number

Date: November 29, 2016
Source: Sacramento Bee
Article: Who likes state's plan to keep more water for fish in California rivers? Practically nobody

Date: November 28, 2016
Source: The Tribune
Article: Initial state water allocation set at 20 percent

Date: November 26, 2016
Source: Modesto Bee
Article: Sides brace for hearing on river flow plan

Date: November 23, 2016
Source: Palo Alto Weekly
Article: Palo Alto looks to boost East Palo Alto's water share

Date: November 23, 2016
Source: Water Deeply
Article: Allocating San Joaquin River Water to the Environment Shows Promise

Hetch Hetchy work leaves Palo Alto with ‘musty’ water

Mercury News | December 6, 2016 | Jacqueline Lee

Palo Alto residents were subject to drinking water in recent days that had “musty” or “earthy” overtones.

City leaders said Monday the unpleasant smelling and tasting water is safe to drink and the city continues to conduct daily water testing.

The noticeable difference resulted from a blending of the water supply that happens when the Hetch Hetchy water distribution system undergoes annual maintenance, City Manager James Keene said at the City Council meeting.

Blending of the water supply with local surface water sources stirred up sediment in a pipeline, causing the change in taste and odor, Keene said.

The strange taste and odor could linger through Wednesday as the water travels from distribution reservoirs and tanks to Palo Alto residents and businesses.

The city alerted some water customers on Sunday and stressed that the changes are “aesthetic and do not indicate an unhealthy water quality.”

The alert suggested residents try running the water for a few minutes to clear out water in pipes or consider using a filter.

Residents in other cities that received water through the San Francisco Public Utilities Commission also reported complaints over taste and odor, Palo Alto officials said.

Keene said the city did not experience such changes in taste and odor in recent years from the annual blending of the water supply. The city has asked the Utilities Commission to notify Palo Alto in advance of the annual blending next year so the city can alert residents.

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Why has the tap water in San Francisco tasted strange lately?

San Francisco Chronicle | December 5, 2016 | Katie Dowd

If your tap water has tasted a little grimy or moldy lately, you aren't imagining it.

Residents all over San Francisco noticed over the weekend that the water coming from their tap had taken on an odd, earthy flavor. Residents posting to Reddit and Next Door termed it "lake water," "funky" and "like chlorine."

The culprit is not your beloved Hetch Hetchy water, considered some of the best drinking water in the nation. It's the process that the city uses to blend water from other sources with the Hetch Hetchy water; the process can cause a change in the taste of water as it moved through the pipes to your faucet.

"There was a blend change," says San Francisco Public Utilities communication spokesperson Charles Sheehan. "We throttled back, or reduced, the supply from one part of our system and increased the supply from another part of our system."

"When you do that you can stir things up and cause a little bit of churn. You can have some very slight taste changes."

Sheehan says that, despite some taste changes, residents should have no concerns about the quality of their tap water. It's still perfectly safe to drink.

According to Sheehan, tap water blend changes are a common occurrence throughout the year as the city mixes Hetch Hetchy water with water from one of six reservoirs in Alameda and San Mateo counties. San Francisco city tap water is generally around 85 percent Hetch Hetchy water, however.

Sheehan notes that the taste changes should dissipate on their own within a few days, if they haven't already.

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Thirsty city may get help

Daily Post | December 7, 2016 | Jen Nowell

Palo Alto City Council supports transferring or selling a portion of the city's water allocation to East Palo Alto, with Mayor Pat Burt saying it's one way to address a number of "unfair and unjust" actions that have occurred over several decades. East Palo Alto is "very constrained" by the water supply allocated to the city, restricting its ability to build housing and other developments, Burt said at council's Monday meeting.

Moratorium

In June, East Palo Alto City Council imposed a moratorium on new development, putting projects on hold, including low-income housing projects and a private school.

Both cities receive their water from the San Francisco Public Utilities Commission's Hetch Hetchy water system, but East Palo Alto receives far less water than its neighboring cities.

East Palo Alto, with a population of 30,545, receives 1.96 million gallons of water each day. By comparison, Palo Alto, with a population of 68,207, gets 17.07 million gallons per day. And East Palo Alto also uses less water per person per day than the cities around it.

Burt said it would have a nominal impact on Palo Alto if half-a-million gallons per day goes instead to East Palo Alto.

Discussing options

Council didn't take any formal action on Monday, but a colleague's memo from four council members — Burt, Eric Filseth, Karen Holman and Tom DuBois — recommended the full council consider helping out its neighbor. Council voted 8-0 to have one of its sub-committees discuss the options.

East Palo Alto Mayor Donna Rutherford thanked the council for its consideration and said East Palo Alto would be willing to make a purchase "because we know water is a hot commodity."

SFPUC supplies water to San Francisco and 26 wholesale customers in San Mateo, Santa Clara and Alameda counties, according to the council members.

Doling out water

In 1984, the SFPUC agreed to allocate 184 million gallons of water per day to its 26 wholesale customers, and in 1994, the cities determined how the water would be allocated among them.

But in 1984, East Palo Alto had just been incorporated, and the water allocation the city receives today is far lower than its needs and historic usage, the colleague's memo states.

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The Coming California Drought in 2017

Water Deeply | December 2, 2016 | Jay Lund

California is a big, diverse place.

California probably will experience droughts this year of different types in different places, and no drought at all in some places, simultaneously. Even if conditions this year are very wet, with flooding, parts of California will have drought issues. (This is what makes California a great place to work on water problems.)

The first two months of this new water year have been wetter than average in the north and much drier than average in the south. But it is still early days.

Reservoir and Groundwater Storage Conditions

Reservoir storage in California is now about 2.5 million acre-feet (3.08 billion cubic meters) below historical averages for this time of year. (This is 0.8 million acre-feet – 987 million cubic meters – better than two months ago.) Some major reservoirs are below average, particularly Oroville, Trinity, San Luis, New Melones and the Tulare Basin. Cachuma Reservoir near Santa Barbara is in the worst shape at 7 percent of capacity or 10 percent of average storage for this time of year.

Groundwater will be recovering in northern parts of California, with less recovery in large parts of the southern Central Valley. (Can anyone suggest a set of online well elevation records in different parts of the Central Valley to create a groundwater storage index?)

October was a nice wet month, so soil moisture in much of the Sierras and Central California is improving, but remains in drought conditions (worsened by unusually high temperatures). Conditions for forests and native fishes remain depressed and will see drought impacts for years after hydrologic conditions improve.

This seemingly bad situation is substantially better than in this time a year ago. Something to be thankful for.

Major reservoir storage in California on November 25, 2016. (Calif. Dept. of Water Resources)

Precipitation Conditions

North of the Delta, so far we have above-average precipitation and improving storage in most Sacramento Valley reservoirs. In the San Joaquin Valley, this water year's precipitation is about average so far. But further south, the Tulare Basin has less than 50 percent of average precipitation so far this water year. And temperatures remain higher than average. So far, no snowpack – it is still a bit early.

Thoughts for the Coming Drought Year

So far, overall drought conditions are mostly improving, but unevenly. We won't really know how wet this year will be until late March. In October, this blog looked at overall drought conditions

from several perspectives and statistical projections for the new water year. (This month's election reminded us of the reliability and unreliability of statistical projections.)

Even if this year is wet, parts of California will experience drought or residual effects from five years of drought. The California Drought of 2017 will likely take several forms:

Dry residential and community wells drought, affecting rural areas with lowered groundwater tables. Many of these household wells and small systems are in a precarious state even in wet years.

Drought of surface irrigation water. Here surface water is unavailable and farmers mostly increase groundwater pumping, often at a higher cost and increasing regional groundwater depletion. This drought is more likely south of the Delta. Less surface being less available than irrigation demands south of the Delta is now a normal condition, due to a host of hydrologic, infrastructure, groundwater sustainability, economic and environmental factors, worsened by drought.

Higher groundwater pumping cost drought. Even if this year is wet, many areas that pump groundwater will still face higher pumping costs for some years or longer from the drought's cumulative groundwater depletions.

Forest drought (including snow drought). Here, lack of soil moisture or its more rapid depletion with higher temperatures affects forest ecosystems.

Ecosystem drought. Problems for some fish are likely to continue even if the year is wet, due to drought-depletion of some native fish populations. Dry conditions could also affect waterfowl. A drought of cold water in some reservoirs might affect both fish and farmers disrupted by reoperation of reservoirs.

Urban drought. So far, most urban areas have pretty healthy water supplies. The big exception is Lake Cachuma in the Santa Barbara area, now at 10 percent of its long-term storage for this time of year.

We could easily see some drought surprises. The wet season is still young. Welcome to California water, where anything can happen.

It is best to prepare for another drought year (and prepare for floods as well).

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Thanks to heavy rains, state may increase water delivery allocations

Associated Press | November 30, 2016

Dozens of water agencies in drought-weary California may receive only 20% of their requested deliveries in 2017, state officials said Monday.

But the Department of Water Resources' initial allocation forecast is double what was announced a year ago.

Officials said winter storms in coming months may boost the first 2017 allocation, but they point out that California's deep drought lingers.

Initial allocations almost always change. This year's 10% allocation ultimately gave way to a 60% allotment.

The rainy season has had a strong start, with snow in the Sierra Nevada and rain in parched Southern California. But officials say one wet year won't make up for the long drought.

"October's storms and subsequent rainfall have brightened the picture, but we could still end up in a sixth year of drought," said Mark Cowin, director of the Department of Water Resources. "Our unpredictable weather means that we must make conservation a California lifestyle."

Much of October's heavy rainfall was soaked up by the state's drought-dried soil, although water from subsequent storms will increase runoff into streams and reservoirs, the department said.

The State Water Project supplies 29 public water agencies — from the San Francisco Bay Area to Southern California — that serve nearly two-thirds of California residents and irrigate nearly 1 million acres of farmland.

The drought has left California reservoirs at or near record low levels, and the water shortage has caused farmers to rely heavily on pumping groundwater.

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Rain season off to fast start, but drought worries linger

East Bay Times | November 28, 2016 | Denis Cuff

California's rain and snow season is getting off to a fast start as Thanksgiving week brought more storms, launched the ski season early and raised cautious hope for a wet year after five years of drought.

Two wet months in a row have boosted seasonal rainfall totals to 2.83 inches in San Jose, 125 percent of seasonal normal, and 4 inches or 148 percent of normal in Livermore.

In the northern Sierra region that produces much of the snow and runoff that gets California through the long, hot summer, it's been even wetter. Some 17.9 inches of precipitation has fallen in October and November — about 200 percent of average, state officials reported Monday.

But while water managers are pleased with the abundant early rains, they caution that it's too early to predict whether this is going to end up as a wet or dry year by the time spring rolls around.

And in a move that reinforces that cautionary outlook, state officials announced Monday there is a chance of sharp cuts next spring in water distributed to local water agencies.

In a preliminary outlook, the state Department of Water Resources said it can count on allocating as little as 20 percent of requested water supplies to start, hinting drought fears are far from over in California. In most years, the initial state water allocations increase as more storms produce more rain and snow later in the season.

"October's storms and subsequent rainfall have brightened the picture, but we could still end up in a sixth year of drought," said Mark Cowin, the state Department of Water Resources.

Much of the rainfall in October and November was soaked up by the state's dry soil, although later storms will increase runoff into streams and reservoirs.

"We are off to a fast start, but rain in October and November is not a good indicator for what falls the entire year," said Stephen Nemeth, a state water resources engineer. "We have had two very wet months followed by very dry ones before."

California's three wettest months historically are December, January and February.

While some rain fell Monday, the rest of the week is expected to be mostly dry other than a passing storm on Wednesday that is likely to produce perhaps trace amounts of water.

"We're basically looking at a dry spell for the next week," said Wil Pi, a forecaster for the National Weather Service.

Since last Wednesday, close to an inch of rain had fallen in San Jose and Oakland.

Last week's storms, however, brought more moisture to the Sierra and produced an early start to the Sierra ski season.

Northstar at Tahoe opened to skiers on Wednesday, the day before Thanksgiving, and has had more than 26 inches of snow fall since that day, said Marcie Bradley, a Northstar spokeswoman.

“Any time you open before Thanksgiving is a great year for us,” said Bradley. “It’s a great start.”

California remains under a drought emergency called by Gov. Jerry Brown on Jan. 17, 2014. While Northern California had nearly average rainfall last winter and spring, Southern California was drier than average. As a result, many reservoirs began the season with lower-than-average storage levels.

“One year with nearly average rainfall only makes a dent in a drought lasting for five years,” said Nemeth, the state water engineer.

The water level in Shasta Lake, the largest reservoir in California, is at 107 percent of normal for Nov. 27. But Oroville in Butte County has only 70 percent of normal for the date, and San Luis near Los Banos has 67 percent of normal.

State officials said water levels in several reservoirs south of the Sacramento-San Joaquin River Delta are down in part because of water pumping limits aimed at protecting the Delta smelt and other wild fish.

The East Bay Municipal Utility District said its reservoirs in the East Bay and Sierra foothills have 113 percent of normal water levels for this time of year.

“We’re feeling good about our supplies early in the season,” said Jenesse Miller, a district spokeswoman, “but it’s important for people to save.”

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Boxer slams water bill rider backed by Feinstein

San Francisco Chronicle | December 5, 2016 | Carolyn Lochhead

WASHINGTON — Sen. Dianne Feinstein, D-Calif., and House Majority Leader Kevin McCarthy, R-Bakersfield, teamed up Monday to slip a legislative rider into a giant end-of-year water infrastructure bill that would override endangered species protections for native California fish for the purpose of sending water to San Joaquin Valley farmers.

Retiring Sen. Barbara Boxer, D-Calif., angrily denounced the rider as a “poison pill,” calling a late-afternoon news conference, during which she lashed out against McCarthy, saying he lied by calling the more than 80-page provision a “little, small agreement.”

“This is so wrong it is shocking,” Boxer said of the provision, saying it would authorize water pumping from the state’s rivers beyond what is allowed under the biological opinions for fish protection. She said the legislation also would transfer from Congress to the incoming Trump administration the power to approve big dam projects in the West.

Boxer vowed to use every tool at her disposal to block the legislation.

It was the first time in recent memory that Boxer confronted Feinstein, her colleague of more than two decades, on California water policy, saying the provision clearly overrides the Endangered Species Act, despite Feinstein’s insistence to the contrary.

Feinstein’s move was a clear affront to Boxer, trampling over Boxer’s legislative turf as the top Democrat on the Environmental and Public Works Committee. Boxer is a co-author of the Water Resources and Development Act, a massive bill with broad bipartisan support. Boxer noted that the bill that Feinstein and McCarthy want to add their provision to, includes many projects that Feinstein herself wrote. Among them are restoration of Lake Tahoe and the San Francisco Bay shoreline.

The rider was negotiated behind closed doors without legislative hearings or public input, and suddenly attached Monday afternoon in the House to the larger water bill. McCarthy hinted at the legislation to reporters Monday morning, referring to the “little, small agreement.” Boxer said it was hatched “in the dead of night” just before the bill is about to be taken up.

The rider came out of more than three years of attempts by Feinstein and House Republicans to respond to California’s five-year drought with provisions that would loosen environmental protections. Earlier efforts had failed time and again over the opposition of Boxer, the Obama administration and nearly every Democrat in the Bay Area delegation, mainly over provisions that allow more water to be pumped from rivers to farmers during the spring.

State water authorities have said that more water needs to remain in rivers to prevent the extinction of several native fish species, including salmon and the delta smelt.

Feinstein’s office claimed that the legislation does not violate the Endangered Species Act, because it contains a “savings clause” that dictates that nothing in the provision shall violate the act. House Democratic aides countered that the courts have ruled that direct instructions from Congress, in this case on how much water can be pumped from rivers, always supersede more general clauses declaring that nothing in the legislation violate bedrock environmental law.

McCarthy praised Feinstein’s cooperation. The legislation could not have been achieved without her help, he said, adding that the legislation “will bring more water to our communities and

supports critical storage projects.” He said it was critical to pass the legislation now to allow water authorities to capture more of this season’s rains.

He also indicated that more drought legislation will come next year, as well, when Republicans will maintain their control of the House and Senate but no longer face President Obama’s veto. President-elect Donald Trump promised during the campaign at a rally in Fresno that he would turn on the pumps for farmers.

Feinstein in a statement touted the provision’s more than half billion dollars in authorizations to “help California develop a new water infrastructure,” and said it calls only for “short-term operational improvements to help us hold more water in a way that does not negatively affect fish or the environment.”

Boxer said the larger water infrastructure bill contains nearly everything for California’s water infrastructure that Feinstein claims will be in the new legislation, including money for desalination, water recycling and groundwater recharge.

She vowed that she would not end her Senate career by allowing the Feinstein/McCarthy provision to stand.

Boxer promised to play “hardball” by filibustering every piece of legislation, including her own, that is pending in the Senate in the current lame-duck session, scheduled to end this week. Noting that many of her Republican colleagues have big stakes in all of it, she speculated that they will not be inclined to see their own projects filibustered over a contentious California water bill that she said would inevitably wind up in court.

The broader water infrastructure legislation contains authorizations to fix the lead problem in the water supply in Flint, Mich., as well as similar problems in municipal water systems across the country.

Feinstein has long supported San Joaquin Valley farmers on water issues and in return received big political support from the valley. She has not yet announced whether she will be running for re-election when her term expires in 2018.

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California's new water conservation plan focuses on cities

Las Vegas Review Journal | December 4, 2016 | Ellen Knickmeyer and Scott Smith with Associated Press

FRESNO, Calif. — California officials crafting a new conservation plan for the state's dry future drew criticism from environmentalists on Thursday for failing to require more cutbacks of farmers, who use 80 percent of the water consumed by people.

Gov. Jerry Brown ordered up the state plans for improving long-term conservation in May, when he lifted a statewide mandate put in place at the height of California's drought for 25-percent water conservation by cities and towns.

Ben Chou, a water-policy analyst with the Natural Resources Defense Council, criticized state planners for not mandating any new water-savings by farm water districts.

"There's been a huge difference all along in what urban water districts have been required to do and what ag water districts are required to do" regarding conservation, Chou said.

Under the governor's order, state agencies this week released the plan for a long-term water diet for California. They anticipate climate change to cause the Sierra Nevada snowpack — one of California's largest sources of water — to decline by half by the end of the century.

The plan includes creating customized water-use limits for urban water districts, so that arid Palm Springs, for example, would have a different amount of water budgeted than foggy San Francisco. City water districts would have until 2025 to fully set and meet the budgets, and risk state enforcement if they fell short.

Other changes for urban water districts in this week's proposal include a new focus on fixing leaks that drain away upward of 10 percent of processed water. And cities and towns would be required to draft contingency plans for droughts up to five years, up from the current requirement for a three-year supply of water.

But critics say the plan does little to address California's \$47 billion agricultural industry, which leads the nation, growing nearly half of the fruits, nuts and vegetables produced in the United States.

Diana Brooks, head of water efficiency at the Department of Water Resources, which oversees farm water use, said the proposal would require agricultural water district managers to keep better track of how their water is being used, and better think through possible steps for saving water.

"The idea that agriculture is standing still is absolutely false," said Mike Wade, executive director of the California Farm Water Coalition. "We know there's a shared responsibility that we all have to do our part."

Felicia Marcus, chairwoman of the state Water Resources Control Board, one of the agencies involved in the planning, said that rather than dealing with each drought when the crisis hits, California is becoming more efficient at a reasonable pace.

"We're just trying to be smart for the future ... and do it in the fairest way," Marcus said. "It is a big change in thinking."

After taking public comment, officials expect to adopt the plan in January.

The current drought encompassed the driest four-year spell in state history, devastating some rural communities and many native species. A rainy fall this year has lifted the north of the state out of drought, but not the agriculture-heavy center and populous south.

New regulations and laws would be required to carry out some of the plan. The proposal leaves many of the details of carrying out conservation proposals to be worked out.

Some water and conservation experts, however, praised the state's effort to make water conservation a way of life in California, given a changing climate.

Lester Snow, a former top state water regulator who has weathered droughts from the 1970s on, said each drought boosts the state's water efficiency in some way. A house built today, for example, uses half as much water as a house built in the 1980s.

"This policy change is fundamentally different," he said. "It's really recognizing that climate change is upon us."

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State Plan Seeks To Make Water Conservation A Way of Life

FOR IMMEDIATE RELEASE

November 30, 2016

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SACRAMENTO – Working to make water conservation a way of life, State agencies today released a [draft plan](#) for achieving long-term efficient water use and meeting drought preparedness goals that reflect California’s diverse climate, landscape, and demographic conditions.

“Californians rose to the challenge during this historic drought and recognized that conservation is critical in the face of an uncertain future. This plan is about harnessing the creativity and innovation that Californians have shown during the driest years in state history and making water conservation a way of life in the years ahead,” said California Department of Water Resources Director Mark W. Cowin. “This plan will help make permanent changes to water use so California is better prepared for whatever the future brings.”

The new plan’s fundamental premise is that efficient water use helps all of California better prepare for longer and more severe droughts caused by climate change.

California recently suffered the driest four years in state history, with only average rainfall last year, and 75 percent of the state remains in severe drought conditions. Meanwhile, a new report from UCLA projects that the Sierra Nevada snowpack — one of California’s largest sources of water supply — is likely to drop 50 percent by the end of the century due to climate change. Recognizing these risks and many others, today’s plan seeks permanent changes to water use that boost efficiency and prepare for more limited water supplies. These practices will help achieve a top priority in the Governor’s [Water Action Plan](#) - to “Make Conservation a California Way of Life.”

Today’s plan builds on the success of mandatory water restrictions during California’s severe drought and develops long-term water conservation measures that will ensure all communities have sufficient water supplies. This will involve activities such as ensuring farmers plan and

prepare for severe drought and permanently banning wasteful practices like hosing off sidewalks and driveways.

“The last few years provided the wake-up call of all wake-up calls that water is precious and not to be taken for granted,” said Felicia Marcus, Chair of the State Water Resources Control Board. “Californians rose to the occasion collectively during the drought. We can build on that success and now prepare for a more unpredictable and disruptive future marked by a changing climate – and do it equitably and cost effectively.”

Today’s plan represents a shift from statewide mandates to a set of conservation standards applied based on local circumstances, including population, temperature, leaks, and types of commercial and industrial use. For example, communities in hotter and drier climate zones will receive irrigation allowances that reflect evaporation levels.

Key water conservation efforts included in today’s plan include:

- Permanent bans on wasteful practices, such as hosing driveways and excessively watering lawns.
- Technical assistance and financial incentives for water suppliers to implement leak prevention, detection, and repair programs.
- Collecting information about innovative water conservation and water loss detection and control technologies.
- Requiring agricultural water suppliers to quantify water use in their service areas and describe measures to increase water use efficiency.
- Full compliance with water use targets for urban water suppliers by 2025.
- Planning and preparing for continued and future drought and water shortages.

Some of the actions described in the draft plan will require working with the Legislature on new and expanded State authority, while others can be implemented under existing authorities. All recommendations aim to achieve the main objectives of the Governor’s Executive Order B-37-16: use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning.

In addition to taking action to implement this long-term water conservation plan, State agencies recognize the reality that most of California potentially faces a sixth year of historic drought. Therefore, in January the State Water Board will also consider whether it must extend its existing emergency water conservation regulations, as required by Governor Brown’s recent executive order. The State Water Board has already taken action to maintain mandatory reductions in communities that could not verify they have enough water supplies to withstand three more years of severe drought.

Today’s plan, Making Water Conservation a California Way of Life, Implementing [Executive Order B-37-16](#),” is the result of extensive community and stakeholder engagement across California. The plan was prepared by the Department of Water Resources, the State Water Resources Control Board, the Public Utilities Commission, Department of Food and Agriculture

and the Energy Commission. For more information on the development of the draft plan, visit <http://www.water.ca.gov/wateruseefficiency/conservation/>.

The State encourages the public to submit comments on today's draft plan: ["Making Water Conservation a California Way of Life Implementing Executive Order B-37-16"](#)

Comments should be submitted to wue@water.ca.gov no later than December 19, 2016. Public comments will be posted at:

<http://www.water.ca.gov/wateruseefficiency/conservation/comments.cfm>.

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Concerns Raised Over California's Plan To Provide More Water For Fish

Capital Public Radio | November 29, 2016 | Amy Quinton

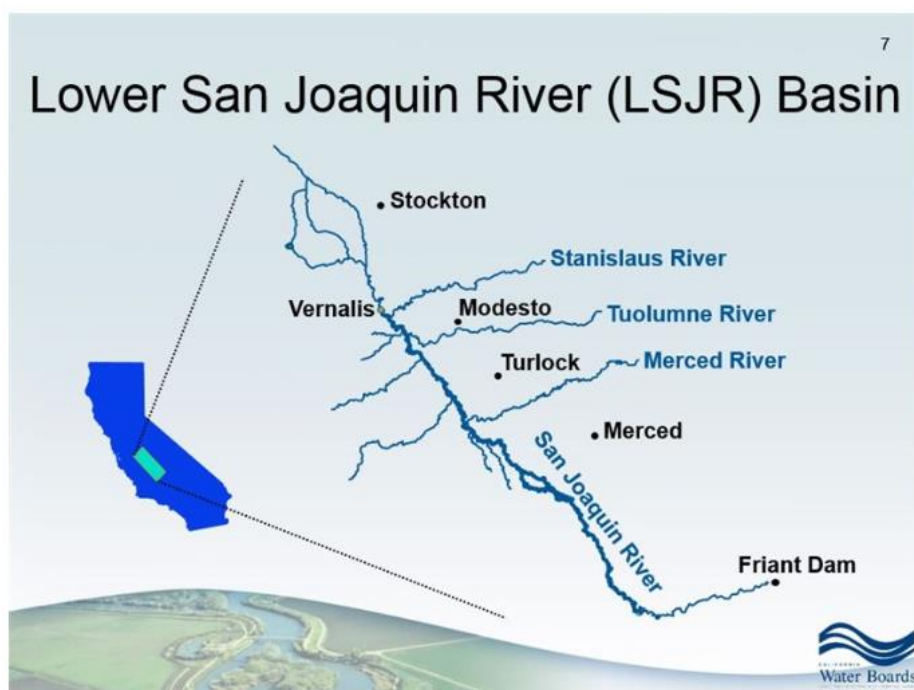
[Click here](#) to listen

Farmers and rural residents told California regulators they're concerned about a proposal to increase water flows in the San Joaquin River and its tributaries to protect threatened fish. Native fish populations in the system have been declining for decades.

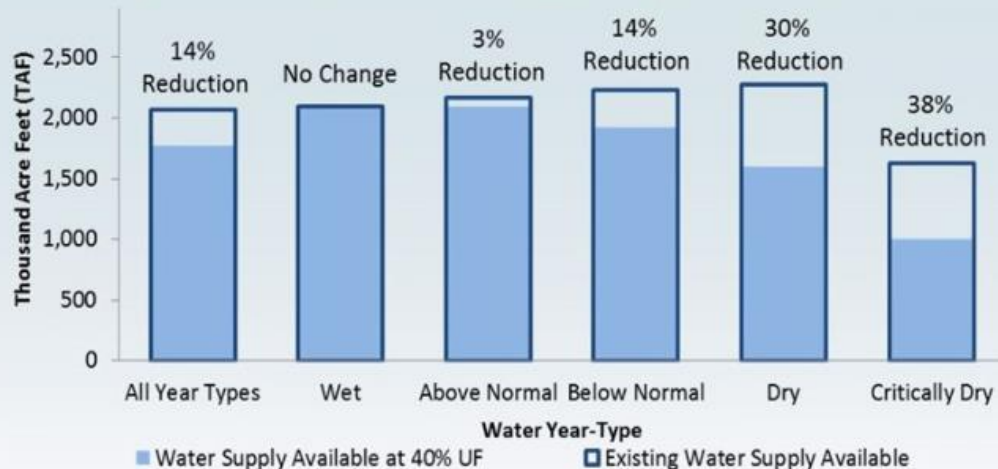
The river system is part of the Sacramento-San Joaquin Delta, which provides water to Central Valley farms and millions of Californians. Regulators say currently up to 70 percent of the water is diverted. J.D. Richey, a Delta fishing guide, says his industry is collapsing.



"If I'm thinking about moving completely out of state, how about everyone else in my industry? That's a big hit to the state. That's something to think about. It's more than just fish."



Reduction in Surface Water Availability by Water Year Type (40% UF)



The greatest impact on diversions for human use would be in driest years; there would be almost no impact on diversions for human use in wet years.



The State Water Resources Control Board wants at least 40 percent of the water in the San Joaquin River tributaries to flow unimpaired – without diversions- in order to protect fish.

But Deidre Kelsey with the Merced County Board of Supervisors says that comes at the expense of agriculture and the county's economy. It could also mean more dependence on groundwater.

"Under this proposal, impacts on groundwater are going to be brushed aside, and we're concerned about that because we do depend on groundwater, a lot, not just the agriculture, but the cities."

Four more public hearings are scheduled before regulators adopt a plan in July.

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About that 40 percent number

Recordnet.com | November 29, 2016 | Alex Breitler

The Stanislaus River near Calaveras Big Trees. Record file photo

It seems simple enough: The State Water Resources Control Board, arbiter of equitable water use in California, wants to leave 40 percent of the water in three streams feeding the San Joaquin River south of Stockton.

To the surprise of no one who follows this stuff, it's more complicated than it sounds.

Let's ignore, for the moment, that the board has actually proposed a range of river flows from 30 percent to 50 percent, starting at 40 percent. I can only handle so much complexity, so we'll just examine that 40 percent number.

What, exactly, does it mean? You could look at it two ways: One, that even after the board requires higher flows, that more than half of these rivers — the Stanislaus, the Tuolumne and the Merced — will still be diverted for human use. The science says that if you really want to restore salmon runs, it should be the other way around.

Or, you can look at how little water has traditionally been left in these rivers during the driest of years — as low as 5 percent or 6 percent on the Tuolumne in extreme cases, according to one commentator at today's hearing. Cast in that light, 40 percent starts to look like a pretty big number.

That's why we've seen a host of extremely critical opinion pieces published by newspapers around these parts, particularly the Modesto Bee, which ran a column earlier this week likening the water board to a drug addict obsessed with getting a fix (water, in this case) at any price.

Forty percent. Interpret this number with caution. Context is important.

For one thing, some folks may be thinking that the water board intends to increase flows by 40 percent. That's not the case. It's an increase to 40 percent.

An increase from what? According to the water board, about 21 percent of the water has historically been left in the Tuolumne River. On the Merced, it's about 26 percent. And the Stanislaus is already close to 40 percent.

But one fish biologist suggests examining these numbers more closely. Jon Rosenfield, with environmental group The Bay Institute, points out that the numbers in the previous paragraph are based on the years 1984-99 only.

If you look at 1995-2014 — which makes sense, since 1995 is the last time that water quality standards were significantly updated — flows have been 28 percent, 30 percent and 43 percent on the Tuolumne, Merced and Stanislaus respectively, according to Rosenfield.

That's right: Using those other years as a baseline, flows on the Stanislaus have already topped 40 percent. Rosenfield says the water board's plan could result in less water flowing down the Stan.

Across the three rivers, the biologist told me in an email last month, "The increase in flows is incremental and... entirely inadequate to restore viable salmon populations."

Could even this “incremental” change cause serious harm to humans? The water board has said that increasing flows on the rivers will cost water users about 288,000 acre-feet of water per year on average. Of course, averages are just that — averages.

In wet years there’ll be plenty of water for people while still meeting the new flow target. No problemo. It’s in drier years when conflicts could emerge. State officials acknowledged at today’s hearing that farmers will likely need to pump more groundwater to compensate for a decrease in surface water, among other consequences. But when it comes to quantifying those impacts the water board and water users are miles apart.

I don’t pretend to have the expertise needed to vet those numbers myself, and I certainly won’t try here. All I know is that nothing is as simple as I’d like it to be. Not even a nice round number like 40 percent.

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Who likes state's plan to keep more water for fish in California rivers? Practically nobody

Sacramento Bee | November 29, 2016 | Dale Kasler

California regulators say their sweeping proposal to devote more flows from the state's major rivers to fish and wildlife is an attempt to balance competing interests for a scarce resource.

So far, all they've done is get practically everyone mad at them.

Opponents of the plan came out in force Tuesday, in the first of a series of hearings before the State Water Resources Control Board on the future of the San Joaquin River and its tributaries. Environmentalists said the plan doesn't do enough for California's beleaguered fish populations, while farmers and elected officials said the changes would dry up the San Joaquin Valley's already troubled economy.

"We should not be punished for staying in agriculture," said Diedre Kelsey, a Merced County supervisor. "It's our economy. ... It funds our schools, it funds our community." She and others said the drought has already taken a toll on the valley.

The board is charged with overseeing the quality of the water that flows through the Sacramento-San Joaquin Delta, the fragile estuary that is the hub of California's elaborate water delivery system. The board's proposal, unveiled in September, would let more water flow unimpeded through the Delta and out to the Pacific Ocean. That would leave less water available to be pumped from the south Delta to farms in the arid San Joaquin Valley and homes in Southern California.

Along with the San Joaquin River, the board is planning to reallocate flows from the Sacramento River and its tributaries, with the same goal in mind: to shore up the Delta's ecosystems. Decisions aren't expected until next summer.

While farmers complained about losing water to fish, environmentalists said the additional supplies won't be enough to protect salmon, steelhead and other fish species whose populations have fallen dramatically over the years.

"It isn't sufficient," said policy advocate Kyle Jones of Sierra Club California. He urged the board to adopt "more protective standards that are backed by the science."

Board officials say a rewrite of the rules governing the San Joaquin River is long overdue. Standards haven't been updated in two decades, and on average just 20 percent of the San Joaquin's flow reaches the Pacific unimpeded during critical months when fish are migrating. Sometimes, the unimpeded flow is as low as 5 percent, board officials said.

The board says the unimpeded flow level should be raised to anywhere between 30 percent and 50 percent. Along with proposed changes in the Sacramento Valley watershed, hundreds of thousands of additional acre-feet of water could be left in the rivers for wildlife, subtracting supplies available to farms and cities.

"No one will be happy with the number. It'll be too little for some, and too much for others," said Les Grober, the board's deputy director. "But it's what we've got to do."

The board said leaving more water in the San Joaquin watershed could translate into a \$64 million loss to the region's economy. Farm groups called that estimate too low.

The plan creates other complications. Board staff members said farmers would pump more groundwater to make up for lost surface water supplies, a scenario that collides with a 2014 state law designed to curb excessive groundwater pumping.

Besides taking water from agriculture, the plan also could affect San Francisco and other cities that rely on the San Joaquin and its tributaries.

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Initial state water allocation set at 20 Percent

The Tribune | November 28, 2016 | Associated Press

SACRAMENTO, Calif. — Dozens of water agencies in drought-weary California may only receive 20 percent of their requested deliveries in 2017, state officials said Monday.

But the Department of Water Resources initial allocation forecast is twice more than that announced a year ago.

Officials said winter storms in coming months may boost the first 2017 allocation, but point out California's deep drought lingers.

Initial allocations almost always change. The 10 percent allocation ultimately gave way to a 60 percent allocation for 2016.

The rainy season has had a strong start with snow in the Sierra Nevada and rain in parched Southern California. But officials point out that one wet year won't make up for the long drought.

"October's storms and subsequent rainfall have brightened the picture, but we could still end up in a sixth year of drought," said Mark Cowin, director of the Department of Water Resources. "Our unpredictable weather means that we must make conservation a California lifestyle."

Much of October's heavy rainfall was soaked up by the state's drought-dried soil, although water from subsequent storms will increase runoff into streams and reservoirs, the department said.

The State Water Project supplies 29 public water agencies — from the San Francisco Bay Area to Southern California — that serve nearly two-thirds of California residents and irrigate nearly 1 million acres of farmland.

The drought has left California reservoirs at or near record low levels, and the water shortage has caused farmers to rely heavily on pumping groundwater.

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Sides brace for hearing on river flow plan

Modesto Bee | November 26, 2016 | John Holland

Fishing and environmental groups will get the first say Tuesday about how much water should run down the Stanislaus, Tuolumne and Merced rivers.

The session in Sacramento will be the first of five before the State Water Resources Control Board, which is considering a major boost in the flows. Irrigation districts, city water suppliers and other critics will get their chance as the public hearing moves to Stockton, Modesto and Merced next month.

The board Wednesday released a detailed agenda for the hearing, which will be webcast live. Its staff already has heard plenty of informal comment since the proposal came out in September.

The plan would reduce water supplies by 14 percent in an average year of rain and snow and by 38 percent in “critically dry” years, the staff said. Critics fear the cuts could be even greater and accuse the board of underestimating job and income losses.

“It will absolutely devastate our economy,” Stanislaus County Supervisor Vito Chiesa said during an October presentation by the state agency. Added Supervisor Jim DeMartini, “Where do you get the authority to just take the water away from the irrigation districts?”

The state board staff said the plan tries to balance the needs of fish and humans, and is much less than what many environmentalists would like to see.

“We don’t view this as an easy task in the least,” Executive Director Tom Howard told the Merced County Board of Supervisors in October.

The increased reservoir releases would help struggling fish in the lower rivers, he said. The agency also aims to reduce salinity in the Sacramento-San Joaquin Delta, which is tapped as a water supply for much of California.

The state board will take written comment until Jan. 17 and could make a final decision in July.

The flows would rise from February through June of each year, when most of the rain runoff and snowmelt take place. The plan calls for boosting the rivers to 40 percent of what they carried before the dam building that started in the mid-1800s. The three rivers combined are at about 20 percent now, but the Stanislaus is already under a higher standard than the Tuolumne and Merced.

The state agency acknowledged that the loss of river supplies would prompt farmers and cities to increase well pumping. Critics say this flies in the face of a recent state law that requires sustainable groundwater use within a quarter-century.

They also say the state’s projection of farm losses – 433 jobs and \$64 million in income in an average year – is far too low in a three-county region that grossed about \$10 billion last year.

Irrigation leaders agree that some increased flows could help salmon, but they want them targeted to when the fish would clearly benefit. They urge non-flow measures, such as restoration of spawning gravel and reduced predation by non-native bass.

The state board staff said 40 percent is a “starting point,” but the levels could range from 30 to 50 percent depending on conditions.

The Tuolumne River Trust urges at least 50 percent to enhance a stream heavily used by the Modesto and Turlock irrigation districts, along with San Francisco and nearby cities.

Farms and cities could build on their efforts at efficient water use, Executive Director Patrick Koepele said in an email Wednesday.

“River restoration creates jobs,” he added, citing a study on the large project underway on an often-dry stretch of the San Joaquin River upstream of the Merced confluence.

“A healthier river and healthier environment is also a quality-of-life issue,” Koepele said. “We want places for our families to enjoy nature close to home, a place for a father to take his kids fishing, for friends to picnic.”

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Palo Alto looks to boost East Palo Alto's water share

Council members propose transferring part of city's water allocation to neighbor

Palo Alto Weekly | November 23, 2016 | Gennady Sheyner

Office buildings, being developed by the Sobrato Organization, are going up on University Avenue and Donohoe Street in East Palo Alto, which is currently facing a water shortage, on June 16. Photo by Veronica Weber. Photo by Veronica Weber.

As East Palo Alto continues to cope with a water shortage that has effectively frozen new development, four members of the Palo Alto City Council are proposing to shift some of their city's water allocations to their parched neighbor.

The idea, which was proposed in a memo from Mayor Pat Burt and council members Eric Filseth, Karen Holman and Tom DuBois, is to transfer or sell to East Palo Alto a "small portion" of the city's guaranteed allocation from the San Francisco Public Utilities Commission, the regional supplier. The allocations, known as "individual supply guarantees" were established in 1984, when the SFPUC was divvying up portions between San Francisco and the Bay Area Water Supply and Conservation Agency, a coalition of 26 wholesale customers that includes both Palo Alto and East Palo Alto.

The allocation took place just as East Palo Alto was being incorporated as a city, with little thought given to future growth. As a result, its allocation was only 1.96 million gallons of water per day (mgd). By contrast, Palo Alto received an individual supply guarantee of 17 mgd, far more than the city uses today.

In recent years, as East Palo Alto has continued to grow and expand, the water issue has grown more acute. With the city's allocation still frozen in 1984 levels, development has slowed to a trickle as the city put several major projects on hold. These include a 120-unit affordable-housing development on Weeks Street; major office developments at 2111 University Avenue and 2020 Bay Road and a private school funded by Mark Zuckerberg and Priscilla Chan. To cope with the challenge, East Palo Alto has requested from the SFPUC an expanded allocation of 1.5 mgd. The city has also joined a newly formed Joint Recycled Water Advisory Committee, which includes elected officials from Palo Alto, Mountain View and the Santa Clara Valley Water District. During the committee's March meeting, just after East Palo Alto and Mountain View were introduced as new members, water district Board Member Gary Kremen called East Palo Alto's water allocation "unfair" and said he'd like to see some progress on that front.

"If there was a way that we can, in the county, help them out from the potable-drinking-water point of view, I'm really excited about this," Kremen said.

Burt and DuBois, who also serve on the regional committee, agree. In the new memo that they co-signed with Filseth and Holman, they request that the council either schedule a discussion of how to transfer to East Palo Alto some of Palo Alto's individual supply guarantee or to delegate the debate to the council's Policy and Service Committee.

"Given that East Palo Alto has the lowest residential per capita water use in the region, the current situation is inadequate to meet its needs," the memo states. "In addition, the economic

wellbeing of East Palo Alto is important to Palo Alto, and its ability to provide affordable and obtainable housing helps support its surrounding communities."

The memo also notes that Palo Alto has plenty of water to give, particularly given the recent surge of conservation. Through their agreement with SFPUC, the 26 customers that make up BAWSCA are allocated 184 mgd of water. As the memo points out, last year they collectively purchased only 126 mgd. Palo Alto has done its share, having reduced its water usage over the past 20 years by 40 percent, to about 10 mgd. The SFPUC projects that Palo Alto will need about 11.9 mgd in 2020, with use "slightly decreasing thereafter as water conservation programs continue."

The terms of the cities' agreement with SFPUC expressly provide for transfers between wholesale customers of individual supply guarantees. The terms also specify that the transfers must be permanent and that the minimum quantity transferred is 0.1 mgd.

The Palo Alto council is scheduled to consider the memo and lay out the city's next steps on Dec. 5.

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Allocating San Joaquin River Water to the Environment Shows Promise

After a California agency proposes a plan to allocate blocks of water for environmental uses in the lower San Joaquin River and its tributaries, researchers write about what works and what could make the plan better.

Water Deeply | November 23, 2016 | Jeffrey Mount, Brian Gray, Ellen Hanak, Peter Moyle

Gino Celli draws a water sample to check salinity in an irrigation canal that runs through his fields near Stockton, California, in May 2015. California's Water Resources Control Board released a draft that could double the minimum amount of water flows into Central California's San Joaquin River system, by reducing water diversions to farms and cities. Rich Pedroncelli, AP

In September 2016, the State Water Board released its draft plan for new environmental flow requirements in the San Joaquin River watershed. The board's proposal contains a novel – and controversial – recommendation. Instead of following the traditional approach of setting minimum flows to meet specific environmental needs at specific times of the year, the board proposes to allocate a block of water each year to improve habitat for fish and wildlife in the lower San Joaquin River and its tributaries – the Stanislaus, Tuolumne and Merced.

As we have argued in several recent reports, assigning a block of water to the environment has numerous advantages over the traditional regulatory approach. Done well, it could improve ecosystem performance and the efficiency of environmental water use, while reducing uncertainty for other water users.

Here we outline the essence of the board's proposal and describe its strengths and areas for improvement. We conclude with some suggestions for how these ideas could be incorporated fruitfully into settlement negotiations with stakeholders in the watershed.

The Board's Proposal

Cattle roam along the Eastside Bypass of the San Joaquin River restoration project in September 2016. (Gary Kazanjian, AP)

Native fishes in the lower San Joaquin River and its tributaries – particularly salmon and steelhead – have been declining in number for decades. The board has authority to address this decline by setting flow requirements to protect beneficial uses of California's waters. This authority derives from a variety of California laws that are not dependent on either the federal Clean Water Act or the Endangered Species Act.

For fish, the board traditionally sets minimum flow standards tailored to meet the requirements of specific life stages of each of the protected species (for example, pulse flows to facilitate migration up and down the river, cold water for eggs and young fish). These flows are made available through a combination of releases from reservoirs and limitations on diversions by other water users.

The proposed new approach is to allocate a portion of the February-through-June “unimpaired flow” on the Stanislaus, Tuolumne and Merced tributaries to native fish. Unimpaired flow is the volume of water that would be present in the tributaries without reservoirs or diversions.

The plan proposes that an average of 40 percent of this flow – with a range of 30–50 percent – be assigned to meet environmental objectives. We have no position on the merits of this proposed share, which is likely to be a matter for negotiation on each tributary.

More important is the flexible way that environmental managers could use this water. Under the proposal, they could shift flows as needed for different hydrologic conditions or locations to meet biological goals for protected species. This could include storing water for pulse flow releases – such as to improve water quality or provide migration cues for fish – and holding water until late summer to bolster cold water releases from reservoirs.

Why This Approach Is a Good Idea

The board's proposal to allocate a flexibly managed block of water to the environment is an improvement over the traditional setting of minimum flow standards in three ways:

Efficiency: The block approach allows for better use of environmental water to benefit fish. Managers can more easily adapt to changing conditions such as droughts and floods, time flow releases for maximum effect, vary the way they apply water from year-to-year and more nimbly respond to new biological and ecological information. This would increase the efficiency of environmental water use while also improving its effectiveness.

Predictability: A block of water is simple, transparent and easier to incorporate into environmental and operations planning. Assigning a specific quantity of water to environmental uses would give more certainty to other water users, because they would know the percentage of unimpaired flow available to them.

Shared responsibility: Allocating a flexibly managed block of water to environmental uses would ensure that the environment is better integrated into the water rights system. Environmental water managers would have a seat at the table in water management, deciding how best to use their allocation just as other water users do, and the environmental water block would share equally in abundance and shortage along with other beneficial uses.

How to Make This Approach Better

In addition to this novel approach to establishing flow standards, the draft plan encourages stakeholders and interested parties to negotiate settlements that they would submit to the board for approval. Such negotiations are a good way to harness local knowledge, creativity and cooperation.

We recommend that negotiators and the board retain the idea of allocating a block of water to the environment and consider several improvements:

Allow carryover: The draft plan requires that all environmental water be used in the same water year. To enhance efficiency and to hedge against drought, it should be possible to store some environmental water in surface reservoirs or groundwater basins (with rules to avoid impacts on other users). A good example of the benefits of integrating groundwater and surface-water storage with environmental flow management comes from the Yuba River watershed in northern California.

Allow trading: Environmental water efficiency would be enhanced if the plan explicitly allowed the buying and selling of this water. A good example comes from Australia, where environmental managers regularly lease some of their water to fine-tune flow management in different catchments. Some revenues from leasing are also used to support ecosystem investments.

Encourage augmentation: The existence of a well-managed environmental water budget would present an opportunity for better employing conserved urban and agricultural water for environmental purposes. Allowing the budget to be easily augmented with water acquired on a permanent, long-term or temporary basis through voluntary purchases or donations would increase resources for environmental management.

Assign responsibility: The proposed governance structure for environmental water management is a large, multiparty committee of regulatory and planning agencies, project operators, water users and other stakeholders (Draft Plan, Appendix K, page 32). This structure is cumbersome and lacks the independence and flexibility needed to administer the block of water in a timely fashion. The revised plan should create an environmental water manager – perhaps similar to the environmental water holder in Victoria, Australia – with authority and staffing to administer the environmental water for defined biological objectives.

Improve planning: The long-range biological goals and objectives – beyond improving salmonid populations – are not well articulated in the current plan. Management of the Stanislaus, Tuolumne and Merced tributaries needs an overarching biodiversity plan that takes a broader, ecosystem-based approach and defines how the environmental water allocation would benefit salmonids as well as other riverine, riparian and wetland species. The plan should achieve multiple environmental benefits from the water, focusing on different priorities in different types of water years. Such a plan could be developed relatively quickly, based on available scientific information and with input from stakeholders. The biodiversity plan should be revised every 7–10 years, based on improvements in scientific understanding of ecosystem performance. Victoria, Australia provides a model for developing pragmatic, ecosystem-based plans to maximize the benefits of environmental water.

Monitor and adapt: It is critical that management of the environmental water allocation be supported by a robust, transparent and science-based monitoring program. This program should report to the environmental water manager, who would use the information to guide annual allocation and use decisions, adaptation and management experimentation and long-term planning and evaluation. Funding this effort may require pooling of resources among agencies and water users.

The board's proposal to use a percentage of unimpaired flow as an environmental standard and budget for the Stanislaus, Tuolumne and Merced tributaries has generated a great deal of controversy in the water-user community. While this is understandable, we encourage all interested parties to carefully examine the merits of this approach and to consider its compensating advantages.

Block allocations of environmental water – flexibly managed and supported by science, sound governance and planning – can be an effective tool for achieving the twin goals of ecosystem protection and water supply reliability. Negotiating settlements that seek to achieve multiple benefits from blocks of environmental flows is a promising direction for using California's water more efficiently and effectively.

This story first appeared on California WaterBlog, a publication of the Center for Watershed Sciences, U.C. Davis.

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