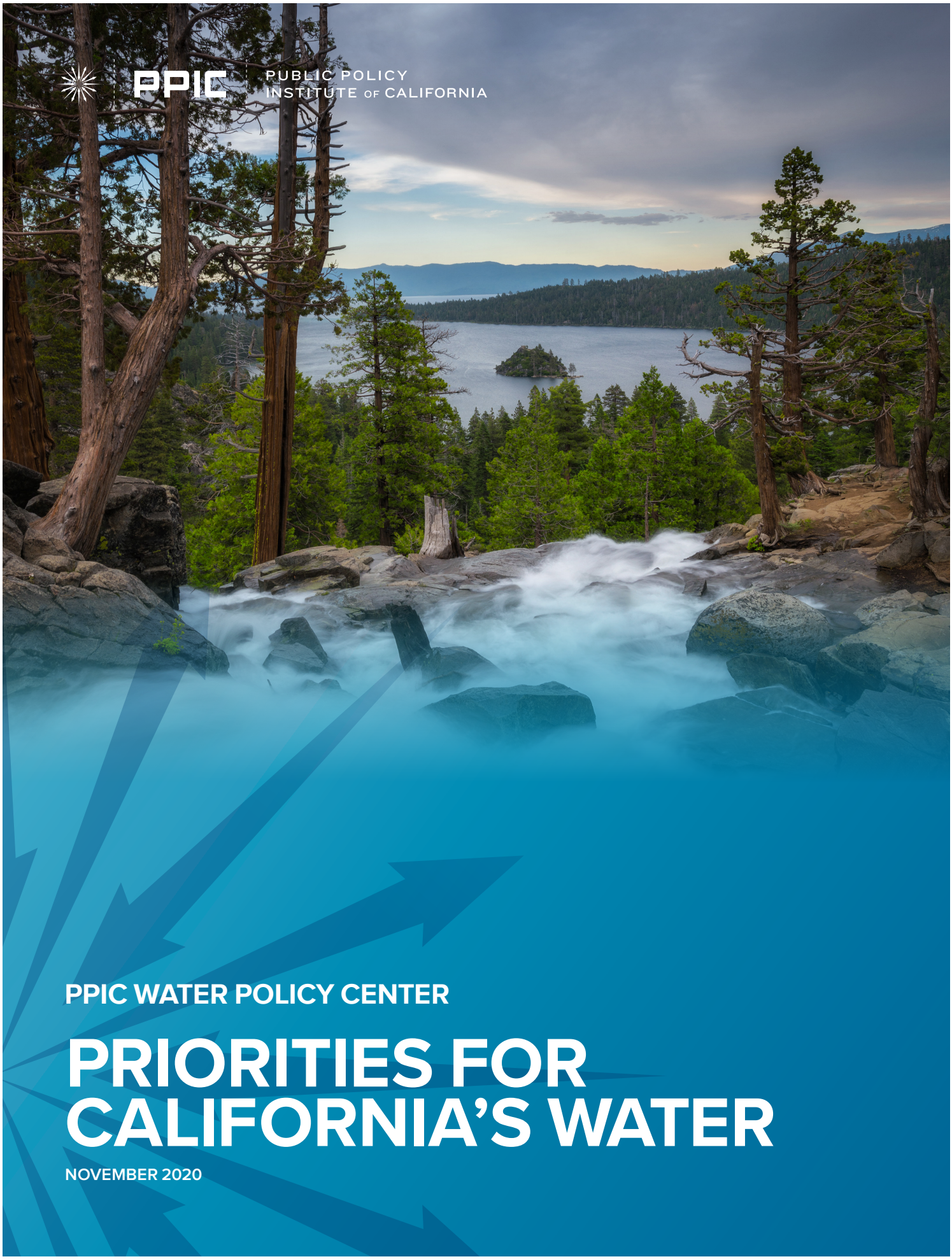

PPIC WATER POLICY CENTER

PRIORITIES FOR CALIFORNIA'S WATER

NOVEMBER 2020

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INTRODUCTION

"Volatile" doesn't begin to describe the past year. The monumental impacts of the coronavirus health emergency and resulting economic fallout have affected virtually every aspect of modern life, including how water is managed. And the nation's much-needed and difficult conversation about racism has illuminated water equity issues—such as how we address climate change, safe drinking water, flood management, and more.

Layered on top of these upheavals is California's regular companion, drought. As in other western states, the pandemic's effects are compounded by long-term drought—which is being made worse by climate change. California is also experiencing increasing conflict over water solutions, especially in the Sacramento–San Joaquin Delta.

In the midst of the pandemic, the Newsom administration finalized its water resilience portfolio—an ambitious, wide-ranging charter for tackling chronic problems and adapting California's water systems to the changing climate. Dwindling state and local revenues require hard choices on near-term funding priorities for this plan.

This brief highlights how events this past year have shifted the state's water landscape and lays out priorities for local, state, and federal action. Key elements include:

- **Ensure safe and affordable water.** Some California communities did not have safe drinking water before the pandemic, and the recession has made affordability of water and wastewater an urgent crisis. Solutions must ensure access for the most vulnerable, while maintaining the financial health—and safety—of our water systems.
- **Collaborate to reduce uncertainties in agricultural water supplies.** Broad-based partnerships to bring groundwater basins into balance and address environmental water needs can improve the outlook for farm water supplies. The agricultural sector can also do more—in partnership with others—to support workforce communities hit hard by the pandemic.

- **Invest in forest health as a vehicle for economic recovery.** Wildfire risk is growing in California, threatening lives, property, and the quality of our air and water. Expanding forest management can help reduce extreme wildfire risk and safeguard the many benefits forests provide, while creating good jobs for rural, forest-based communities.
- **Make the most of limited resources for the environment.** Increasing the efficiency and effectiveness of ecosystem investments can help, as can efforts to reduce conflict over water dedicated to the environment. California also needs robust funding and reliable water supplies to improve the health of freshwater ecosystems, which are especially vulnerable to drought.

On the next page you'll find a summary of the major disruptions currently affecting the water sector. These disruptions also bring opportunities to reduce the water system's vulnerability to economic shocks and other "surprises"—because the state's water systems are at risk not just from drought and disease, but also from floods and earthquakes. In this rocky economic period, we must also try to do more with less: boosting resilience to multiple sources of stress, while supporting economic recovery and workforce development.

It's been a tough year, and the light at the end of the tunnel remains faint. But there is much work to do to create a more equitable, resilient water system, and delays only make these goals harder to accomplish. We hope this policy brief spurs meaningful conversations that can take us forward and fosters new ways of addressing problems in these uncertain times.

Ellen Hanak

MAJOR DISRUPTIONS IN THE WATER WORLD

California has been in the grip of a widespread pandemic and deep recession, against the backdrop of a long drought and ongoing conflicts over water allocation. These disruptive forces have heightened existing vulnerabilities, put stress on the state's institutions, and thrown a wrench into water management.

COVID-19: For agriculture, the pandemic has posed a serious public health threat to people working in essential farm and food processing jobs—and their families. It has also disrupted food supply chains. Water and wastewater utilities were largely able to adjust workforce practices to continue providing essential services, though smaller systems remain vulnerable, given their more limited staff and resources. Wastewater utilities faced an increased risk of spills from non-flushable wipes clogging sewer systems. Social distancing requirements complicated efforts to fight wildfires, and stay-at-home orders disrupted vital research and management of freshwater ecosystems.

Recession: The pandemic's economic impacts will be broad and possibly enduring. A state moratorium on water service shutoffs has helped maintain this essential service for the growing number of households unable to pay their bills. But lasting solutions are needed to address affordability while keeping water systems solvent and capable of funding capital improvements. Management of headwater forests and freshwater ecosystems, already disrupted by the pandemic, also face financial uncertainty. Critical investments to prepare the water system for a changing climate are much less certain. The postponement of a "climate resilience bond"—initially envisaged for the November 2020 state ballot—reflects the challenges of getting voter approval for such measures in tough economic times.

Drought: California—like much of the West—appears to be mired in a "megadrought." Over the past two decades, dry years outnumbered wet years by three to one. Temperatures have been the highest on record, intensifying drought impacts. Fewer wet years mean fewer opportunities to replenish aquifers, making it harder to meet state mandates for sustainable groundwater management. Wet years are also becoming more extreme, making it more difficult to store water and manage flood risk. Dry, warm conditions have contributed to a steady increase in extreme wildfires—with 2020 the worst year on record. Drought also degrades water quality in rivers and lakes and makes it harder to protect freshwater ecosystems and species.

Conflict: California always has water conflicts, but 2020 was exceptional. At last count almost 20 lawsuits had been filed over efforts to establish new water quality and endangered species regulations for the Sacramento-San Joaquin Delta. Efforts to negotiate a comprehensive agreement for this watershed have stalled. Heightened tensions between the state and federal government make matters worse. The pandemic, recession, and drought make resolving these conflicts even more challenging.

LEARN MORE

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SAFE AND AFFORDABLE WATER

The essential role of California's complex water system was on full display this year. Early in the health emergency, "panic buying" of bottled water emptied store shelves and sowed confusion over water safety, prompting water agencies to reiterate that the virus could not be spread through the drinking water supply. Wastewater systems grappled with the increased use of products such as disinfecting wipes which, when flushed, can damage equipment and cause dangerous sewage spills. Shortages of bottled water posed added challenges for rural communities where water quality is a chronic problem.

The sudden economic downturn and widespread unemployment prompted a statewide utility-shutoff moratorium, providing some relief to vulnerable households at a time when access to water and sanitation is more important than ever.

Water systems are used to preparing for disasters, which paid off. Utilities quickly adjusted practices to maintain their responsibilities while protecting their workforce, leading to more reliance on automation, more remote work, and grouping on-site staff into shifts to limit contagion risks. They also moved to help track the spread of the virus through wastewater testing. Smaller systems, with less staff and fewer resources, likely had a harder time adjusting. But there is much to be thankful for, as there are no reports of major COVID-19 outbreaks at utilities, or of utilities being unable to meet mandates.

LASTING EFFECTS

The pandemic could have lasting effects on utility finances, affecting their ability to maintain safe and resilient systems. The moratorium on shutoffs has helped maintain access for vulnerable residents, but also reduced revenues. Utilities are worried about a longer-term rise in nonpayment, particularly if the moratorium continues for much longer. The recession will also make it harder to enact rate increases. Although many utilities have used reserves to cover initial shortfalls, continued nonpayment will ultimately reduce spending to maintain and upgrade aging infrastructure. Water and wastewater revenues fell by 6 percent during the Great Recession of the late 2000s. Federal stimulus funds temporarily helped fill that gap, boosting capital spending in both sectors.

Meanwhile, several hundred mostly small, rural water systems—and thousands of domestic wells—do not provide safe drinking water, and many more are on the brink of failure. This problem disproportionately affects communities of color. A variety of

"Many wastewater agencies throughout the state are interested in getting their wastewater tested for COVID-19. This is an area where cooperation and capacity sharing among agencies are proving extremely important."

—EILEEN WHITE, EBMUD

groundwater contaminants are prevalent, and additional contaminants continue to be identified and regulated. Treating these pollutants can be very costly, and many small, poor communities already lacked the resources and economies of scale to address them before the recession. The Safe and Affordable Funding for Equity and Resilience (SAFER) program was created in 2019 to help tackle these problems, with $130 million annually over 10 years. But its revenue source—California's Greenhouse Gas Reduction Fund—is at risk due to earnings declines. Borrowing prevented a near-term budget shortfall for SAFER, which the administration has flagged as a top priority.

Many rural communities face drinking water supply vulnerabilities from drought, a growing risk with climate change. During the last extended drought, the state provided emergency supplies where wells ran dry. This will be an ongoing priority if dry conditions persist—but with the added challenge of finding funding during a recession.

Finally, affordability is a growing issue. Racial disparities in income and unemployment mean that people of color are more likely to need rate assistance. Propositions 218 and 26—constitutional amendments that require tight connections between water rates and cost of service—limit options for publicly owned utilities to fund lifeline rates for water, such as those used for electricity and gas. The economic crisis is bringing this issue to a head—highlighting the challenges of simultaneously addressing access, affordability, and financial sustainability for many water agencies.

"The San Joaquin Valley has a disproportionate number of small water systems, many of which are ... just a power failure or contamination event away from their system failing."
—LAURA RAMOS, FRESNO STATE

PRIORITIES

While the pandemic itself did not significantly impair the state's water systems, the economic fallout puts the financial stability of these essential systems at risk. It could also worsen inequities in access. Here are three priorities:

Use federal stimulus funds to support water system solvency.

Emergency relief should help utilities weather recession-related revenue shortfalls so that they can continue providing service to residents who cannot pay, while also ensuring the ongoing safety of water systems. Economic recovery funds should include projects that address safety gaps and build climate resilience in underserved communities.

Expand options for addressing affordability.

The pandemic highlights the need to ensure a basic level of water service regardless of income and underscores the conundrum utilities face in addressing this challenge. Relaxing Proposition 218 and 26 restrictions on using water rates to fund lifeline programs would give utilities more flexibility to offer these programs where needed. Federal or state assistance for lifeline water rates could also help—modeling the federal Low-Income Home Energy Assistance Program. Providing minimal service to those who don't pay their water bills, rather than shutting off the taps, may also incentivize payment by those who can afford it.

Pursue collaborative approaches to provide safe drinking water.

The key to ensuring safe and affordable service for many smaller communities is physical or administrative consolidation with larger systems, or other arrangements where larger systems provide technical support. This is important not only for systems that are already in violation of safety standards, but also for those on the brink. Such efforts require funding, so it will be essential to ensure that SAFER remains fully funded.

LEARN MORE

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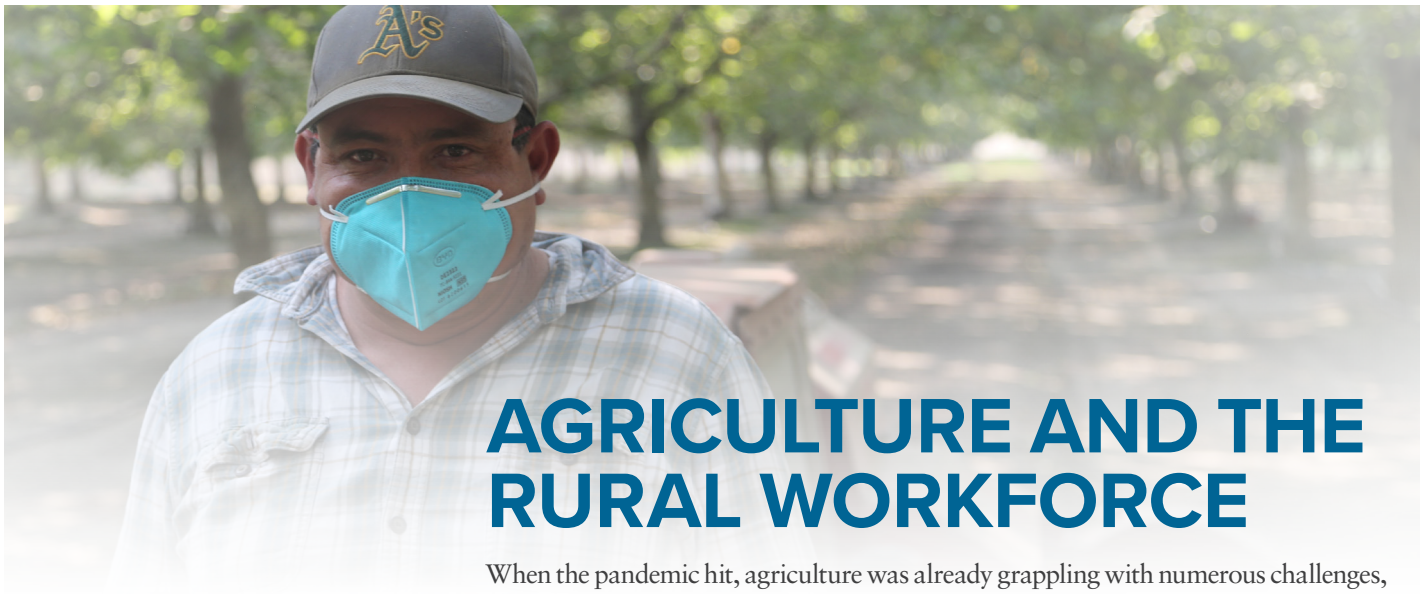

AGRICULTURE AND THE RURAL WORKFORCE

When the pandemic hit, agriculture was already grappling with numerous challenges, including implementation of the Sustainable Groundwater Management Act (SGMA), a rise in tensions over managing environmental water in the Delta, labor shortages, and falling commodity prices. The pandemic brought workforce health concerns and supply chain disruptions to the fore, making the most important factor in decision-making—uncertainty—worse than ever. Looming drought impacts and the lack of cooperation between the federal and state governments have exacerbated the challenges.

As essential activities, operations continued on farms and in processing plants. While many employers were swift to implement new safety measures, the lack of clear industry-wide workplace safety requirements led to gaps. Many low-wage workers also faced high exposure risk from close living conditions and crowded commutes. Agricultural counties quickly became virus hotspots, hitting the largely Latino workforce and their families especially hard and stretching local healthcare systems to the limit. By mid-summer, the state sought to reverse this trend with coronavirus strike teams, increased workplace inspections, and temporary housing for exposed workers.

The health crisis also limited agricultural labor availability, compounding the effects of increased immigration restrictions. And it raised costs at a time of falling revenues. The sudden closure of schools, offices, and restaurants upended markets for products destined for the food service industry, including fresh produce, dairy, and wine. Wine industry revenues and jobs were also hit hard by wildfires and smoke.

Water managers adopted new protocols to maintain workforce safety. Local groundwater sustainability agencies—charged with managing aquifers under SGMA—pivoted to virtual meetings, but progress continued. Agencies in 21 critically overdrafted basins submitted their first sustainability plans in January and have begun implementation; planning is still underway to meet the January 2022 deadline for other basins. A wet 2019 meant that reservoirs could help make up for this year's lack of rain. But conflict over surface water availability, and the specter of prolonged drought—which increases pressure to pump groundwater and reduces recharge—will make it harder for these agencies to bring basins into balance.

"The disruption of markets—such as the closure of restaurants and food service operations—is a huge concern for growers. There's the potential for huge swings in marketability and profitability."

—CANNON MICHAEL, BOWLES FARM

LASTING EFFECTS

The pandemic's disruption of commodity markets is likely to spur some bankruptcies and farm sales. Its longer-term effects on the sector's economic health will depend on

the depth and duration of the recession. California agriculture took a hit during the last major recession but rebounded quickly, and the same could occur this time.

The pandemic could have lasting effects on the labor market, with recent workforce challenges accelerating an ongoing trend toward mechanization. While this can create better jobs for some workers, it is also likely to dampen farm labor demand overall.

For water, the big issues ahead relate less to the pandemic than to the underlying challenges of sustainably managing a scarce resource for the benefit of the economy, local communities, and the environment. Groundwater overdraft has caused wells to go dry, damaged vital infrastructure, and depleted rivers and wetlands. Successful implementation of SGMA is essential to stem this tide and protect the long-term health of California's farming regions, communities, and ecosystems. But this will require a heavy lift, including reductions in farm water use and crop acreage alongside actions to increase other water supplies. The recession has affected state funds to support these efforts.

Across the Central Valley, SGMA solutions are inextricably tied to the allocation of water for the environment in the Delta and its watershed. Heightened conflict over approaches—aggravated by federal-state tensions and the collapse of negotiations—has delayed constructive solutions and raised uncertainties about surface water availability in overdrafted basins.

The pandemic affected the entire 2020 growing season.

PRIORITIES

As a major water user and economic driver in rural California, agriculture needs to pursue solutions that promote the health of the sector, local communities, and the environment. State and federal governments can provide vital support. Here are three priorities:

Foster protections for farmworker communities.

The pandemic has underscored the strong connections between the well-being of the workforce and the viability of farming. The agricultural sector on its own can't solve all of the challenges facing these communities. But as a major employer it should take a leading role, partnering with others to improve conditions for farmworkers and their families. Irrigation districts can help provide safe drinking water. Farm groups can engage in efforts to address community challenges such as housing and health care. More consistent use of health safety measures is vital while the pandemic persists.

Adopt collaborative approaches to manage groundwater sustainably.

Although it's impossible to eliminate hydrologic and climatic uncertainty, it is possible to reduce risk with collaborative approaches to managing groundwater. Early groundwater plans reveal progress, but also unrealistic expectations about how much water is available for recharge. More cooperation is needed to develop alternative supplies, manage demands effectively, and address undesirable effects of pumping, including on drinking water for rural communities. Federal stimulus funds and state grants could support planning, piloting, and multi-benefit water infrastructure.

Seek agreement on environmental flows in the Delta.

Another way to reduce risk is through negotiated agreements to manage environmental flows in Central Valley rivers. To help break the logjam, agriculture can be a leader in pursuing cooperative water and land management that benefits people and nature.

LEARN MORE

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WILDFIRE RISK IN HEADWATER FORESTS

California's mountainous headwater forests are a critical part of the state's natural infrastructure. They capture and release large volumes of high-quality water that flows into the state's rivers. They provide outdoor recreation, carbon storage, timber and forage, and habitat for plants and animals. Past forest and fire management practices have made these forests overly dense. Warming and more intense droughts have made them susceptible to widespread tree die-off and increasingly severe wildfire. Healthier forests can support headwater communities and residents across California by reducing air quality impacts from wildfires, securely storing carbon, protecting water quality from post-fire erosion, and improving water supply.

At the outset of the fire season, Cal Fire was confident in its ability to battle upcoming wildfires while limiting firefighters' exposure to COVID-19. It hired more front-line firefighters to replace inmate firefighters who were released early due to the pandemic. Although social distancing was integrated where feasible, there was concern of virus spread among firefighters. Vegetation management—including mechanical thinning of dense forests and the intentional use of fire to clear underbrush—was also designated as an essential service and continued during the pandemic.

But the 2020 fire season quickly became the worst in California history. Drought, record-high temperatures, and strong winds, coupled with rare summer lightning strikes, catapulted the state into an unprecedented wildfire siege that exceeded the capabilities of local firefighting agencies.

Managing these forests to adapt to the changing climate requires a two-pronged approach: suppressing large wildfires that threaten public safety, and thinning vegetation to reduce the risk of extreme wildfires and improve resilience to drought and other sources of stress. Experts suggest that fuel reduction on US Forest Service lands in the Sierra Nevada would need to increase two- to six-fold to meaningfully enhance their resilience.

"There are several reasons that fire intensity is increasing, but the biggest driver of change is climate change, which is bringing hotter temperatures day and night."

—CRYSTAL KOLDEN, UC MERCED

LASTING EFFECTS

The recession is not likely to impair funding for wildfire suppression, which Governor Newsom identified as one of three spending priorities during the pandemic. But funding for vegetation management to bring forests back to health is now less certain.

Management on the scale needed requires a robust funding portfolio, including cost-share grants, revenues from harvested wood products, and payments from beneficiaries.

The recession has jeopardized state cost-share grants, which had just received a major boost. In 2018, the legislature committed to using $1 billion from the Greenhouse Gas Reduction Fund (GGRF) for forest health grants over five years—a nearly five-fold increase over recent state spending. A dozen projects received GGRF money in February 2020. But future appropriations are now less certain due to revenue instability. The Climate Resilience Bond proposed in early 2020 included an additional $250 million for such grants, but has been sidelined by the recession.

Overcoming funding constraints is critical to avoiding future costs associated with wildfire and tree death and maintaining the important benefits these forests provide.

"We use fire to increase the health and availability of culturally important species and to protect our community from the threat of wildfire."

—MARGOT ROBBINS, CULTURAL FIRE MANAGEMENT COUNCIL

PRIORITIES

The economic downturn could constrain long-term forest stewardship—but it also provides an opportunity to reexamine funding strategies and consider options that are better suited to the urgent need to manage forests. Three priorities are critical:

Broaden the funding portfolio for forest health projects.

Periodic infusions of public funds can catalyze valuable management efforts—but can't fully meet California's long-term needs. Forest owners need additional ways to offset management costs, including expanded markets for wood products and payments for forest benefits such as water and air quality and carbon storage. For instance, several forest health projects are funded by water utilities whose water source is headwater forests.

Collaborate in pursuit of shared management goals.

Headwater forests have a patchwork of ownership, including larger federal and industrial lands and smaller holdings by private individuals, state and local governments, non-profits, and tribes. Some management objectives—such as reducing wildfire risk and improving forest health—cross ownership boundaries. Collaboration enables parties to pool resources and reap economies of scale. It can also help insulate long-term stewardship from temporary shocks such as the current recession. A new state-federal agreement to manage forest health signals major progress in collaborative management. Collaboration with tribes to restore prescribed burning can help expand much-needed "good fire" to tame overgrown landscapes.

Invest in forest health to support economic recovery.

Federal stimulus spending boosted forest management during the Great Recession, and it could do so again this time. Economic recovery is also a potential goal of future state climate and natural resource bonds. Forest health programs can employ thousands of workers in a region where unemployment and low incomes are widespread, while generating broad benefits. A first step is to expand workforce development programs such as the California Conservation Corps, Calaveras Healthy Impact Product Solutions, and Central Valley Forestry Corps. Investing in additional wood processing infrastructure could also help. For example, the Tuolumne County Biomass Utilization Fund incentivizes infrastructure investments that create value from woody debris and generate rural jobs.

LEARN MORE

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FRESHWATER ECOSYSTEMS AT RISK

Management of California's rivers, lakes, and wetlands is hard, even when the rains come and the economy is strong. Freshwater ecosystem health has been declining for decades—a trend made worse by long-term drought and rising air and water temperatures. Reversing this decline can require making difficult, controversial trade-offs in water and land management. The pandemic and resulting downturn have made this even harder.

Ecosystem management relies on agency and university monitoring and research programs to inform adaptation strategies and measure progress. But because ecosystem health was not considered an essential service, the pandemic disrupted these programs.

One high-profile example is the extensive monitoring and research that guides management of the Sacramento–San Joaquin Delta and its watershed. Pandemic-related workforce restrictions reduced water quality and biological monitoring and laboratory analyses. This set back efforts to understand how the Delta and its at-risk native fish species are responding to water management and the changing climate.

Restoration projects to improve ecosystem health also faced disruptions. Given the magnitude of change to California's water landscape over time, extensive investments to restore and reconnect river channels, floodplains, and wetlands are needed to improve ecosystem health. Experts described modest setbacks, mostly involving delays in construction and vegetation restoration. Maintenance was also delayed, with the greatest impact on removal of invasive weeds that, once established, become costly to remove in the future.

In a reminder that investments in nature can yield results, 2020 also saw bright spots, particularly for two runs of salmon in danger of becoming extinct. Modest numbers of spring-run Chinook salmon returned to the San Joaquin River for the second year, marking an initial achievement of the San Joaquin River Restoration Program. And efforts to expand the range of winter-run Chinook showed early success as many adults spawned in Battle Creek—a potential cold-water stronghold against climate change.

"Climate change brings real urgency to the need for better-functioning ecosystems to support water supply, flood risk management, water quality enhancement, and wildlife."

—LETITIA GRENIER,
PPIC CALTROUT FELLOW

LASTING EFFECTS

Pandemic-related disruptions to ecosystem management will likely be short-lived, but the recession could set back programs to improve ecosystem health for years.

Ecosystem management is expensive—with costs at every stage, from planning and permitting to construction, maintenance, and scientific monitoring. It takes years of

sustained investments, with strong agency support, to achieve results. Yet this facet of water management remains a "fiscal orphan" without reliable, dedicated funding. We estimate that roughly $700 million is spent annually on aquatic ecosystems in California—but an additional $400–$700 million is needed to address existing gaps. Because much of the available funding comes from state bonds, this sector is vulnerable to cutbacks during economic downturns. During the Great Recession, the state paused distribution of bond funds—putting many ecosystem efforts on hold. The slow recovery also delayed placement of a new bond on the ballot, causing another spending drop until new funds became available years later.

This year, the state has not cut spending from existing bonds, but the Climate Resilience Bond, which would have included funds for ecosystems, is on hold. Challenges include prioritizing actions with scarce dollars and finding a balance between improving conditions today versus preparing for a changing climate.

Tribal fisherman on the Klamath river

PRIORITIES

Although the pandemic disrupted ecosystem management, other challenges—recession, drought, and heightened conflict—are not new and will reoccur. The key is finding ways to mitigate current setbacks while putting ecosystem management on better footing for an uncertain future. Here are three priorities:

Increase the efficiency and effectiveness of environmental investments.

The state should commit to creating the greatest return on investments in money, water, and land to improve ecosystem health. Shifting away from the emphasis on protecting single species and toward ecosystem-based management can create broader public benefits and head off future conflicts over vulnerable species. Restoring more-natural flow patterns to rivers, alongside physical habitat improvements, makes more efficient and effective use of water allocations. Simplifying and aligning permitting processes can lower costs and speed progress of ecosystem restoration and management. And coordinating and modernizing research and monitoring—similar to efforts outlined in the 2019 Delta Science Plan—can increase effectiveness while lowering costs.

Diversify the funding portfolio.

Building the resilience of freshwater ecosystems also requires dependable funding streams. Although Californians have supported more than $4 billion in bond funds since 2014 for freshwater ecosystems, there is still a large funding gap. Land assessments (such as the Bay Area's program to protect, restore, and enhance San Francisco Bay) and surcharges on water use (such as the Central Valley Project's restoration fund) have been effective alternatives in some watersheds.

De-escalate conflict wherever possible.

Water management—and ecosystem management in particular—will never be conflict-free. But conflict and associated litigation is costly. It often delays or prevents progress, and is inherently inefficient. Although negotiations in the Delta and its watershed have stalled, efforts to resolve these conflicts should be redoubled. De-escalation includes building a coalition of the willing within the water user community, repairing the strained relationship with the federal government, and expanding collaboration with stakeholders.

LEARN MORE

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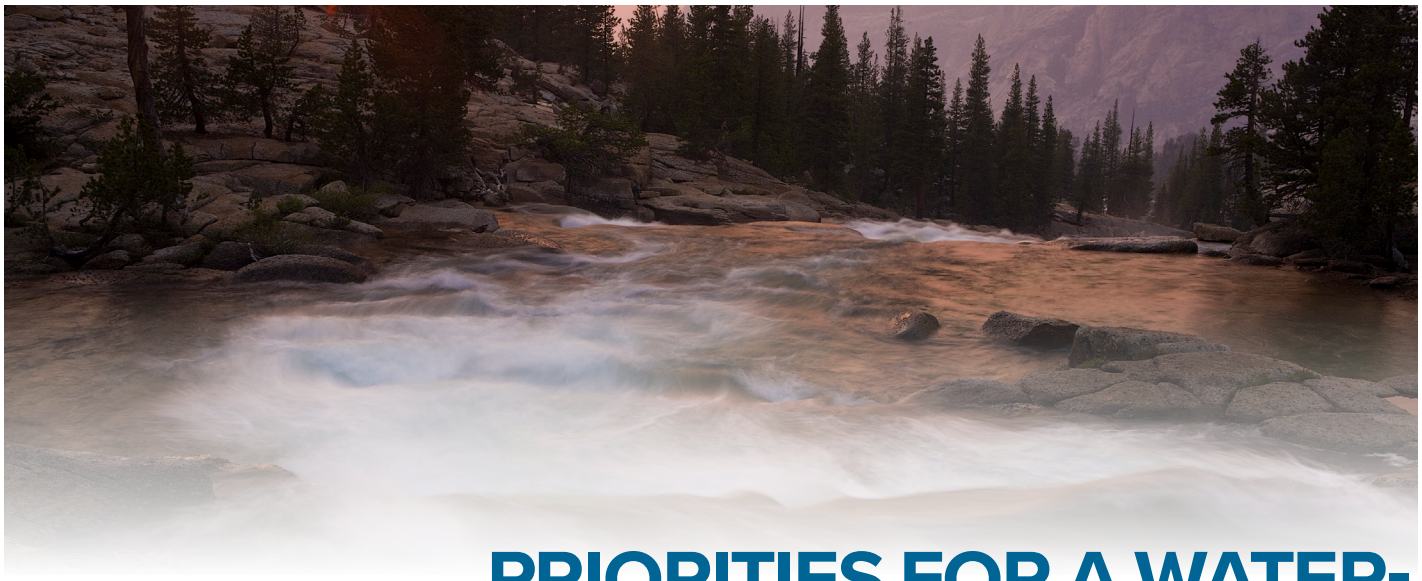

PRIORITIES FOR A WATER-RESILIENT CALIFORNIA

California faces numerous hardships and challenges in this extraordinary time. Water issues that were high priorities pre-pandemic are now competing for urgency with public health, jobs, affordable housing and homelessness, racial injustice and equity—all made harder to address in a severe recession. Parts of the Newsom administration's Water Resilience Portfolio are likely to be on hold for now.

Yet postponing action is not an option for some urgent water issues. And for others, postponement could result in bigger, harder-to-solve problems, at higher future cost.

MANAGING WATER DURING CRISIS

Coping with the challenges will require commitment to three objectives:

- **Efficiency:** Money is a perennial issue in many aspects of water management, but it's even more of a brake on progress now. To be more efficient and effective with limited resources, priority should be given to multiple-benefit approaches that tackle several issues together. For example, managing high spring flows for the combined purposes of flood protection, groundwater recharge, and habitat can broaden cooperation and leverage more funding sources. Similarly, there are opportunities for federal stimulus funds to support economic recovery and jobs while boosting the resilience of our natural and built water systems.
- **Collaboration:** Durable solutions to California's major water problems require building coalitions and adopting cooperative approaches—as exemplified by efforts to remove dams on the Klamath and Carmel rivers and develop comprehensive agreements for managing the Delta. Alignment of agency priorities and objectives can simplify permitting and make it easier to complete collaborative, multi-benefit projects. The administration's "cutting the green tape" initiative is one notable step forward.
- **Leadership:** Finally, progress cannot happen without leadership. In particular, improving environmental water management requires individuals to come forward to innovate, take risks, work together, and build coalitions. Institutions and organizations should encourage this, including nurturing future leaders.

THE MOST URGENT PRIORITIES

The administration's Water Resilience Portfolio describes efforts and programs to address numerous water management problems. All are important, but during times of crisis, prioritizing urgent needs can help avoid higher long-term costs. In our view, three issues rise to the top:

Ensure safe and affordable drinking water.

In areas of unsafe or unreliable water supply, promoting consolidation of small, at-risk water systems with larger systems is an important approach. Safeguarding state funding for the SAFER program is critical. Affordability of both water and wastewater is a growing concern that affects households impacted by the recession and utilities facing fiscal uncertainty. Solutions must avoid incentivizing nonpayment of bills, which could hinder maintenance of water systems and create new risks of unsafe or unstable water supplies. A broader array of funding to support lifeline rates for poor households is needed. To expand local funding options, Californians should consider reforming Propositions 218 and 26, which currently limit the use of water lifeline rates. A federal water lifeline program, similar to one that helps with energy bills, would be valuable in California and nationally.

Make SGMA work.

Getting to groundwater sustainability is one of the grand challenges facing California water. It calls for a concerted effort to balance water accounts, mitigate the undesirable effects of overdraft—especially dry drinking water wells—and prepare for increasing drought intensity. There are no simple, inexpensive solutions to this problem. It will require major reductions in demand; improvements in supply; investments in infrastructure, trading, and banking of water; and strategic land fallowing. Minimizing the economic and social impacts of this effort will necessitate unprecedented collaboration and coordination, robust community engagement, and strong state and local leadership.

Steward the environment.

Efforts to arrest environmental decline are often sidelined during crises because they are seen as a lower priority than immediate social and economic needs. But healthy ecosystems are part of California's natural infrastructure and integral to human health and well-being. Failing to address ecosystem decline makes it more difficult and expensive to tackle in the future, especially given climate trends. California needs new strategies that make the most of resources dedicated to improving the environment. This includes investing in forest health to reduce wildfire risk and maintain the benefits forests provide, and adopting new approaches—including restoring more-natural variability of river flows and simplifying permitting—that improve the health of freshwater ecosystems.

Clearly, we have a lot of work to do. But California also has the will and the skill to tackle these issues. It will require nimble and collaborative governance, a broad commitment by local, state, and federal actors to making every drop and dollar count, and leadership at all levels and in all sectors.

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