

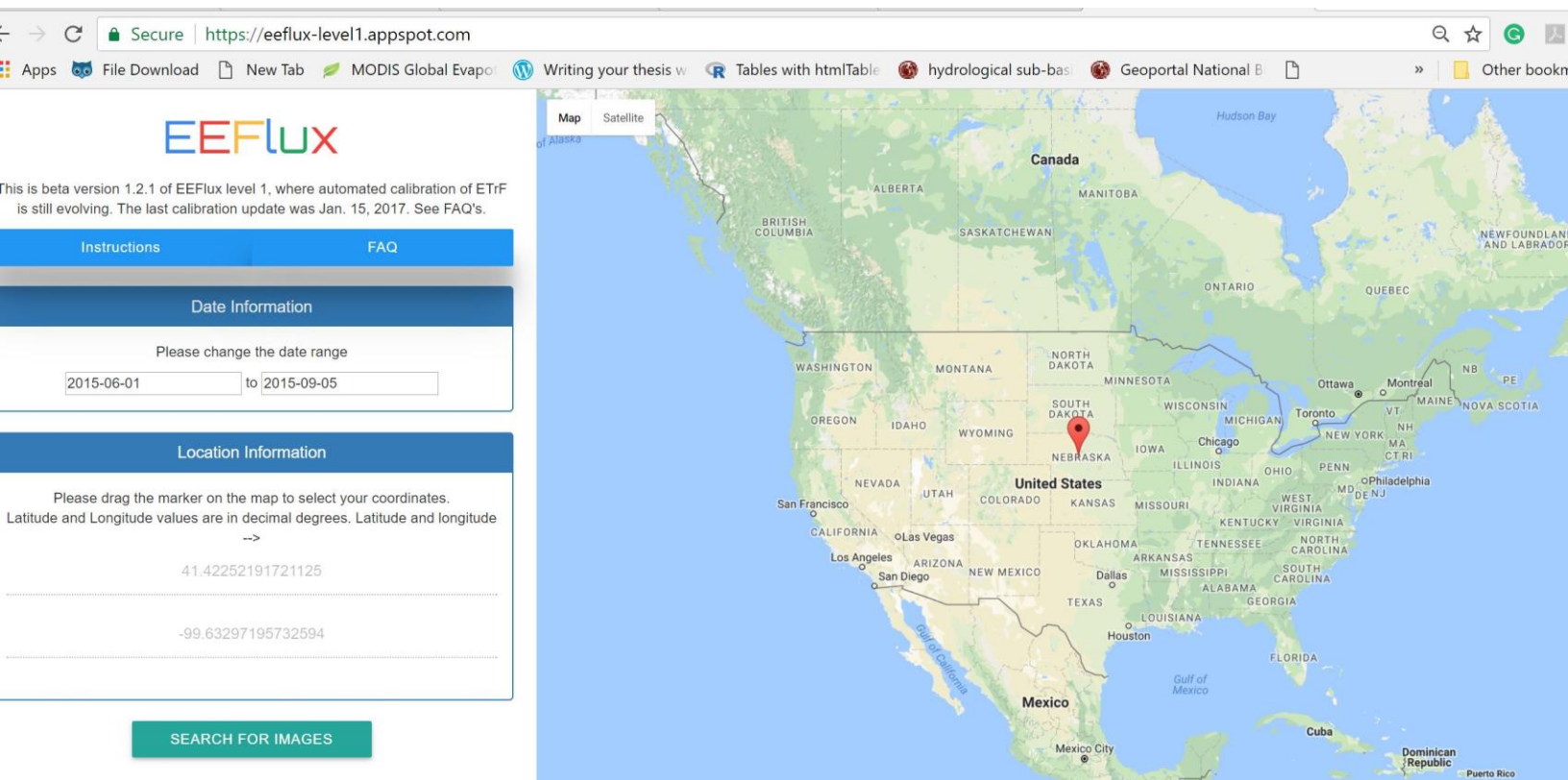
Downloading EEFlux ET maps

What is EEFlux?

- EEFlux a model based on METRIC - a model which estimates the surface-energy balance using remotely sensed imagery and weather data.
 - “Satellite-based ET estimation in agriculture using SEBAL and METRIC” (Allen et al. 2011)
 - “Automated Calibration of the METRIC-Landsat Evapotranspiration Process” (Allen et al. 2013)
 - “Assessing Calibration Uncertainty and Automation for Estimating Evapotranspiration from Agricultural Areas using METRIC” (Morton et al. 2013)
- EEFlux was launched in late 2015 and was accessible in 2016
- Module which pulls data from the Google Earth Engine
 - Landsat imagery, climate gridded data

How to Access EEFlux

- EEFlux is on a freely accessible website: <https://eeflux-level1.appspot.com/>
- The model is still in its “beta” version. ET and ETrF data that I’ve downloaded and used for my previous work will soon be on Github (<https://github.com/MaeAntoinette>) or on some Google Drive as there is a size limitation for GitHub files. Already downloaded data were under beta version 1.2.1. As of Sept 2017, this is still the version EEFlux. Staying up to date on the versions/updates will be important for ET comparison as model changes can alter ET estimates.
- The site has a straightforward GUI which allows you to relocate the drop pin to any place within the continental US (previous applications of EEFlux allowed for maps outside of the CONUS but this is no longer a working option – it will soon be.. Hopefully!)



Downloading Files

- Downloading files is simple. Move to the location of interest. Let's say... the Imperial Valley 😊



This is beta version 1.2.1 of EEFlux level 1, where automated calibration of ETrF is still evolving. The last calibration update was Jan. 15, 2017. See FAQ's.

Instructions

FAQ

Date Information

Please change the date range

2015-06-01

to 2015-09-05

Location Information

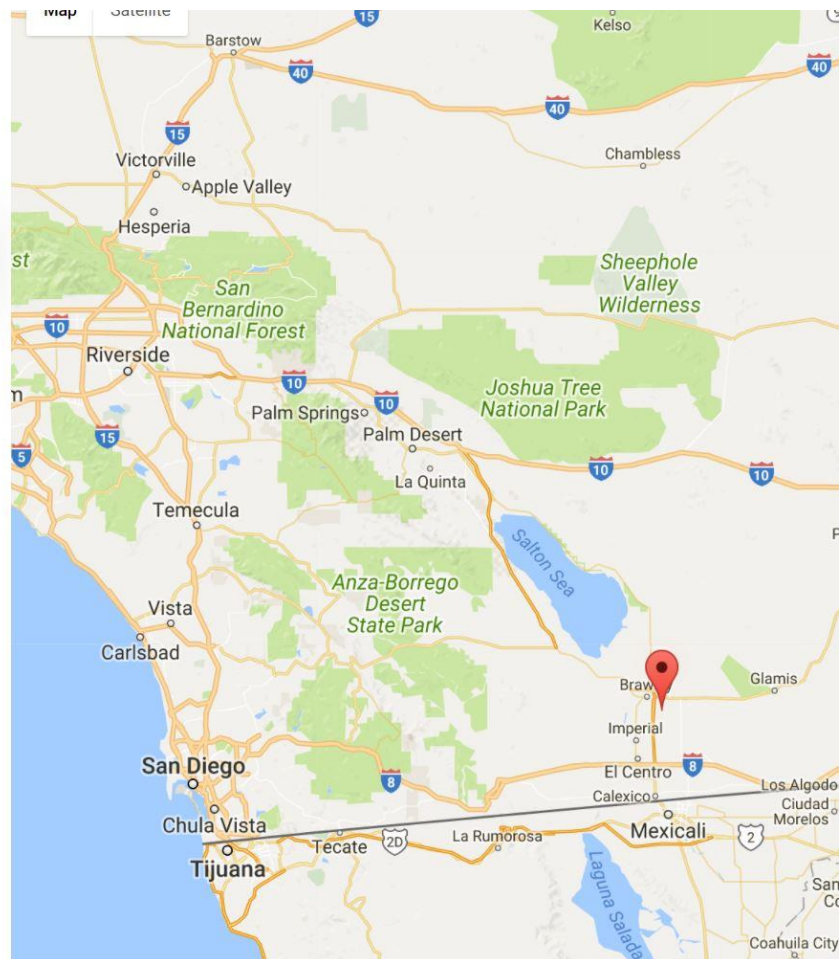
Please drag the marker on the map to select your coordinates.

Latitude and Longitude values are in decimal degrees. Latitude and longitude -->

32.935362576677605

-115.47525711357594

SEARCH FOR IMAGES



Downloading Files

- You will need to select the date range in YYYY-MM-DD.
- Then click, “search”



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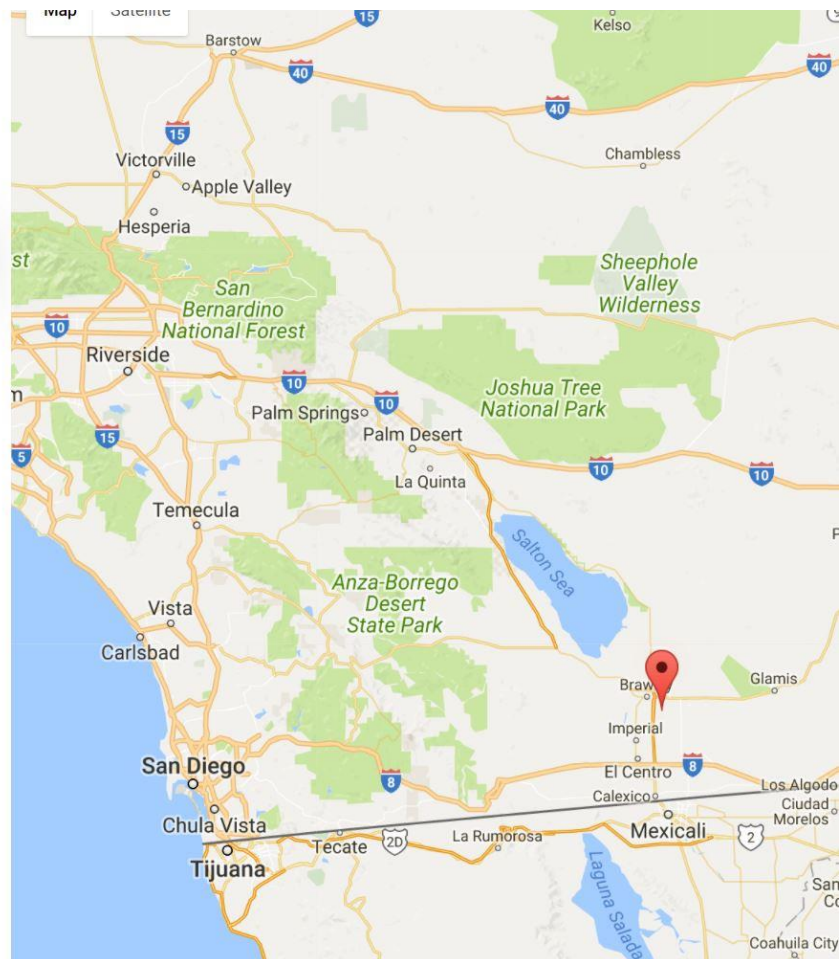
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SEARCH FOR IMAGES



Downloading Files

- Your page will reload to display the list of Landsat “scenes” (images) by date then by satellite (L5, L7, L8) and tier. This is only important if you want to exclude/include certain satellites. For more information of satellite types and tier versions, see the USGS/Landsat website.
- Thankfully, the scene list also displays cloud cover which is important for any remote sensing analysis.
- Lets view the one with 0% cloud cover on July 16, 2015

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Instructions FAQ

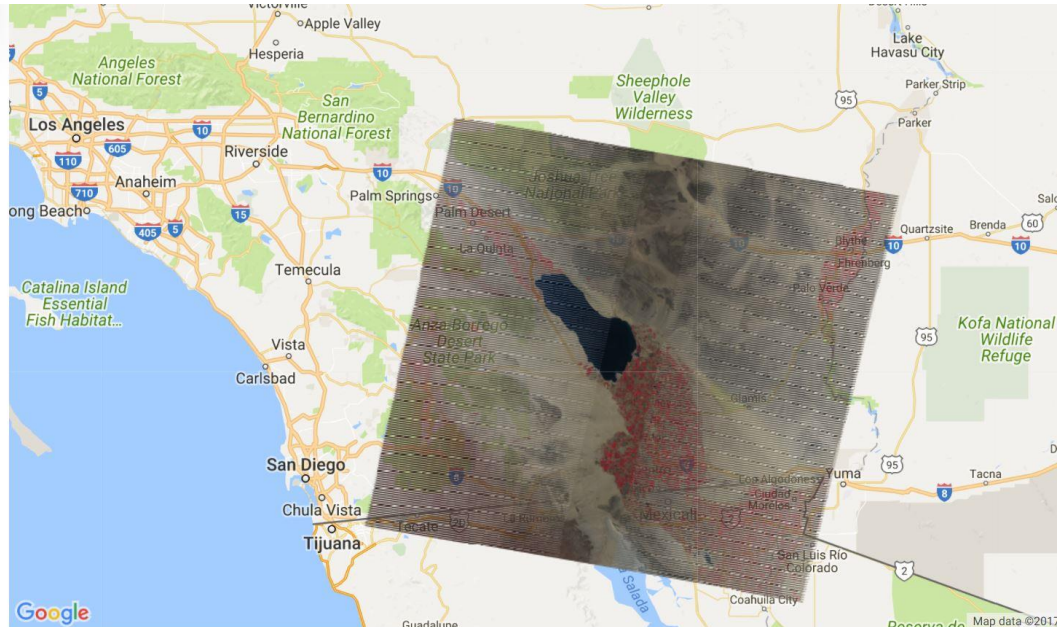
SELECT YOUR LANDSAT IMAGE▼

2015-06-14 / LE70390372015165EDC00 / Cloud 0% / Tier T1
2015-06-30 / LE70390372015181EDC00 / Cloud 47% / Tier T1
2015-07-16 / LE70390372015197EDC00 / Cloud 0% / Tier T1
2015-08-01 / LE70390372015213EDC00 / Cloud 29% / Tier T1
2015-08-17 / LE70390372015229EDC00 / Cloud 0% / Tier T1
2015-09-02 / LE70390372015245EDC00 / Cloud 20% / Tier T1
2015-06-04 / LE71382072015155EDC00 / Cloud -1% / Tier T2
2015-06-20 / LE71382072015171EDC00 / Cloud -1% / Tier T2
2015-07-22 / LE71382072015203EDC00 / Cloud -1% / Tier T2
2015-08-07 / LE71382072015219EDC00 / Cloud -1% / Tier T2
2015-08-23 / LE71382072015235EDC00 / Cloud -1% / Tier T2
2015-06-06 / LC80390372015157LGN01 / Cloud 0% / Tier T1
2015-06-22 / LC80390372015173LGN01 / Cloud 0% / Tier T1
2015-07-08 / LC80390372015189LGN01 / Cloud 0% / Tier T1
2015-07-24 / LC80390372015205LGN03 / Cloud 0% / Tier T1
2015-08-09 / LC80390372015221LGN01 / Cloud 0% / Tier T1
2015-08-25 / LC80390372015237LGN01 / Cloud 28% / Tier T2
2015-07-14 / LC81382072015195LGN01 / Cloud -1% / Tier T2

Downloading Files

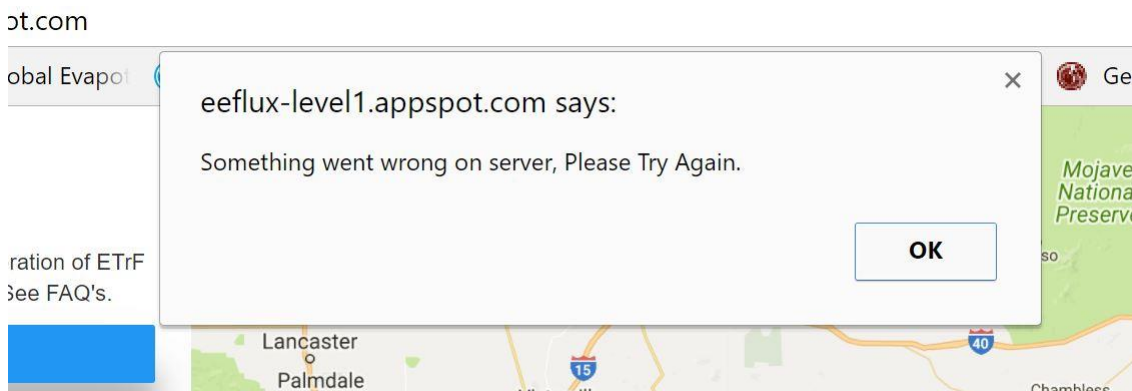
- EEFlux allows us to view only one image at a time. Your page will reload and provide a list of variables that you can view and or download. The download buttons are depicted at drop arrows to the right of the variable.
- Not sure if all variables will be freely downloadable. I am aware that there will be a paid-access version of EEFlux in the future which will allows users to alter some parts of the model
- The most important values would be the ETrF and Actual ET maps. However, if you can download other variables, why not? It would be great to see how the ET values are influenced...

2015-07-16 / LE70390372015197EDC00 / Cloud 0% / Tier T1	
Products	Download Tiff
BASE MAP	
TRUE COLOR	↓
FALSE COLOR (4, 3, 2)	↓
FALSE COLOR (7, 5, 3)	↓
ALBEDO	↓
NDVI	↓
DEM	↓
LAND COVER	↓
SURFACE TEMPERATURE	↓
ALFAFA REFERENCE ET (ETr)	↓
GRASS REFERENCE ET (ETo)	↓
ETrF (default)	↓
ACTUAL ET (default)	↓



Downloading Files

- Unfortunately, EEFlux is still evolving (as the site says) so there are times when an image will not download. You will be presented with a message such as this:



- In such a case, you'll have to exit out and reload the website again. This is when EEFlux can become time consuming. However, when the images do download it provides a quick way to process ET estimates at moderate resolution.

Any questions, feel free to email at salinasmaegan@gmail.com

- Maegan