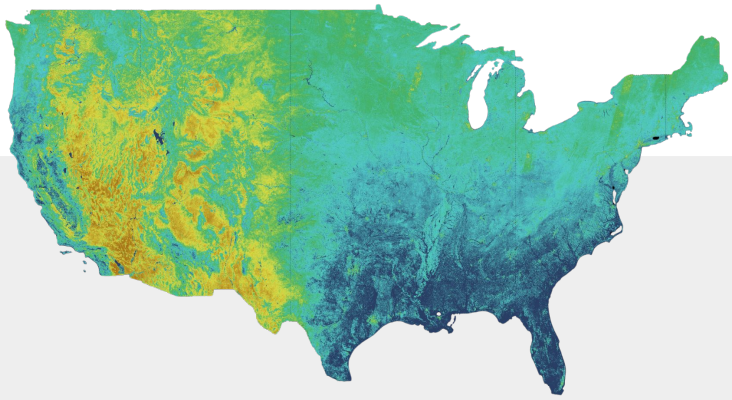
Filling the biggest data gap in water management

OpenET provides freely accessible evapotranspiration (ET) data to all water users, land managers, and decision-makers by integrating best-available science with publicly available satellite, meteorological, and land cover information.

Openly accessible, field-scale ET data can strengthen irrigation management decisions and long-term planning for farmers, ranchers, irrigation districts, state farm bureaus, and more.

Transparent | Reliable | Easy to Use



Compare, Collaborate, and Strengthen OpenET Data

Open-access methods and data allow growers, agencies, consultants, and community members to work from the same information, creating a shared foundation for more productive and proactive water management discussions. OpenET encourages user feedback – please review OpenET data alongside field observations and share questions or insights with support@openetdata.org, and help to improve the models, data, and value for everyone.

Most Common Questions

How much does OpenET data cost?
OpenET data are public and freely accessible, meaning there is no cost to view, download, or use the data within standard quota limits.

What is the resolution of OpenET data?
OpenET produces data at a spatial resolution of 30m x 30m (0.22 acres). Daily data are available from 2016 to present. Monthly data are available from 1985 to present. Data are available across 48 US states and expanding.

Where do you get field boundaries?
We use publicly available field boundary datasets from academic research teams, state and federal agencies, and the USDA Common Land Unit database.

What does OpenET data represent?
OpenET calculates actual ET (ETa) — all water removed from a land surface through evaporation and transpiration. It does not measure pumped, diverted, or applied water directly, but when combined with your own records or field data, it provides a more complete view of water use to help inform your daily operations.

What is the latency of OpenET data?
OpenET produces provisional daily ET data as soon as satellite and meteorological data are available. On average, users can expect the provisional daily data to be made available within 2-6 days of an overpass. Provisional monthly values are made available within 3-6 weeks of the end of a month.

How accurate is OpenET data?
ET accuracy varies with time aggregation and is more accurate when values are aggregated over the growing season. Growers can expect that OpenET numbers are accurate +/- 12.9% at the growing-season scale. Additional details are available in *Nature Water* (2024) and at etdata.org/accuracy-known-issues.

Partnerships

OpenET is a neutral, nonprofit-backed consortium that brings together leading experts in remote sensing, cloud computing, web design, and water management applications.

USGS | USDA | NASA | DRI | Environmental Defense Fund | Cal State Monterey Bay | Cornell University | UFRGS | University of Nebraska Lincoln | Google Earth Engine

OpenET

OpenET is built on open data, open access, and open science. We partner across sectors to ensure data is relevant, user-friendly, and always improving.

→ **Sacramento-San Joaquin Delta, California**
Producers, regulators, environmental nonprofits, and water districts in the Delta water community rely on **OpenET as an open, consistent, and reliable data source** for near-real-time measurement of crop consumptive use at the field level. OpenET is an easier alternative to measuring water diversions through siphons that **complies with state Water Measurement Regulations.**

→ **West Central Nebraska**
The Twin Platte Natural Resource District and the Nebraska Department of Natural Resources are using OpenET data to help **deliver calculations on local groundwater supplies** that allow water managers to plan ahead (**saving time, money, and water**) and improve the sustainability of local water basins, agricultural economies, and communities.

→ **Colorado River Basin**
The Upper Colorado River Commission unanimously adopted one of the OpenET models to serve as **the basis for consumptive use** across upper basin states. OpenET data are being used to **support system conservation** programs and **long-term water management decisions**.

Your tools

Data can be accessed through intuitive web interfaces (Data Explorer and FARMS), via an API for large-scale integration into third-party tools, or the Google Earth Engine Catalog.

Data Explorer

The OpenET Data Explorer provides easy access to ET data, helping water managers, farmers, researchers, and community leaders better understand water use across agricultural and natural landscapes.

Farm and Ranch Management Support (FARMS)

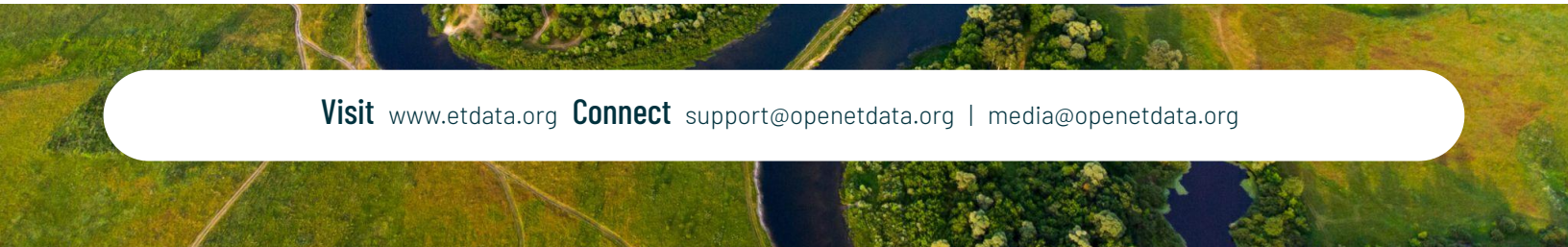
This user-friendly interface makes ET data accessible on any device, including mobile. With a few clicks, generate customizable reports that help you draw valuable insights and streamline agricultural planning.

Why are ET Data Helpful

In agriculture, ET is a measure of crop water use and an important metric for understanding consumptive use (water that cannot be recaptured or reused), crop condition, and the effects of environmental stress.

In natural landscapes, such as forests, riparian zones, wetlands, and rangelands, ET provides insight into drought impacts, vegetation response, ecosystem conditions, and landscape water use.

Reach out to support@openetdata.org anytime to connect with OpenET scientists on how to leverage this data.



Visit www.etdata.org **Connect** support@openetdata.org | media@openetdata.org