The Department of Water Resources (DWR) is providing data, tools and guidance to help Groundwater Sustainability Agencies (GSAs) develop Groundwater Sustainability Plans (GSPs), and implement the requirements of the Sustainable Groundwater Management Act (SGMA).

Data—Available Datasets

- SGMA Portal – Submit and view SGMA data: https://sgma.water.ca.gov/portal/
- Groundwater levels, water quality, and more:
  - Water Data Library: http://wdl.water.ca.gov/waterdatalibrary/
  - California Statewide Groundwater Elevation Monitoring: http://bit.ly/dwr-casgem
- CNRA Open Data Platform: https://data.cnra.ca.gov/

- Additional related datasets:
  - Climate Change: http://bit.ly/sgmaclimate
  - Urban water use and land use: https://www.water.ca.gov/Programs/Water-Use-And-Efficiency
  - Precipitation, evapotranspiration, streamflow, and more: http://www.cimis.water.ca.gov/ or at https://cdec.water.ca.gov/snow_rain.html

Tools—Interactive Maps
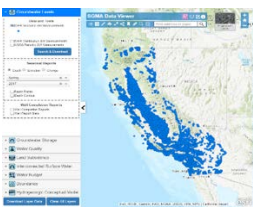
SGMA Data Viewer: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer
The SGMA Data Viewer provides access to groundwater related datasets that are organized by the requirements of SGMA and the Groundwater Sustainability Plan (GSP) regulations for the purpose of supporting GSP development and implementation. The SGMA Data Viewer provides centralized data access that will improve coordination across the State and help GSAs meet the requirements of SGMA and the GSPs regulations.
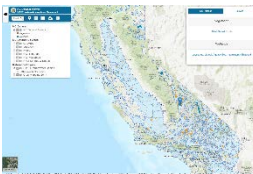
Natural Communities Dataset Viewer: https://gis.water.ca.gov/app/NCDatasetViewer/
The NC Dataset Viewer provides efficient access to the Natural Communities Commonly Associate with Groundwater dataset and related source datasets, allowing both query and download of features in the NC Dataset and query of source data sets used in the development of the NC Dataset.

California DWR Land Use Viewer: https://gis.water.ca.gov/app/cadwrlanduseviewer/
The CADWR Land Use Viewer allows you to easily view and download both statewide (as recent as 2014 crop data) and existing county land use datasets that have been collected over the last 30 years. The application also enables you to filter crop specific information and visualize land use change over time.

Well Completion Report Map Application: https://gis.water.ca.gov/app/wcr/
This interactive map provides access to copies of Well Completion Reports. Well Completion Reports contain information collected by drillers during the drilling and construction of water wells, including the location, dates of construction, planned use, depth of the well, subsurface geologic units encountered, well construction, and well yield.

Groundwater Information Center Interactive Map: https://gis.water.ca.gov/app/gicima/
This interactive map displays groundwater and subsidence data. The application allows users to view and download individual geographic information systems (GIS) layers containing geospatially referenced groundwater-related information.

Water Management Planning Tool: https://gis.water.ca.gov/app/boundaries/
The application allows users to overlay various GIS boundary layers onto a map of California. Each planning layer includes a brief description and a location or source where you can find additional information regarding that layer.
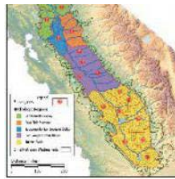
Tools—Models Provided by DWR

Integrated Water Flow Mode (IWFM): IWFM is a water resources management and planning model that simulates groundwater, surface water, stream-groundwater interaction, and other components of the hydrologic system. Find out more at:
http://baydeltaoffice.water.ca.gov/modeling/hydrology/IWFM/index.cfm

California Central Valley Groundwater Surface Water Simulation Model (C2VSim): C2VSim applies the IWFM to Central Valley groundwater. C2VSim simulates the historical response of the Central Valley's groundwater and surface water flow system to historical stresses, and can also be used to simulate the response to projected future stresses. This model is currently being enhanced and is expected to be available in early 2018. Find out more at: http://baydeltaoffice.water.ca.gov/modeling/hydrology/C2VSim/index_C2VSIM.cfm
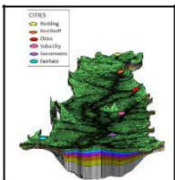
Sacramento Valley Simulation Model (SVSIM; Under Development): SVSim is a new model of the Sacramento Valley using the IWFM code and based on the C2VSim-Fine Grid dataset. This model is being developed to support more detailed analysis of streamflow depletion due to groundwater substitution transfers as well as support the implementation of SGMA. SVSim will have an updated representation of the hydrogeologic conceptual model and aquifer parameters based on an extensive lithologic texture analysis. It will also have a more refined (smaller) horizontal grid along major waterways and more discretized vertical layering. The model is scheduled to be completed in Summer 2018.

For additional information on DWR's modeling tools, visit: https://www.water.ca.gov/Library/Modeling-and-Analysis

Reports and Guidance—Best Management Practices

- **Monitoring Protocols, Standards and Sites:** http://bit.ly/sgma-bmp-monitoring-protocols
- **Monitoring Networks and Identification of Data Gaps:** http://bit.ly/sgma-bmp-monitoring-networks
- **Hydrogeologic Conceptual Model:** http://bit.ly/sgma-bmp-hcm
- **Water Budget:** http://bit.ly/sgma-bmp-water-budgets
- **Modeling:** http://bit.ly/sgma-bmp-modelling
- **Sustainable Management Criteria (currently in draft):** http://bit.ly/sgma-bmp-smc

Reports and Guidance—Other Guidance Documents and Groundwater Reference Reports

- Preparation Checklist for GSP Submittal:
  http://bit.ly/sgma-gsp-prep-checklist
- Annotated GSP Outline: http://bit.ly/sgma-gsp-outline
- Engaging with Tribal government:
  http://bit.ly/sgma-engagement-tribal
- Stakeholder Communication and Engagement:
  http://bit.ly/sgma-stakeholder-engagement

- Guidance for performing climate change analysis (under development)
- Groundwater references and reports:
  – Bulletin 118 Interim Update 2016:
    http://bit.ly/b118-interim-update-2016
  – California Groundwater Update 2013:
    http://bit.ly/ca-groundwater-update-2013

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Northern
o Red Bluff

o West Sacramento
North Central

o Fresno
South Central

Southern
o Glendale

Legend
- Bulletin 118 Groundwater Basins (2016)
- Critically Overdrafted Basins
- Northern Region Office
- North Central Region Office
- South Central Region Office
- Southern Region Office
- County Boundary

For more information about Sustainable Groundwater Management Program (SGMP) news and resources, subscribe to the twice-monthly SGMP newsletter:
https://listservice.cnra.ca.gov/scripts/wa.exe?SUBED1=DWR_SGMP&A=1

For general SGMA inquiries, please email: SGMPS@water.ca.gov