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Despite Heavy Rain and Snow, Relief from Drought Conditions Still Depends on Coming Months

From the Department of Water Resources:

The Department of Water Resources (DWR) today conducted the first snow survey of the season at Phillips Station. The manual survey recorded 55.5 inches of snow depth and a snow water equivalent of 17.5 inches, which is 177 percent of average for this location. The snow water equivalent measures the amount of water contained in the snowpack and is a key component of DWR's water supply forecast. Statewide the snowpack is 174 percent of average for this date.

California is expected to see continued rain and snow over the next seven days, with the threat of flooding in parts of California. Conditions so far this season have proven to be strikingly similar to last year when California saw some early rainstorms and strong December snow totals only to have the driest January through March on record.

"The significant Sierra snowpack is good news but unfortunately these same storms are bringing flooding to parts of California," said DWR Director Karla Nemeth. "This is a prime example of the threat of extreme flooding during a prolonged drought as California experiences more swings between wet and dry periods brought on by our changing climate."

One year ago, the Phillips survey showed the seventh highest January measurements on record for that location. However, those results were followed by three months of extremely dry conditions and by April 1 of last year, the Phillips survey measurements were the third lowest on record.

More telling than a survey at a single location are DWR's electronic readings from 130 stations placed throughout the state. Measurements indicate that statewide, the snowpack's snow water equivalent is 17.1 inches, or 174 percent of average for this date. This January's results are similar to results in 2013 and 2022 when the January 1 snowpack was at or above average conditions, only for dry weather to set in and lead to drought conditions by the end of the water year (September 30). In 2013, the first snow survey of the season also provided promising results after a wet December similar to today's results. However, the following January and February were exceptionally dry, and the water year ended as the driest on record, contributing to a record-breaking drought. In 2022, record-breaking December snowfall was again followed by the driest January through March period on record.

"Big snow totals are always welcome, but we still have a long way to go before the critical April 1 total," said DWR's Snow Surveys and Water Supply Forecasting Unit Manager Sean de Guzman. "It's always great to be above average this early in the season, but we must be resilient and remember what happened last year. If January through March of 2023 turn out to be similar to last year, we would still end the water year in severe drought with only half of an average year's snowpack."

On average, the Sierra snowpack supplies about 30 percent of California's water needs and is an important factor in determining how DWR manages the state's water resources. Its natural ability to store water is why the Sierra snowpack is often referred to as California's "frozen reservoir." A below-average snowpack impacts water users across the state, putting further stress on the environment and critical groundwater supplies.

Due to these increasing swings from dramatically wet to dry conditions, Governor Newsom's recently released "California's Water Supply Strategy, Adapting to a Hotter, Drier Future" calls for investing in new projects and technologies that will modernize how the state manages water. In alignment with the Administration's strategy, the recently adopted 2022 Update to the Central Valley Flood Protection Plan identifies actions needed to adapt much of California's flood infrastructure to a rapidly changing climate. Current climate research indicates the state will see bigger swings from extreme heat and dry conditions to larger and more powerful storms that deliver temporary large boosts to the state snowpack as well as flood risk.

DWR encourages Californians to visit SaveOurWater.com for water saving tips and information, and to continue to conserve California's most precious resource, rain or shine.

DWR conducts five media-oriented snow surveys at Phillips Station each winter near the first of each month, January through April and, if necessary, May. The next survey is tentatively scheduled for February 1

XIII.

JIM COSTA
21ST DISTRICT, CALIFORNIA
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CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

January 11, 2023

The Honorable Gavin Newsom
Governor of California
1303 10th Street, Suite 1173
Sacramento, CA 95814

The Honorable Deb Haaland
Secretary
Department of the Interior
1849 C Street, N.W.
Washington, DC 20240

Mr. Wade Crowfoot
Secretary
Natural Resources Agency
1416 9th Street
Sacramento, CA 95814

Dear Governor Newsome, Secretary Haaland, and Secretary Crowfoot:

As you work to respond to the severe winter storms and atmospheric rivers impacting California, I write to urge you to take all permissible actions to maximize the conservation of available surface water, including pumping at the southern Delta Central Valley Project (CVP) and State Water Project (SWP) pumping plants, for future use. We must make the most of the heavy precipitation we are receiving and use it to our advantage by bolstering our water supplies to increase our resiliency during ongoing and future periods of drought.

I understand the CVP and SWP are operating under "first flush" actions due to high turbidity until January 17. Given high levels of precipitation, and more of it falling as rain rather than snow than is normal for this time of year, project operators should consider actions to maximize future water supply, especially during this period of high flood flows. To accomplish this, project operators should consult the real-time monitoring and operational flexibility provisions of the 2019 biological opinions. It is my belief, that their analysis will demonstrate that operating the pumping plants at capacity would have minimal impact on listed species.

As I have said before, we cannot continue to operate on a calendar-based approach but rather a dynamic approach that responds to shifting and extreme weather patterns. This situation calls for the exact adaptive management and water operations strategies that we need to improve drought resilience in a future with extreme weather and climate change and which are allowed under the 2019 biological opinions.

As you know, federal dollars are available for the next five years through the Bipartisan Infrastructure Law to develop our water infrastructure. These resources need to be deployed quickly and strategically to facilitate the construction of new surface supply and the development increased capacity for groundwater recharge, particularly in California's over drafted groundwater basins to replenish depleted aquifers.

If we had completed the critical reservoir projects in the pipeline, such as raising San Luis Reservoir, expanding Los Vaqueros Reservoir, building Sites Reservoir, and building Del Puerto Canyon Reservoir, we would be in a position today to move and store more water both for flood control and water supply purposes at a time of abundant flows and minimal impact on listed

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species. Community drinking water systems, agriculture, and listed species that occupy managed wetlands alike would benefit from an increased supply of stored water for use during the next dry period. If the 2022 water year is any indication, that could come as soon as next month. It makes NO sense to miss the opportunity created by the extraordinary wet conditions California is now experiencing.

Further, I encourage you to work with water districts and other state and local partners to maximize the use of groundwater recharge. For decades, including the last three years of drought, we have depleted our aquifers and reduced groundwater levels across the San Joaquin Valley. It is imperative that we use these high flows to restore our groundwater. High flow storm events such as those occurring right now demonstrate the need to rapidly deploy federal resources for groundwater storage made available by the Bipartisan Infrastructure Law and the annual appropriations bills.

In August, Governor Newsom released a water supply strategy calling for California to "create storage space for up to four million acre-feet of water, allowing us to capitalize on big storms when they do occur and store water for dry periods." Included in this figure, is a goal to expand average annual groundwater recharge by at least 500,000 acre-feet. The strategy calls for streamlining these efforts and created an interagency strike team to "facilitate state permitting and supply completion of these projects." As these storms show, we have no time to waste.

We need to quickly move forward with these projects and implement the Governor's water supply strategy. Due to shifting climate change induced weather patterns, we know that weather "whiplash" will continue, where California will experience long periods of drought followed by periods of intense rainfall. We need to develop our infrastructure to be prepared for when the next intense storm event comes.

As of January 11, at least 17 people have been died in the relentless storms. Communities across the state have been evacuated because of flooding. Estimated damage so far has topped $1 billion and 220,000 utility customers are without power across California. More extreme weather is in the forecast with for more storms heading towards California in the next ten days. The human impacts of our current water infrastructure shortcomings carry tragic costs.

I look forward to continuing to work with you to advance these efforts towards a sustainable water future for California and our nation.

Sincerely,

JIM COSTA
Member of Congress

Cc: Camille Calimlim Touton, Commissioner, U.S. Bureau of Reclamation
Karla Nemeth, Director, California Department of Water Resources

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Press Releases

CONGRESSMAN VALADAO LEADS REQUEST FOR ANSWERS FROM INTERIOR ON BIOLOGICAL OPINIONS

Lawmakers' Latest Attempt at Oversight to Evaluate Potential Political Influence

Washington, December 23, 2022 | Faith Mabry

Tags: *Water*

U.S. CONGRESSMAN
DAVID G. VALADAO
Representing California's 21st District

WASHINGTON – Today, Congressman David G. Valadao (CA-21) led Republican Majority Leader Kevin McCarthy (CA-23) Ranking Member of the House Natural Resources Subcommittee on Water, Oceans, and Wildlife Cliff Bentz (OR-02), Western Caucus Chairman Dan Newhouse (WA-04), and the entire California Republican delegation in a renewed request to Secretary of the Interior Deb Haaland to provide answers about the Department of Interior's (Department) reconsultation process on the 2019 Biological Opinions (BiOps). The reconslutation of the 2019 BiOps has caused significant uncertainty for Central Valley farmers about the future of their water supply, and Congressman

Valadao has led several efforts to obtain answers from Interior about their attempts to reverse them. All requests for information have gone unanswered.

In the letter, lawmakers raise concerns about political influence on the Department in its attempt to cancel the BiOps:

"We are concerned that this reconsultation process represents a departure from common practice, raising questions about whether outside entities may have exerted undue influence on the Department's decisions," **the lawmakers wrote.**

The members highlighted that their August 8th request for information has gone unanswered, and if this pattern continues additional action could be taken in the Republican majority:

"If the Department should continue to refuse to provide requests for information, the House Committee on Natural Resources will take additional steps to secure the information to fulfill our constitutional oversight duties," **the members wrote.**

Background:

The 2019 Biological Opinions (BiOps) were independently peer-reviewed and informed by the most accurate, best available science. The corresponding operations plans for the Central Valley Project and State Water Project employ the 2019 BiOps science and data to ensure greater water reliability and availability for communities and farms across California, while continuing to protect at-risk species. Unfortunately, the Biden administration's Bureau of Reclamation has ignored science and reinitiated consultation of these BiOps with no explanation, despite multiple requests for transparency.

Read the full letter here.

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XIII.

CALIFORNIA LEGISLATURE

STATE CAPITOL
SACRAMENTO, CALIFORNIA
95814

January 10, 2023

The Honorable Gavin Newsom
Governor of the State of California
1021 O Street, Suite 900
Sacramento, CA 95814

Re: Request to Increase South of the Delta State Water Exports

Dear Governor Newsom,

The elevated runoff throughout the State from repeated heavy precipitation events from late-December through early January has caused flooding conditions throughout the State of California. Inflows to the Delta have increased to levels that haven't been observed since April of 2019. The Sacramento River is hemorrhaging below the dams. The state opened a weir to draw excess flows into the Yolo Bypass for the first time since 2017. Folsom Dam releases have been bumped up to 35,000 cubic feet-per-second (cfs).

Despite this, as a result of the 2019 Biological Opinions and the 2020 Incidental Take Permit State Water Project, exports have been drastically cut by more than 50% from approximately 6,000 cfs on December 31st to a daily average well under 3,000 cfs through January 8th, according to The Bureau of Reclamation's Central Valley Operations Office Delta Outflow Computation Report. After several years of drought and low reservoir levels, it only makes sense to capitalize on wet conditions by maximizing south of the Delta exports at a time when the water is available. This is no time to be 'dialing back the pumps' as mentioned by Director Karla Nemeth last week.

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As of January 8, 2023, Delta inflow was approximately 92,000 cfs and Delta outflow was approximately 86,000 cfs. With so much excess water in the system, there is no reason that exports south of the Delta cannot be increased. Future weather forecasts indicate dry conditions later in the month of January, which support and highlight the need to increase exports and conserve this valuable resource before Delta inflows recede.

We urgently ask you to relax the unnecessary Delta pumping restrictions and increase exports south of the Delta immediately.

Sincerely,

Melissa Hurtado
Senator, 16th District

Jasmeet Bains
Assemblymember, 35th District

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XIII.

SOLVE THE WATER CRISIS
ACT NOW TO SECURE CALIFORNIA'S FUTURE.

FOR IMMEDIATE RELEASE
January 12, 2023

Contact: Jenny Dudikoff
Phone: 916-599-5415
Email: jdudikoff@ka-pow.com

Recent storms reveal extent of crisis: Drought and long-term water supply threat will continue

SACRAMENTO, CA – California continues to battle a series of significant storms, bringing much needed rain to the entire state. The storms which have been described as "atmospheric rivers" are another indication of the impact of climate change and the urgent need to adapt the California water system to handle large volumes of water in very short periods of time. Climate change has also caused snow packs to melt earlier in the winter season, making less water available for water allocations in the spring and summer months.

Despite the incredible downpour this month, experts throughout the State are cautioning that the drought is far from over and the long-term water supply crisis will continue. History has proven that a wet start to a new year does not always indicate a wet year to come because the system is incapable of collecting and storing water in wet periods to use in dry periods.

Just last year at this time, "snow depths were reaching 150 percent of normal levels" but then California experienced the driest January, February and March on record, pushing the Golden State into a third year of consecutive drought and going down as the driest three-year period in 1,200 years.

In addition to the water storage limitations, the storms also highlight the need to address flood control deficiencies in the state water system infrastructure to protect against existing and increasing flood risk and damage. While improved infrastructure can't prevent all flooding, California's water supply system must be redesigned to more effectively protect life and property. Recent fire and flood events demonstrate the need for generational infrastructure investments so California can manage these extreme water events, including capturing flood flows and moving them to storage, for use during future dry years.

"While we are encouraged by the recent storm events providing much needed water to our dry state, the significant rainfall is not enough to offset the historic drought conditions that continue to plague California, our economy, businesses, and our communities," said Craig Miller, General Manager of Western Municipal Water District and a leader of Solve the Water Crisis. "The future of this great state is dependent on new policies that require necessary investments that will result in more water for residents, businesses, and the environment. "

Top officials at California's Department of Water Resources echo these concerns, "No single storm event will end the drought. We'll need consecutive storms, month after month after month of above-average rain, snow and runoff to help really refill our reservoirs so that we can really start digging ourselves out of extreme drought," said Sean de Guzman, manager of snow surveys for the Department of Water Resources.

With trillion gallons of water expected to fall on California as a result of recent storm events, it's more important than ever to assess how we are capturing and storing this significant amount of rain to use in the future.

"History has proven time and again that we can't rely on a wet start to a year to pull us out of decades of drought. The significant challenges we face as a result of changing and worsening climate conditions not only require all water managers to work together, but also requires bold action by California's policymakers to change state water policy and address infrastructure constraints and limitations," said Heather Dyer, General Manager of San Bernardino Valley Municipal Water District and a leader of Solve the Water Crisis. "The failure of the system to properly manage water supply in wet and dry periods requires a comprehensive long-term solution."

About The Solve the Water Crisis

Solve the Water Crisis brings into sharp focus the ongoing water supply crisis that is impacting quality of life, economic growth, health, and the environment of communities throughout California. By raising awareness among California policymakers, Solve the Water Crisis demonstrates the urgency and bold actions needed to secure California's water future. Solve the Water Crisis is led by water agency leaders across the state, representing both urban and rural areas of California. To learn more, please visit: www.SolvetheWaterCrisis.com

XIII.

Storms tell California to upgrade its plumbing

BY DAN WALTERS JANUARY 17, 2023

IN SUMMARY

A series of storms has dumped immense amounts of water on California, but the state needs some new plumbing to take advantage of such events and counteract the effects of drought.

The rain and snow storms that have pummeled California for weeks have taken nearly two dozen lives and caused billions of dollars in damages to public and private property.

The flip side, however, is that they dropped immense amounts of water on a state that has suffered through severe drought for several years. At one point this month, an astonishing 160,000 cubic feet of water – 1.2 million gallons – was flowing through the Sacramento-San Joaquin Delta every second. That's enough water to fill a reservoir the size of Folsom Lake, about 1 million acre-feet, in three days and doesn't count water falling on other regions, such as Southern California.

Whether the storms have ended the drought, however, depends on California's ability to capture enough water to fill its badly depleted reservoirs and at least begin to recharge underground aquifers that have been terribly overdrafted by desperate farmers.

So far, only a relatively tiny amount of the immense storm runoff has found its way into storage. For instance, just a trickle of the Delta's heavy flows has been pumped into state and federal aqueducts for delivery to the San Joaquin Valley and Southern California, largely because of rules that limit diversions to protect endangered species such as the two-inch-long Delta smelt.

San Joaquin Valley legislators have beseeched President Joe Biden and Gov. Gavin Newsom to relax the rules so that more runoff can be either delivered to farmers or placed in storage, such as the San Luis Reservoir, which is now less than half-full.

"This is no time to be dialing back the pumps," state Sen. Melissa Hurtado and Assemblywoman Jasmeet Bains, both Democrats from Bakersfield, told Newsom in a letter last week. "After several years of drought and low reservoir levels, it only makes sense to capitalize on wet conditions"

"We have a moral obligation to provide Californians any relief that is within our control," five Republican congressional members told Biden and Newsom. "Government regulations should not and must not deny our constituents critical water from these storms."

State water officials, however, say their hands are tied by environmental protection rules requiring that initial winter flows be allowed to flush out the Delta and San Francisco Bay.

What's been happening, or not happening, during the weeks-long deluge indicates that California needs some new plumbing to take advantage of the periodic "atmospheric rivers" that bring immense amounts of precipitation.

Meteorologists believe that due to global climate change, the state will experience more erratic weather – prolonged periods of drought interrupted by occasional storm events such as the ones California has been experiencing.

That means we need more storage, such as the Sites Reservoir on the west side of the Sacramento Valley that's been in the planning stage for several decades and sinking basins to recharge aquifers. The long-dormant, $4

billion Sites project now has the ardent support of state and federal officials, as well as some serious money.

The relatively meager diversions from the Delta now allowed by law, meanwhile, bolster the case for the "Delta Conveyance," which would allow more water to be diverted into the state and federal aqueducts, and thus into downstate reservoirs, without running afoul of environmental restrictions. The project has kicked around for six decades, first as a "peripheral canal," later as twin tunnels dubbed "Water Fix," and now a single tunnel.

California water managers will have another chance to fill reservoirs in a few months, when the immense Sierra snowpack that's twice the historic average and still growing melts. We can only hope that Mother Nature releases the snowpack's water slowly enough to avoid destructive floods

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XIII.

California storms: A 2-inch fish is limiting how much water can be captured for cities and farms

Trump and Newsom rules to protect endangered Delta smelt have curbed Delta pumping by nearly half since Jan. 3

An aerial view of the Harvey O. Banks Delta Pumping Plant, the first major plant designed and constructed within the California State Water Project. The facility located in Alameda County has a number of pumps that lifts water into the California Aqueduct. (California Department of Water Resources)

By PAUL ROGERS | Bay Area News Group

PUBLISHED: January 16, 2023 at 5:04 p.m. | UPDATED: January 16, 2023 at 5:05 p.m.

The most drenching storms in the past five years have soaked Northern California, sending billions of gallons of water pouring across the state after three years of severe drought.

But 94% of the water that has flowed since New Year's Eve through the Sacramento-San Joaquin River Delta, a linchpin of California's water system, has continued straight to the Pacific Ocean instead of being captured and stored in the state's reservoirs.

Environmental regulations aimed at protecting a two-inch-long fish, the endangered Delta smelt, have required the massive state and federal pumps near Tracy to reduce pumping rates by nearly half of their full limit, sharply curbing the amount of water that can be saved for farms and cities to the south.

The move has angered Central Valley politicians of both parties along with agricultural leaders, who have been arguing for many months that someone must help farmers suffering terribly during the drought. Now they are frustrated that the state Department of Water Resources and the federal Bureau of Reclamation aren't capturing more water amid the record rainfall.

"It's like winning the lottery and blowing it all in Vegas," said Jim Houston, administrator of the California Farm Bureau Federation. "You have nothing to show for it at the end of the day."

The rules were put in place by the Trump administration in 2019 and reinforced by the Newsom administration in 2020. They also are affecting urban water supplies.

The Contra Costa Water District, which relies on Delta water, has been able to add almost no water to its largest reservoir, Los Vaqueros, in the past two weeks. Its level has gone from 48% full to 50% full. And less water has flowed into San Luis Reservoir, east of Gilroy, a major supply for the Santa Clara County Valley Water District, the Metropolitan Water District in Los Angeles, and others, than otherwise would have. San Luis Reservoir has gone from 34% full on Jan. 1 to 42% full on Thursday.

"This happens every time we have high flows in the winter," said Cindy Kao, imported water manager for the Santa Clara Valley Water District in San Jose, which provides water to 2 million people in Silicon Valley. "We are able to capture very little of it because of regulations to protect species."

Karla Nemeth, director of the California Department of Water Resources, said Friday that the state and federal governments do not have much flexibility under the law. She said the current pumping restrictions began Jan. 3 and are scheduled to end Monday.

She said the restrictions have reduced pumping by about 45,000 acre feet over the two weeks. That's enough water for about 225,000 people a year or enough to fill Crystal Springs Reservoir south of San Francisco 80% full.

"We share the urgency to move as much water as we can during these storms," Nemeth said. "No question. But we also have species that are hammered by the same drought conditions. And those protections are important so we can operate the system in a balanced way."

Under the federal Endangered Species Act signed in 1973 by Richard Nixon and the state Endangered Species Act signed in 1970 by then-Gov. Ronald Reagan, it is illegal to kill fish or wildlife at risk of extinction.

The Delta, a vast area of marshes and sloughs between Sacramento and San Francisco Bay that is roughly the size of Yosemite National Park, is where some of California's biggest political battles over endangered species have been fought in recent decades.

The Delta is the meeting point for the state's two largest rivers, the Sacramento, which flows south, and the San Joaquin, which flows north. That water mixes and runs westward, eventually flowing into San Francisco Bay and out through the Golden Gate to the Pacific Ocean.

In the 1950s, the federal government built huge pumps near Tracy to send water south to farmers and cities through the Central Valley Project. In the 1960s, former California Gov. Pat Brown built even bigger pumps two miles west, near Byron, that pumps Delta water into the State Water Project, which serves 27 million people.

The pumps are enormous and over time have disrupted fish and wildlife in the Delta, including smelt and salmon, sometimes grinding them up, sometimes making sloughs run backward, and other times removing up to half the Delta's fresh water. Once plentiful, smelt and salmon numbers crashed. This winter, only five smelt have been found in the Delta by scientists.

After Sacramento River winter-run Chinook salmon were listed as endangered in 1989 and Delta smelt were listed in 1993, state and federal wildlife agencies began limiting how and when the big pumps could operate. That sparked relentless lawsuits from environmental groups, farmers and urban water agencies that continue to this day.

The key rule that has limited pumping the last two weeks is called the "first flush" rule. It requires that the pumps be ratcheted down after the first big rain every winter so that migrating smelt can move westward away from the pumps. The rule was included in the Trump administration's Delta permits in 2019, called biological opinions, and in the Newsom administration's state rules in 2020, known as an incidental take permit.

Environmentalists say the fish are "canaries in the coal mine" that indicate the health of the Delta, the West Coast's largest estuary. The solution, they say, is for farms and cities to use water more efficiently and develop local sources so they take less from the Delta.

"The notion that we should just let some species go extinct because they get in the way of corporate agribusiness profits, I don't think that's what Californians want," said Doug Obegi, an attorney with the Natural Resources Defense Council in San Francisco, who noted that other reservoirs around the state are filling from the rains. "No one should have the right to kill the last Delta smelt, the last chinook salmon or the last bald eagle."

A Delta smelt is held in the hand of biologist Kelly Souza on Tuesday, October 8, 2002. Souza is a member of The California Department Of Fish And Game, which is conducting smelt research in the Delta. (SHERRY LAVARS/ Contra Costa Times)
But political leaders are angry and asking for relief.

"This is no time to be dialing back the pumps," wrote State Sen. Melissa Hurtado and Assemblywoman Jasmeet Bains, both Democrats from Bakersfield, in a letter to Gov. Gavin Newsom on Tuesday. "After several years of drought and low reservoir levels, it only makes sense to capitalize on wet conditions"

Five Republican congressmen, led by Rep. David Valadao, R-Hanford, wrote to Newsom and President Biden this week. "We have a moral obligation to provide

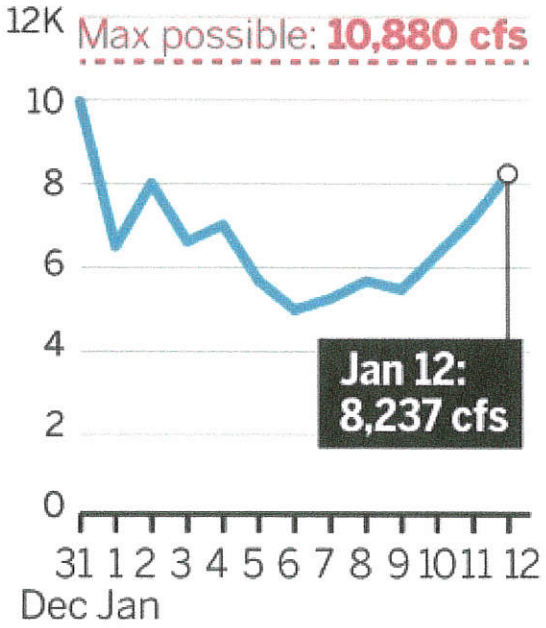
Californians any relief that is within our control," they said. "Government regulations should not and must not deny our constituents critical water from these storms."

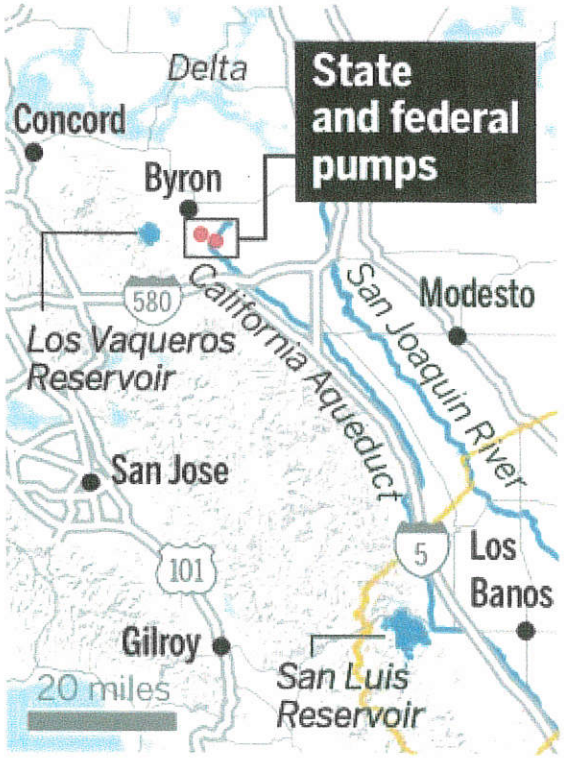
An immense amount of water was moving through the Delta on Friday. The flow rate was so high that it surpassed the volume raging down the mighty Columbia River near Portland, Oregon.

WATER OPPORTUNITY LOST

Despite heavy winter rains, federal and state rules aimed at protecting an endangered fish, the Delta smelt, have limited the amount of water that can be pumped from the Delta south to farms and cities.

Total Delta exports in cubic feet per second since Dec. 31 in thousands





Source: U.S. Bureau of Reclamation

BAY AREA NEWS GROUP

At that rate, about 159,000 cubic feet per second, the Delta was carrying enough water — 316,500 acre feet a day or 1.2 million gallons every second — to fill an empty reservoir the size of Hetch Hetchy in Yosemite National Park to the top every 27 hours.

When the state and federal pumps are fully running, they can move roughly 10,800 cubic feet per second. That means they are unable to catch most of the current

deluge even if maxed out. But since Jan. 1, they have averaged just 6,415 cfs per day — far less than their capacity.

Nemeth said the issue shows the need for Newsom's $16 billion Delta tunnel project that is designed to catch more water during big storms. She said it also shows the need to construct more reservoirs to capture wet winter flows.

If rain and snow continue this winter, the current reduced pumping won't make much difference, experts say. But if the rain stops, as it did last year, these past two weeks will loom larger.

"It's incredibly frustrating," said Jennifer Pierre, general manager of the State Water Contractors, who said the rules need to be rewritten to allow more flexibility as climate change makes droughts and storms more volatile. "The jury's still out. In May we'll know if it was a big deal or not."

XIII.

PPIC | PUBLIC POLICY INSTITUTE OF CALIFORNIA

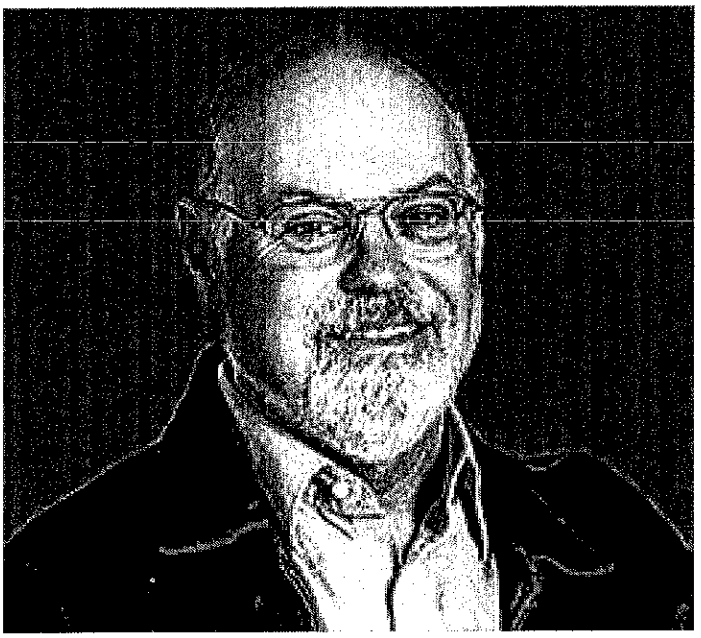
BLOG POST · JANUARY 17, 2023

Can We Capture More Water in the Delta?

Sarah Bardeen

A massive amount of water is moving through the Sacramento–San Joaquin Delta in the wake of recent storms, and calls have risen from all quarters to capture more of this bounty while it's here. We spoke with PPIC Water Policy Center adjunct fellow Greg Gartrell to understand what's preventing that—and to dispel the myth of "water wasted to the sea."

Your recent policy brief said that California doesn't do a good enough job of managing water supply in the Sacramento–San Joaquin Delta in wet years. Are we likely to see some of the effects that you highlighted this year?



Yes. The brief focused on where we could have improved water management during California's last three really wet years, which were 2011, 2017, and 2019. All three years had periods when the San Joaquin River was flooding, protections for salmon and steelhead were suspended, and the two water projects—Central Valley Project and State Water Project—could pump without restrictions. But the major reservoir south of the Delta—San Luis—was full, and there was simply no place to put the additional water.

We could see that again this year, though a couple of things make that less likely. Reservoirs further south, like Castaic and Diamond Valley in Southern California, are low and will be able to take some water, and some areas in the San Joaquin Valley now have capacity to put more water in the ground.

People complain that we're wasting water to the ocean. While it's true that there are pumping restrictions right now to protect fish, the maximum the projects could be pumping is about 14,000 cubic feet per second (cfs), not quite double what they're currently pumping (8,000 cfs on Jan 12). With current outflows at about 150,000 cfs, we'd still see 144,000 cfs flowing to the ocean if they were pumping without restrictions. There's a limit to how much the aqueducts can carry, and there's a limit to where water can go south of the Delta. In other words, most of this water is not just uncaptured—it's uncapturable. And it's not actually wasted: it's freshening San Francisco Bay, which benefits from these kinds of flows.

It's always been this way when it rains hard. Upstream reservoirs are capturing every drop they can right now. Only Folsom is releasing a lot of water to prevent a disastrous flood in Sacramento; in the San Joaquin Valley, the same is true for Millerton reservoir, to reduce flood risk in downstream communities like Manteca. Unfortunately, some of the water released to protect Manteca could have gone to groundwater recharge, but the southern part of the Friant-Kern Canal is out of service as it undergoes repairs for subsidence caused by overdrafted groundwater.

There are restrictions on pumping in the Delta right now, even though large flows are coming down the Sacramento River. Why is that?

The export pumps in the Delta are currently pumping at about half of their capacity to reduce harm to species of fish protected by state and federal Endangered Species Acts. For several days after Christmas, pumping was restricted to give time for fish to adjust to changes in inflow and to move away from harm at the pumps. And on

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January 3rd, regulations kicked in that restrict pumping when turbid water gets near the pumps. Protected Delta fishes make use of this turbid water as habitat, placing them at risk.

These latest restrictions are limiting the amount of water exported from the Delta: roughly 84,000 acre-feet less will be exported over 14 days (roughly enough water to irrigate 25,000 acres of farmland for a year, or to supply 150,000 homes). However, if inflows to the Delta remain high—which looks likely—these restrictions may just delay filling San Luis Reservoir by a few weeks. If San Luis Reservoir fills to its 2 million acre-foot capacity, and we again have no place to put additional water, the ultimate water supply cost of these regulations will be low. Also, don't forget that snowpack—our largest reservoir—is piling up, and upstream surface reservoirs are filling.

In your report, you recommended some changes. What do we need to do?

Especially in the San Joaquin Valley, we need investments to put water in the ground—our largest reservoir for long-term storage (snowpack is short-term)—when it's raining. That's the cheapest and easiest thing to do. Everything else—including projects like the proposed Delta tunnel and Sites Reservoir—is pretty darned expensive and will take a lot of time.

In the near term, we should prioritize the fast, easy, and cheap options—the ones that involve no need to change regulations and no big new infrastructure. In past wet years, it would have been possible to pump an additional 400,000–800,000 acre-feet in the Delta, within current regulations, if we had places to put it. The logical place to put this water is in our depleted groundwater basins.

In our study, we also recommend taking a hard look at regulations that govern protections for fish in the Delta. Some of the rules are tied to water-year type and are fairly rigid, not adapting to the range of hydrology in a single year. We need to revisit the biological basis for the numerous, overlapping restrictions to be both more protective of the Delta environment and more efficient in pumping. And we need to be more nimble, able to adjust pumping restrictions based on real-time hydrology and biological conditions.

Finally, what the Delta really needs is better cooperation between agencies. Agencies like to keep their independence. That can lead to uncoordinated regulations, sometimes with unanticipated impacts on water supply operations. We need a modern version of the 1994 Delta Accord—a durable cooperative agreement between state and federal agencies that does not change every time there's a change in governor or president. That is likely to help with managing the Delta as much as any new storage effort.

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