GROUNDWATER
ACCOUNTING PLATFORM

Environmental Defense Fund | California Water Data Consortium | ESA | olsson

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 groundwater 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

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

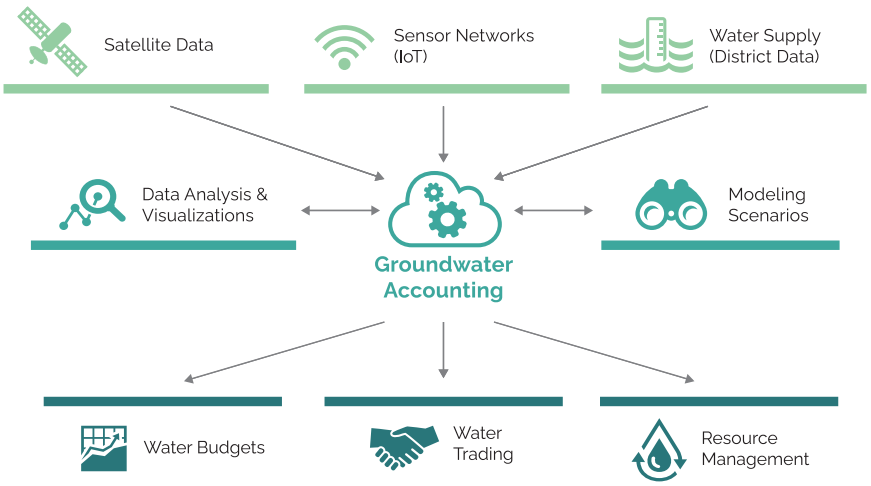
"We developed this accounting and trading platform because we want to provide landowners and growers with as many tools as possible to manage their water more sustainably and balance their water budget."

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

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

MEASURE	MONITOR	MANAGE	TRADE

- Track water supply data
- Track demand and account for usage in near real-time
- Capture usage data to inform district billing
- Create, view, and manage water budgets
- Landowners can check their water budget and outstanding balance online, similar to how they check their bank account online
- Model the hydrological impacts of various allocation, usage, trade, and recharge scenarios with the optional Groundwater Evaluation Tool (GET) from Olsson
- Post offers to buy and sell water with the optional Trading Module
- Facilitate the transfer of allocations at the request of landowners
- Because the technology used to develop the platform is open source, other water agencies can use it to build their own cost-efficient, locally applicable groundwater accounting and trading platforms

Key Clients and Partners

Rosedale-Rio Bravo Water Storage District

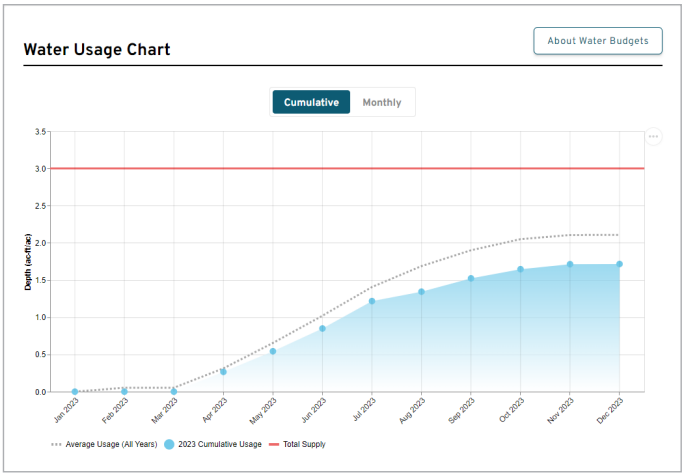
Merced Irrigation-Urban Groundwater Sustainability Agency

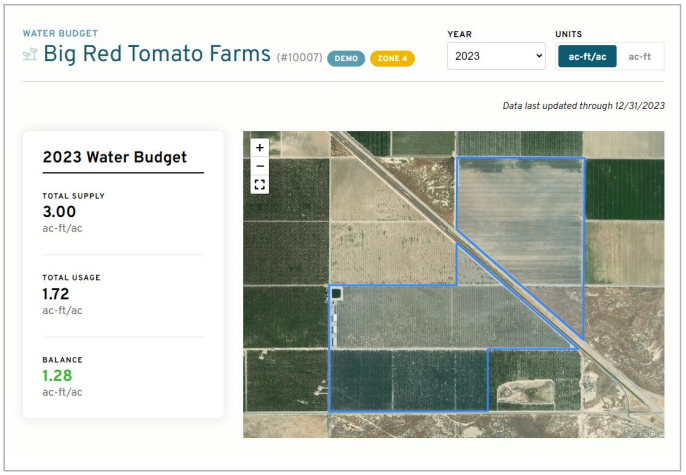
Pajaro Valley Water Management Agency

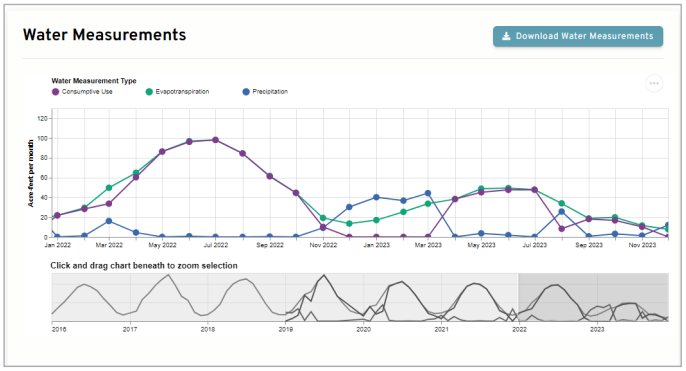
Yolo County Flood Control and Water Conservation District

Merced Subbasin Groundwater Sustainability Agency

Groundwater Accounting Features







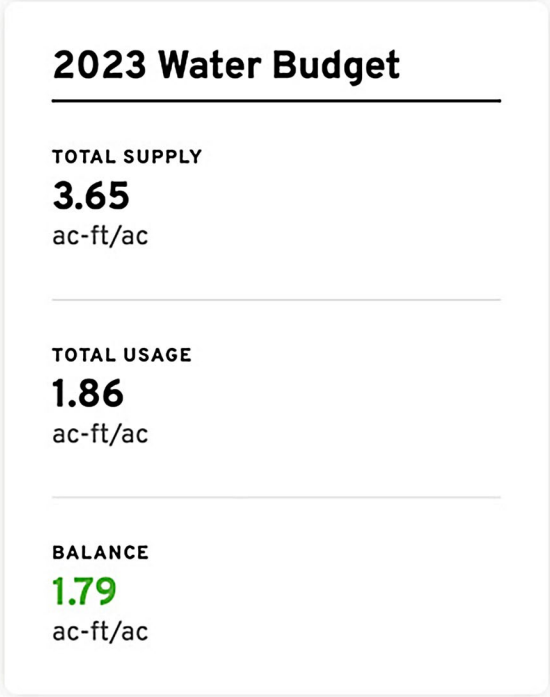
Landowner Dashboard

Key Benefits

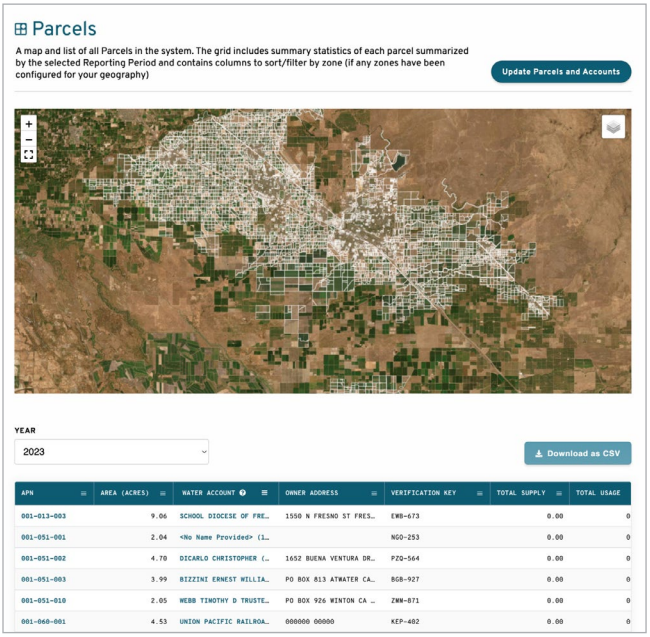
- Landowners can understand usage and supply in real time to make better informed decisions
- Users can manage allocations month over month and create data-driven water budgets
- Growers can analyze water usage by parcel

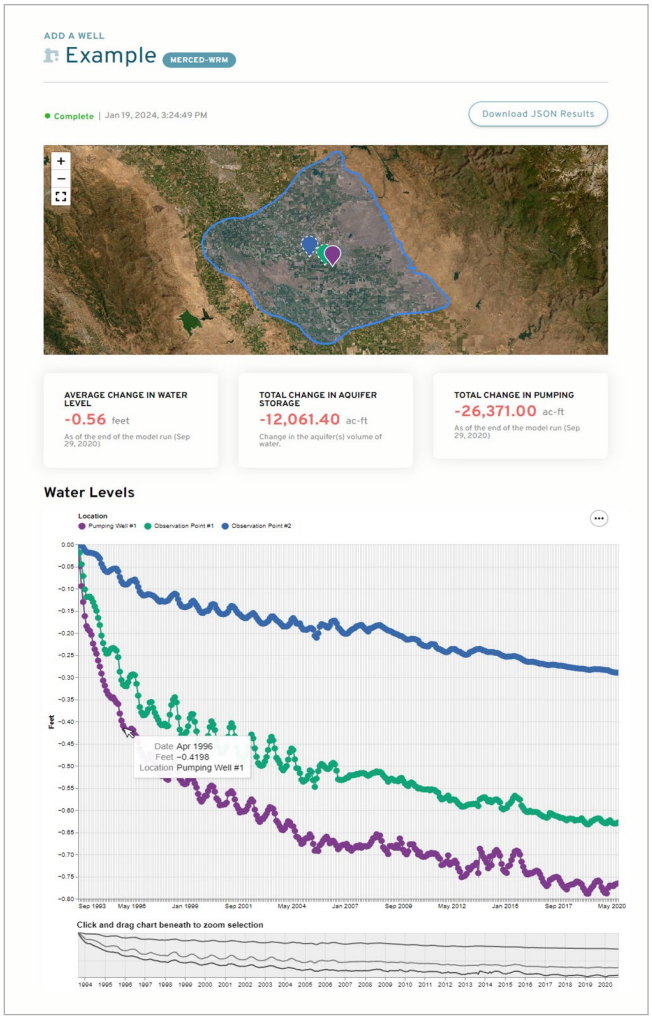
Features

- 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



Groundwater Accounting Features





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

Join the Groundwater Accounting Platform Community

Designed to Help California Water Users Meet SGMA Goals

In 2019, Environmental Defense Fund (EDF) joined forces with California Water Data Consortium (Consortium) to commission a software solution that would help California water users meet their goals for sustainable groundwater usage under the State's SGMA legislation. Environmental Science Associates (ESA) and Olsson worked together to build the Platform and manage the first deployment to Rosedale-Rio Bravo Water Storage District in California's Central Valley. The success of that deployment has cultivated a robust network of new users and supporting resources. New users include *Merced Irrigation-Urban Groundwater Sustainability Agency, Pajaro Valley Water Management Agency, Yolo County Flood Control and Water Conservation District,* and *Merced Subbasin Groundwater Sustainability Agency.* Ongoing Platform development is being funded by California Department of Water Resources.

Licensed as Open-Source Software to Facilitate Adoption and Collaboration

Open source software avoids vendor lock-in and is available for anyone to modify, enhance, and update over time. Because the Groundwater Accounting Platform is open source, upgrades and new features added by one organization will benefit all organizations. Open-source software additionally encourages users to participate in an open user-community. The Groundwater Accounting Platform User Community meets quarterly to weigh in on new features, curate the roadmap, and share ideas.

Supported by a Collaborative Product Team

Four organizations work together to support and fund ongoing development and deployments for the Platform. EDF, Consoritum, ESA, and Olsson share a commitment to help new users learn about this software and join the Groundwater Accounting Platform community. Users benefit from the collective knowledge and energy of this collaborative team.

Learn More:

Visit the Platform
https://www.groundwateraccounting.org/

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