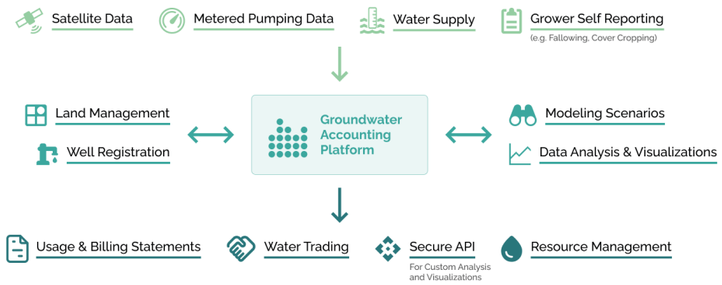
Data Driven Decisions

Manage Water Supply and Demand

The Groundwater Accounting Platform accepts water supply data from a variety of sources including satellite, flow meters, and sensor networks. This software combines water supply and use data to help track water budgets at the field scale for water users. The platform also features a water manager dashboard to track and account for water across a district or region, which informs management decisions such as billing and allocation planning.



Key Platform Functionality

- Track water usage from any remote sensed and metered data source
- Account for available water supply, including allocations, recharge, and other credits
- Visualize water usage at the field, parcel, and account scales with grower-facing dashboards
- Generate mail-ready Usage Statements and bills
- Well inventory and grower-facing Well Registration workflow
- API for flexible integration with existing tools
- Configurable Zones for flexible analysis and reporting
- Integrate with remotely-sensed raster data files from any provider
- Integrate with meter data via CSV, allow growers to manually upload or telemetrically upload meter data
- Model the hydrological impacts of various allocation, usage, trade, and recharge scenarios with the optional Groundwater Evaluation Toolbox (GET) from Olsson
- Facilitate pooling, transfers, and recharge credits according to local policies

Key Clients and Partners

Southwest Kansas Groundwater Management District 3

Twin Platte Natural Resources District

Upper Big Blue Natural Resources District

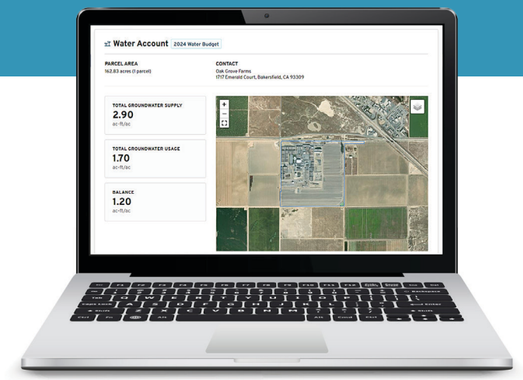
Merced Subbasin Groundwater Sustainability Agency

East Turlock Subbasin Groundwater Sustainability Agency

Merced Irrigation-Urban Groundwater Sustainability Agency

Rosedale-Rio Bravo Water Storage District

GROUNDWATER ACCOUNTING PLATFORM



Groundwater Accounting Platform

Leverage Data to Better Understand and Manage Water Supply, Usage, and Trading

Climate change and population growth are driving many communities to make tough decisions about water use. It is more important than ever that water managers and agricultural water users have access to the best possible data to balance supply and demand. ESA is deeply involved in the challenge to chart a sustainable future for water resources. The Groundwater Accounting Platform is the result of a partnership with Environmental Defense Fund, California Water Data Consortium, Olsson, and ESA. The platform was initially created for the Rosedale-Rio Bravo Water Storage District in California and is now being deployed to other markets.

The Groundwater Accounting Platform enables water managers, landowners, and water users to track water budgets and usage in near real-time. The platform includes modules for supply and demand modeling and water trading, providing a complete set of tools for local water districts to better manage allocations over time. Because it is open-source software, this platform provides a springboard for water districts everywhere to launch and customize their own solutions.

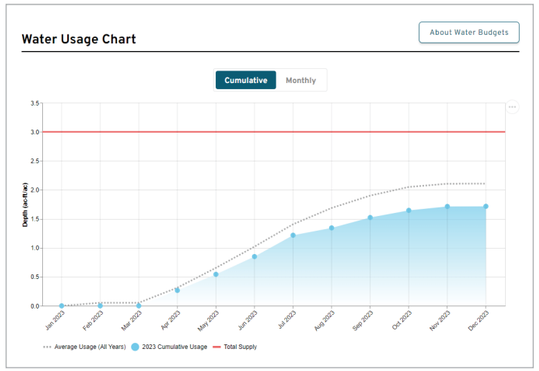
Benefits

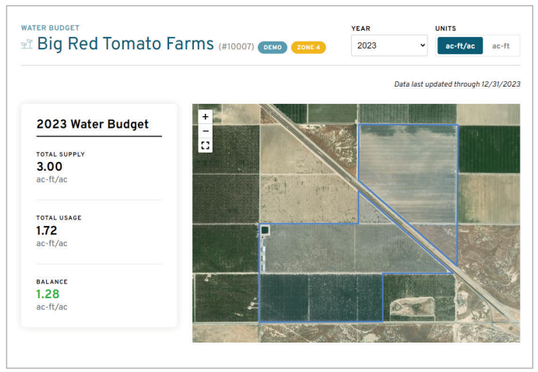
- **Measure**
  Enable water managers and agricultural users to understand their water use and available supply in near real-time
- **Manage**
  Empower well-informed decision making with advanced modeling
- **Plan**
  Create and manage Allocation Plans and evaluate management scenarios
- **Support Sustainability**
  Meet regulatory objectives for your region

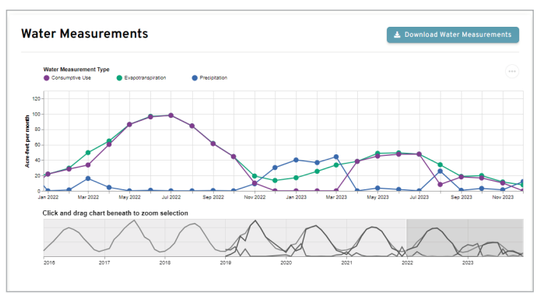
"We developed this accounting and trading platform because we want to provide landowners and growers with as many tools as possible to manage their water more sustainably and balance their water budget."

— Eric Averett | Former General Manager, Rosedale-Rio Bravo Water Storage District

Groundwater Accounting Features







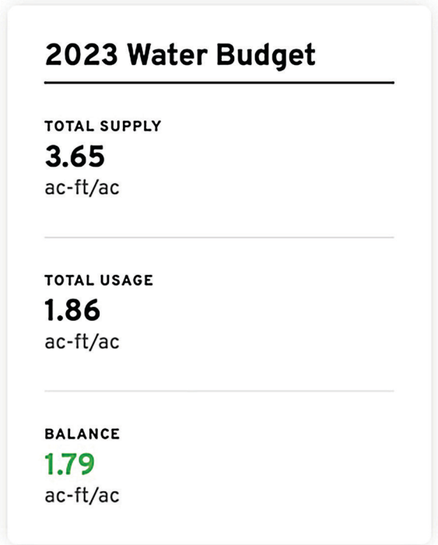
Landowner Dashboard

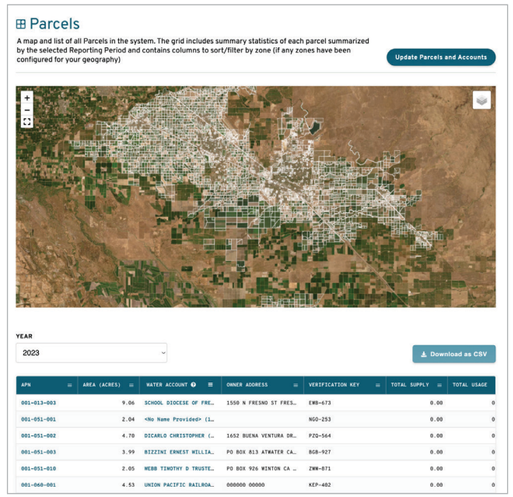
Key Benefits

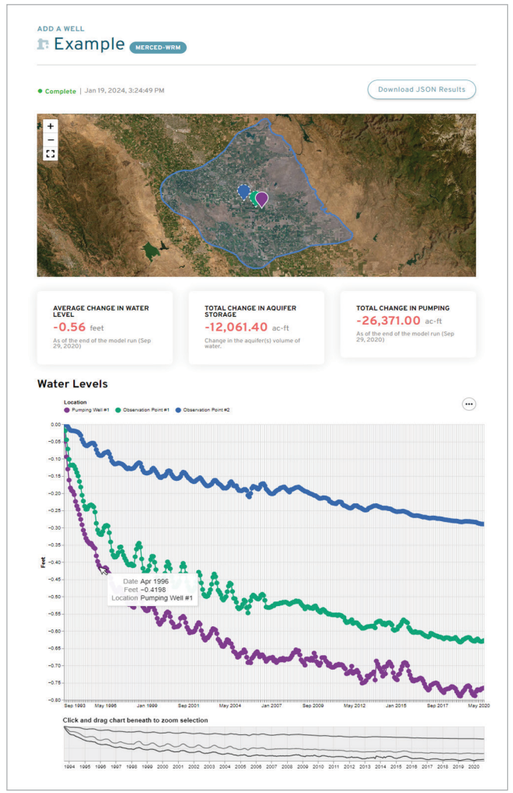
- Landowners can understand usage and supply in real time to make better informed decisions
- Users can manage allocations month over month and create data-driven water budgets
- Growers can analyze water usage by parcel

Features

- Review water allocation
- Review water usage to date and current available supply, just like a bank account
- Track cumulative water usage over time, and monitor monthly usage trends
- Review water use data specific to each parcel
- Review buying and selling activity for your account (with the optional Trading Module)
- Review water usage via interactive map tool
- Secure login to individual landowner accounts







Water Manager Dashboard

Key Benefits

- Water managers can monitor groundwater use and account for customers' water usage
- Real time data empowers adaptive management to achieve compliance with water supply regulations

Features

- Review water allocations and usage for every parcel and water account managed on the platform
- Review cumulative supply and usage data across your region/jurisdiction
- Track usage over time, by account and district-wide
- Review district trading activity (with the optional Trading Module)

Scenario Planning

This feature leverages the Groundwater Evaluation Toolbox (GET) designed by Olsson

Key Benefits

- Scenario modeling helps users evaluate the hydrological impacts of groundwater pumping
- Potential management decisions can be evaluated in advance for long-term benefits and impacts
- Automated groundwater model integration with water accounting framework allows evaluation of actual and hypothetical allocation and trading scenarios

Features

- Leverage fully integrated geospatial data to model a wide variety of scenarios including trading, recharge, drawdown, etc.

Trading Module

Key Benefits

- A managed local marketplace gives water users a viable economic alternative to "use it or lose it" model

Features

- View posting details from water buyers and sellers
- Create postings with offers to buy or sell water
- Post counter-offers and negotiate online
- Register completed trades
- Track market metrics