Source List for Priorities for California’s Water: Responding to the Changing Climate

This document provides background references for the PPIC policy brief, Priorities for California’s Water: Responding to the Changing Climate (November 2021). If you have any questions about the information in the report or these sources, contact us at water@ppic.org.

Introduction


Shifting Currents

- Climate change is intensifying drought:
- Snow droughts throw a wrench into our water management systems: Mount, Jeff. 2016. “California’s Snow Drought.” PPIC Blog.
- This year continued the trend of ever-larger and more damaging wildfires: Taylor, Derrick B. 2021. “In California, a heat advisory and a wildfire season that is ‘far from over.’” New York Times.
- Plans to improve forest health are advancing and more money has been allocated: McCann, H. 2021. “State makes progress on wildfire and forest health policy.” PPIC Blog.
- New state funding for unmet water needs:
- Building climate resilience will require upgrades to our water grid: Escriva-Bou, Alvar, et al. 2019. California’s Water Grid. PPIC.
Managing Groundwater

- **Groundwater provides about 40 percent of water used by farms and cities:** California Department of Water Resources. “Water Basics: Groundwater.”
- **Few GSPs address how they will bring basins back into balance or address subsequent impacts:** Hanak, Ellen et al. 2020. “A Review of Groundwater Sustainability Plans in the San Joaquin Valley.” Public comments submitted to the California Department of Water Resources.
- **Local pumping restrictions and mitigation plans can minimize the negative impacts of increased groundwater pumping:** Jezdimirovic, Jelena, et al. 2020. “Will Groundwater Sustainability Plans End the Problem of Dry Drinking Water Wells?” PPIC Blog.
- **California’s water infrastructure is not equipped to take advantage of water available for recharge:** Hanak, Ellen et al. 2018. Replenishing Groundwater in the San Joaquin Valley. PPIC.
- **Coordinating investments regionally can maximize benefits and reduce costs:** Escriva-Bou, Alvar et al. 2020. Water Partnerships between Cities and Farms in Southern California and the San Joaquin Valley. PPIC.

Safe and Affordable Water

- **Small groundwater-dependent systems in low-income communities—disproportionately communities of color—are at high risk for water quality and supply shortfalls:**
- **The state has completed a comprehensive assessment of water systems that are out of compliance or at risk of violating drinking water standards:** State Water Board. 2021. “Drinking Water Needs Assessment.”
- **The state has begun work to connect tribal communities to the SAFER program:** Collins, Joy, and Caitrin Chappelle. 2021. “Ensuring Safe Drinking Water for California’s Native American Communities.” PPIC Blog.
- **The state is investing $1.3 billion in water and wastewater systems in low-income communities:** S.B. 129 Budget Act of 2021 (Sec 127), 2021 Skinner. (California 2021).
- **As of late September, 700 domestic well users had lost water access due to the drought:** Department of Water Resources. 2021. “Household Water Supply Shortage Reporting System.”
- **Hundreds of additional well users are at risk:** Escriva-Bou, Alvar, and Rich Pauloo. 2021. “How better data can help California avoid a drinking water crisis.” CalMatters.
- **The state has allocated $200 million for drinking water drought emergencies in small and low-income communities:** Department of Water Resources. 2021. “Guidelines for Small Community Drought Relief Program.”
- **The budget will put an additional $100 million for urban communities:** A.B. 148 Public resources, 2021 Committee on Budget and Fiscal Review. (California 2021).
- **The state has allocated $1 billion of federal funds to cover unpaid water bills:** Botts, Jackie. 2021. “Unpaid utility bills? California will pay off $2 billion to avoid shutoffs.” CalMatters.
- **Water costs are rising:** Chappelle, Caitrin, and Ellen Hanak. 2021. Water Affordability. PPIC.
- **Propositions 218 limits options for publicly owned utilities to fund lifeline rates for water:** Hanak, Ellen et al. 2018. California’s Water: Paying for Water. PPIC.
- **Temporary federal assistance program, LIHWAP, launched in June 2021:** Mackey, Rachel, and Nicolette Gerald. 2021. “IHH launches new Low-Income Household Water Assistance Program (LIHWAP).” NACo Blog.
- **Local agencies have funded most water system upgrades:** Chappelle, Caitrin et al. 2021. Paying for California’s Water System. PPIC. For historical discussion, see also Hanak et al. 2014. Paying for Water in California, PPIC.
Freshwater Ecosystems


- **Near-term extinctions are likely if the drought persists:** Mount, Jeff, et al. 2019. *A Path Forward for California’s Freshwater Ecosystems*. PPIC.


- **Ecosystem water budgets can help better manage ecosystems during drought:** Mount, Jeff, et al. 2017. *Managing California’s Freshwater Ecosystems: Lessons from the 2012-16 Drought*. PPIC.

- **Ecosystem-based management would improve watershed health:** Mount, Jeff, et al. 2019. *A Path Forward for California’s Freshwater Ecosystems*. PPIC.

- **Expanding nature-based solutions can help meet climate change and biodiversity goals:** California Natural Resources Agency. “Expanding Nature-Based Solutions.”

- **‘30 by 30’ land and coastal waters conservation pledge:** Office of Governor Gavin Newsom. 2020. “Governor Newsom Launches Innovative Strategies to Use California Land to Fight Climate Change, Conserve Biodiversity and Boost Climate Resilience.”

- **The state’s Cutting the Green Tape Initiative:** California Natural Resources Agency. “Cutting the Green Tape.”

- **New legislation exempts restoration projects from CEQA:** S.B. 155 Public resources trailer bill, 2021 Committee on Budget and Fiscal Review, 2021. (California 2021).

- **Smarter permitting is necessary to speed the pace of ecosystem restoration:** Grenier, Letitia, et al. 2021. *Advancing Ecosystem Restoration with Smarter Permitting*. PPIC.

Headwater Forests and Fires

- **Decades of poor forest management has made wildfires more extreme:** McCann, Henry. 2020. *The Benefits of Headwater Forest Management*. PPIC.

- **New state funding is supporting an array of tools for combating wildfire:**

- **The Wildfire and Forest Resilience Action Plan outlines the state’s priorities for forest management over the next decade:** Governor’s Forest Management Task Force. 2021. “California’s Wildfire and Forest Resilience Action Plan.”

- **Forest management is not scaling fast enough:** McCann, Henry and Xiong, Mingfei. 2021. “Accounting for a Decade of Headwater Forest Management.” PPIC Blog.


- **Fire scientists have pushed back on US Forest Service’s policy shift to halt controlled burns:**

- **New funding mechanisms are necessary to provide more reliable support to forest management projects:** McCann, Henry. 2020. “Paying for Forest Health Projects.” PPIC Blog.

- **Developing technical capabilities and personnel for forest management can boost rural economies:**


- **California lacks comprehensive accounting of how forests are being managed:** McCann, Henry, and Mingfei Xiong. 2021. “Accounting for a Decade of Headwater Forest Management.” PPIC Blog.

- **Forest management partnerships with tribes need more support:** McCann, Henry. 2021. “Using Fire for Good on Tribal Land.” PPIC Blog.
Thinking Differently about Managing Risk

- The state’s water resilience portfolio prepares the water system for climate change: California Natural Resources Agency. 2020. “Water Resilience Portfolio,”


- Multipronged solutions will be needed to provide safe drinking water to Californians: Chappelle, Caitrin. 2021. “A Look at California’s Safe and Affordable Drinking Water Gaps.” PPIC Blog.

- Reducing demand for water while minimizing economic and social costs is essential:

- Constitutional rules on local funding make it difficult to fund affordability programs: Hanak, Ellen et al. 2018. *California’s Water: Paying for Water*. PPIC.

- While water bond funding could fill some funding gaps, expanding taxes and fees may also be necessary: Rosser, Annabelle, and Caitrin Chappelle. 2021. “How Water Bonds Plug Spending Holes.” PPIC Blog.