

# OPENET

## Quick Stats

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<b>Purpose</b>	OpenET is a non-profit that provides ground-truthed, scientifically rigorous evapotranspiration (ET) data that is publicly accessible.
<b>Why OpenET?</b>	The OpenET collaborative includes nationally recognized scientists brought together to develop a credible, trusted source of ET data developed using publicly available information. OpenET has convened farmers and agricultural companies, representatives from state and federal agencies, policymakers, nonprofits, and other practitioners to collect input and user requirements from a broad range of perspectives. Growers and water managers at the local scale are providing feedback for our team of over 20 scientists, creating an iterative process that continually improves the data and benefits all users.
<b>Creators and Contributors</b>	Management Team: Environmental Defense Fund, NASA, Desert Research Institute Technical Team: NASA, Desert Research Institute, U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), University of Nebraska, University of Idaho, University of Wisconsin, University of Maryland, California State University Monterey Bay, University of Montana, Federal Univ. do Rio Grande do Sul, Google Earth Engine
<b>Spatial Resolution</b>	30m x 30m (0.22 acres)
<b>Data Timesteps</b>	Daily, monthly, and yearly
<b>Data Delivery Timing</b>	Monthly data delivered within four weeks or less of the end of each month Daily data delivered within three days of satellite overpass
<b>Data Delivery Options</b>	Web-based Data Explorer, OpenET REST Application Programming Interface (API), csv, GIS shapefiles, GeoJSON, GeoTIFF, and custom reporting tools
<b>ET Measurement Methods</b>	Satellite-based ET measurements from six different models, all of which have been used by government agencies with responsibility for water use reporting and management (ALEXI/DisALEXI, eeMetric, geeSEBAL, PT-JPL, SIMS, SSEBop). Data from these models are used to calculate a single ET value, or “ensemble value.”
<b>Crop Type Data</b>	USDA Cropland Data Layer and/or state-developed datasets (when available)
<b>Accuracy &amp; Validation</b>	OpenET completed one of the largest, most rigorous ET intercomparison efforts to date, which was used to determine which models provide the highest accuracy for different crops, land cover types, regions, and seasons. The results were also used to evaluate the accuracy of the ensemble ET value and evaluate the outlier detection and removal approach used by OpenET in the development of the ensemble ET value. For croplands, the OpenET ensemble had a mean absolute error (MAE) for the growing season of 13.2% (80.3 mm) and a MAE value of 16.6% (15.6 mm) at monthly time steps.
<b>Cost</b>	Use of the Data Explorer is free and limited amounts of downloadable data are available at no cost. Details on acquiring data for larger areas and daily timesteps for commercial use will be available when the API launches in 2022.

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Learn more at [OpenETdata.org](https://OpenETdata.org)