

# Using Explore and View EDEN (EVE) to Access Everglades Depth Estimation Network (EDEN) Data

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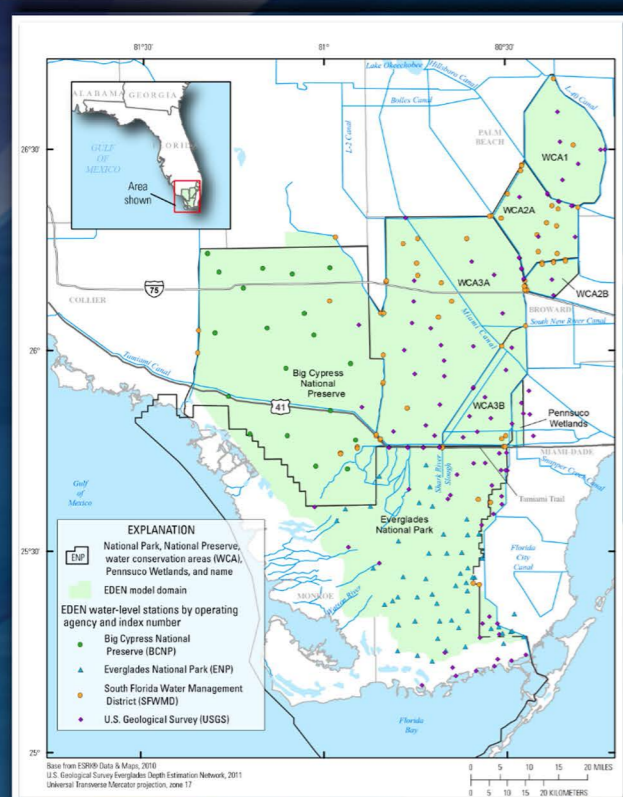


Figure 1. Location of the water-level gages used in the Everglades Depth Estimation Network (EDEN) surface-water model or used to estimate missing water-level data for gages in the surface-water model. The EDEN model domain is the freshwater part of the Greater Everglades.

The Everglades Depth Estimation Network (EDEN; fig. 1) provides water-level data for the freshwater part of the greater Everglades. Initiated in 2006, EDEN is an integrated network of real-time water-level gages, interpolation models, and web-accessible applications that generate daily water-level maps and derived hydrologic data. Users of EDEN data include biologists and wildlife-resource scientists who manage habitat requirements for endangered species, ecologists assessing restoration impacts, and water-resource managers monitoring water levels and depths to meet mandated regulation schedules. Data for EDEN are provided by Big Cypress National Park, Everglades National Park, South Florida Water Management District, and the U.S. Geological Survey.

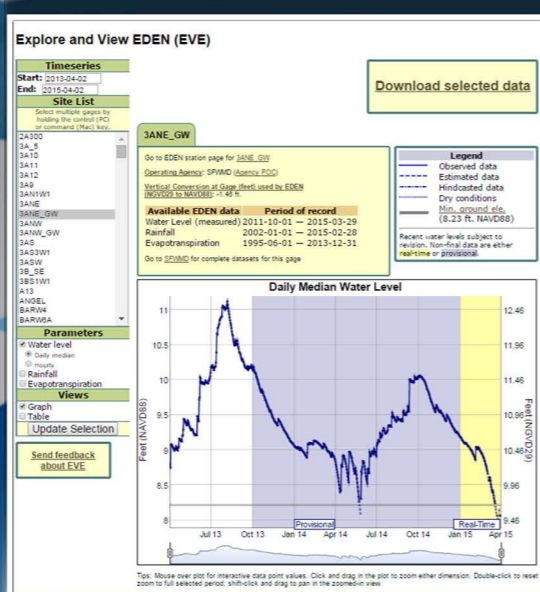


Figure 2. Screen capture showing the Explore and View EDEN (EVE) web page (<http://sofia.usgs.gov/eden/eve/>). Real-time water-level data are updated quarterly from provisional designation, and annually from approved (final) designation. Rainfall data are updated monthly, and evapotranspiration data are updated annually.

The EDEN team recently developed a graphical interface, Explore and View EDEN (EVE; fig. 2), to allow easy access to data stored in the EDEN database. Data include real-time and historical water level, rainfall, and evapotranspiration for over 300 water-level gages in the Everglades. Water-level data are measured at every gage; rainfall and evapotranspiration values are retrieved from 2-kilometer gridded Next-Generation Radar (NEXRAD) (rainfall) and Geosynchronous Operational Environmental Satellite (GOES) satellite (potential evapotranspiration) remote-sensing data sets. The EVE interface allows users to display and download hourly or daily water-level, and daily rainfall and potential evapotranspiration data for over 300 water-level gages in the Everglades (fig. 3). Users can plot water-level data simultaneously for up to five gages with daily local rainfall and potential evapotranspiration for user-specified periods from 1991 to the present (2015). The ground elevation at the gage is included on the graph

to allow users to determine when conditions are dry at the gage. Multiple water-level hydrographs for signal sites are shown in NAVD 88 and National Geodetic Vertical Datum of 1929 (NGVD 29). Data for selected gages can be tabulated or downloaded for use in other software programs (fig. 4). Users can easily distinguish measured data from estimated and hindcasted data.

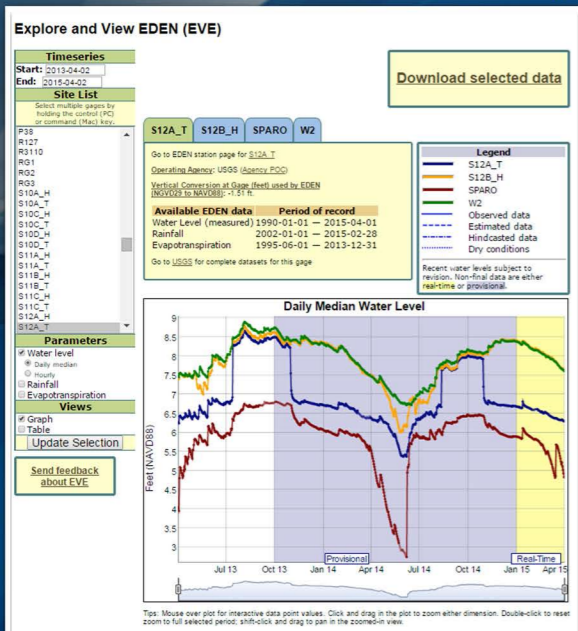


Figure 3a. Screen captures showing multiple hydrographs. To create a hydrograph, select the site(s) of interest, date range, data frequency (hourly or daily median value), and Graph view. Up to five gages can be selected for each graph. The line type indicates whether the data was observed (measured), estimated, hindcasted, or represents dry conditions.

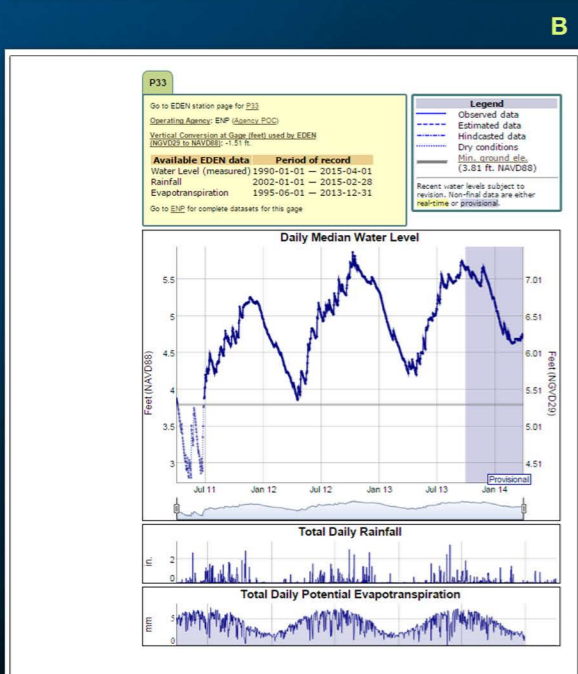


Figure 3b. Screen capture showing rainfall and potential evaporation graphed in separate windows below the hydrograph. Note the dotted line indicating dry conditions.

P33

Go to EDEN station page for P33

Operating Agency: FWP (Agency POC)

Vertical Conversion at Gage Height used by EDEN: NAVD88 to NAVD83: -1.91 ft

Available EDEN data Period of record

Water Level (measured) 1990-01-01 — 2015-04-01

Rainfall 2002-01-01 — 2015-02-28

Evapotranspiration 1995-06-01 — 2013-12-31

Go to EVE for complete datasets for this page

Table of Selected P33 Parameters for 2011-04-02—2014-04-02

Recent water levels subject to revision. Non-final data are either real-time or provisional. Daily water levels are medians computed from hourly water levels.

Data type flags: O = "Observed", E = "Estimated", H = "Hindcasted", D = "Dry", M = "Missing"

Date	Water Level (feet NAVD88)	Water Level Data Type Flag	Rainfall (in.)	Evapotranspiration (mm)
2011-04-02	3.89	O	0	5.14
2011-04-03	3.96	O	0	4.93
2011-04-04	3.84	O	0	5.28
2011-04-05	3.82	O	0	4.52
2011-04-06	3.8	D	0	3.99
2011-04-07	3.77	D	0	5.01
2011-04-08	3.74	D	0	5.33
2011-04-09	3.72	D	0	4.97
2011-04-10	3.68	D	0	5.81
2011-04-11	3.66	D	0	5.47
2011-04-12	3.62	D	0	5.47
2011-04-13	3.59	D	0.07	3.71
2011-04-14	3.56	D	0	5.22
2011-04-15	3.52	D	0	3.72
2011-04-16	3.49	D	0.01	4.34

Figure 4. Screen capture of tabulated data in EVE. Up to five gages can be selected for each table. If selected, rainfall and evaporation also will be included in the table. The water-level data type flag indicates whether the data is observed (measured), estimated, hindcasted, or representative of dry conditions. Data are listed as "Dry" when the measured or estimated water level is below the land-surface elevation at the gage.

The EVE graphical interface, which is a part of the EDEN website, integrates monitoring data from gages operated by multiple agencies, and provides model results to scientists and managers. This website provides a "one-stop shopping" location for consistent and well-documented datasets for use in the restoration of the Everglades.