Adapting California's Water Rights System to the 21st Century Climate: Additional Notes to Accompany Testimony

Testimony for the Assembly Water, Parks, and Wildlife Committee Informational Hearing,
"How Should California's Water Right System Adapt to a 21st Climate?"
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California's ability to address the challenges of a changing climate is put at risk by several vestiges of the state's water rights law that were adopted in the late 19th and early 20th Centuries.

The most important of these—codified in the Water Commission Act of 1913—are:

(1) the division between riparian rights and pre-1914 appropriative rights, and post-1914 appropriative rights that are defined and regulated through the State Water Resources Control Board's permitting and licensing jurisdiction; and

(2) the Legislature's decision categorically to exempt groundwater rights from the Board's permitting and licensing authority.

These statutory exemptions remove more than one-third of California's surface water diversions and almost all groundwater extraction from direct supervision by the Board. The Board's lack of direct permitting authority compounds the difficulties it experiences in enforcing water rights priorities, implementing water quality standards, protecting fish and other instream beneficial uses, ensuring public health and safety, and, in some stream systems, effectuating the human right to water for essential domestic uses. This is especially true during periods of acute water shortage when the Board has had to curtail the exercise of certain water rights—both to enforce water right priorities and to protect domestic and instream uses—based on limited information about the volume, timing, and legality of riparian and pre-1914 diversions.

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Moreover, while it has included selected groundwater rights in several of its recent water rights enforcement and curtailment orders—including those involving the Scott, Shasta, and Russian Rivers—it lacks clear statutory authority to do so.

In our 2015 report—*Allocating California's Water: Directions for Reform*—we recommended a variety of changes to the water rights system, including bringing all surface water rights within the State Water Board's permitting and licensing jurisdiction. While we continue to believe that this would be a salutary reform, these notes focus on a more limited form of integration of surface water rights—and, in a few settings, groundwater rights—that would enhance the Board's authority to enforce water rights priorities *and* implement existing statutory, common law, and constitutional directives regarding the proper allocation of water during periods of shortage.

In addition, we offer several recommendations on how the Legislature might strengthen the Board's authority to address the flip side of administering the water rights system in times of drought—i.e., clarification of the Board's power to establish a special permitting system to govern the diversion of water during high-flow conditions for purposes of groundwater recharge, implementation of the Sustainable Groundwater Management Act (SGMA), and other beneficial uses.

Strengthening the State Water Board's Authority Over Water Rights During Periods of Shortage

Amend the Water Code to expressly authorize the Board to curtail all surface water rights—as well as the exercise of groundwater rights that significantly affect the volume or flow of hydrologically connected surface waters—when it determines that the volume or flow of water is likely to be insufficient to supply all reasonable and beneficial uses, comply with regulatory standards, and fulfill public trust requirements.

There is confusion about the State Water Board's authority to curtail the exercise of water rights to enforce priorities and to ensure compliance with the laws that protect water quality, fish and wildlife, public health and safety, and the human right to water. This confusion has arisen because the Board has used two different statutes to curtail water rights—Water Code sections 1052 and 1058.5—and the courts have issued differing opinions on the scope of the Board's curtailment jurisdiction.

In *Stanford Vina Ranch Irrigation Co. v. State of California,* decided in 2020, the Court of Appeal for the Third District upheld the Board's authority to include riparians and pre-1914 appropriators in curtailment regulations that it issued under section 1058.5 to protect Chinook salmon and steelhead in the Mill, Deer, and Antelope Creek watersheds during low flow

conditions in 2014 and 2015. In contrast, in its *California Water Curtailment Cases* decision issued last fall, the Sixth District Court of Appeal ruled that the Board does not have authority as part of its water rights enforcement powers conferred by section 1052 "to curtail an entire class of pre-1914 appropriative water rights solely on the basis that the Board believes that there will be insufficient water to serve all pre-1914 appropriative rights."

Although these decisions are not necessarily inconsistent, they do illustrate the need for legislative clarification of the nature and scope of the Board's curtailment jurisdiction, as well as the circumstances under which it may proceed by regulation and the conditions under which it must focus on individual water users or groups of water users.

Water rights matter the most when there is not enough water for all lawful uses. The recommendations that follow would strengthen the security of water rights by granting the State Water Board integrated and comprehensive authority to enforce water right priorities during times of shortage. They also would help to ensure that statutory priorities and regulatory standards are fulfilled by allowing the Board to respond expeditiously to rapidly changing hydrologic conditions as it was required to do in 2014, 2015, 2020, and 2021.

1. *Clarify that the Board's Enforcement and Curtailment Authority Applies to All Surface Water Rights.*

In exercising its enforcement and curtailment authority, the Board must have the power to address water rights comprehensively, because curtailment is not simply a matter of enforcing diversion priorities between and among different classes of water right holders. Rather, as both the *Stanford Vina* and *Curtailment Cases* courts recognized, curtailment and enforcement of water rights are necessary when there is insufficient water to supply even the most senior water rights *and* provide water for essential domestic supplies, public health and safety, water quality, fish and wildlife, and other aspects of the public trust. Moreover, the constitutional requirements of prevention of waste and promotion of reasonable use require comparative analyses of water use practices between and among all water users.

Therefore, it is essential that the Board have jurisdiction over *all* surface water right holders when it acts to enforce and, if necessary, to curtail water rights in times of shortage.

2. *Extend the Board's Enforcement and Curtailment Authority to Include Hydrologically Connected Groundwater Pumping.*

As noted previously, there are some watersheds in which the volume and flow of water is significantly affected not only by surface diversions, but also by the extraction of groundwater

that is hydrologically connected to the surface stream. The Board has recognized this hydrologic interplay in the Scott, Shasta, and Russian River watersheds.

For example, as the 2020–22 drought worsened, the Board adopted emergency regulations and issued a series of orders that curtailed the exercise of water rights in the Shasta River system to protect flows for spawning salmon. The final order included all appropriative groundwater rights with priorities junior to March 1, 1850, with exemptions where groundwater was the user's "only water source for human health and safety purposes," including drinking water, domestic uses, and firefighting.

The Board's authority to curtail the exercise of riparians and pre-1914 appropriators in this context was previously confirmed in the *Stanford Vina* decision. But the Board was operating on a less certain footing in extending its curtailment authority to the groundwater users.

The Legislature could address this uncertainly by authorizing the Board to enforce and curtail the exercise of groundwater rights that, in the Board's judgment, significantly affect the volume or flow of water in hydrologically connected surface streams. The Legislature has recognized this hydrological interconnection between surface and ground water rights in several settings, including the Scott River adjudication and in SGMA. It would be helpful to do so in this context as well.

3. *Ensure that the Board Has Authority to Respond Swiftly to Rapidly Changing Conditions.*

Section 1058.5 currently authorizes the State Water Board to issue emergency regulations to prevent waste and unreasonable use—and, if necessary, to curtail the exercise of water rights—under two conditions: (1) if the Governor has declared a drought emergency; or (2) in a "critically dry year immediately preceded by two or more consecutive below normal, dry, or critically dry years." These "triggers" are problematic for two reasons.

First, conditions that warrant curtailment may exist in some watersheds well before the Governor declares a regional or statewide drought emergency. Second, as we learned from the past two droughts, water supplies can become critically scarce even in years that are preceded by periods of relative abundance. Indeed, section 1058.5, as now written, is premised on the idea that "carry-over" reservoir storage amassed during years of relative abundance will be sufficient to meet consumptive water demands and downstream regulatory requirements in subsequent dry years. As the most recent drought has shown, this presumption is no longer realistic.

The Legislature therefore should consider amending section 1058.5 to eliminate the existing conditions on the Board's curtailment powers. The amendment instead would grant the Board

authority to issue emergency regulations to prevent waste and unreasonable use—and, if necessary, to curtail the exercise of water rights within specific watersheds—when it determines that changing hydrologic conditions make it unlikely that there will be a sufficient volume or flow of water to supply all reasonable and beneficial uses, to comply with regulatory standards, and to fulfill public trust requirements.

4. *Create Incentives for Water Users to Provide Current Information About Water Rights, Diversions, and Reasonable and Beneficial Use to the Board.*

The State Water Board and other interested parties have expressed frustration that the Board does not have adequate information about water rights and water use—especially by riparians and pre-1914 appropriators—to exercise its enforcement and curtailment authority during periods of shortage. The Legislature has previously addressed this problem by requiring most riparians and pre-1914 appropriators annually to report their diversions. It also has authorized the Board to require all surface water users who divert more than 10 acre feet annually (afa) to install meters or other devices to monitor their diversions and to include monthly diversion summaries in their annual statements of diversion and use.

Although these reforms have enhanced the Board's ability to track water diversions and use, several problems remain. The statements of diversion and use, which cover monthly data for the preceding year, are effectively out-of-date when the Board is confronted with drought conditions in the following summer and fall months and must make real-time enforcement and curtailment decisions. There is widespread noncompliance with the diversion measurement requirements. And the Board continues to lack adequate information about the water rights of non-permitted water right holders—i.e., riparians, pre-1914 appropriators, and hydrologically connected groundwater extractors.

To improve the usefulness of reporting for purposes of drought management, we recommend that the Legislature build on the current requirements under SB 88 and authorize the Board to require more frequent reporting as needed. This could include reporting the now required monthly data throughout the year, rather than in one annual retrospective report. And in some watersheds in some years, even more frequent reporting may be warranted to enable the Board to respond to rapidly evolving hydrologic conditions.

In addition, as it evaluates the Board's enforcement and curtailment authority, the Committee may want to include a complementary approach—one that would create incentives for water right holders to gather and report accurate information to the Board. We therefore recommend that the committee consider legislation that would place the burden of proving both the existence of a valid water right and the lawful exercise of that right on the water right holder. This requirement would apply to all actions to enforce or curtail the exercise of water rights,

including administrative or judicial proceedings challenging an enforcement or curtailment order.

The proposed reform would create incentives for water right holders that are not currently within the Board's permitting and licensing jurisdiction to seek permits from the Board to confirm the existence of a valid water right. It would create incentives for all water users to install technology that would enable them to prove the valid exercise of their water rights. And it would relieve the Board of the immense burden of investigating and attempting to monitor the exercise of all water rights across the state's myriad watersheds.

Strengthening the State Water Board's Authority to Administer Water that is Temporarily Available During High Flow Conditions

Confirm and clarify the State Water Board's authority to adopt a special permitting system governing diversions of surface water during high flow conditions.

California's changing hydrology—with more intense droughts and wetter wet periods—also makes it imperative that we capture and store more water during high winter and early spring flows. And the most readily available and cost-effective storage is in many of the state's overdrafted groundwater basins.

In 2019, the State Water Board created speical permitting guidelines for the diversion of high-water flows for groundwater recharge. The new permitting program applies both to projects that divert and store water within the same basin and to projects that divert water for export to another basin. Under the program, the Board may grant "standard permits" for long-term groundwater recharge projects. These permits have no expiration date. The Board also may issue two types of "temporary permits" with maximum terms of 180 days or five years.

The special permitting guidelines built on 2019 legislation, AB 658, which authorized the Board to issue temporary permits to Groundwater Sustainability Agencies (GSAs) and other local water managers to divert surface water to underground storage "for beneficial use that advances the sustainability goal of a groundwater basin." Most of the high flow permitting program is the Board's own creation, however, and it would be useful for the Legislature to confirm the Board's authority to issue special permits for the diversion and storage of high-water flows.

The structure and contours of the program are largely in place, and the guidelines provide an excellent foundation for statutory reform. If the Committee decides to consider clarifying legislation, there are several aspects of the program that are especially important.

1. *Direct the Board to Distinguish More Precisely Between Water Available for "High Flow" Diversions and Water That is Needed to Fulfill Existing Water Rights and Instream Beneficial Uses.*

The Board's streamlined permits are available only for "high flow events," which the guidelines define as: (1) diversions when daily streamflow at the point of diversion is above the 90th percentile, with the diversion rate limited to 20 percent of the total streamflow; and (2) diversions of high flows that "trigger flood control actions necessary to mitigate threats to human health or safety."

These criteria are important for two reasons. First, they protect existing legal water users by limiting high-flow diversions to water that has not previously been appropriated by existing water right holders. Second, they protect water quality, fish, and other instream uses by ensuring that the new diversions do not unduly diminish the ecological services provided by seasonal high flows.

The threshold criteria are not without controversy, however. Environmentalists and fisheries advocates have argued that the 90th percentile threshold is too low, because it fails to account for the ecological benefits that floodwaters historically have provided by mobilizing riverbeds, creating access to floodplain habitat, and improving water quality for rivers and estuaries. Conversely, prospective permit applicants have argued that the threshold is too high—at least for some rivers—because it was based on a general risk analysis that did not consider hydrologic and ecologic conditions within specific watersheds. And some senior water right holders have claimed that they—rather than a new permittee—have prior rights to water that is available for diversion, even when the flows exceed the 90th percentile or the river is above flood stage.

Legislative guidance would be useful to address this important issue. We therefore recommend that the Committee consider legislation that would direct the Board to engage with the Department of Water Resources (DWR) and stakeholders within the basin to study the appropriate thresholds for watersheds that are likely to be the source of future high flow diversions. Based on this analysis, the Board would then set new diversion thresholds for each individual watershed. The 90th percentile threshold would continue as the general interim standard until the Board publishes individual watershed criteria.

2. *Confirm the Board's Definition of Storage of High-Flow Diversions as a Beneficial Use.*

Section 1242 of the Water Code states that the underground storage of surface water is a beneficial use if the stored water is thereafter applied to a defined beneficial use. Consistent with this, the Board has determined that "groundwater recharge is not a beneficial use of water

on its own, but rather is one method of diverting and storing water that takes advantage of the natural storage capacity of groundwater aquifers."

Nevertheless, the board has broadly defined beneficial use in this context to include a variety of *in situ* beneficial uses from the underground storage itself. These include prevention of saltwater intrusion into freshwater aquifers, protection against subsidence and compaction of aquifers, and support of groundwater-dependent ecosystems. The Board also has encouraged GSAs to develop underground storage projects using high flow diversions to address these and other "undesirable results" from groundwater overdraft as defined by SGMA and to assist overall compliance with SGMA's sustainability directive.

The definition of "beneficial use" for groundwater storage and recharge has been a contentious topic. It would be helpful for the Legislature to confirm the Board's broad interpretation of the term in the context of the high flow diversion and storage program.

3. *Ensure that the Board Has Authority to Facilitate Swift Response to Rapidly Changing Conditions.*

As with enforcement and curtailment of water rights during periods of shortage, rapidly changing high-flow and flood conditions also require prompt action—both by the Board and by parties seeking to divert the high water flows when they are still available.

New legislation could further this goal by authorizing the use of programmatic hydrologic and environmental analyses that the Board could use to review and approve specific high-flow diversion requests on an expedited basis. The programmatic analyses would include input from DWR, the Department of Fish and Wildlife, GSAs, counties, and other relevant agencies and stakeholders.

Programmatic analysis would be especially helpful for long-term and five-year permit applicants. This analysis would better enable them to plan and develop the diversion, conveyance, and recharge facilities needed to harvest and store high-water flows, and it would provide greater certainty that their investments in infrastructure will be put to use when hydrologic conditions permit.

Programmatic analysis also would enable the Board to determine in advance the conditions that should be placed on diversion and recharge projects to protect fish and to advance other important public interests. (These interests include siting of the groundwater recharge facilities near small community and domestic wells or groundwater-dependent ecosystems that may benefit from higher and more stable groundwater levels.) This would benefit all types of permit applicants, but it would be especially useful for 180-day permits, because the programmatic

analysis would allow the Board to expedite its review and approval of permit applications that seek to capture unanticipated and ephemeral high flows.

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Article X, Section 2 of the California Constitution declares that "because of the conditions prevailing in this State, the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable." It also stipulates that the right to use water is "limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not . . . extend to . . . waste or unreasonable use." The recommendations set forth above would promote these constitutional standards, and new legislation to implement the recommendations therefore would fall under the Constitution's express authorization that the Legislature shall have authority to "enact laws in the furtherance of the policy in this section contained."

Indeed, the Legislature has amended the Water Code numerous times to ensure that its various directives keep pace with changing hydrologic conditions, new scientific understanding, and contemporary public values. The projected effects of climate change—many of which we are already experiencing—also require new legal and policy responses.