



*To advance the economic, social and environmental sustainability of Northern California
by enhancing and preserving the water rights, supplies and water quality.*

Managed Groundwater Recharge to Support Sustainable Water Management

A Sacramento Valley Perspective

November 8, 2017

We appreciate the opportunity to participate in the California State Board of Food and Agriculture's public forum and to provide our perspective on how state and local agencies can work together to pursue additional opportunities for managed groundwater and aquifer recharge. The State of California has strong policies to encourage managed groundwater and aquifer recharge, which is an important part of a statewide water management portfolio that will be necessary for California to serve water for various beneficial uses in the future. We offer the following thoughts on how state and local agencies can work together to effectively implement these policies by aligning them with local efforts to improve groundwater recharge and the conjunctive management of surface and groundwater resources. This includes the Sustainable Groundwater Management Act (SGMA) and various regulatory processes involving surface and groundwater.

I. State Policies Encourage Groundwater Recharge

There are many policies that support and encourage managed groundwater recharge. This includes:

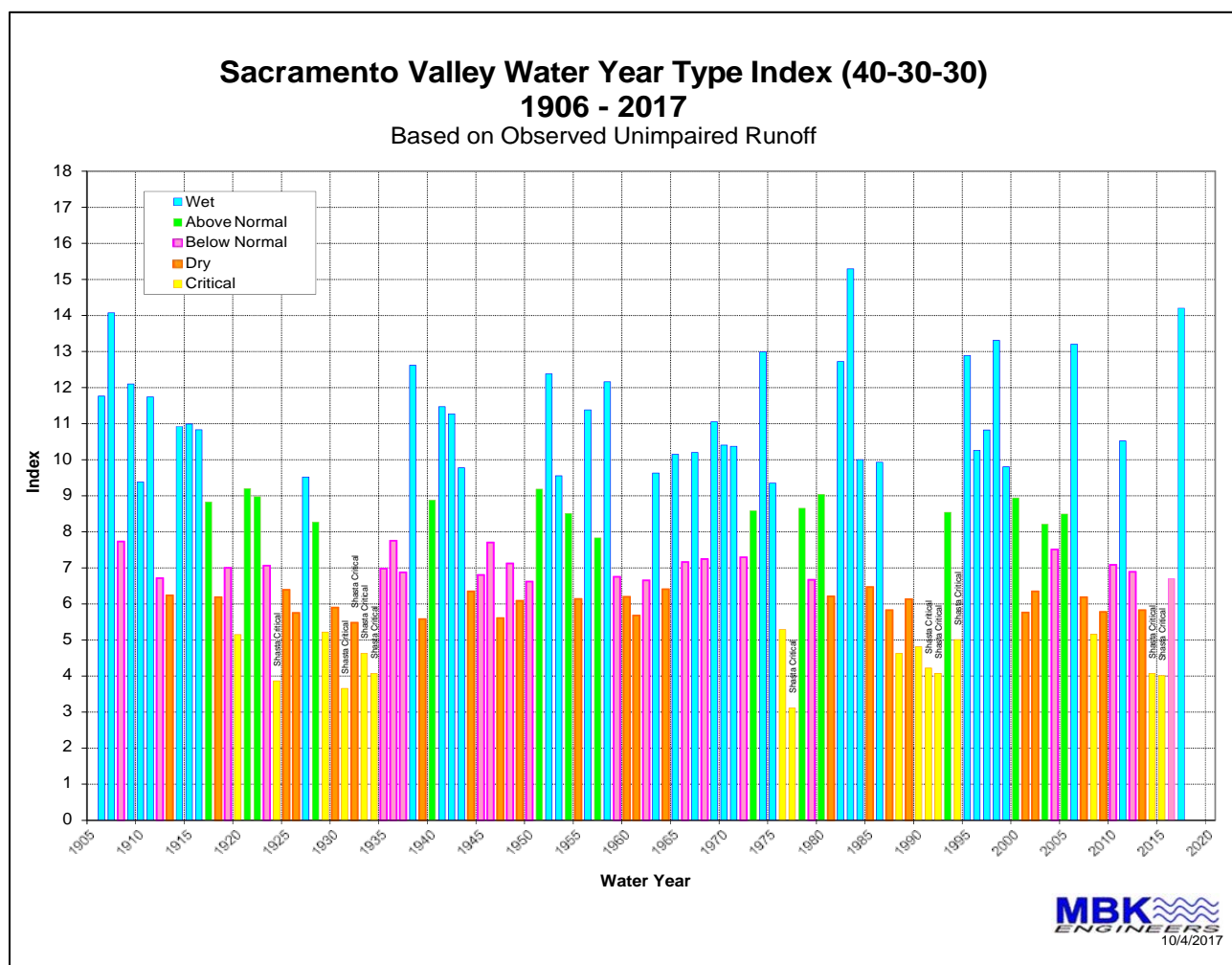
- “It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.” (California Constitution Art. X, §2.)
- “The administration will work with the Legislature to discourage actions that cause groundwater basin overdraft and provide incentives that increase recharge. State agencies will work with tribes and federal, regional and local agencies on other actions related to promoting groundwater recharge and increasing storage, including improving interagency coordination, aligning land use planning with groundwater recharge, and identifying additional data and studies needed to evaluate opportunities, such as capturing and recharging stormwater flows and other water not used by other users or the environment.” (California Water Action Plan, p.14.)

- “To demonstrate the feasibility of projects that can use available high water flows to recharge local groundwater while minimizing flooding risks, the State Water Resources Control Board and California Regional Water Quality Control Boards shall prioritize temporary water right permits, water quality certifications, waste discharge requirements, and conditional waivers of waste discharge requirements to accelerate approvals for projects that enhance the ability of a local or state agency to capture high precipitation events this winter and spring for local storage or recharge, consistent with water rights priorities and protections for fish and wildlife.” (Governor’s Executive Order B-36-15.)
- “Sustainable groundwater management in California depends upon creating more opportunities for robust conjunctive management of surface water and groundwater resources. Climate change will intensify the need to recalibrate and reconcile surface water and groundwater management strategies.” Furthermore, the Legislature expressed its intent “to increase groundwater storage and remove impediments to recharge.” (Water Code §10720.1)(g).)
- It is the intent of the Legislature “to increase groundwater storage and remove impediments to recharge.” (Water Code §10720.1(g).)
- A Groundwater Sustainability Plan shall include...”(e) Replenishment of groundwater extractions [and](f) activities implementing, opportunities for, and removing impediments to, conjunctive use or underground storage.” (Water Code §10727.4(e) and (f).)

II. The Setting in the Sacramento Valley for Groundwater Recharge

The Sacramento Valley is generally in balance with respect to its surface and groundwater resources. This did not happen by accident and has been the result of a concerted effort by local agencies working with landowners and state and federal agencies. The active and conjunctive management of surface and groundwater has played an important role in this balance and will continue to play an increasingly important role as groundwater uses expand and intensify in certain parts of the Sacramento Valley. This dynamic is described in a [2014 Sacramento Valley Groundwater Assessment](#) with a technical supplement. Active groundwater and aquifer recharge will be important in many parts of the Sacramento Valley to maintain and help achieve sustainability, particularly around the small pockets where groundwater levels may be declining or not recovering during wet periods as quickly as they have in the past.

With respect to hydrology, the Sacramento Valley has always been challenged by the maldistribution of water, with both floods and droughts, as well as seasonal variability of water availability. For example, the following chart illustrates the different year types in the Sacramento Valley. Imbedded in these different year types is seasonal variability, which many believe will become even more variable in the future. This hydrologic setting not only reveals the value and importance of the existing infrastructure in the Sacramento Valley, but also points to the importance and need for more active groundwater and aquifer recharge in the future, coupled with more modern water infrastructure, such as the proposed Sites Reservoir, improved local conveyance and a bypass system that can serve multiple benefits in all year types and seasons.



For more information on groundwater management in the Sacramento Valley, see the [Fact Sheet: The State of Sacramento Valley Groundwater](#) (July 1, 2017), prepared by NCWA and RCRC.

III. Approaches to Align State Policy with Sustainable Water Management in the Sacramento Valley

We offer three general approaches we believe will help align state policy with water management in the Sacramento Valley and provide incentives for local agencies and landowners to pursue managed groundwater recharge.

A. Multi-Benefit Approaches that Benefit Groundwater Recharge

In the Sacramento Valley, there are many opportunities for multi-benefit water management, where water is used for multiple beneficial uses and the water can also recharge groundwater. As an example, there is a concerted effort to spread water out and slow it down across the region, which can support farming, birds, fish and fish-food, and other wildlife--while also assisting with flood protection, managing for hydrologic variability, and providing benefits for groundwater recharge.

We were encouraged that the 2017-18 State Budget contained “an increase of \$40 million Proposition 1 to support Central Valley multi-benefit flood management projects. Additionally, SB 5, which will be before the voters in June 2018, provides “two hundred million dollars (\$200,000,000) shall be available to the Natural Resources Agency for implementation of voluntary agreements that provide multi-benefit water quality, water supply, and watershed protection and restoration for the watersheds of the state to achieve the objectives of integrating regulatory and voluntary efforts,” (Public Resources Code §80114.) These important efforts provide necessary funding, point in the right direction, and will benefit from other state policies facilitating these actions, including the regulatory processes described below.

We are also encouraged by the Department of Water Resources’ (DWR) Flood-Mar Program “[Using Flood Water for Managed Aquifer Recharge to Support Sustainable Water Resources](#).” We strongly support multi-benefit projects to use high flows and flood waters for groundwater recharge on agricultural lands and working landscapes.

B. Envision a New Regulatory Approach to Encourage Recharge Opportunities

The key to groundwater and aquifer recharge opportunities is the availability of surface water supplies and the ability for local agencies to access and apply affordable surface water to advance groundwater recharge opportunities, both directly and in-lieu recharge. To foster surface water availability, we believe fresh approaches to the regulatory approach will be most helpful and should be encouraged by the Administration, much as it did with the state direction in the Governor’s 2014 Executive Order (B-36-15). The State Water Board, for example, has many different opportunities to foster active groundwater recharge through the flexible and innovative regulatory approaches. This could include:

- Facilitate groundwater recharge programs, such as CalEPA and the State Water Board did through Executive Order (B-36-15), on a more regular basis that is both efficient and affordable. The Yolo County Flood Control and Water Conservation District and others directly involved in these processes can provide helpful ideas on how these programs can best work in the future. There are also benefits to making the process to obtain permits easier to navigate so that willing landowners can participate in these important programs.
- Recognize the value of multi-benefit approaches as described above and take actions to support these innovative actions on the ground.
- Encourage and expedite new water rights applications, including applications to support multi-benefit approaches and expand the traditional irrigation season, particularly when there is a benefit to groundwater recharge. In some places, this may require a more flexible and innovative approach to implement fully appropriated stream orders or Term 91.
- Provide for multi-year benefits from groundwater recharge that are consistent with the local hydrologic situation.

- Initiate a more creative and thoughtful application of beneficial use requirements to groundwater recharge.

Conversely, it is also important that the State Water Board not preclude opportunities for recharge and multi-benefit water management. As an example, the State Water Board in its Water Quality Control Plan process has proposed to redirect water away from various beneficial uses of water in the Sacramento Valley and, through its “unimpaired flow” approach, evacuate water from storage and quickly convey this water through a sterile, inhospitable river channel through the Delta. This approach has caused fish declines, it precludes multi-benefit water management, and it severely limits groundwater recharge opportunities, which in turn, makes California more vulnerable for the next drought. In this regard, the State Water Board is working at cross-purposes with SGMA and specifically the policies for groundwater recharge described above.

C. Empower Local SGMA Implementation

Local agencies in the Sacramento Valley recognize the importance of active groundwater and aquifer recharge and will be working hard to align local agency actions with the state policies on groundwater recharge. They will be integrating robust monitoring programs and scientific studies with recharge projects to inform and improve implementation of these types of projects. These agencies will also be working on further aligning groundwater recharge with land use policies. Investments in local infrastructure to redirect and apply water for recharge will also be a central part of necessary local actions.

The organization of Groundwater Sustainability Agencies (GSAs) through Joint Powers arrangements and similar mechanisms are intended to help bring different local perspectives and expertise together to foster sustainable groundwater management, which should include active groundwater and aquifer recharge. Through the SGMA process, we have appreciated the current efforts by the Department of Water Resources and the SWRCB to encourage local agencies to pursue groundwater recharge through the SGMA and related regulatory processes, best management practices, and technical assistance. Empowering local agencies is the essence of SGMA and is the best path forward to encourage local agencies to work with their landowners to implement recharge programs. Funding for local agencies will also be essential to advance these state policies, which can include the current Proposition 1 funding for SGMA implementation, as well as the groundwater-related funding in both SB 5 (on the June 2018 ballot) and the “Water Supply and Water Quality Act of 2018” (proposed for the November 2018 ballot), if approved by the voters.

As an example of an effort to inform and assist local agencies and landowners, the Sacramento Area Council of Governments (SACOG) is preparing a regional hydrological assessment and recharge suitability model to identify areas in the region that have the greatest need, feasibility and opportunity for maximizing groundwater recharge that will benefit specialty crop producers.

Thank you for the opportunity to provide this perspective. Please call if you have any questions or would like to discuss further.