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Policy recommendations from *Allocating California's Water: Directions for Reform*

California's system for allocating water to its residents, businesses, and ecosystems hampers its ability to meet the state's needs, especially in times of drought. It is fragmented, inconsistent, and lacking in transparency and clear lines of authority.

The common thread in our suggested reforms is to increase consistency, transparency, and flexibility, while protecting water right-holders and public values. These changes would also reduce uncertainty, lower administrative costs, and enable more nimble water management. And they would be less disruptive and easier to implement than a major overhaul of the state's complex water rights system.

The problem: A fragmented system of water rights administration

California has three types of surface water rights (riparian, pre-1914 appropriative, and post-1914 appropriative), and they are not administered under a uniform system. In addition, surface water and groundwater rights are legally separate, even when groundwater pumping reduces water in rivers and streams. Because the rights to most groundwater are not quantified, users have generally been able to pump as much water as they need, resulting in long-term declines in water levels. Critical information about water availability and use is lacking, impeding efficient water allocation. This is especially a problem during times of scarcity, when some water rights need to be curtailed. These information gaps also hinder water trading.

Suggested reforms

- **Bring all surface water rights under the State Water Board's permitting system.** These changes would not alter the seniority of water rights, but merely add certainty and efficiency by bringing all rights under a common administrative system.
- **Require surface right-holders to choose between riparian and appropriative rights.** This would not change the amount of water these landowners could use, but would prevent them from frustrating the administrative system by toggling between rights.
- **Quantify groundwater rights in priority basins.** Under the Sustainable Groundwater Management Act of 2014, local pumpers must now develop plans to manage groundwater levels and prevent harm to surface water uses. Local agencies should assign pumping rights as part of this process to facilitate trades within basins—a way to lower costs. This would also increase incentives to invest in groundwater recharge—an essential tool for augmenting drought storage.
- **Develop an authoritative water accounting system.** Key state agencies should develop a common water accounting framework. Water accounting information should be made publicly available in the interests of transparency and efficient management.

The problem: A lack of clarity on allocating water for the environment

This drought has caused an environmental crisis, especially for fish and waterbirds. Water for the environment was reduced in some places to increase supplies for cities and farms. The water board lacks a clear policy on how to factor these flows into the curtailment process, even though an array of laws designates water for the environment as a priority that can take precedence over senior water rights.

Suggested reforms

- **Assign an environmental water budget for each river system.** The state should adopt a process to develop watershed-based environmental flows, combining a state mandate and local authority to flesh out details. The water board should assign interim environmental water budgets on different river and stream systems based on applicable environmental laws. During droughts, certain environmental uses would have top priority—along with protections for public health and safety. Defining these environmental water budgets as water rights, rather than a regulatory baseline, would facilitate more flexible environmental water management.
- **Encourage environmental water trading.** Dedicated funding is needed to enable the state or other entities to purchase some environmental water. The review process should be streamlined for temporary acquisitions of water for the environment.
- **Require water users to pay into an ecosystem fund when they benefit from a relaxation in environmental water standards.** This would create appropriate incentives for water users, while providing funds that can help mitigate the loss of water for the environment.

The problem: Barriers to water trading

Trading is an essential tool for enabling water right-holders to voluntarily reallocate water to reduce the economic and environmental costs of shortages. Water trading requires oversight to ensure that it does not harm other water users or the environment. But California's trading rules are fragmented and inconsistent, reflecting the underlying fragmentation of water rights and associated information gaps. There is also a lack of clarity on basic issues, such as how much water can be traded when land is fallowed. The federal government's large role, as owner of the Central Valley Project, adds to the complexity.

Suggested reforms

- **Streamline regional water trading.** Flexibility can be improved by consolidating permitting so that local agencies in the same region no longer need multiple layers of review by multiple agencies each time they want to share water.
- **Preauthorize some water transfers and expedite reviews.** Some types of transfers, such as those beneath a specific size threshold, should be preauthorized because they are unlikely to cause unreasonable harm. Both the state and federal governments should streamline reviews for temporary transfers.
- **Encourage drought storage.** The California Water Code should be amended to define storage (both above and below ground) as an allowed use of water (in legal terms, a "beneficial use"), as long as it would serve a demonstrated public purpose such as recharging groundwater basins. The water board should also expedite granting water rights to capture excess flood flows.
- **Improve information about trading opportunities.** A water transfer clearinghouse should be developed to make information available about transactions and trading opportunities.