

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

August 7, 2020

Correspondence and media coverage of interest between July 22, 2020 and August 5, 2020

Correspondence

From: Nicole Sandkulla, BAWSCA CEO/General Manager
Date: July 29, 2020
Subject: Report on Use of \$805,000 Transferred from Water Supply Agreement Balancing Account to BAWSCA in July 2019

From: Valley Water
Date: July 14, 2020
Subject: Statement from Valley Water Chair Nai Hsueh on Bay-Delta Water Quality Control Plan

Media Coverage

Water Supply Management:

Date: August 5, 2020
Source: Maven
Article: ACWA Conference: Chair Esquivel and Director Nemeth Discuss Their Plans For 2020

Date: August 4, 2020
Source: Maven
Article: ACWA Conference: Secretary Wade Crowfoot Highlights the Principles and Priorities of the Water Resilience Portfolio

Date: August 2, 2020
Source: California Water Blog
Article: Drought and the Sacramento – San Joaquin Delta, 2012 – 2016: Environmental Review and Lessons

Date: July 31, 2020
Source: Los Angeles Times
Article: Editorial: Gavin Newsom’s plan for California water is a good one. Stay the course

Date: July 29, 2020
Source: Cap Radio
Article: California Has a New Plan To Protect Its Water Supply From Climate Change, But Some Say It’s Based On Old Thinking

Date: July 28, 2020
Source: Maven
Article: This Just In: Governor Newsom Releases Final Water Resilience Portfolio

Date: July 28, 2020
Source: Courthouse News Service
Article: Newsom Lays Out Big Dreams for California’s Water Future

Water Infrastructure:

Date: July 31, 2020
Source: Mercury News
Article: Gov. Newsom asks Warren Buffett to back removal of Northern California dam

Water Policy:

Date: August 4, 2020
Source: E&E News
Article: 'No shrinking violet.' Meet Trump's surprise FERC pick

Date: August 2, 2020
Source: Bakersfield.com
Article: Water bills would fundamentally change under proposal headed for CPUC

Date: July 26, 2020
Source: Modesto Bee
Article: Federal agency reaffirms support for how MID, TID want to operate Don Pedro Reservoir

Date: July 22, 2020
Source: AgAlert
Article: River agreements stall amid focus on delta litigation

Water Quality:

Date: August 3, 2020
Source: The Conservation
Article: Wildfire can poison drinking water – here's how communities can be better prepared



July 29, 2020

Via Email

Mr. Eric Sandler, Assistant General Manager
San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102

Subject: Report on Use of \$805,000 Transferred from Water Supply Agreement Balancing Account to BAWSCA in July 2019

Dear Eric:

On July 1, 2019, in accordance with action taken by the Board at its May 16, 2019 meeting, BAWSCA made a request to the SFPUC to transfer \$805,000 from the Water Supply Agreement (WSA) Balancing Account to BAWSCA as the funding source for the Los Vaqueros Expansion (LVE) Project Study and the completion of the Regional Water Demand and Conservation Projections Study included in BAWSCA's FY 2019-20 work plan and operating budget.

BAWSCA appreciates the SFPUC's timely response to that request made in accordance with Section 6.05.B.2.a of the WSA. BAWSCA received the transfer fund of \$805,000 from the Balancing Account on July 17, 2019. Although it is not required, BAWSCA would like to provide the SFPUC an update on the use of the fund.

As of June 30, 2020, BAWSCA has completed the Regional Water Demand and Conservation Projections Study with the total expenditures of \$450,000 funded by the transfer amount. Regarding the LVE study, BAWSCA used the remaining transfer fund of \$355,000 to pay costs associated with LVE, primarily the payment to Contra Costa Water District for the agency's participation fee. As of June 30, 2020, the entire Balancing Account transfer fund of \$805,000 has been spent.

Should you have any questions regarding the use of the prior Balancing Account fund transfer in last fiscal year, please contact me. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Nicole Sandkulla". The signature is fluid and cursive.

Nicole Sandkulla
CEO/General Manager

cc: Charles Perl, SFPUC Deputy CFO
Kristina Cordero, SFPUC Director of Financial Planning
Erin Franks, SFPUC Rates Administrator
Michelle Novotny, SFPUC Senior Water Analyst and BAWSCA Liaison
Tom Francis, BAWSCA Water Resources Manager
Christina Tang, BAWSCA Finance Manager
Allison Schutte, Hanson Bridgett, LLP Legal Counsel

(This page was intentionally left blank)

July 14, 2020

Statement from Valley Water Chair Nai Hsueh on Bay-Delta Water Quality Control Plan

The Valley Water Board of Directors voted on Tuesday, July 14 to give Valley Water's CEO, Rick Callender, and its legal counsel the authority to settle a lawsuit against the State Water Resources Control Board related to amendments to the Bay-Delta Water Quality Control Plan. The Board had voted to enter into litigation in early 2019 because the amendments will have a large impact on Santa Clara County's water supplies received from the Tuolumne River and the Board believes the more comprehensive approach promoted by the Voluntary Agreements process will provide better benefits to fish at a reduced water supply cost to the Bay Area.

The Valley Water Board still firmly supports the voluntary agreement process to address the water supply and environmental concerns in the Delta. The voluntary agreement process will allow for all interested stakeholders, including state and federal agencies, local water agencies and non-government organizations to come together and negotiate a compromise. Valley Water remains committed to working collaboratively with all parties toward that end.

Valley Water manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's nearly 2 million residents. Valley Water effectively manages 10 dams and surface water reservoirs, three water treatment plants, an advanced recycled water purification center, a state-of-the-art water quality laboratory, nearly 400 acres of groundwater recharge ponds and more than 275 miles of streams. We provide wholesale water and groundwater management services to local municipalities and private water retailers who deliver drinking water directly to homes and businesses in Santa Clara County.

(This page was intentionally left blank)

ACWA Conference: Chair Esquivel and Director Nemeth Discuss Their Plans For 2020

Maven | August 5, 2020

At the ACWA's virtual conference held last week, the second keynote speaker session featured Joaquin Esquivel, Chair of the State Water Resources Control Board, and Karla Nemeth, Director of the Department of Water Resources. Chair Esquivel's comments focused on the Safe and Affordable Drinking Water Act, implementation of the Open and Transparent Water Data Act, and racial equity. Director Nemeth spoke of the strides forward the Department was making on modernizing the State Water Project operations, improving statewide water resources planning, and addressing racial equity. Here's what they had to say.

JOAQUIN ESQUIVEL, Chair of the State Water Resources Control Board

Governor Jerry Brown appointed Joaquin Esquivel to the State Water Resources Control Board in March of 2017. He was then designated chair by governor Gavin Newsom in February of 2019. Previously he served as assistant secretary for federal water policy at the California Natural Resources Agency and the governor's Washington DC office, where he facilitated the development of policy priorities between the agency, the governor's office, the California congressional delegation, and federal stakeholder agencies for more than eight years. Prior to that, he worked for the U S Senator Barbara Boxer of California.

Joaquin Esquivel began by stating his appreciation for being able to be participating in a discussion with the Department of Water Resources Director Karla Nemeth as much of the work the State Water Board does is integral with that of the Department.

With the covid crisis, about 90% of Board staff are teleworking from home, and conducting meetings online has been a challenge. Governor Newsom's ban on water shutoffs during the pandemic to ensure people have water in their homes comes with its own challenges, such as reduced revenue for public water agencies and backlogs of debt that will have to be dealt with, so he has appreciated the opportunity at the conference to join the discussion and do their best to contribute to what is a difficult situation.

Implementation of the Safe and Affordable Drinking Water Act

The Governor's newly released final Water Resiliency Portfolio has as its number one priority implementation of the Safe and Affordable Drinking Water Act.

"This speaks to how this is such a critically high priority for the board this last year in implementation," Chair Esquivel said. "We've been able to do quite a bit. I've been quite proud of the work that the Board has done in particularly getting an expenditure plan out which details not just the expenditures in the first year of the Safe and Affordable Fund, but also those anticipated in the next year. It's an expenditure policy that better flushes out the work that the Safe and Affordable Fund will have to do over the years ahead, knowing that this is a years-long effort, it's a decade of effort, and it's a generational challenge that we finally have some resources to address and have before us."

Implementation of AB 1755, The Open and Transparent Water Data Act

One of the other priorities in the water resilience portfolio is to better coordinate and leverage data. *"I did want to take the time to talk about the incredible opportunities and leadership that*

the state has shown in passage and implementation of AB 1755, the Open Water Data Act,” he said. “We’re fortunate for the leadership of DWR and other sister agencies to really continue to wrap our minds around how we best continue to leverage data for good decision making.”

“I often remark that we at the Board are nothing but a big decision-making agency,” Chair Esquivel continued. “The five of us state board members, and then the 60 plus regional water quality control board members throughout the state are called upon to weigh and balance, to do our best at making our most informed decisions and continuing to make decisions off of better available and transparent data is going to be very critical.”

“But we also need to talk about where that data emanates from, and there is a strong racial equity discussion about how do we best listen to communities, synthesize their knowledge, their understanding, and their information so that we, whether in the context of the Water Boards and its decisions or our other sister agencies so we are able to make our best and most important decision based off of the variety of opinions, information, and data that may be out there.”

“So I think we have a lot to do certainly in the space of trust around water data, but I think there too, we can continue to focus on ways and projects that help build that trust and more importantly, help make us be better decision-makers,” said Chair Esquivel. “The core and the thrust of so much of that data work within the water space is how do we build better trust, but also become better decision-makers in that trust, and in that better information amongst us.”

He acknowledged that it’s difficult, given how disparate the management of water in this state is, as well as the multiple programs such as the Safe and Affordable Drinking Water Fund, implementation of the Sustainable Groundwater Management Act, and CV-SALTS, which is trying to better quantify, manage and integrate concerns around nitrates, water quality, and salinity.

“So how do we do all of that? I think we do it by continuing to focus on what are these common decisions, support tools, and platforms that, although making disparate decisions and at different levels, whether they be at the Board or at a local water agency, the decisions are still premised off of the best available information in a common space where others can make the same decision looking at the same information and leveraging the power that can bring to our communities.”

Addressing racial equity

“It’s hard to not talk about some of that data work without talking about racial equity and the difficulties that we certainly find ourselves with a lack of faith in institutions, and sometimes institutions not fulfilling or keeping the faith of those that we engage,” said Chair Esquivel. “As a public government official and someone appointed and not elected, and in a position that has its own authority, and of the five seats at the State Water Board, I have the public seat. So it provides an opportunity for me to contemplate what that actually means and how is it that the board does translate its work to the public, how is it that the board is transparent in its decision making and invites others, especially those who may not have traditionally been at the table or have had the capacity or the attention of the government institution that they may or may not have had otherwise. So going back to the principle of being good decision-makers, we have to continue to understand how racial inequity impacts people. We can be candid and look at the

million Californians that don't have access to clean and safe drinking water who disproportionately are communities of color."

"What does that mean? Certainly the board is not equipped to solve the racial inequities that we find in our society, but we're here to be part of a conversation," continued Chair Esquivel. "And it's a conversation I know that Governor Newsom himself has dedicated from the beginning when he talks about a California for all. How do we continue to see ourselves and to be reflective of the diversity that we find within the state and how do we continue to make better decisions together by ensuring that everyone's at the table?"

"So I think there's a strong need to focus on workforce development. There are opportunities. We oversee drinking water operator certifications as well as wastewater operator certifications. We're looking to move online, to have rolling testing ... How do we connect into a workforce development discussion that helps us continue to bring the best and brightest and most diverse minds possible to the table, to the water sector, to help us be better decision makers in the end."

Chair Esquivel concluded by noting there are no small number of issues before the board. "I find that this work continues to be about communities, outcomes, and the transparent operations of what it is that we're called to do."

KARLA NEMETH: Director, Department of Water Resources

Director Nemeth was appointed by Governor Brown in 2018 and oversees the operation of the Department of Water Resources, including maintaining the California State Water Project, managing floodwaters, monitoring dam safety, conducting habitat restoration, and providing technical assistance and funding for projects for local water needs. Director Nemeth has long influenced water policy through her leadership position previously as deputy secretary and senior advisor of water policy at the California Natural Resources Agency under Governor Brown.

Director Nemeth began by saying she was glad to be participating in the virtual conference. She also acknowledged Chair Esquivel and his personal leadership with the implementation of AB 1755.

"While the Department of Water Resources is the lead on implementation for AB 1755, we do so with a lot of partner agencies, but Joaquin is very active as a thought leader in that space," said Director Nemeth. "He really encourages DWR and our host of agencies to reach out beyond California and understand what's happening at the national level. And so I can't think of a better leader in that very important topic in California than Chair Esquivel."

Director Nemeth hearkened back to Secretary Crowfoot's keynote speech the previous day, noting that something he said really caught her attention.

"That is we are a system of systems and there are no truer words in California water management than that fundamental fact," she said. "So that absolutely requires all of us to be collaborating and moving together to meet that challenge. The Department of Water Resources can't do it without all the public water agencies and our sister state agencies and our partners and the federal government, so we all need each other to advance an extremely important

agenda for all of California. So I want to talk to you today about what the Department of Water Resources is doing to help Californians as well as the public water agencies meet that challenge, both the what and the how.”

State Water Project

Director Nemeth began with the State Water Project. “So many people know that the State Water Project serves 27 million Californians and hundreds of thousands of acres of irrigated agriculture,” she said. *“But what I think fewer people understand is that of those 27 million Californians, 6 million are from disadvantaged communities. And that to me just speaks to the critical importance of the operation of the State Water Project and achieving a broader vision that brings water safety and security to all Californians.”*

Director Nemeth said she was doing this in three ways.

Reliability report now includes climate change. “For the first time ever in our water reliability report, an annual report for the State Water Project that’s out, we have included climate change forecasting into the ways that we generate the reliability of that important project into the future. That’s really important data, not just for our state water contractors, but for their member agencies and the member agencies’ member agencies, so that is in essence, our system of systems. And while it may be subtle, it really is an important shift to getting to a degree of granularity in this annual report and how we think about climate forecasts and how they affect this foundational supply for so many Californians.”

The Incidental Take Permit under the California Endangered Species Act. “Up until this point, the State Water Project sought compliance with the California Endangered Species Act through essentially a process whereby we declared ourselves consistent with the federal Endangered Species Act,” Director Nemeth said. “This year, we completed a permit a standalone permit under the California Endangered Species Act. That is important in a couple of key ways. It gives us an opportunity as the Department of Water Resources to manage the State Water Project in a way that is more flexible and more transparent than we otherwise could.”

“That permit embraces a lot of key principles that are important leading to this climate resilient future,” she continued. “The first of which is moving more water when it’s wet so that we can leave more water in the system when it’s dry. And that means using our current infrastructure to meet these challenges with greater flexibility. So one of the key features of the permit is that it enables the Department of Water Resources to carry over water in Oroville reservoir, during these wet years and use them for supplies for our communities and the environment in dry years.”

“There’s no greater example than our last two years. You all probably remember 2019 as a pretty wet year. Had we had that permit in place, we would have been able to hold more supplies in Oroville, and that would have helped us immensely this year. We would have been able to boost our allocation in a modest way, but nonetheless, we would have been able to boost our allocation to the State Water Project contractors and we would have also had water to provide to species during these very dry conditions. So that’s one

way in which the California Incidental Take Permit, is helping us start taking these steps, even in a regulatory environment where we can operate more flexibly and really in response to increasingly extreme conditions.”

Water transfer program. The State Water Project is working to finalize a new water transfer program that enables long-term transfers of core State Water Project supplies amongst the state water contractors. *“It’s critical to enable greater flexibility in the water transfer market, but with that desire for greater flexibility comes an absolute need for greater transparency,”* said Director Nemeth. *“So this transfer program also includes better, more publicly accessible information about how these transfers work and how they work for both the buyers and sellers in those communities.”*

“Those are three important firsts for the State Water Project that I’m proud of and I think really contribute overall to water resiliency here in California.”

Federal-state relations

Next, Director Nemeth briefly turned to the issue of the state and federal relations as it relates to water policy. She said the long-standing relationship and the cooperation between the state and State Water Project operations and the US Bureau of Reclamation and the operations of the Central Valley Project continues to this day.

“Our federal permit and the federal biological opinions are also the regulatory criteria for the operation of the State Water Project under federal law,” said Director Nemeth. *“So our incentive to align and coordinate is very strong and that work is ongoing, despite a lot of the contention around how those regulatory regimes will work together.”*

Statewide water resources planning

Next, Director Nemeth discussed ongoing work with statewide planning.

She began with the ongoing effort to develop water use efficiency standards, expressing her appreciation to all the local water agencies that have been working very closely with the Department of Water Resources to start to pilot new ways to understand how to establish appropriate water budgets and efficiency targets no matter where folks are in California.

“We’re famous for our variability and in many ways that challenge plays out in how we think about water use efficiency into the future,” she said. *“That is ongoing work at the California Department of Water Resources. And it is something that is emblematic of our partnership with the Water Resources Control Board. They have a role to play in as we move through and adopt those new water use efficiency standards. So a big thank you to the water users or water agencies that are helping us do that. There’s absolutely no way we could do that without you.”*

The second is the update of the urban water management plans and the ag water management plans. Director Nemeth said that in the coming weeks, they will be releasing draft guidelines for the update of those plans. *“Many of you have been participating through various stakeholder groups, and I know you’ll comment in a full*

throated way on those guidelines, and I urge you to do that," she said. "That's going to improve our ability to put guidelines out for your use that can help us ultimately achieve improvements in water security and reliability here in California."

The final piece is sustainable groundwater management. *"I want to commend all the groundwater management agencies that have formed and have started to put their plans together. Certainly, there's no greater challenge than that for those groundwater management agencies that are working in critically overdrafted basins. We are now in the formal review process and it's my goal that we will be able to make some decisions in advance of our statutory deadline of January 2022. So as we continue to evaluate the plans, we are going to look for opportunities to make some decisions on those plans in advance of that so people can have the certainty that they need to continue to implement and invest."*

"We know that in order to achieve sustainability by 2040, there's a lot of other work that we need to do to really fill in how these plans are going to work together, and that's something that the Department has a very important role to play, especially in our work around systems planning," she said. "Many of you may be familiar with the work that the Department has done over the years on broad storage studies. And other times of system-wide planning, we are now entering into a phase where examining groundwater recharge and examining hydrology's watershed wide, not necessarily within the boundaries of these sustainable groundwater management plans, even broader than that, to understand both the climate change impacts on hydrology at a watershed scale and how that information can help inform really important projects that we're all going to need for groundwater recharge going forward."

Director Nemeth said there is yet another area in which the Department is working very closely with the Water Resources Control Board in particular, which is the Safe and Affordable Drinking Water Act. *"They are making fantastic progress there. And what's really important is that is aligning in time to help us have a better understanding of the interaction between those two critical programs for California."*

Addressing racial equity

Lastly, Director Nemeth echoed Chair Esquivel's comments on the importance of diversity equity and inclusion. "DWR has been working on these issues for quite some time, but recent events have certainly improved our focus on our efforts in that area. And I'm very proud to say the Department is participating in the Capitol Collaborative on Race and Equity. And that is a way in which we examine all of our services, from recruiting to contracting, and how our existing programs to support diversity throughout California. In the course of the next 12 to 14 months, we will have a racial equity action plan that the Department will implement that is so critical to creating the California that we want and a California water, a system of systems that work no matter what corner of the state you reside in, no matter your background, um, and no matter your economic advantage. So I'm very proud of that work."

"I'll be very proud to share that more broadly with the water user community as well because I know you all are in the same boat as DWR, especially as we seek to recruit the next generation of water leaders in California."

Q&A Highlights

Question: Director Nemeth, when do you think we'll see the Prop 1 storage money starting to go out the door?

Director Nemeth noted that the Water Commission does have a continuous appropriation of \$2.7 billion that was approved by voters in 2014. There are decisions that the Water Commission is set to make at the beginning of next year. There are certain planning milestones, and she said she has heard about some of the challenges that the pandemic has presented to some of the projects that are eligible for those dollars.

"We are working closely with the California Water Commission to understand that and to potentially make adjustments so that we can keep on schedule with the disbursement of those funds," she said. "DWR has an important role to play as does the California Department of Fish and Wildlife. We are working very closely with Secretary Crowfoot to make sure that work that to establish contracts for public benefits is happening in a timely manner. That is a crucial next step in the state disbursement of those funds. I will make a commitment to have a more specific update as to where we are on that timeline to get those dollars out at the fall or winter ACWA conference."

Question: How can there be more certainty for surface water supplies for agriculture and other beneficial uses?

"There are lots of programs underway," said Director Nemeth. "I think first and foremost is really getting a handle on our groundwater supplies and what it takes to make them sustainable over the next two decades. I very much want to acknowledge and appreciate the anxieties around economic dislocation associated with the implementation of those plans, but I cannot emphasize enough that the cost of doing nothing in the context of groundwater management will be far higher and that uncertainty will be far greater. And so actual implementation of projects within SGMA are going to be crucial at providing agriculture with more certainty around surface water supplies, because what the SGMA planning process is going to do is help us address a long standing need to connect surface water supplies with how we manage our groundwater basins."

"Second are the voluntary agreements, and I know that Secretary Crowfoot touched on them briefly yesterday. Governor Newsom put out a framework in February of this year. It feels like a very long time ago, but there's a lot of ongoing work on those voluntary agreements. We are continuing to work through challenges around surface water regulations between the federal biological opinions and the state of California Endangered Species Act permit, and it's our goal as an administration to continue to work through those issues because they do bear a relationship to our ability to complete the voluntary agreements. That said we do continue to work with other tributaries that are not a part of the State Water Project or the Central Valley Project on voluntary agreements."

"Lastly, we have great partnerships with folks in the Sacramento Valley and folks in the Salinas Valley, but are also working more closely with agriculture in the Central Valley, particularly on their blueprint. I discussed earlier about watershed-wide assessments and layering climate hydrology on top of that, and to understand surface water supplies and understand how floodwaters can promote recharge to provide a degree of stability to agriculture in the Central

Valley – that is something that's very important to DWR. It's one of the key things that our agricultural water users, are already paying attention to that, but get engaged and know that DWR is engaged with that blueprint effort to help answer that question.”

Question: Chair Esquivel, how does the water community collaborate with the state and its goals to improve the science, the data and the technology?

“An organization was just recently stood up actually that I really hope will facilitate a lot of that,” said Chair Esquivel. “It's known as the Water Data Consortium, and it's an outgrowth of AB 1755 and the open water data transparency discussion, the partner agency teams and us state agency teams recognize that we're sometimes limited when it comes to the resources that we have to put toward these projects and these discussions on the data side. It helps to have an external nonprofit body populated by water agencies, nonprofits, and others to help facilitate and leverage what are these incredible opportunities to focus on projects, focus on areas like data submission, streamlining and others. And so I would point specifically to that consortium, it's just recently selected Tara Moran as its CEO, and she comes from Stanford's Water in the West program and has a background in some of the groundwater modeling efforts and discussions. She will be an incredible benefit to that organization.”

“There are other projects and efforts specifically at the board and some of our sister agencies. I think we need to continue to understand what are the opportunities and make sure that we're speaking to them. I think of also the open ET project, which is at this point a very years long project, but in collaboration between Google NASA, the Environmental Defense Fund, and water agencies around getting a better tool for evapotranspiration and using that to better complete our understanding of our systems of systems. Most of the water we know is lost to ET, so being able to put that in our ledger, be able to figure out that balance sheet could be a critical tool.”

“So I'd point to individual projects there, and really point to the consortium, because that's specifically where an organization was stood up to house and coordinate and transparently engage with all water users and the academic community around these opportunities in coordination with the state agency teams or projects for learning and understanding where the data is and where best we can create tools to make better decisions.”

Question: what is the State Water Board's role in the implementation of the Sustainable Groundwater Management Act?

“If you look at the Sustainable Groundwater Management Act, it's a continuum of a program between the Department of Water Resources and the State Board,” said Chair Esquivel. “And so our role is something of a backstop, if you will. So, in the previous checkpoints, we had to make sure that the GSAs were formed in all these high priority and medium priority basins; if that didn't happen, those basins fell to the board's purview at that point to help them figure out where they needed to go. Thankfully 99.9% of basins made that.”

“Where we are now is that the Department of Water Resources is evaluating the plans from the critically overdrafted basins, and Director Nemeth talked about making some decisions on this over this next year. So those basins that are rejected, where the plan has deficiencies enough so that DWR rejects them, then the agencies and the basins will come under the board's purview,” he continued. “There, we have incredible flexibility and we'll be very dependent upon

the basin itself as to how the board moves forward. What I want to emphasize is that in that continuum of a program, it is always about getting the resource and the basin back to local control. And if there is a deficiency, if DWR makes that determination, we'll coordinate. We're not starting from scratch. We have a basin, we have a plan, and we'll begin to figure out what may have been a challenge."

"An example is that the Madera basin didn't sign a coordinating agreement, which then fell under Board purview. Much of the work was an investigation as to what was the disagreement. As I recall, the disagreement was around a certain amount of recharge that was happening on a particular property and accounting for that. Ultimately, it's been resolved now. It will always depend upon what, where, where the basin is, and what the issues are. "

The process is laid out in the Sustainable Groundwater Management Act and includes a process of public notification and a full public hearing before the Board to take a careful look at what the issues are. *"There won't be some draconian boot that comes down quickly," Chair Esquivel said. "We'll be coordinating with DWR certainly. And, my message is to those basins that they not see it as a complete failure. It's a part of a continuum of a program in a very incredibly complicated act and with longterm goals here. And so we'll be again looking to evaluate those basins as they come as they may ...with treatment and understanding between the two programs, which are really a single program at DWR and the board here."*

Question: As recently as June of 2020, polling showed that public supported state bond funding for water infrastructure. Do you have any thoughts for how the state and local water agency partners like ACWA can be successful with a bond or economic stimulus package that includes water infrastructure investments?

Director Nemeth said there hasn't been much conversation about that as the Newsom Administration has started to understand the impact of the coronavirus on the state budget and economy. So with the news of the sharpest economic downturn in the history of the country, stimulus bills are likely both in Congress and potentially here in California, she said.

"At this point, I'm not involved in discussions for a bond for this November, but I do think there is significant ongoing interest in the Newsom administration to look at subsequent elections and think about those in terms of a stimulus. The Department of Water Resources ... has some analysis underway about the stimulus effects of water infrastructure projects in particular. And so that information will certainly inform anything that we do as a department to contribute to content of an economic stimulus bill. And, as we develop that information, that's something we'd be delighted to share with ACWA. ... Right now we are focused on water infrastructure as part of a federal stimulus bill potentially, and that's happening administration wide. So we're very eager to get some dollars back to California, for the express purpose of water infrastructure, which as you know, is the underpinning of so much of our economic stability here."

Question: How is the state managing the desperate impact that Sigma will have on disadvantaged communities in the Central Valley?

Chair Esquivel said that this has been a topic of discussion between he and Director Nemeth and number of times, as well as with staff. *"As we sort of alluded to earlier, the Safe and Affordable drinking water fund is there to try to really overcome this generational challenge, but it is impacted from the implementation of other laws ... We have to make sure these efforts are*

in concert because those dollars on the Safe and Affordable fund to bring clean and safe drinking water to the million Californians is only \$130 million. We're leveraging all of our other sources of funding for capital project costs, but it isn't going to meet the full need. We sort of knew that when we first had the fund, but it was what we needed to start. But with the economic downturn and perhaps assumptions that may be another plans and GSPs. It's going to have to be something that we are aware of and best account for, There are no direct solutions now, other than ensuring that the implementation of the safe and affordable fund and implementation of the sustainable groundwater management act implementation and of these overlaying government programs be aware of each other so that we can ensure the of the outcomes that we want in the end, and don't allow for unintended consequences to really impact or, or make situations worse."

"Within the water resilience portfolio that was released yesterday, we did signal our intention as an administration to develop a state task force on, SGMA, particularly the effects of SGMA," said Director Nemeth. "So certainly how the implementation of that act affects disadvantaged communities is going to be a centerpiece of the policy discussion there. That is an effort that will include not just the Department of Water Resources and the State Water Resources Control Board, but also the California Department of Food and Agriculture, GoBiz, and the labor department to really understand the longer-term effects that implementation of SGMA will have on those communities. One of the things that we are focused on as we get all these plans in and start to understand the relationship of surface water to groundwater management and how important it is to invest in projects that help us capture surface water so that we can be more efficient and also minimize the potential for fallowing and other kinds of land use changes, particularly in the Central Valley and those effects that, they will have on disadvantaged communities."

"So the way I think about it is that these groundwater management plans give us a real regional look and there's a lot of organizations that are helping us think about that. Some represent disadvantaged communities," she continued. More broadly, we're also working with the Public Policy Institute of California to understand more regionally what the balance looks like coming out of those plans and what the state can do to make real additional water supplies that can overall help in that balance. And then take a look at demand management like fallowing or other kinds of programs that can also contribute to that sustainability.

"It's that math if you will that is going to help us as a state understand the broader economic impacts. We can expect the task force to be announced over the course of the next month or two. I'm confident that this task force is going to be a central place, because we know the effects of that really are beyond folks who work in water and really have to extend towards folks that are more active in employment and in other parts of state government."

Question: What the status and future expectations of the integrated regional water management plans are?

"I refer to that as IRWM 2.0," said Director Nemeth. "I just want to register kind of my general disappointment that broader economic considerations have really overtaken our ability to have that resilience bond on the ballot that we had been hoping in November, because we knew that IRWM 2.0 is going to feature prominently. So I think there are ways in which that we need to look at IRWM again with an eye toward climate change.

“That takes us to a place where we want to think through not just these hydrologic areas or hydrologies as they’ve been defined relative to funding areas, but really expand that a little bit more broadly. We’re looking at sort of watershed wide. So the relationship of water projects that are going to be necessary for groundwater management agencies to achieve sustainability are also going to have play another function within certain IRWM service areas. So how we connect those things geographically with other jurisdictions, and how we orient ourselves to the effects of climate change. That means deeper droughts and bigger rain events, I think those are the things that DWR is looking to address in the next version of IRWM but I don’t know exactly when that’s going to be.”

“But absolutely when we start having that discussion, one of the first places where we’re going to go is our regional round table. Folks that have been very active in that program for many years, I know how effective it’s been at getting local water districts to collaborate. And you all are doing amazing work through that program. And we very much hope to position it to meet the future challenges and continue it with significant amounts of funding when we have the opportunity to do so.”

Question: Another panel today talked about the importance of collaboration and addressing our water issues going forward. How can regulate regulatory agency staff be more incentivized and empowered to participate collaboratively in stakeholder driven process?

“I’ve made a focus of a lot of my time on how we continue to make more transparent or decision-making, and to invite in individuals and be clear when those opportunities are, whether they’re at staff workshops or a board workshop,” said Chair Esquivel. “It’s also having materials ahead of time, having multi-lingual materials, all sorts of standards that we really need to incorporate again, if we’re going to be the best decision making bodies that we can. The issue sometimes is of resources. I think the question is more aimed at there are many great collaborative efforts, external necessarily ... something’s coming up for development at the board. And I want bodies there. I want our program programs to be staffed to a point to really attend those, have people tracking the PYs, the staff time, it takes to collaborate, because it does take resources to collaborate.”

“I’ll just be a bit candid in saying that since the board became a fee based organization about ten years ago or so, it is hard to resource those people and those positions, because it comes with a fee increase on those regulated communities and entities. So it would require an agreement that we are to be funded to better engage and collaborate. And I want to make sure we’re leaving nothing on the table before it is. We really make that ask because it’s not as if we have in any real structured way, but I am encouraged by the continued collaboration I see from our staff. I look for opportunities. If there are projects folks are working on that, they think that we should have interest in or, or please reach out we’ll, we’ll do our best to find those resources to engage.”

“For me, it’s how are we making sure first and foremost, our processes are transparent. Are you able to know where are you in a discussion on the toxicity provisions for water quality, or a new MCL for maximum contaminant limit for chromium-6, you know where to quickly go to a website and see the past meetings that have gone on and the discussion that happened with the

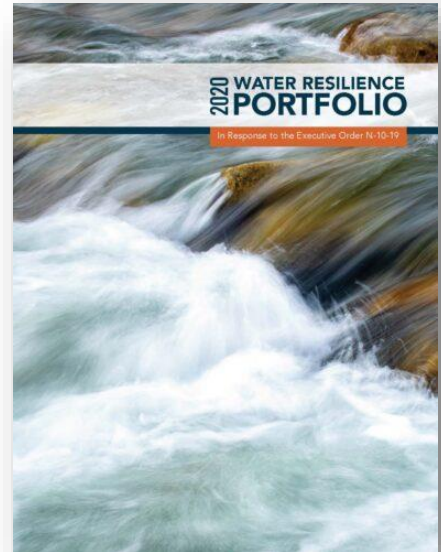
materials all in one place. Again, we have less resources at this point to do that terribly well on our website, but we're working towards, it. It's a huge priority of mine."

#

ACWA Conference: Secretary Wade Crowfoot Highlights the Principles and Priorities of the Water Resilience Portfolio

Maven | August 4, 2020

Wade Crowfoot has been the Secretary of the California Natural Resources Agency since January 2019 and oversees an agency of 19,000 employees charged with protecting and managing California's natural resources. Secretary Crowfoot brings over two decades of public policy and environmental leadership experience. Most recently, he was the CEO of the Water Foundation; prior to that, he was a senior advisor in the Brown Administration. At the Association of California Water Agencies virtual conference last week, Secretary Crowfoot gave this keynote address, focusing most of his comments on the recently released final Water Resilience Portfolio.



Secretary Crowfoot began by saying that clearly, 2020 has evolved into a year that none of us could have ever expected, and that for the vast majority of Californians, most have had clean, abundant water flowing out of the taps in this moment of uncertainty and anxiety. He acknowledged that while there are those in California that don't have clean water, largely due to the efforts of the member agencies of the Association of California Water Agencies (ACWA), the majority of Californians do.

(And he reiterated the need for everyone to be wearing a mask.).

Background of the Water Resilience Portfolio

Mr. Crowfoot then noted the recent release of the final Water Resilience Portfolio, which Governor Newsom calls the blueprint for the next two and a half years of his term. The genesis of the water portfolio came from an Executive Order in April of 2019 at a time when many were unclear where the Governor's priorities lay with regard to water issues, especially given the reputation for water issues for being complex and conflict-ridden. Governor Newsom's Executive Order articulated the need for a diversified comprehensive water portfolio for the state.

In the Executive Order, Governor Newsom identified eight key priorities to be embodied in the final version of the portfolio, which included prioritizing multi-benefit approaches, utilizing nature-based solutions or natural infrastructure, leveraging data and technology, and framing the work around regions, recognizing that depending on the region of the state, there are different opportunities and challenges with respect to water. It also included bringing in best practices from other places in the world, breaking down silos within state agencies, and deepening partnerships.

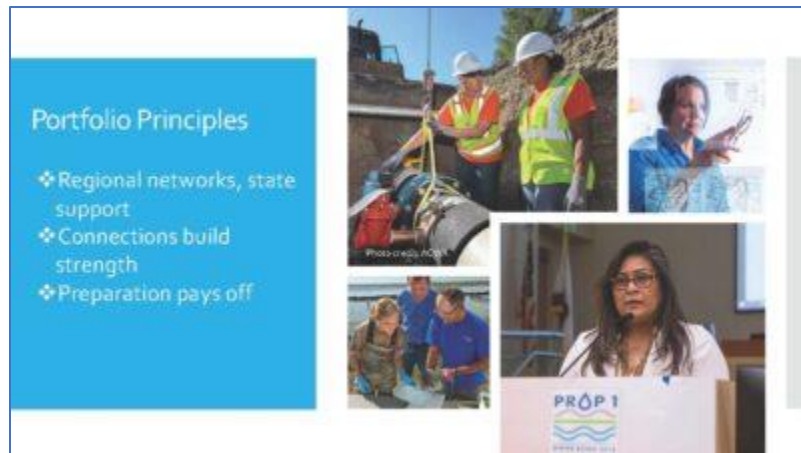


In January, the Newsom Administration released the draft water resilience portfolio, at the same time, invited constructive criticism and feedback from the public and stakeholders on the draft. They received more than 200 detailed letters and communications with specific suggestions around how the draft could be modified. As a result of comments received, 14 new actions were added, such as prioritizing upper watershed health, tribal partnerships, stormwater management, flood safety, and salinity. Five actions were deleted, such as actions related to the climate resilience bond as the bond will not be on the November ballot.

Other actions were modified due to comments received. For example, the draft portfolio had recommended water users provide real-time data on their diversions, but due to the thoughtful input received about the difficulty and the barriers to doing that, they instead the proposed action to instead assess the cost and benefits of directing of requiring real-time data provision.

“I’m really proud that the portfolio includes what we hope is a real distilled assessment of California water,” said Mr. Crowfoot. “We tried to focus on an explanatory approach, because while you all have lived California water and water in your regions for your entire careers, a lot of the policymakers that we hope review this document, haven’t. So we really wanted to distill what’s happening, but at the same time, we wanted to be thoughtful about the diversity among regions. So one of the appendices breaks down California water by region and provides four to five pages of graphical summaries of water issues faced in each region, including our assessment of areas of vulnerability in each region.”

Principles of the water portfolio



Three principles provide the foundation for the portfolio.

One is that we are a system of systems in the state. “You all have educated us that we really need to empower regions to build their sustainability, build their resilience, build their reliability, and then we as the state need to provide support,” said Secretary Crowfoot. “I want to just take a direct quote from

the summary that water resilience will be achieved region by region based on the unique challenges and opportunity in each area; therefore local, regional and tribal leadership is critical moving forward. All of the agencies and governments can do a better job of integrating water planning and management to steward shared water watersheds and aquifers. And then importantly, as the state government, we need to focus on enabling regional resilience while continuing to set statewide standards, enable projects of statewide scale and importance, and tackle challenges beyond the scope of any region. So we think that there’s a role for the state to play, but it is really in full partnership with regional leaders.”

The second principle is that connections build strength. “We need to maintain the physical connections between among the system of systems, obviously conveyance underground storage above-ground storage, but also more connection of information, data, and shared practices.”

The third principle is that preparation pays off. “We know from the last drought that many urban water agencies, for example, had done a lot of planning and diversification of their water supply within their regions and were therefore able to weather the drought more effectively than had they not done that. So we really hope to empower regional planning to prepare for what will be drier dries and wetter wets.”

Priorities for the Water Resilience Portfolio

The final portfolio includes 142 actions across four categories, which are unchanged from the draft: maintaining and diversifying water supplies, protecting and enhancing our natural systems, building those connections and being prepared.

“The governor provided the same observation that many of you did, which was, ‘142 actions is a lot. And how are you going to actually move the ball forward on the most important of those actions if you’ve listed so many,’ said Secretary Crowfoot. “It was important for us in developing this blueprint that we hope will inform future governor’s work is that we be comprehensive. So while different stakeholders find different priorities important, I would make an argument that each of those 142 actions is actually helpful and needed in decades to come to actually achieve water resilience. At the same time, we obviously need to be pragmatic and practical given we have finite resources and bandwidth as leaders. So the governor also directed us to be very clear about communicating our key priorities within the portfolio.”

Secretary Crowfoot then went through the portfolio’s priorities.

Priority 1: Implementing the Safe and Affordable Drinking Water Act.

“It was a long road to get to the point where the state had identified funding to meet the obligation. We have to provide all of our residents clean and safe drinking water , but that is obviously challenged by impacts of the greenhouse gas reduction fund, which ultimately became a large source of implementing this act. But nonetheless EPA Secretary Blumenfeld and Chair Joaquin, Esquivel and others actually have a plan in place to implement the drinking water act, including actually getting projects on the ground this year.”

Priority 2: Support local implementation of the Sustainable Groundwater Management Act.

“You all know that SGMA is both very important and also very challenging to implement. The Department of Water Resources and the State Water Board are actively working within their regulatory roles under SGMA. DWR is evaluating the groundwater sustainability plans that have been submitted, but state agencies need to do more to limit the impacts of this very necessary movement to the sustainable management of groundwater.

“So we are establishing a state SGMA support team, which will be a multi-agency group that is going to target where and how we can be helpful for local implementation. For example, streamlining state approvals for groundwater recharge projects that take winter flood flows and get them underground. There will be more on this in the coming days and weeks. But if you’re an agency that is focused on SGMA implementation, and you have a way that the state can be helpful or remove barriers that we put up that make it hard to implement SGMA, you will have a very focused, active interagency team on this. It will ultimately be led by Secretary Ross at the Department of Food and Agriculture, Secretary Blumenfeld at Cal EPA and myself at the Natural Resources Agency.”

Priority 3: Achieve voluntary agreements.

“We are still focused on achieving a voluntary agreement to implement the protection of beneficial uses in the Sacramento and San Joaquin river systems and the Bay-Delta,” said Secretary Crowfoot. “We continue to be convinced that a voluntary agreement that uses science to adapt and improve the environmental health of these rivers is the best way forward compared to what could be over a decade of regulation and adjudication of this issue.”

“Obviously at the same time, this effort to achieve voluntary agreements has been compounded by differences between the state and federal government on protection of endangered species within the Delta. We recognize that the voluntary agreements from our perspective need to take place within the four squares of state and federal law. So we did feel it was important to stand up and ensure the protection of these endangered species. But we remain a hundred percent committed to resolving these issues with the federal government. And ideally would like to find a solution to move forward outside or beyond this litigation so that we can focus on the grand voluntary agreements. And while that is being navigated, that question of litigation and how to really find solutions and move beyond. We are interested in working with tributaries to explore voluntary agreements with those tributaries who are not actually party or impacted by litigation.”

Priority 4: Updating regulations to expand water recycling with a specific focus on getting those direct potable reuse regulations done by 2023.

“We know that particularly in Southern California, many of your ambitious diversification goals require the state to establish these first-ever Direct Potable Reuse regulations, so Secretary Blumenfield and Chair Esquivel are very focused on that.”

Priority 5: Promote healthy soils.

“There are voluntary efforts underway that the state government is supporting agricultural producers efforts to put more organic content into their soil and build up the health of the soil, which not only improves it as an asset for farmers and ranchers, but also allows for more retention of water, as well as sequestering carbon. We think this is a big win, win, win for agricultural water use and agricultural management in years to come. Secretary Ross, who was in essence, a coauthor of this portfolio, speaks very passionately about that.”

Priority 6: Restore multi-benefit floodplains.

“This is another win, win, win in the water space. We know that actually letting our rivers expand where appropriate into seasonal floodplains provides important environmental habitat for protected species, reduces flood risks on downstream communities, and in a lot of places allows for groundwater recharge. We can and should be doing a lot more of this at a large landscape level, so more on this in the weeks to come. But one thing we’re focused on is really using the existing bond funding out there to advance these important projects.”

Priority 7: Accelerate smart, new water storage projects.

In 2014, California voters approved Prop 1, which was a \$7 billion investment in water, \$2 billion of which would go to water storage. Ultimately, the California Water Commission identified eight projects, both surface storage and underground storage, for public funding to fund the portion of those projects that would deliver public benefits.

“Five years on and those projects are still being developed and we think we actually need to help those projects, the ones that are demonstrating feasibility but are not there, actually get there. So whether it’s Sites or Pacheco or Los Vaqueros or the groundwater projects – actually getting them done. That’s one thing Nancy Vogel is going to focus on along with the Water Commission is how to support this storage getting online. We obviously need to make sure that any new storage improves water reliability, provides environmental benefits, and mitigates any environmental impacts. I know these Prop 1 projects are only a subset of many regional water storage projects that you all are planning, but we want to recognize the role that smart well-positioned storage has within our state’s water portfolio.”

Priority 8: Modernize Delta conveyance.

“Next is modernizing the conveyance system that moves water from storage to use. We continue to be concerned about the vulnerability of Delta levees that provide for fresh water to over 25 million Californians and are vulnerable to earthquake, sea level rise, and saltwater intrusions. So we remain focused with our state water contractor partners on actually delivering on conveyance – not to expand exports from those river systems to the Bay area, Central Valley and Southern California, but to maintain reliability because even as all of our regions diversify water sources and become less reliant on far away water sources, we know that this backbone infrastructure will remain critical to address drought and future climate impacts.”

Priority 9: Stabilize the Salton Sea.

“The Governor personally maintains focus on stabilizing the Salton Sea in Riverside and Imperial counties. The state has an obligation to generate 30,000 acres of habitat and dust suppression, both to protect public safety of residents in that region and to restore critical environmental habitat on the Pacific Flyway. I’m pleased with the progress that we’ve made. The recently passed budget includes new capacity, new positions to move forward, but we need to continue to bring a major urgency and priority to this.”

Priority 10: Remove the obsolete Klamath Dams.

“We have an opportunity collectively to complete the largest river restoration in American history by working with our partners, tribal leadership in the Yuork, Karuk, and Klamath River Tribes, local governments, and PacifiCorp to remove four now obsolete dams on the Klamath River which ultimately less expensive to remove and restore the river than relicensing would be. You’ll hear more from the governor directly on this priority, but we remain really focused a decision from FERC or the Federal Energy Regulatory Commission last week moves us closer to this vision, but also provides some complexity. So we’re looking forward to partnering with Pacific Corp and other partners to actually get this done in the next couple of years.”

Priority 11: Better utilize data and information for management.

“Sometimes this can seem a little conceptual, but we have real specific actions that we want to take, including reducing the duplicative requirements that state government puts on water agencies for data. We want to be an aggregator of data. We want to be a sharer of utilizable data, but we also want to be efficient with the way that we collect that. So more on that in the weeks and months to come.”

Judging the success of the portfolio

So what does success look like? Secretary Crowfoot acknowledged that the process of building resilience won't be done in two months or even two years – it's more of a multi-decadal effort, he said.

“Here's our vision. We look forward to a future where all Californians have clean and healthy drinking water, where our native fish populations can recover, where reliable water helps agriculture, communities, and tribal governments thrive. Our cities and towns can grow and our economy can grow as we use water more efficiently, and we capture, store, and share water through droughts and times of ... not a lot of water at the same time. We protect our communities from floods and, and, and lastly, and importantly that we continue to adapt our water management based on sound, sound, science and collaboration beyond conflict.”

Secretary Crowfoot concluded by saying that the administration will be holding itself accountable by providing annual updates, and expressed his appreciation for all who worked to complete the water resilience portfolio, including Secretary Ross, Secretary Blumenfeld, and Nancy Vogel, as well as the DWR graphics team.

Q&A highlights

Question: How does the state plan on re-engineering the voluntary agreements process following some of the recent actions surrounding the incidental take permits and the biological opinions?

Answer: “I think we need to resolve those legal differences between the state and the federal agencies, as well as the water contractors and the state. It seems important to resolve those legal differences as a step in the pathway to voluntary agreements. We've said very clearly, privately and publicly, that we would like to get around a table with everyone, including our federal partners and federal water contractors and resolve these issues. From my perspective, I think everyone wakes up in the morning wanting to protect these fish and improve reliability. And what we see between Reclamation and DWR is the operators are actually working together really well.”

“And in a lot of respects, the framework of the ITP and the biological opinions can be bridged, so it's our goal to do that. We recognize that resolving those issues is really important. At the same time we issued this VA framework back in February, broad strokes, what we think is scientifically adequate and so we want to work toward that as soon as we can. We know that includes improving flows. We know that includes a tripartite commitment to habitat between the state, federal, and local water agencies. So let's continue to move forward on that.”

“Then lastly, where there are tributaries that are not impacted by those legal differences, we're eager to engage with them on whether we can solve for their tributaries and achieve essentially pieces of the voluntary agreement puzzle, within those tributaries that can ultimately figure into a grand agreement.”

Question: Water infrastructure funding is a high priority for ACWA. The legislature's talking about a hundred billion dollar economic stimulus package. Has the governor reacted to that yet? Is there the potential there for funding water infrastructure and SGMA issues?

Answer: “Late last week, the legislature provided the outline of what it would be that economic stimulus package. We have not assessed that in detail. And so we don’t have any specific reaction from the governor or the governor’s office. What I will say though, is we agree there needs to be more investment in water infrastructure. The governor, back in January, before COVID hit, had proposed a climate resilience bond, which had a large portion for water infrastructure and the priorities within the draft portfolio. We know that the climate resilience bond won’t be on the ballot, but we remain very interested in understanding where and how the state can invest. Likewise, with the federal agencies and federal government, we’re really excited that the federal water infrastructure bill WRDA is advancing. We’re also in active conversations around how we can ensure that any stimulus funding can actually be invested in California’s water system of systems. So any, and all ideas we look forward to, and we recognize it’s going to take more investment to actually get this portfolio done.”

#

(This page was intentionally left blank)

Drought and the Sacramento–San Joaquin Delta, 2012–2016: Environmental Review and Lessons

California Water Blog | August 2, 2020 | Jay Lund

Droughts are common in California. The drought of 2012-2016 had no less precipitation and was no longer than previous historical droughts (Figure 1), but came with record high temperatures (Figure 2) and low snowpack (Figure 3), which worsened many drought impacts. Water supplies for agriculture and urban users statewide struggled to meet water demands. Conservation and rationing, increased groundwater pumping and a diversified economy helped keep California's economy robust in most sectors. The drought degraded environmental conditions in the Sacramento-San Joaquin Delta (Delta) as the region became saltier and warmer, invasive weeds spread, and iconic fishes like salmon and Delta smelt had strong declines.

Water demands on the Delta often outstrip its capacity, even in wetter than average years. During the drought, water-demand conflicts increased among human and environmental uses. For example, maintaining Delta outflow and freshwater standards was important to agriculture, drinking water supplies and some sensitive species. To fulfill these downstream needs, upstream water releases from Shasta Reservoir depleted the cold-water pool in 2014 and 2015, increasing Sacramento River temperatures and nearly extinguishing two cohorts of winter-run Chinook salmon.

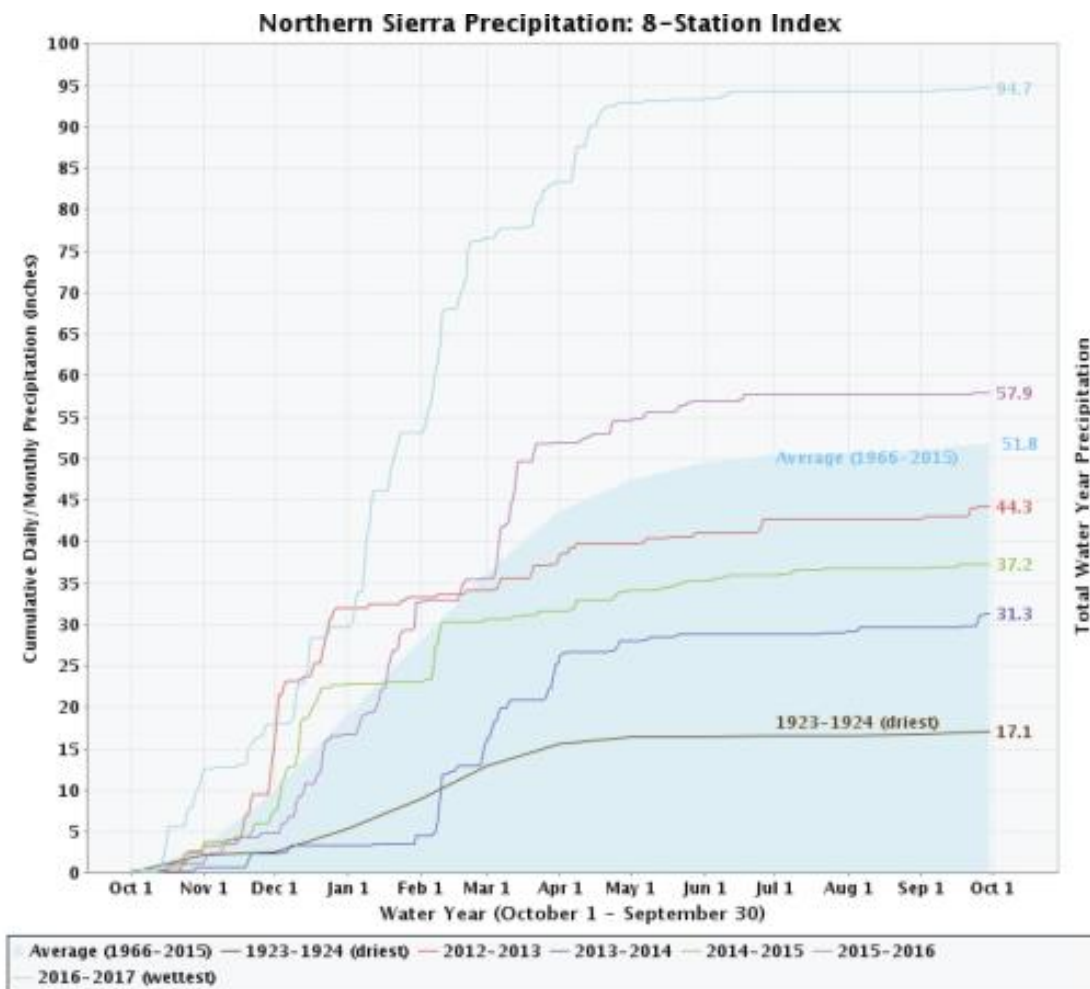


Figure 1. Cumulative precipitation for water years 2012-2016, compared to average and driest water years (Source: CDEC)

California Average Temperature
January-December

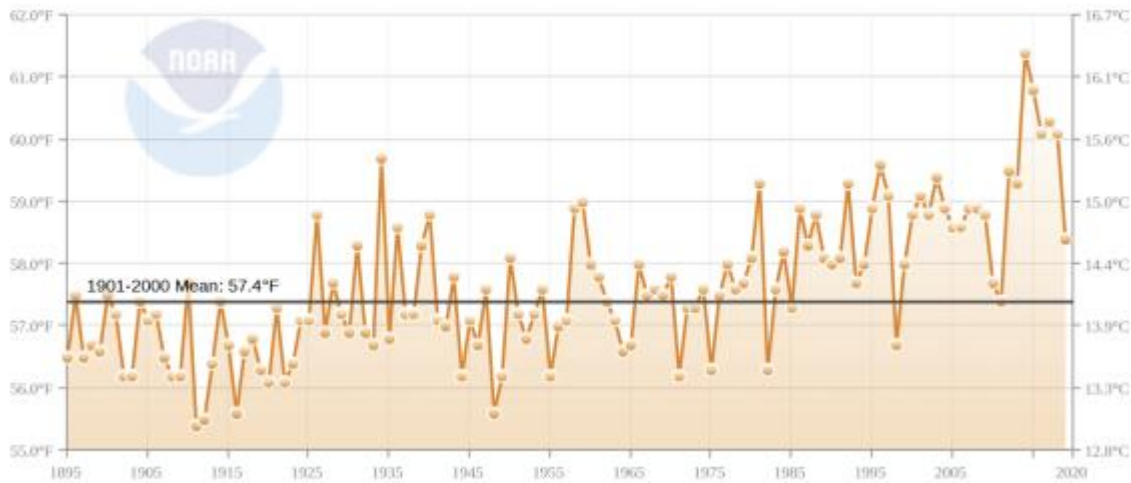


Figure 2.

California Mean annual temperature relative to the 20th Century mean (Source: NOAA National Centers for Environmental Information)

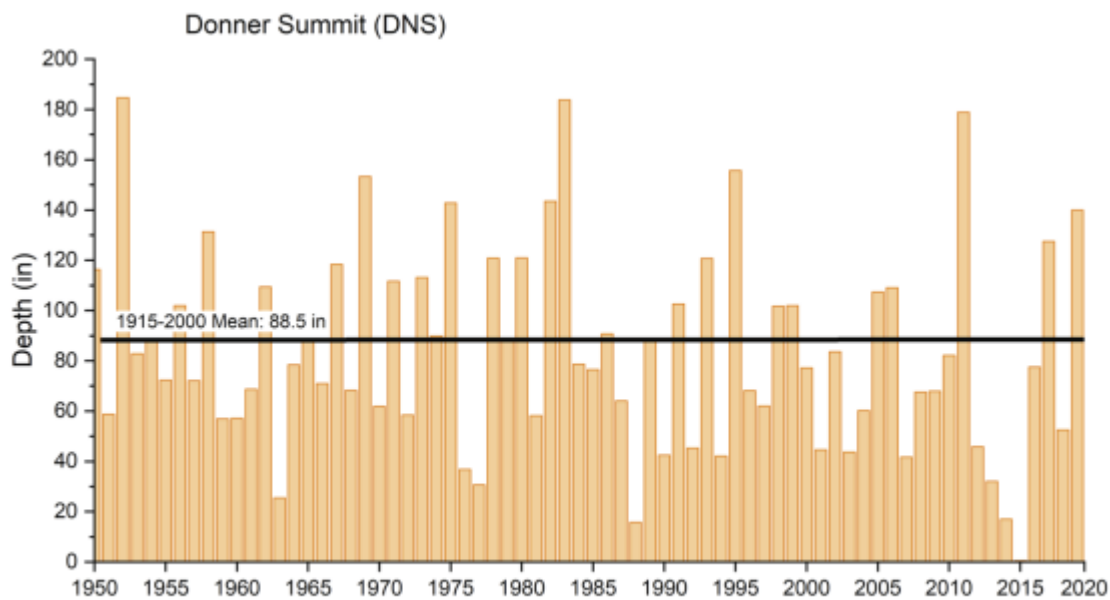


Figure 3 California mean April 1 snowpack at Donner Summit relative to 20th-Century mean. Source: CDEC.

Figure 3.

California mean April 1 snowpack at Donner relative to the 20th Century mean (Source: CDEC)

To help understand scientific aspects of Delta management during the drought, we reviewed official documentation, reports and data, and spoke with numerous agency managers and scientists (Durand et al. 2020). State and federal water management priorities for the Delta watersheds were to (1) provide essential human health and safety needs, (2) control saltwater intrusion in the Delta, (3) maintain reservoir capacity, and (4) protect at-risk species. Support for these priorities included reducing reservoir releases, Delta export pumping, and Delta outflow; installing an in-Delta salinity barrier; conserving urban water; reducing agricultural water allotments; increasing salmon hatchery production and trucking; and removing invasive aquatic weeds.

These actions helped maintain the Delta's environment and its dependent uses. However, with the exception of a study on the effects of the emergency salinity barrier in the Delta, managers were too occupied with emergency-related responsibilities to apply organized scientific methods to learn and prepare for future droughts. Our main recommendation is to use the lessons of this drought—and the next—to prepare for the one after that. Indeed, 2020 is another dry year and we may already be in a long-term western US megadrought that will force changes in water policy (Williams et al. 2020). The more we can learn from current and future efforts, the better prepared we will be.

Systematic science-based and stakeholder-inclusive preparation for our future needs to continue despite other pressing priorities. The impacts of the COVID-19 pandemic, related economic hardship, and racial/social injustice are all worsened without effective resource management in our drying, warming climate. The availability of data from long-term monitoring of water quality, plankton and fish populations provide insights when extreme wet and dry periods are compared. Each drought in California's history has brought changes in water management and policy. As the climate changes, drought effects will become more severe and policies are likely to become rapidly outdated.

We suggest preparing today for anticipated increases in frequency and severity of drought years with the following recommendations:

1. **Pre-drought warnings.** Drought timing differs across California's regions. The Governor's declaration of drought emergency in 2014 helped solidify a unified response. Preliminary declarations allow diverse water jurisdictions to examine local conditions, and prepare for potential water supply disruptions.
2. **Independent Evaluation.** Independent review of water agency data by an interdisciplinary group, such as the Interagency Ecological Program can help managers synthesize and make more environmentally-effective, science-based decisions.
3. **Transparency and Documentation.** The internet is a cluttered, unstable place. Recent mandates that support data and policy transparency have increased the clutter, and work at odds to the original intent. For online information to be transparent, professional archivists are needed to ensure that documents and data remain available over time, and do not become dead links.
4. **Scientific Preparation.** Drought response often overrode scientific opportunity. The demands on agencies were enormous. Some surveys increased frequency or were extended to monitor drought effects. But to answer long-term questions about the effects of the changing California climate (including droughts), more systematic, science-based planning is essential.
5. **A Delta drought plan** would help managers across agencies organize and prepare resources for the next drought, which might already be beginning. A Delta drought plan should provide a summary of lessons from previous droughts; data analysis; protocols for interagency communication and response; resource deployment and operational contingency plans, with funding and staffing details; and structure to organize a scientific team.
6. **Salinity Barriers.** The 2015 Delta salinity barrier program was effective and run like an experiment. Managers should prepare to implement solutions with a similar approach, preparing permits, operational coordination, and scientific monitoring in advance.

7. **Ecosystem Resilience.** Vulnerable animal populations become more threatened during droughts. Interventions are less costly and more effective during inter-drought periods. If vulnerable fish stocks and restored habitats are not materially improved between droughts, they are at risk of failing during the next drought.
8. **Salmon hatcheries** mostly help to support commercial fisheries, while harming the gene pool of wild stocks, reducing their ability to adapt to changing conditions. This conflict is exacerbated during droughts. More research and a re-thinking of hatchery management is required to separate the needs of competing interests in order to preserve California's declining salmon heritage, which becomes more vulnerable with each drought.
9. **Climate Change.** Preparations must be made for the new California climate: hotter, less snowpack, and with more variable and extreme precipitation. A shift to groundwater storage reliance is taking place and may be helpful in the long term. This will affect the timing and volume of water transport in the Delta, and management responses to emerging stressors.

California's 2012-2016 drought was practice for future climate change events. The whiplash events of drought followed by flood (e.g., 2017 water year) are unlikely to remain exceptional. In the past century, each drought has brought improvements in water systems and drought management, but at a steep price to environmental conditions in the Delta and its watershed. The shifting climate will exacerbate this trend. Relative to economic, cultural and environmental losses, organized science is cheap. Investing in research can make policy discussions and water investment more effective. A proactive organized campaign to understand and anticipate the changing impact of drought on the Delta and California will help mediate future conflicts and preserve California's rich natural resources.

#

Editorial: Gavin Newsom's plan for California water is a good one. Stay the course

Los Angeles Times | July 31, 2020 | The Times Editorial Board

Gov. Gavin Newsom's new blueprint for California water policy offers a stay-the-course agenda for projects and policies intended to help cope with a warming climate and more volatile weather patterns that already are affecting the state's irrigation, environmental and drinking water supplies. There are no moonshots and few surprises, and that's fine; it will be challenging enough to ensure that all Californians are hooked up to safe and reliable water supplies to meet their needs for the coming decade and beyond.

The "Water Resilience Portfolio" released Tuesday is in essence a laundry list of projects already in development or at least in the discussion phase. For cities like Los Angeles, there's an emphasis on recycling as a backup to and a partial replacement for water currently imported from the north. That's as it should be. Much of Orange County has been drinking (and flushing, and showering with) recycled water for years without incident and without rebellion by residents, and the rest of Southern California should follow suit — although some state help will be needed to address lingering concerns over pharmaceuticals and other stubborn contaminants that aren't currently filtered out of reused wastewater.

For agriculture, there is a focus on addressing overtapped groundwater supplies and following through on a 2014 law that ever-so-slowly begins to limit depletion of underground aquifers. Newsom's blueprint doubles down on integrating floodplains into the state's water system, so that fields that lie fallow during severe winters can be flooded not just to control raging rivers, but also to provide crucial habitat for spawning and migrating fish while simultaneously recharging the aquifers.

Left for another time or another document is a more thorough discussion of diversifying the San Joaquin Valley's economy. California agriculture will continue to produce a good portion of the nation's food and fiber, but growers will have to do it with less (or less predictable) water. And they will need state help to ramp up, or at least coordinate, new technologies to monitor atmospheric and soil conditions and use available water accordingly, with less waste and runoff. The region needs guidance — and perhaps a bit of a push — in turning inefficient fields with no groundwater into lucrative solar energy production.

There's another key issue that Newsom's blueprint doesn't address, nor should we expect it to, important as it is.

California's water prospects became all the more complex when President Trump's administration began inserting its anti-science policies on endangered species. November's election will to a large extent determine the nature of the federal government's role in the state's water supply. Newsom would be wise to update his portfolio plan in just a few months, when we have a better sense about whether the feds will be a partner, or a lingering headache, in divvying up the state's liquid assets.

###

(This page was intentionally left blank)

California Has A New Plan To Protect Its Water Supply From Climate Change, But Some Say It's Based On Old Thinking

Cap Radio | July 29, 2020 | Ezra David Romero



Water flows from five of the eight flood gates at Folsom Dam Friday, March 18, 2016, in Folsom, Calif. Rich Pedroncelli / AP Photo

Water is a big deal in California, and climate change is threatening the precious resource. That's why Gov. Gavin Newsom finalized a broad plan this week to help prevent future water challenges, but some Californians say it relies on old thinking and harmful water storage projects.

The Water Resilience Portfolio outlines 142 actions the state could take to build resilience as the effects of warming temperatures grow. It supports everything from a recent fund focused on safe and affordable drinking water to habitat restoration to improving groundwater storage capabilities.

It's touted as a way to cope with the effects of climate change — more extreme droughts, floods, rising temperatures, declining fish populations and so on.

“Water is the lifeblood of our state, sustaining communities, wildlife and our economy,” Newsom said in a press release. “My administration has worked to assemble a blueprint to secure this vital and limited resource into the future in a way that builds climate resilience for all communities and sustains native fish and the habitat they need to thrive.”

The final version — a result of an April 2019 executive order — also notes that because of the “drastic downturn in the state’s budget situation” the pace of implementing the actions will depend on what resources are available, which means it’s an “aspirational document.”

“This blueprint establishes regional priorities that align challenges with opportunities for water-focused innovations like conservation, replenishing aquifers and direct potable reuse,” said Secretary for Environmental Protection Jared Blumenfeld.

The idea is supported by many farmers and others in the world of water who like the idea of a tunnel to carry Northern California Water south, which the plan supports.

“It will protect the water supply for essentially two-thirds of Californians from the very real risk of earthquakes, more extreme floods, prolonged droughts and sea level rise,” said Michael Quigley, Co-Chair of Californians for Water Security.

Concerns From Environmental Groups

But creating a \$17 billion one-tunnel project doesn’t sit well with environmental groups like Sierra Club California that have asked the administration to think of alternatives to diverting water from the San Francisco Bay-Delta. Kathryn Phillips, head of the group, says the new plan is very similar to the old one in that it includes the tunnel plan and building a new reservoir.

“His administration has shown a level of naivete about water policy in the state and that’s sort of jaw dropping,” she said. “They continue to believe that this project that was first proposed in the 1940s will still satisfy California’s water needs, even as we face a critical climate crisis that’s changing the way water flows.”

She says the idea should be scrapped and the focus put even more on preparing each region of California to withstand climate change instead of pulling water resources from one part of the state to another. The plan does support local communities in establishing sustainable groundwater solutions.

“The most important thing we need to do is to get to a place where we are truly regionally resilient,” she said. “That’s only going to happen when we stop making ourselves dependent on transporting increasing amounts of water from places where water is going to be declining [because of climate change].”

The plan, if funds allow, could accomplish a ton — protect Californians from pollution, modernize water data systems and present a unified pursuit of federal funding — but an analysis from the Pacific Institute says “there are still gaps that must be addressed.”

The group says the plan could do five things better:

- prioritize efforts with multiple benefits
- get involved in negotiations around the Colorado River
- include the business community more in decisions about water
- do even more for the Salton Sea
- advance projects to collect stormwater

Focus On Safe Drinking Water

The proposal does prioritize implementing a plan to provide safe and affordable drinking water to a million Californians who lack it. That’s a big deal for communities that are facing drought and outside factors like farms using water adjacent to rural communities, says Jonathan Nelson, policy director at the Community Water Center.

“We were excited to see that the very first recommendation in this pretty big document was on safe drinking water,” he said.

Even though safe drinking water is a priority, Nelson says the impact of the pandemic on the funding source — cap and trade dollars, the state's system where pollution credits are bought and sold — is causing concern for securing water to Californians with dirty and unhealthy water.

“The most recent greenhouse gas fund auction was abysmal, almost no funding came in,” he said. “I think there are a lot of eyes on the next auction in August.”

Nelson says a secondary funding source needs to be thought up, but he also realizes with a tight state budget that may prove difficult to find.

“We need to figure out some sort of backup funding to address that gap and ideally we need to be putting that backup or that plan into place now before we realize ... we’re running out of money and then try to figure it out,” he said.

Regional Impact

The sweeping state proposal also underscores how climate change will impact each part of the state differently. That support could help places like the Sacramento region that have come up with plans to store water underground for dry times. The idea is called a water bank.

“A water bank is much like a bank,” said James Peifer, executive director of the Regional Water Authority. “You need to make a deposit first before you can make a withdrawal. So, what we want to do is store water first before we withdraw. That way, it's better for the environment.”

Peifer says investing in a water bank before the climate warms too much could prevent hard times for people and wildlife that call the Sacramento region home.

“What it can do is provide for additional water supplies when we are experiencing dry times,” he said. “We might be able to provide some additional flows to the fishery to the lower American River ... We will be able to provide water supplies for our own residents and businesses when we're experiencing very dry periods in the future because of droughts.”

#

This Just In:... Governor Newsom Releases Final Water Resilience Portfolio

Maven | July 28, 2020 | Office of the Governor

***Water policy blueprint will guide state actions, support regional efforts
Safe drinking water, groundwater recharge, healthy waterways, progress on Salton Sea
among top priorities***

Governor Gavin Newsom today released a final version of the Water Resilience Portfolio, the Administration's blueprint for equipping California to cope with more extreme droughts and floods, rising temperatures, declining fish populations, over-reliance on groundwater and other challenges.

The portfolio outlines 142 state actions to help build a climate-resilient water system in the face of climate change. The actions tie directly to Administration efforts to carry out recent laws regarding safe and affordable drinking water, groundwater sustainability and water-use efficiency. They also elevate priorities to secure voluntary agreements in key watersheds to improve flows and conditions for fish, address air quality and habitat challenges around the Salton Sea and protect the long-term functionality of the State Water Project and other conveyance infrastructure.

"Water is the lifeblood of our state, sustaining communities, wildlife and our economy," said Governor Newsom. "For more than a year, my Administration has worked to assemble a blueprint to secure this vital and limited resource into the future in a way that builds climate resilience for all communities and sustains native fish and the habitat they need to thrive."

The California Natural Resources Agency, California Environmental Protection Agency, and California Department of Food and Agriculture solicited extensive public input to prepare the portfolio in response to an April 2019 Executive Order (N-10-19).

"The state's playbook for managing water in coming decades must be broad and comprehensive," said Secretary for Natural Resources Wade Crowfoot. "The portfolio identifies how the state can help regions maintain and diversify water supplies, protect and enhance natural systems and prepare for a future that looks very different from our recent past."

The agencies released a draft version of the portfolio for public feedback in January 2020. Input from more than 200 separate individuals and organizations helped shape revisions, including the addition of 14 new actions. The revisions give greater emphasis to tribal interests and leadership, upper watershed health and cross-border water issues.

"The Water Resilience Portfolio is a roadmap that will help us plan and build for a climate uncertain future. This blueprint establishes regional priorities that align challenges with opportunities for water-focused innovations like conservation, replenishing aquifers and direct potable reuse," said Secretary for Environmental Protection Jared Blumenfeld. "By implementing this portfolio of actions together, we can meet the existential threat posed by climate change with a strategic sense of obligation and vision."

The portfolio also recognizes the role of healthy soils in building resilience, including efforts that promote using working lands to sequester carbon, store water and prevent pollution.

“Evaluating our water management system for improved resilience is an essential first step in our quest for long-range sustainability and reliability,” said Secretary for Agriculture Karen Ross. “I look forward to collaborating with our state partners and agriculture stakeholders on this essential issue.”

Given the recent drastic downturn in the state’s budget situation, the final version acknowledges that the pace of progress on the actions in the portfolio will depend upon the resources available. The portfolio is a comprehensive, aspirational document, but there are several priorities the state will focus on.

These priorities include:

1. Implementing the Safe and Affordable Drinking Water Act of 2019
2. Supporting local communities to successfully implement the Sustainable Groundwater Management Act of 2014
3. Achieving voluntary agreements to increase flows and improve conditions for native fish in the Sacramento-San Joaquin Delta and its watersheds
4. Modernizing the Delta water conveyance system to protect long-term functionality of the State Water Project
5. Updating regulations to expand water recycling
6. Accelerating permitting of new smart water storage
7. Expanding seasonal floodplains for fish and flood benefits
8. Improving conditions at the Salton Sea
9. Removing dams from the Klamath River
10. Better leveraging of information and data to improve water management

State agencies intend to track and share progress on portfolio implementation with an annual report and stakeholder gathering.

#

For more information, visit www.waterresilience.ca.gov.

Newsom Lays Out Big Dreams for California's Water Future

Courthouse News Service | July 28, 2020 | Nick Cahill



Site of the potential intake for the delta tunnel project in the north Sacramento-San Joaquin Delta, near Freeport. (Courthouse News photo / Katie Cahill)

SACRAMENTO, Calif. (CN) — Touting ways to shield California's most precious resource from climate change, Governor Gavin Newsom released strategies Tuesday to improve drinking water quality, revive a stalled multibillion-dollar tunnel and build new dams.

Newsom says the sweeping water portfolio will help the Golden State prepare for global warming by reinforcing outdated water infrastructure and reducing the state's reliance on groundwater during future droughts.

"Water is the lifeblood of our state, sustaining communities, wildlife and our economy," said Newsom in a statement. "For more than a year, my administration has worked to assemble a blueprint to secure this vital and limited resource into the future in a way that builds climate resilience for all communities and sustains native fish and the habitat they need to thrive."

Newsom kicked off his second year in office in January by announcing the rough draft of the so-called "Water Resilience Portfolio."

The planning document, which details 142 water-related ideas, was shaped by the state's resources management agencies and is the result of Newsom's April 2019 executive order.

While the resulting blueprint doesn't promise a "quick or singular fix" to California's longstanding water woes, it does offer ways to improve physical infrastructure and water transfers, settle

disputes between environmentalists and farmers, implement new recycling programs, improve soil health, wetlands expansion and even restore the Salton Sea.

The first draft was well received by farmers, water districts and others in California's water circle, but critics bemoaned the inclusion of megaprojects like a thorny \$17 billion plan to tunnel underneath a major estuary as well as a massive new dam off the state's largest river.

After getting feedback from over 200 organizations and residents, the Newsom administration says the revised blueprint is ready to go. The finalized version adds 14 new actions, including promises to improve communications with tribal governments and address cross-border water issues.

"The state's playbook for managing water in coming decades must be broad and comprehensive," said Natural Resources Secretary Wade Crowfoot. "The portfolio identifies how the state can help regions maintain and diversify water supplies, protect and enhance natural systems and prepare for a future that looks very different from our recent past."

But the additions to Newsom's wide-ranging portfolio didn't immediately appease environmental groups, including those dedicated to improving water quality in the Sacramento-San Joaquin River Delta.

Sierra Club California said Newsom is continuing down the failed path of his predecessor Jerry Brown by pushing the so-called Delta Tunnel, instead of addressing more implementable goals.

"It's basically a catalog," said Kathryn Phillips, Sierra Club director. "This version doesn't contain the significant changes we asked for; we can't figure out who's running the ship over there when it comes to water."

The finalized portfolio advances support for the tunnel, further linking Newsom to one of the most controversial water projects in state history.

"Plan, permit, and build new diversion and conveyance facilities (such as a tunnel) in the Sacramento-San Joaquin Delta to safeguard State Water Project and, potentially, Central Valley Project deliveries drawn from the Sacramento and San Joaquin river systems," the portfolio states.

The plan additionally directs state agencies to "accelerate" permitting for Sites Reservoir, a multibillion-dollar new dam project in Northern California, finally come up with a feasible plan to restore water to and improve air quality near the Salton Sea and tackle contaminated water and trash spewing across the Mexican border.

Considering the state's dreary budget condition, the complicated nature of California water policy and the myriad of involved parties — from the federal government, environmentalists and the agricultural industry — the 141-page portfolio is as ambitious as it is long.

But Newsom says the immediate priorities will be improving safe and affordable drinking water, implementing a statewide groundwater monitoring rule, settling fights over delta pumping limits, building the tunnel and expanding water recycling programs.

Restore the Delta, which participated in public hearings regarding the portfolio and encouraged the state to prioritize fighting the increasingly common harmful algae breaks in the delta, scoffed at Tuesday's announcement.

"Same old, same old. Yawn," said Restore the Delta in a tweet.

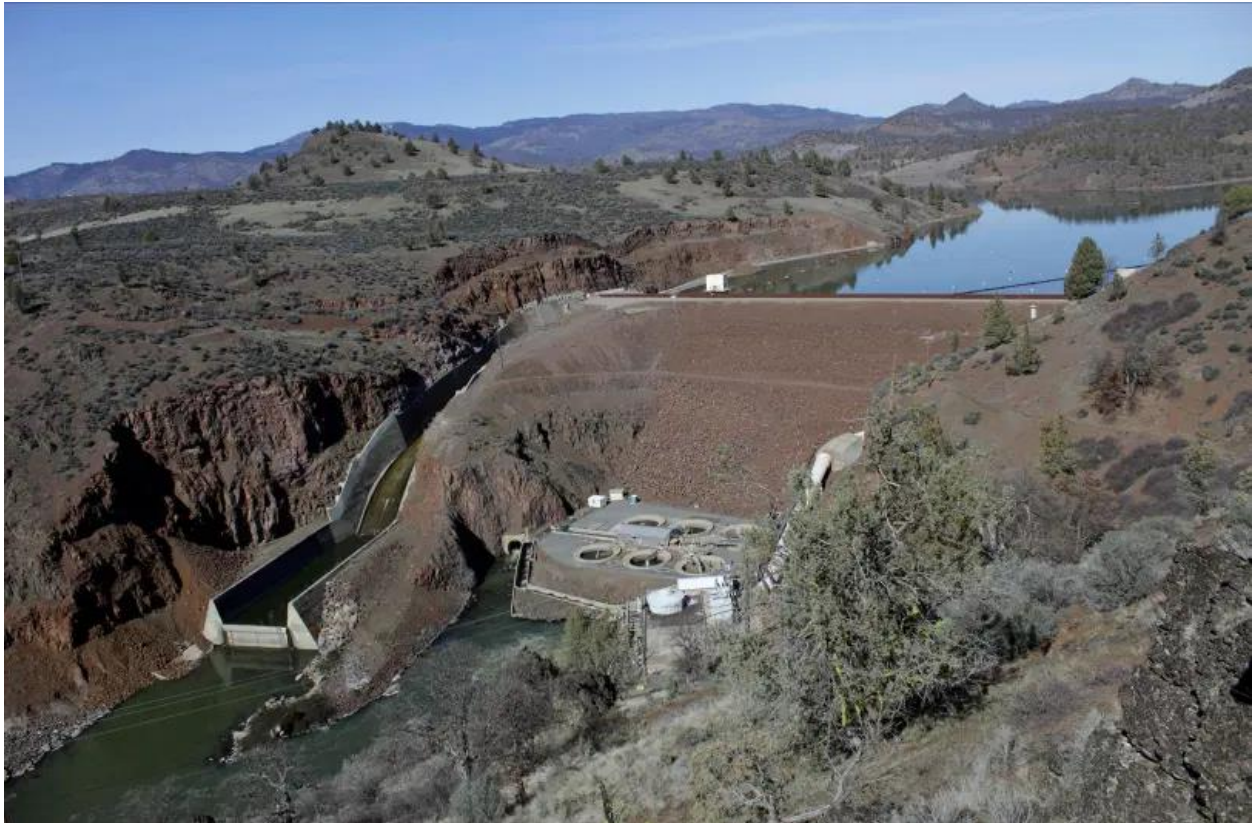
Despite the state's pandemic-induced deficit and the critics' concerns, state officials say the portfolio will guide the way.

"By implementing this portfolio of actions together, we can meet the existential threat posed by climate change with a strategic sense of obligation and vision," said Environmental Protection Secretary Jared Blumenfeld in a statement.

#

(This page was intentionally left blank)

Gov. Newsom asks Warren Buffett to back removal of Northern California dam
Mercury News | July 31, 2020 | Robert Jablon



This March 3, 2020, file photo shows the Iron Gate Dam, powerhouse and spillway are on the lower Klamath River near Hornbrook, Calif. California Gov. Gavin Newsom has appealed directly to investor Warren Buffet to support demolishing four hydroelectric dams on a river along the Oregon-California border to save salmon populations that have dwindled to almost nothing. Newsom on Wednesday, July 28, 2020, wrote Buffet, urging him to back the Klamath River project, which would be the largest dam removal in U.S. history. (AP Photo/Gillian Flaccus, File)

LOS ANGELES — Gov. Gavin Newsom has appealed directly to investor Warren Buffett to support demolishing four hydroelectric dams on a river along the Oregon-California border to save salmon populations that have dwindled to almost nothing.

Newsom on Wednesday sent a letter to Buffett urging him to back the Klamath River project, which would be the largest dam removal in U.S. history.

The dams are owned by PacificCorp, an Oregon-based utility that is part of Buffett's Berkshire Hathaway Inc. conglomerate.

The \$450 million project would reshape California's second-largest river and empty giant reservoirs. It could also revive plummeting salmon populations by reopening hundreds of miles of potential habitat that has been blocked for more than a century.

That could bring relief to a half-dozen Native American tribes that rely on salmon fishing and are spread across hundreds of miles in southern Oregon and northern California.

“The river is sick, and the Klamath Basin tribes are suffering,” Newsom wrote, calling the removal project “a shining example of what we can accomplish when we act according to our values.”

The letter was sent to Buffett, Berkshire Hathaway’s chairman and PacifiCorp’s president.

Efforts to remove the dams and restore the basin have been in the works for a dozen years. Newsom supports a 2016 agreement under which PacifiCorp would transfer its federal hydroelectric licenses for the dams to a nonprofit coalition, the Klamath River Renewal Corp., that was formed to oversee the demolition.

PacifiCorp ratepayers in Oregon and California are contributing \$200 million for the project but the plan allows the utility to avoid liability for additional costs. Another \$250 million would come from a 2014 voter-approved California water bond.

But two weeks ago, the Federal Energy Regulatory Commission made a decision that could threaten the deal. The agency approved the license transfer on condition that PacifiCorp remain a co-licensee with the Klamath River Renewal Corp.

The agency said it believes the nonprofit is capable of carrying out the project, and it is concerned that the corporation “has limited finances and no experience with hydropower dam operation or dam removal.”

“Costs could escalate beyond the level anticipated and unexpected technical issues could arise. Were the Renewal Corp. to be the sole licensee, it might ultimately be faced with matters that it is not equipped to handle,” the agency said.

The decision creates “significant” challenges but the corporation is confident it can work with stakeholders in the project to “once again craft a balanced solution,” said a letter to Newsom Thursday signed by Stefan A. Bird, president and chief executive officer of Pacific Power, which is owned by PacifiCorp.

“We share your concerns about social and environmental progress and remain committed to solving these deeply rooted cultural and community impacts,” the letter said.

Several tribes as well as fishing and conservation groups issued a joint statement urging Buffett’s support.

“Walking away from the agreement will put PacifiCorp ratepayers on the hook for all the risks and liabilities associated with fish kills, toxic algae blooms, lawsuits, and violations of tribal rights,” the statement said. “We urge Warren Buffett and PacifiCorp to end the delays and move the dam removal process forward immediately.”

The dams are the southernmost of six built in southern Oregon and California's far north beginning in 1918 to provide electrical power. They are also part of an irrigation system serving vast farming areas.

The four dams to be demolished lack concrete chutes called fish ladders through which fish can pass to reach upstream spawning areas. Renewing the licenses would require hundreds of millions of dollars in federally mandated modifications, including adding fish ladders.

#

(This page was intentionally left blank)

'No shrinking violet.' Meet Trump's surprise FERC pick

E&E News | August 4, 2020 | Arianna Skibell



Federal Energy Regulatory Commission headquarters in Washington. Francis Chung/E&E News. FERC building. Photo credit: Francis Chung/E&E News

Last week, President Trump unexpectedly announced two nominees — one Democratic, one Republican — to the Federal Energy Regulatory Commission. Democratic pick Allison Clements is a longtime energy lawyer whose name was floated over a year ago for a spot on the influential five-member commission. But news of Trump's lesser-known Republican nominee left many agency observers asking:

Who is Mark Christie?

E&E News spoke to more than half a dozen sources to paint a clearer picture of a nominee who has a deep track record on energy issues but had not previously been named as a favorite for a FERC seat.

Christie's name was thrown into the hat by departing Republican FERC Commissioner Bernard McNamee, according to a former senior Trump administration official familiar with the deliberations.

During Christie's 16-year tenure as Virginia's top utility regulator, the West Virginia native has gained a reputation for being outspoken, a deep thinker and a firm adherent of constructionism, the legal philosophy that limits judicial interpretation.

"He's far more conservative than I am, but he's intellectually honest," said Albert Pollard, an energy consultant and former Democratic Virginia state lawmaker.



Mark Christie. Photo credit: University of Virginia

Prior to Christie's 2004 election to the State Corporation Commission, which regulates utilities, he served as counsel to Virginia's speaker of the House. Pollard said that during that time, the two of them would often "shoot the breeze" while sitting in the back of the chamber.

"He's no shrinking violet," Pollard said. "Watching a FERC proceeding is never going to be an episode of 'The People's Court,' but with Christie up there as a judge, it will be much better TV."

McNamee declined to comment on whether he personally recommended Christie, but he confirmed that the two had worked together under Republican Virginia Gov. George Allen in the 1990s, when Christie served as Allen's counsel and director of policy.

"Having known Mark Christie for 25 years as a colleague, friend, and represented clients before him on the Virginia State Corporation Commission, I am confident that his keen intellect, impartial judgment, and substantive experience with energy regulation will benefit FERC and the country," McNamee said in a statement to E&E News.

Christie would replace McNamee, whose tenure expired in June but who said he will stay on until his successor is instated. Christie declined to comment for this article.

Devin Hartman, a former FERC employee who now heads energy and environmental policy at the libertarian R Street Institute, said Christie is "cut from a similar cloth" to McNamee.

"They're both Virginia products and rule-of-law federalists," Hartman said.

For example, McNamee has argued that the Natural Gas Act does not give the independent agency leeway to consider greenhouse gas emissions in environmental reviews for liquefied natural gas export terminals and pipelines, much to environmentalists' dismay (Greenwire, Jan. 23).

While it's unclear where Christie would land in that debate, Pollard said the Virginia regulator shies away from expansive legal interpretations.

"If you can say one thing about Judge Christie, he is a constructionist and not a judicial activist," he said, using the formal title for SCC members. "He's going to try to figure out what the law says and follow it regardless of what his opinion is."

Unlike McNamee, however, Christie has an extensive background as a state regulator, which drew praise from the National Association of Regulatory Utility Commissioners and others, who have urged the Trump administration to fill open FERC seats with state regulators.

"NARUC has consistently held the perspective that FERC needs the perspective and experience of state utility regulators," said NARUC President and Mississippi utility regulator Brandon Presley in a statement lauding the administration's nomination.

Presley pointed out that Christie was elected to the Virginia SCC three times on a bipartisan basis and "has long been active in NARUC" and regional utility organizations. Christie is the current chairman of the SCC.

Virginia lawmakers elected Christie to the state regulatory body first in 2004 and again in 2010 and 2016. He graduated from Wake Forest University with a degree in history and English before earning his law degree from Georgetown University. He's also spent over 20 years in academia, teaching at Virginia Commonwealth University and the University of Virginia School of Law. Christie is the former president of the Organization of PJM States Inc. and president of the Mid-Atlantic Conference of Regulatory Utilities Commissioners.

William Reisinger, an energy attorney who has argued before the SCC under Christie, said the SCC chairman also has a "great sense of humor."

"Evidentiary hearings can, a lot of times, be pretty dry and dense, and I would say Commissioner Christie finds a way to add some color to those hearings and liven them up," Reisinger said. "He's the one to crack a joke based on an old movie or novel no one has ever read."

Reisinger said Christie's philosophy is more conservative than his own but said the chairman cares deeply about how his decisions affect businesses and ratepayers in Virginia.

In 2018, the state commission rejected a long-term energy road map from the state's largest utility. Christie said Dominion Energy Inc.'s long-term forecasts for energy demand were unrealistically high, nearly doubling the projections of PJM Interconnection LLC, the regional transmission operator. The commission said Dominion failed to account for a number of electricity resources that could mean reduced costs for customers, dealing the powerful utility a rare defeat (Energywire, Dec. 11, 2018).

Earlier that year, the SCC approved Dominion's \$300 million offshore wind proposal, aiming to comply with a law requiring the state to get 2 gigawatts of power from offshore wind by 2028. But the regulators included a scathing critique of the pilot project, saying it "was not the result of a competitive bidding process" and "would not be deemed prudent" under typical review due to potential fallout for ratepayers.

"Dominion's customers bear essentially all of the risk, including cost overruns and lack of performance," the regulators said (Energywire, Nov. 5, 2018).

Pollard said Christie is not against renewable energy. "He understands that renewables are increasingly the lowest cost resources, and he views his role as trying to control costs," Pollard said.

In 2019, the SCC rejected a 10-year, \$6 billion Dominion proposal to modernize Virginia's grid on grounds that the costs were not justified. Christie and his fellow commissioners wrote that the plan was "significantly lacking in detail" and sided with environmentalists who argued that the proposal would harm customers.

"Christie checks three big boxes: He's very qualified, has rule of law integrity and represents an overdue states' background for FERC," Hartman of R Street said.

While the timing of the nominations of Christie and Clements was unexpected, it has eased fears about the agency's ability to function and insulated the panel from lacking a quorum (Energywire, July 28).

"Such a bipartisan move is a breath of fresh air, especially this late in an election cycle," Hartman said. "Both Christie and Clements are highly qualified and respect the proper statutory role for FERC. This sets up the agency well for next year regardless of the election outcome."

#

Water bills would fundamentally change under proposal headed for CPUC

Bakersfield.com | August 2, 2020 | John Cox

Some Bakersfield residents' water bills will be fundamentally restructured, with big cost implications, if the California Public Utilities Commission votes Thursday to end an experiment that 12 years ago erased a financial incentive to sell people more water.

Under the proposal, California Water Service and other investor-owned utilities would no longer bill customers a surcharge covering the cost difference between expected and actual water usage.

The CPUC's consumer-advocacy arm supports the proposal and estimates it would save ratepayers 10 percent to 15 percent, maybe more, on their water bills.

But Cal Water, which covers about half of Bakersfield (city government supplies the other half), says the way the plan is built it would raise low-usage, low-income customers' bills by up to 20 percent.

DECOUPLING

Central to the whole discussion is an idea called "decoupling." It holds that utilities shouldn't be rewarded financially for selling customers more water, especially in a drought-prone state like California.

But advocates of the proposal now under consideration say that system has inappropriately protected water utilities from inefficient operations and bad purchasing decisions. They say water companies should pick up costs incurred by faulty projections.

Decoupling is generally thought to have benefited customers of the state's investor-owned electric utilities. It has meant that companies like Pacific Gas and Electric Co. don't profit selling electricity. Instead the utility makes most of its money charging interest for infrastructure improvements and upkeep.

When utilities contract to buy more or less than its customers use, the difference is passed on to ratepayers in a "true-up" surcharge. This structure has applied to California investor-owned water utilities since 2008.

PROTECTING UTILITIES

Richard Rauschmeier, manager of the water branch at the CPUC's Public Advocate's Office, said the water business turned out to be different from the electricity business. He said decoupling ended up hurting water consumers and producing only negligible water savings while padding utilities' profits.

The system ultimately shielded utilities from the normal risks of doing business, he said, so that poor decisions on the companies' part were covered by ratepayers.

"Really, customers are getting charged for water that they didn't use," he said, adding, "Removing a (true-up) surcharge from a customer's bill results in a lower bill."

But Cal Water says there would be less incentive to conserve water and the change would hurt low-volume, low-income water users.

INEQUITABLE RESULTS

Justin Skarb, Cal Water's director of community affairs and government relations, said decoupling produced a 29 percent increase in water savings between 2008 and 2014, saving California nearly 8 billion gallons of water.

Bills for a quarter of Cal Water's customers "could see their bills jump between 10 and 20 percent because of the changes that could be required by this proposal," he said.

"Given the need to conserve in this state, we don't think this is a correct decision," he said.

He added the proposal deserves additional study, saying, "Our perspective is there's no reason this needs to be rushed."

Advocacy group The Alliance for Water Efficiency sided with California's investor-owned utilities, saying the system would become less equitable if the proposal passes.

"Rewarding customers who use excessive amounts of water with lower rates and punishing low-volume water users with higher rates is counterproductive from either a conservation or affordability perspective, and we fear that the (proposal before the CPUC) will be unintentionally doing just that," the organization's president and CEO, Mary Ann Dickinson, said in a letter Friday to the CPUC.

#

Federal agency reaffirms support for how MID, TID want to operate Don Pedro Reservoir

Modesto Bee | July 26, 2020 | John Holland



Drone footage taken at the Fox Grove Fishing Access in Hughson on Tuesday, Oct. 10, 2017. The Modesto and Turlock irrigation districts filed their final applications for a new federal license for Don Pedro. It mainly is about how much more water s BY JOAN BARNETT LEE

The owners of Don Pedro Reservoir have reached a key milestone in determining how much of its water goes to human uses and how much to Tuolumne River fish.

The staff of the Federal Energy Regulatory Commission stated its support once again for the fishery releases proposed by the Modesto and Turlock irrigation districts.

The action reaffirmed FERC findings in February 2019 that dismissed pleas from environmental and sport-fishing groups for much higher flows.

MID and TID say their plan will still boost water levels in the 52 miles of river downstream from La Grange, but not to a degree that harms their customers. They say more could be achieved for fish with nonflow measures such as restoring spawning gravel and floodplains.

The latest FERC staff action still leaves the districts at least a year from approval of a new license by the appointed commission, TID leaders said last week. But they are confident it will go through.

“This is an exciting time for the Tuolumne River,” TID board member Michael Frantz said after an update Tuesday on the process.

The term of the new license has not been decided, but it will be between 40 and 50 years, said John Devine, a consultant to the districts. It would replace the 1966 license that led to the completion of Don Pedro in 1970.

The latest FERC action was the release of a final environmental impact statement on the new license. The draft EIS, issued early last year for public comment, also agreed with the districts' flow plan.

The final EIS still needs review by federal fishery agencies and the State Water Resources Control Board. The state board had voted in December 2018 for much higher releases. Gov. Gavin Newsom, who took office the next month, directed the board to seek a compromise with the districts. That process is still under way.

WATER, POWER FOR FARMS, CITIES

Don Pedro is California's sixth-largest reservoir at 2.03 million acre-feet, and the largest under local rather than state or federal ownership.

The districts supply about 208,000 acres of farmland in Stanislaus and Merced counties, a foundation of a vast food-processing sector.

MID treats some of the water for domestic use in Modesto and a few nearby locales, reducing their reliance on wells. TID will do the same for Turlock and Ceres via a treatment plant set for completion in 2023.

Don Pedro also generates hydropower for the districts' electricity customers. It is cheaper than other sources but makes up far less of the supply than decades ago.

The hydropower part means that Don Pedro needs a license from FERC, including conditions on releases to the lower river. The renewal process launched in 2011 with a 2018 deadline, which was extended.

ENHANCING FISH HABITAT

Highlights of the districts' plan for the Tuolumne:

- The fishery releases would not reduce water deliveries to farms and cities in years defined as wet, above normal, below normal or dry. In the worst kind of year, critically dry, 88 percent of demand could be met, down from 92 percent under the current rules.
- The increased flows would be most pronounced in the 26 river miles between La Grange and the Geer Road bridge. From there, some of the water would go to the treatment plant for Turlock and Ceres. It will have its biggest demand in summer and early fall.
- The remaining 26 miles past Geer would get a smaller increase during this time of year. This stretch of the Tuolumne winds past Ceres and Modesto before joining the San Joaquin River.
- Minimum flows would rise from October to December to help Chinook salmon returning to spawn after a few years in the Pacific Ocean.

- The boost would continue as new fish hatch and develop over winter and spring before heading out to sea. The volume would be far less than what the state board first proposed – 30 to 50 percent of the natural runoff from February to June.

The districts proposed \$138 million worth of improvements to the river that they say would mesh with their increased flows. This includes building up gravel beds where salmon lay their eggs, which have been damaged by mining and other activities. The restored floodplain would be inundated at times to provide food and shelter for juvenile fish.

The plan included a few things that FERC rejected, including a salmon hatchery and efforts to reduce predation by striped bass and other non-natives.

ENVIRONMENTAL PERSPECTIVE

The Tuolumne River Trust has been among the environmental groups seeking much higher flows. A representative could not be reached for comment on the latest FERC action.

The trust and its allies have argued that only about 20 percent of the Tuolumne remains in the channel after the diversions to local users and the Bay Area. It can be more like 10 percent in dry years, advocates say.

They say more water down the river would provide the cool conditions that salmon need, while also benefiting trout and other creatures. They also urge further water conservation.

“Higher flows and a strong local economy can be successful together,” the trust said in an online post last year. “Through better management of snowmelt, water-efficient irrigation practices and better crop selection, farmers can grow more food with less water.”

The trust cited a project involving Stanislaus River water used by the South San Joaquin Irrigation District. It replaced some of its open canals with a pressurized system that cut demand by 30 percent while increasing crop yields by the same percentage.

#

(This page was intentionally left blank)

River agreements stall amid focus on delta litigation

AgAlert | July 22, 2020 | Christine Souza

With state and federal administrations fighting in court about delta water operations—and with a pandemic and election year both underway—work has slowed on voluntary agreements meant to avoid severe cuts to northern San Joaquin Valley water supplies.

At issue is the first phase of a State Water Resources Control Board plan for the Sacramento-San Joaquin Delta. Adopted in 2018, the regulatory regime would require water users in San Joaquin River tributaries to leave 30% to 50% of unimpaired flows in the Stanislaus, Tuolumne and Merced rivers to benefit protected fish. Water users have pressed the state to pursue voluntary agreements that could achieve the same fisheries goals without the significant water-supply impacts.

California agency leaders say conversations on voluntary agreements continue, though slowly.

"Right now, we are in what has been a pause as far as implementing voluntary agreements," California Secretary for Natural Resources Wade Crowfoot told the State Board of Food and Agriculture last month.

Early this year, state water and resource agencies released a framework for voluntary agreements among agencies and water users that rely on the San Joaquin River tributaries.

"We have to turn that framework into a legally enforceable agreement among a range of water users and third parties," Crowfoot said, adding that the effort has become more challenging, given the dispute between state and federal governments over delta operations and how best to protect endangered species.

The two administrations have been in court regarding new federal biological opinions that determined the proposed long-term operations of the federal Central Valley Project and State Water Project do not jeopardize continued existence of protected salmon and delta smelt. In response, the state issued an environmental permit for the SWP that could place its operation in conflict with that of the CVP.

California Farm Bureau Federation Senior Counsel Chris Scheuring said the effort to create voluntary agreements on delta tributaries has stalled in the meantime.

"We look at the voluntary agreements with so much hope, but now with some exasperation, because it's a process that's been hung up and the recent descent into litigation in the delta is not helpful," Scheuring said. "We hope the state and the federal governments can reconcile delta operations, so that the Sacramento-San Joaquin system can go forward on a reasonable basis to find ways to distribute water under vested water rights, while doing good things for fish species."

For the state's part, Crowfoot said, "The goal, frankly, is to move beyond that legal process as quickly as possible to find a settlement with our federal partners on the biological opinions and to resolve legal disputes on our state permit. Settling out these legal issues will allow parties to get back to the table on the voluntary agreements."

At a virtual meeting regarding the delta last week, state Department of Water Resources Director Karla Nemeth said the state continues to meet with tributary stakeholders.

"Specific to the incidental take permit and the voluntary agreements, there is a degree of potential interaction between those things, should the voluntary agreements be completed over the course of the next months or a year or so," Nemeth said, adding that the state agency is "in communication with our federal colleagues around how we might bridge some differences between the biological opinions and the California ESA permit and the voluntary agreements."

Speaking to the CFBF Board of Directors this spring, U.S. Bureau of Reclamation Commissioner Brenda Burman said she would like "to see the state come to the table as far as looking for real long-term solutions," and said state and federal agencies have continued to coordinate daily delta operations.

The Modesto Irrigation District, which with the Turlock Irrigation District owns the Don Pedro Hydroelectric Project on the Tuolumne River, remains in discussions about voluntary agreements for the river, according to district spokeswoman Melissa Williams.

In addition, Williams reported progress in relicensing the facility through the Federal Energy Regulatory Commission, which last week issued the final environmental impact statement for the project.

On the Merced River, the Merced Irrigation District concluded a years-long FERC process for the New Exchequer Dam this month.

Farm Bureau's Scheuring noted that the FERC process gives government agencies and advocacy organizations additional opportunities to seek more water requirements or other concessions from reservoir operators. Under the federal Clean Water Act, the state water board has qualified authority to review, condition and certify consistency of FERC relicensing decisions with state water quality law.

Should voluntary agreements on the San Joaquin tributaries eventually be reached, the process would include finalizing governance, policy and legal issues, and submitting a proposal to the state water board for review.

A second phase of the board's bay-delta plan affecting Sacramento River tributaries has not yet been released.

California Assemblymember Adam Gray, D-Merced, said he and many stakeholders in his district, which includes Merced County and part of Stanislaus County, remain committed to finding voluntary agreements.

"Unfortunately, we're not there yet," Gray said, "and it seems like it's been difficult to get people to the table in a meaningful way with the polarization and political posturing by both the state and federal government."

Private water-rights attorney Tim O'Laughlin said he expects to have a better idea of progress for the voluntary agreements in two or three months.

"Right now, the agreements are just in limbo, hanging out there," O'Laughlin said. "There are some preliminary discussions, but with COVID and litigation, they definitely got pushed back. They may get resurrected, but I just don't see that any time soon."

###

Wildfires can poison drinking water – here's how communities can be better prepared

The Conversation | August 3, 2020 | Andrew J. Whelton and Caitlin R. Proctor



The 2018 Camp Fire north of Sacramento burned everything in its path: cars, power lines, and buildings – and contaminated local drinking water. Justin Sullivan/Getty Images

In recent years wildfires have entered urban areas, causing breathtaking destruction.

The 2018 Camp Fire in Paradise and Butte County, California was the deadliest and most destructive fire in California's history. It took 86 lives and destroyed more than 18,000 structures in a matter of hours.

Almost two years later, only a fraction of the area's 40,000-plus population has returned. This disaster followed the 2017 Tubbs Fire, which killed 22 people in California's Sonoma and Napa counties.

After both fires, drinking water tests revealed a plethora of acutely toxic and carcinogenic pollutants. Water inside homes was not safe to use, or even to treat. Water pipes buried underground and inside of buildings were extensively contaminated.

We are environmental engineers who help communities affected by disasters, and supported responses to both fires. As we conclude in a recently published study of burned areas, communities need to upgrade building codes to keep wildfires from causing this kind of widespread contamination of drinking water systems.

Wildfires and water

Both the Tubbs and Camp fires destroyed fire hydrants, water pipes and meter boxes. Water leaks and ruptured hydrants were common. The Camp Fire inferno spread at a speed of one football field per second, chasing everyone – including water system operators – out of town.

After the fires passed, testing ultimately revealed widespread hazardous drinking water contamination. Evidence suggests that the toxic chemicals originated from a combination of burning vegetation, structures and plastic materials.



Pipes, water meters and meter covers after wildfires destroyed them. Caitlin Proctor, Amisha Shah, David Yu, and Andrew Whelton/Purdue University Firefighting can accelerate the spread of contamination. As emergency workers draw hydrant water, they spread contaminated water through the water pipe network.

Metal, concrete and plastic pipes can become contaminated. Many plastics take up these chemicals like sponges. As clean water later passes through the pipes, the toxic substances leach out, rendering the water unsafe.

In the Tubbs and Camp fires, chemicals in the air may have also been sucked into hydrants as water pipes lost pressure. Some water system plastics decomposed and leached chemicals directly into water. Toxic chemicals then spread throughout pipe networks and into buildings.

Limited water testing by state and local agencies showed benzene and naphthalene were present at levels that could cause immediate harm. These, as well as methylene chloride, styrene, toluene and vinyl chloride exceeded longer-term regulated exposure limits. Many of these chemicals cause cancer. All can cause vomiting, diarrhea and nausea after short-term high concentration exposure.

Anyone who drinks the water containing these substances could be harmed. And simply running a faucet could cause chemicals to enter the air. Hot showers and boiling water would vaporize the chemicals and increase the dose a person breathed in. Some of these substances can also be absorbed through the skin.

Dangerous contamination levels

Benzene was found at concentrations of 40,000 parts per billion (ppb) in drinking water after the Tubbs Fire and at more than 2,217 ppb after the Camp Fire. According to the California Office of Environmental Health Hazard Assessment, children exposed to benzene for a single day can suffer harm at levels as low as 26 ppb.

The U.S. Environmental Protection Agency recommends limiting children's short-term acute exposure to 200 ppb, and long-term exposure to less than 5 ppb. The EPA regulatory level for what constitutes a hazardous waste is 500 ppb.

In early 2019, California conducted contaminated water testing on humans by taking contaminated water from the Paradise Irrigation District and asking persons to smell it. The state found that even when people smelled contaminated water that had less than 200 ppb benzene, at least one person reported nausea and throat irritation. The test also showed that water contained a variety of other benzene-like compounds that first responders had not sampled for.

The officials who carried out this small-scale test did not appear to realize the significance of what they had done, until we asked whether they had had their action approved in advance by an institutional review board. In response, they asserted that such a review was not needed.

In our view, this episode is telling for two reasons. First, one subject reported an adverse health effect after being exposed to water that contained benzene at a level below the EPA's recommended one-day limit for children. Second, doing this kind of test without proper oversight suggests that officials greatly underestimated the potential for serious contamination of local water supplies and public harm. After the Camp Fire, together with the EPA, we estimated that some plastic pipes needed more than 280 days of flushing to make them safe again.



Plastic pipes can be damaged by heat and fire contact. Andrew Whelton, Purdue University

Building codes could make areas disaster-ready

Our research underscores that community building codes are inadequate to prevent wildfire-caused pollution of drinking water and homes.

Installing one-way valves, called backflow prevention devices, at each water meter can prevent contamination rushing out of the damaged building from flowing into the larger buried pipe network.

Adopting codes that required builders to install fire-resistant meter boxes and place

them farther from vegetation would help prevent infrastructure from burning so readily in wildfires. Concrete meter boxes and water meters with minimal plastic components would be less likely to ignite. Some plastics may be practically impossible to make safe again, since all types are susceptible to fire and heat.

Water main shutoff valves and water sampling taps should exist at every water meter box. Sample taps can help responders quickly determine water safety.

The smell test doesn't work

Under no circumstance should people be told to smell the water to determine its safety, as was recommended for months after the Camp Fire. Many chemicals have no odor when they are harmful. Only testing can determine safety.

Ordering people to boil their water will not make it safe if it contains toxic chemicals that enter the air. Boiling just transmits those substances into the air faster. "Do not use" orders can keep people safe until agencies can test the water. Before such advisories are lifted or modified, regulators should be required to carry out a full chemical screen of the water systems. Yet, disaster after disaster, government agencies have failed to take this step.

[Understand new developments in science, health and technology, each week. Subscribe to The Conversation's science newsletter.]

Buildings should be tested to find contamination. Home drinking water quality can differ from room to room, so reliable testing should sample both cold and hot water at many locations within each building.

While infrastructure is being repaired, survivors need a safe water supply. Water treatment devices sold for home use, such as refrigerator and faucet water filters, are not approved for extremely contaminated water, although product sales representatives and government officials may mistakenly think the devices can be used for that purpose.

To avoid this kind of confusion, external technical experts should be called in assist local public health departments, which can quickly become overwhelmed after disasters.

Preparing for future fires

The damage that the Tubbs and Camp fires caused to local water systems was preventable. We believe that urban and rural communities, as well as state legislatures, should establish codes and lists of authorized construction materials for high-risk areas. They also should establish rapid methods to assess health, prepare for water testing and decontamination, and set aside emergency water supplies.

Wildfires are coming to urban areas. Protecting drinking water systems, buried underground or in buildings, is one thing communities can do to prepare for that reality.

#

*Andrew J. Whelton, Associate Professor of Civil, Environmental & Ecological Engineering,
Purdue University*

Caitlin R. Proctor, Lillian Gilbreth Postdoctoral Fellow, Purdue University