OpenET

Filling the biggest data gap in water management

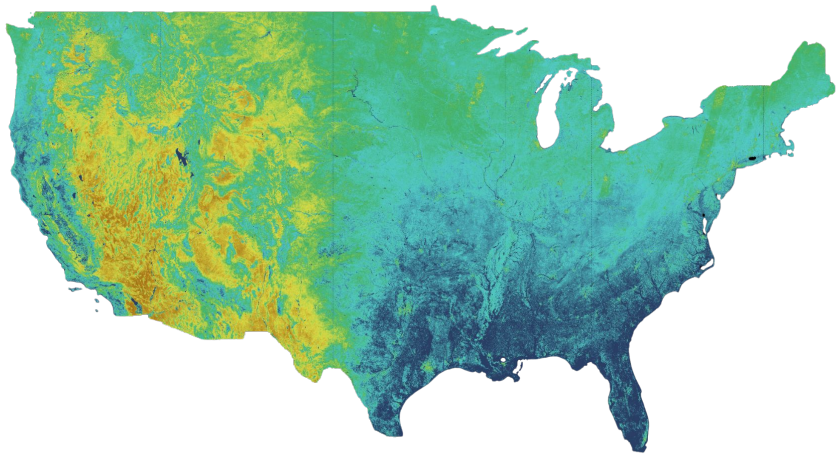
OpenET provides freely accessible evapotranspiration (ET) data to all by integrating best-available science with publicly available satellite, meteorological, and land cover information.

Collaborative | Transparent | Credible | 15,000+ Users

Evapotranspiration (ET) = Evaporation + Transpiration

ET is the transfer of water from the Earth's surface to the atmosphere

Evaporation from soil, open water, and other surfaces + ***transpiration*** from plants



Available to Support Tribal Priorities

OpenET supports a growing array of applications such as groundwater planning, water supply modeling, irrigation & crop management, and voluntary, compensated water conservation programs. Watershed, forest, and rangeland managers are exploring ways to monitor wetland and riparian restoration, forest health, wildfire mitigation efforts, and other vegetation management activities with OpenET data.

The OpenET team is available to answer questions, provide training, and support new use cases as tribes define them - *support@openetdata.org*

Why ET Data are 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.

Partnerships

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

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.

Your Tools →

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

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.

Most Common Questions

How are OpenET data generated?

OpenET data are generated using publicly available satellite and weather datasets, including imagery from NASA and USGS Landsat satellites combined with ground-based weather information. These inputs are processed through peer-reviewed, scientific models that calculate ET.

How can OpenET support communities?

ET data can support local communities in finding their own best paths to water security and sustainability by democratizing data access and making it easier to facilitate locally developed water management strategies, shape policymaking, and test flexible management solutions.

What is the data availability?

OpenET provides daily, monthly, and annual ET data at the field-scale — 30m x 30m, or about 0.22 acres — going back to 2000. Data are currently 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.

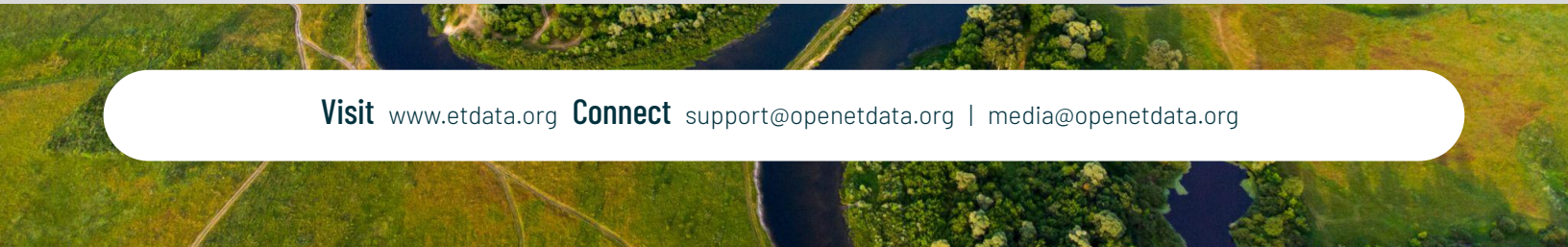
How much does OpenET data cost?

OpenET data are public and freely accessible, meaning there is no cost to view, download, or use the data within standard quota limits. This is possible through federal, state, and philanthropic funding.

Why make ET data public?

Before OpenET, ET data was only available to those who could afford to produce it. Additionally, agencies and water users were using different models with varying results. We believe that everyone should be able to access this data, as it is a critical piece in water management.

OpenET is dedicated to transparency, so we openly share information about the data sources, modeling methods, and assumptions behind our ET calculations. We want users to understand the strengths and limitations of the data and apply it with confidence in their own water management decisions.



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