FACT SHEET: The State of Sacramento Valley Groundwater

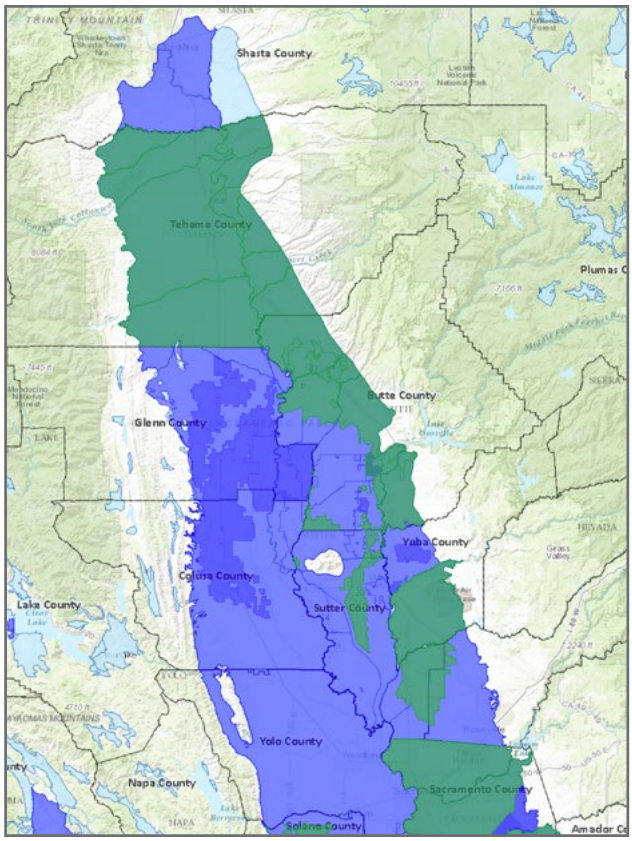
NCWA
Northern California Water Association

July 1, 2017

1. **The ENTIRE Sacramento Valley floor is covered by local Groundwater Sustainability Agencies (GSAs) that are pursuing active and sustainable groundwater management.**

   Local governments across the ten counties overlying the Sacramento Valley floor are working closely together to effectively organize and assure sustainable water resources in the Sacramento Valley.

   This includes ten counties and nearly 100 special water districts and companies. These local agencies will likely invest more than $10 million over the next five years to advance sustainable groundwater management as they refine Groundwater Sustainability Plans (GSPs) that will be completed by 2022.



Details on GSAs and the full map is available from DWR by clicking HERE.

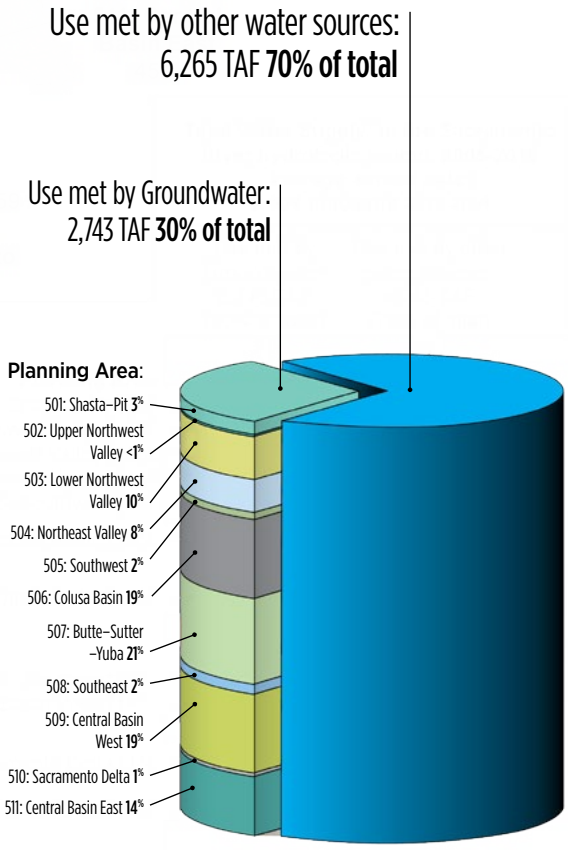
Upon submittal to DWR on June 30, 2017, DWR and local agencies are working to resolve the minor discrepancies that involve shape files with slightly different data layers.

2. **Groundwater is a VITAL component of the Sacramento Valley's water supply.**

   The recent consecutive dry years in Northern California have illuminated the pressures on Sacramento Valley's water resources and the challenges we face in providing reliable and affordable water supplies for various beneficial purposes in the Valley.

   Groundwater provides nearly **30%** of the region's water supplies, with this percentage greatly increasing during dry years and during sustained droughts.

Total Water Supply[1] in the Sacramento River hydrologic region, 2005–2010 average annual data: 9,008 thousand acre-feet



source: DWR Bulletin 160-13, SR55

3. The surface and groundwater resources in the Sacramento Valley are currently SUSTAINABLE, recognizing there are several pockets of concern that have emerged in the past decade.

The newly formed groundwater sustainability agencies (GSAs) in the region will be working with water resources managers and the water quality coalitions to keep the region's water resources sustainable, which means avoiding "undesirable results" that are described in the Sustainable Groundwater Management Act (SGMA). For the pockets in the region that may not be sustainable, the local entities will take action to achieve sustainability through groundwater sustainability plans that are due in 2022. As described below, the GSAs in the Sacramento Valley will build upon the foundation that local agencies have taken throughout the region to sustainably manage groundwater resources.

3a. Water Supplies and Groundwater Levels

The Sacramento Valley is generally in balance with respect to its surface and groundwater resources, recognizing there are pockets that have shown declining groundwater levels during the recent dry period. There are no critically over-drafted basins in the Sacramento Valley. Keeping the region in balance is largely dependent upon the availability of affordable and reliable surface supplies.

In 2014, Macaulay Water Resources, Davids Engineering, and West Yost Associates prepared a *Sacramento Valley Groundwater Assessment* with a technical supplement, which provides an overview of the Sacramento Valley's groundwater resources and the evolving efforts to better understand and actively manage the resources to provide sustainable benefits for the Sacramento Valley. To view the report, click **HERE.**

The report provides a discussion on the historical development of land and water resources; the ongoing efforts for sustainable groundwater management; the effects of increasing use of groundwater; and recommendations for the future. Most importantly, the report summarizes long-term trends within the Sacramento Valley that affect the region's groundwater resources.

Although groundwater levels in the Sacramento Valley have been generally consistent—draw down during dry years and then recovery in wet years—the report shows that the Sacramento Valley is starting to see certain pockets where groundwater levels may not be recovering as they have in the past.

While we cannot yet distinguish between the impacts of the recent drought and what may be longer-term changes to the Sacramento Valley water balance, the lack of surface supplies coupled with an expanding and intensifying use of groundwater in the Sacramento Valley contribute to this dynamic. Further and more detailed analysis will be part of the region's Groundwater Sustainability Plans.

For trends analyses by DWR in the Sacramento Valley, click **HERE.**

3b. Water Quality

The Sacramento Valley generally has high quality groundwater, although there are pockets with water quality concerns that need to be addressed. The map below shows these small pockets for nitrates.

The goal is to preserve these high-quality groundwater resources in the Sacramento Valley for future generations, while continuing to support economic and environmental uses in the Valley.

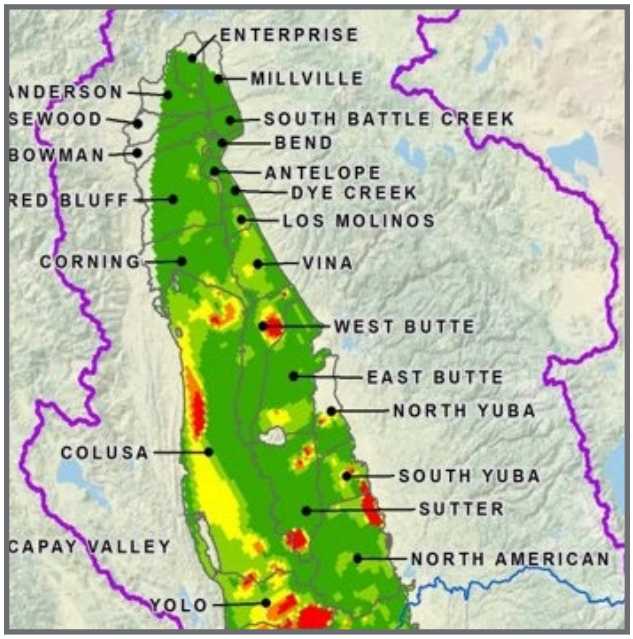


Figure 3-23 (Page 3-40), Final CV-Salts Salt and Nitrate Management Plan

CH2MHILL developed *Groundwater Quality Assessment Reports* (GAR) for the Sacramento Valley that provide water resources managers and the leaders in the water quality coalitions with a current assessment of groundwater quality in the region.

The GAR provides a rigorous review of regional settings of irrigated farmlands in the Sacramento Valley, including agriculture practices, soils and hydrogeology, and existing groundwater monitoring networks and data. In this manner, the GAR serves as an initial framework that establishes the technical basis for the groundwater quality monitoring and implementation program.

The reports identify areas of low and high vulnerability to water quality impacts from irrigated agriculture, and areas having data gaps that indicate the need for further evaluation.

The GAR supports the Central Valley Regional Water Quality Control Board's Waste Discharge Requirements for the Long-Term Irrigated Lands Program and informs the Central Valley Salinity Alternatives for Long Term Sustainability (CV-SALTS) Basin Plan process. This will also inform the GSPs. The water quality coalitions are working with the regulatory agencies to address these water quality issues.

The report is available, click HERE.

4. **Water resources managers are ACTIVELY MANAGING the region's surface and groundwater resources to support the rich mosaic of inter-dependent farmlands, refuges and managed wetlands, meandering rivers that support fisheries and wildlife, and the cities and rural communities sprinkled throughout the region.**

Click IMAGE below to view the video clip.

5. **The California Water Action Plan calls for promoting GROUNDWATER RECHARGE and increasing storage:**

   "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."

   The Legislature has also expressed its intent "to increase groundwater storage and remove impediments to recharge." (Water Code §10720.1)(g).)

   As one example, the Yolo County Flood Control and Water Conservation District (District) recharged underground storage in Yolo County over the past several years by diverting and percolating 11,000 acre-feet of additional surface water from Cache Creek into its existing unlined canal system.

   This project is an important element of the District's conjunctive management of surface and groundwater resources and it shows the value and importance of implementing recharge projects for sustainable groundwater management in the Sacramento Valley and throughout California.

   The project was facilitated by the Governor's Executive Order (B-36-15) "to accelerate approvals for projects that enhance the ability of local agencies to capture high precipitation events… for local storage or recharge" and the State Water Board issuing temporary permits.

6. **Leaders in the Sacramento Valley are working together to expand the ability to store surface water resources, such as SITES OFF-STREAM RESERVOIR, for critical times of need.**

   These surface water strategies are essential to sustainable groundwater management by taking pressure off the groundwater resources in the region and providing new and innovative ways to conjunctively manage surface and groundwater supplies in the Valley.

   For more information on Sites Reservoir, click **HERE.**

7. **The water resources managers and GSAs in the Sacramento Valley are making a concerted effort to BETTER UNDERSTAND the surface and groundwater resources in their area and to work together to assure that we have the appropriate technical, institutional and legal knowledge and tools to define and measure sustainability and support local groundwater management.**

   This approach was described in a technical report articulating *Efficient Water Management for Regional Sustainability in the Sacramento Valley.*

   The technical report, which brought together water management experts in the region, provides a sophisticated foundation to initiate the process to evaluate improved water management opportunities in the Sacramento Valley and the trade-offs that will need to be considered in making future management decisions in this region.

   Click **HERE** to read more.

8. **The largest threat to groundwater resources in the Sacramento Valley is the various REGULATORY THREATS to surface water resources posed by agencies that want to redirect water away from the various beneficial uses of water in the Sacramento Valley.**

   The counties on the Sacramento Valley floor sent a letter to the Governor expressing this concern. Click **HERE.** The region has also prepared a document showing *What's at Stake: The Importance of Protecting Water Resources in the Sacramento Valley.*
   Click **HERE** to read more.

9. **The overarching goal for water resources managers is to continually improve water management as a means of achieving regional sustainability with respect to water resources. Importantly, the ongoing sustainability initiative in the Sacramento Valley advances the state policy:**

   "To improve regional self-reliance for water- through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts." (Water Code §85021.)

10. **The preservation of Northern California's groundwater resources is critical to the economic, social and environmental fabric of the region.**

    As part of ongoing efforts to achieve sustainability, water leaders throughout the Sacramento Valley have convened the Northern California Water Association Groundwater Management Task Force to coordinate across the region and make a concerted effort to assess Sacramento Valley groundwater resources, both for groundwater levels and quality.

    Our objective is to better understand the water resources and use this information to bring the region together to actively manage our water resources—both surface and groundwater—to assure sustainable water supplies for cities and rural communities, farms, fish, birds and recreation.

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