RealEarth Desktop Interface Quick Guide

Developed for the NOAA Proving Ground Global Flood Team

RealEarth Overview

- RealEarth is a server-based data visualization system developed at SSEC/CIMSS, University of Wisconsin-Madison that provides satellite imagery and related data products to desktop and mobile clients.

- It is built on open source software including, MapServer, GDAL, Proj4, PHP, and Python.

- The purpose of RealEarth is to provide a simple interface for data visualization and comparison across the atmospheric, oceanic, and Earth science domains.

RealEarth from NOAA Satellite Proving Ground Global Flood Website

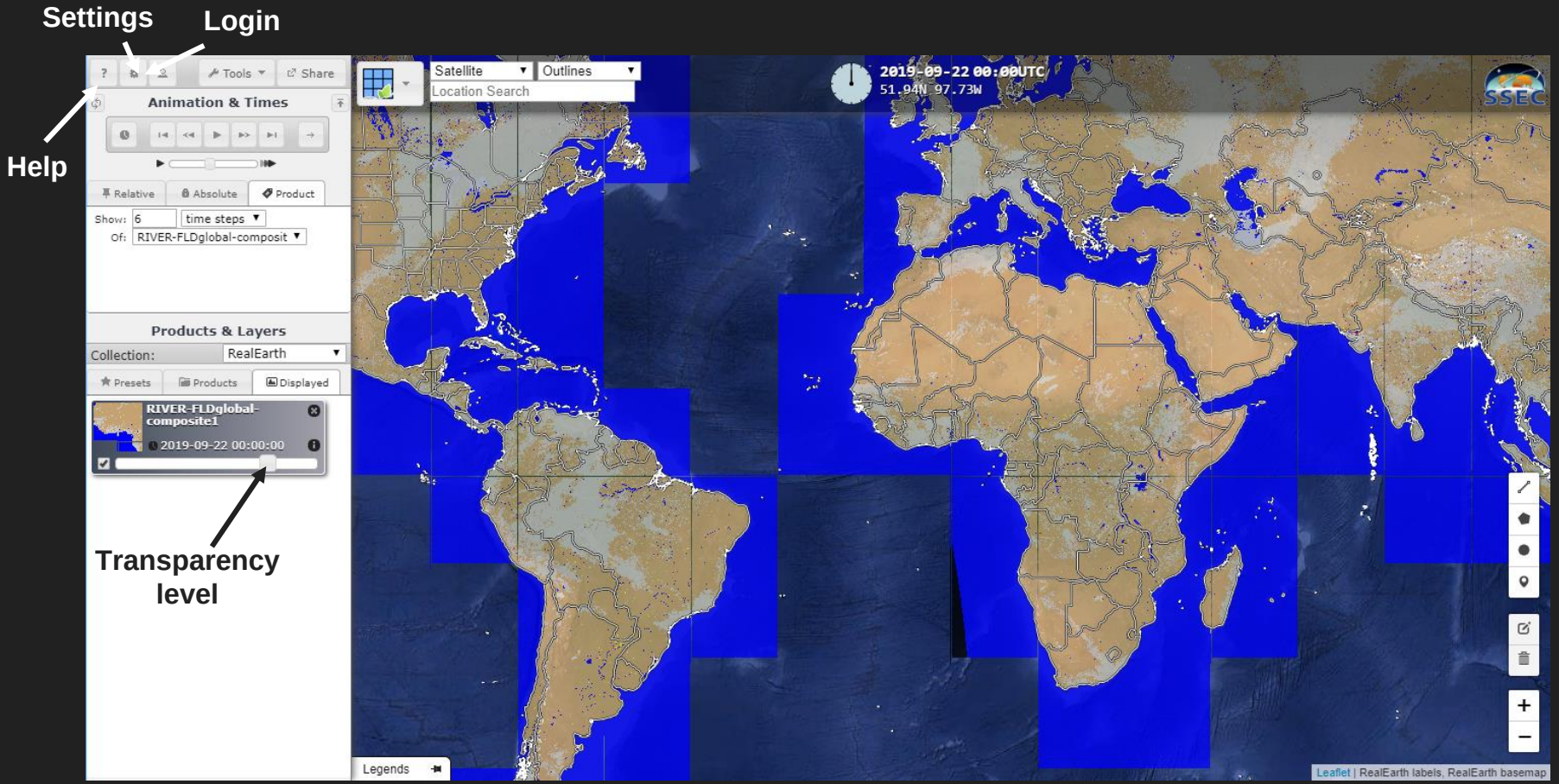
- The flood products within RealEarth can be accessed from the NOAA Satellite Proving Ground Global Flood Website (https://www.ssec.wisc.edu/flood-map-demo/flood-products/)

- Each product opens in a new tab. The following will use the VIIRS 1 day composite as an example.

- Most information needed for use is contained in the RealEarth Help (the “?” button on the upper left of the interface) and RealEarth documentation site (http://realearth.ssec.wisc.edu/doc/)

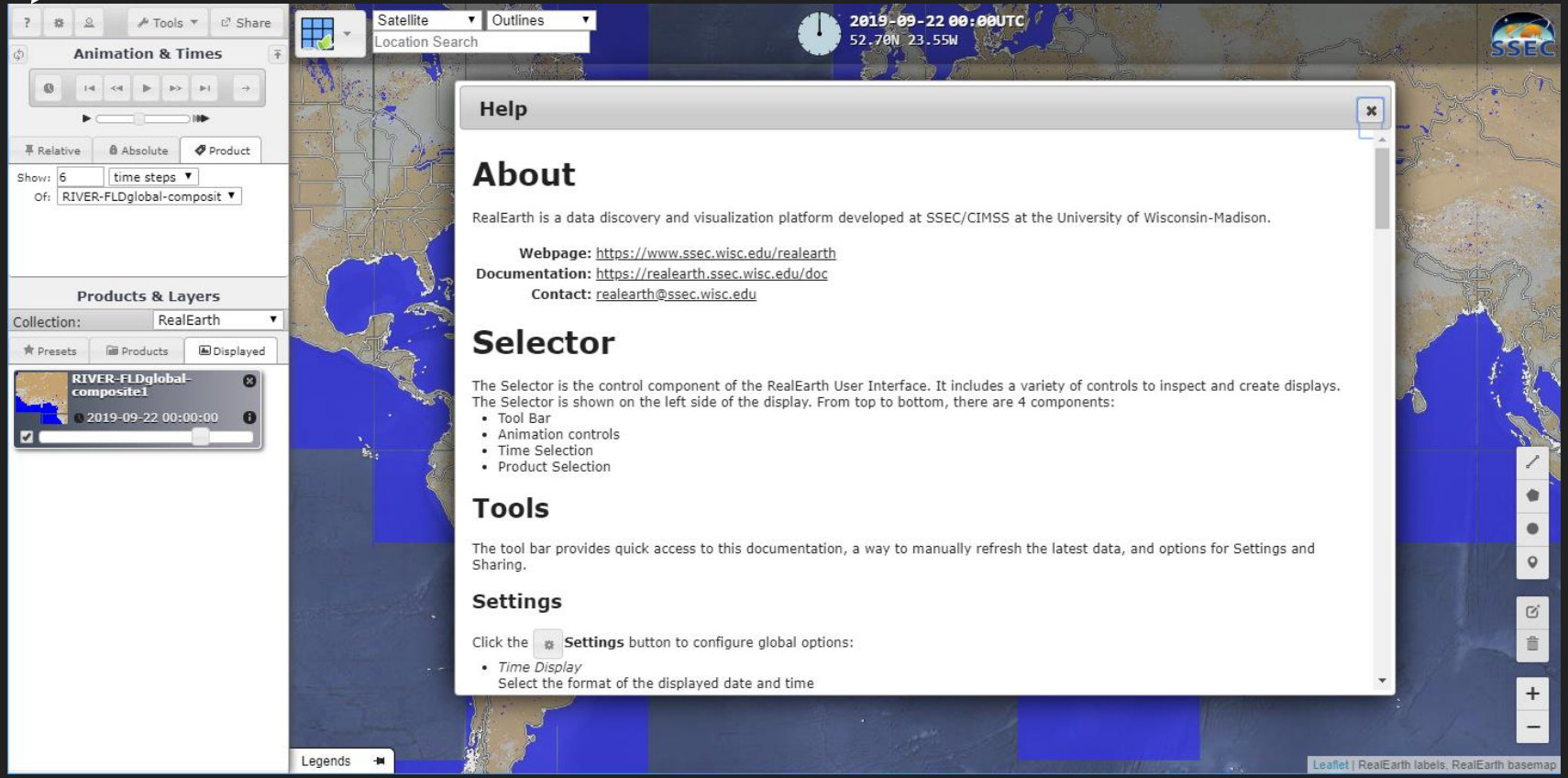
- The following slides will provide a **brief** overview of some of the features

RealEarth Browser Interface



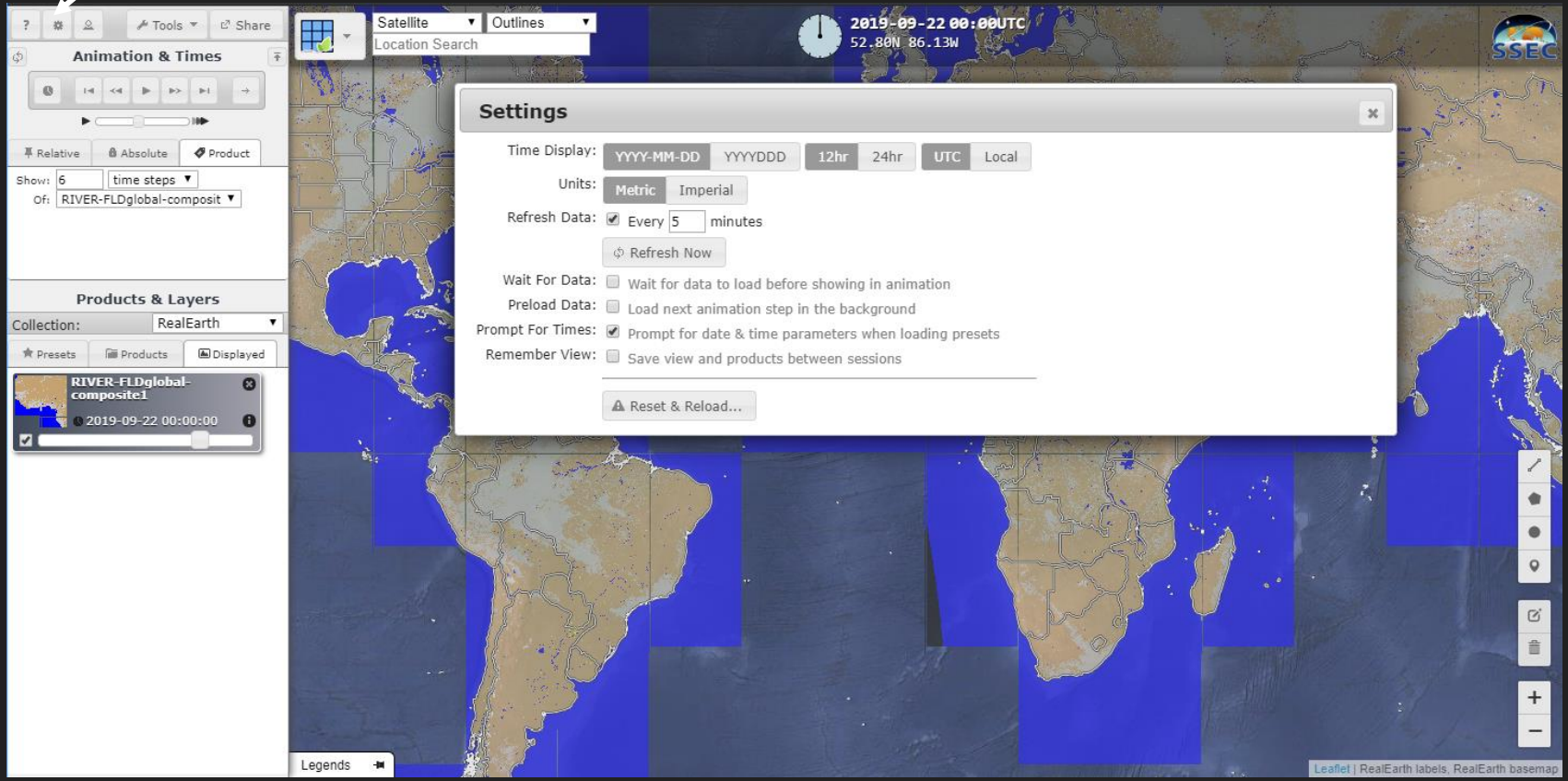
RealEarth website – Help

Displays information on settings, etc. for RealEarth.
Contains documentation on how to operate RealEarth



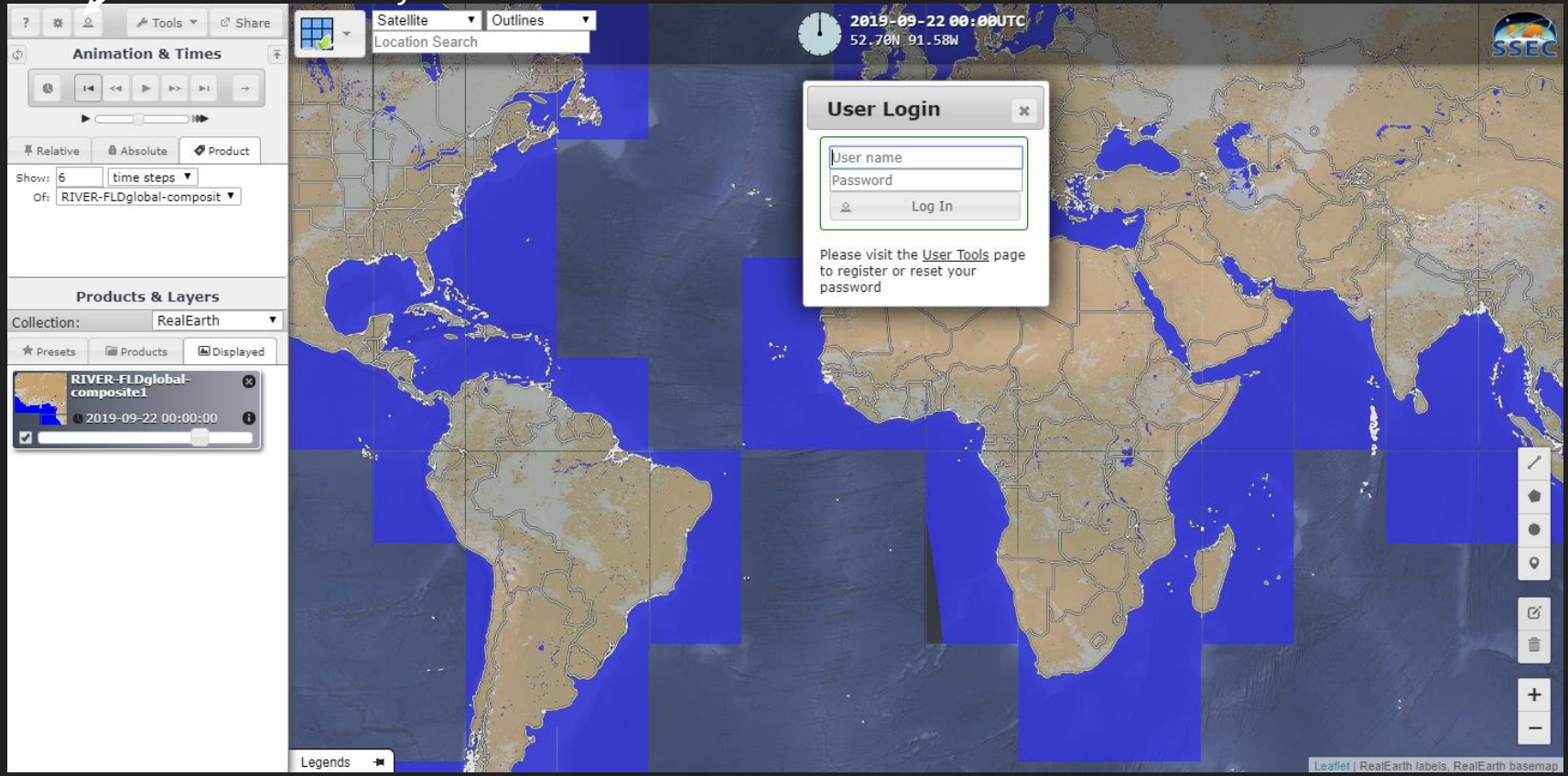
RealEarth website – Settings

Allows user to change settings of RE session



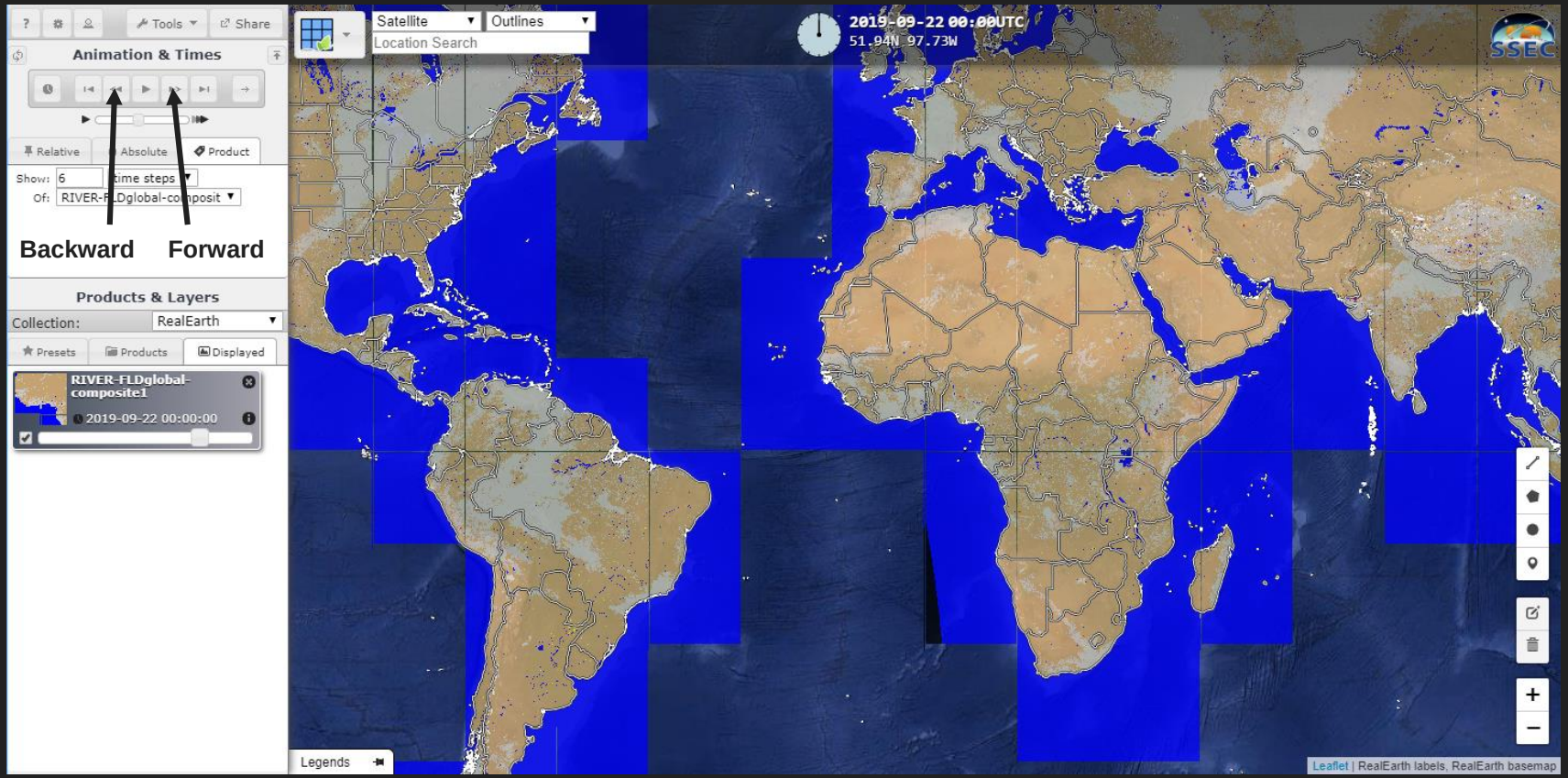
RealEarth website – Login

RealEarth has a limited number of frames per day for a given IP address. Having a free login will double the quota. Not necessary unless you are refreshing a log of data constantly



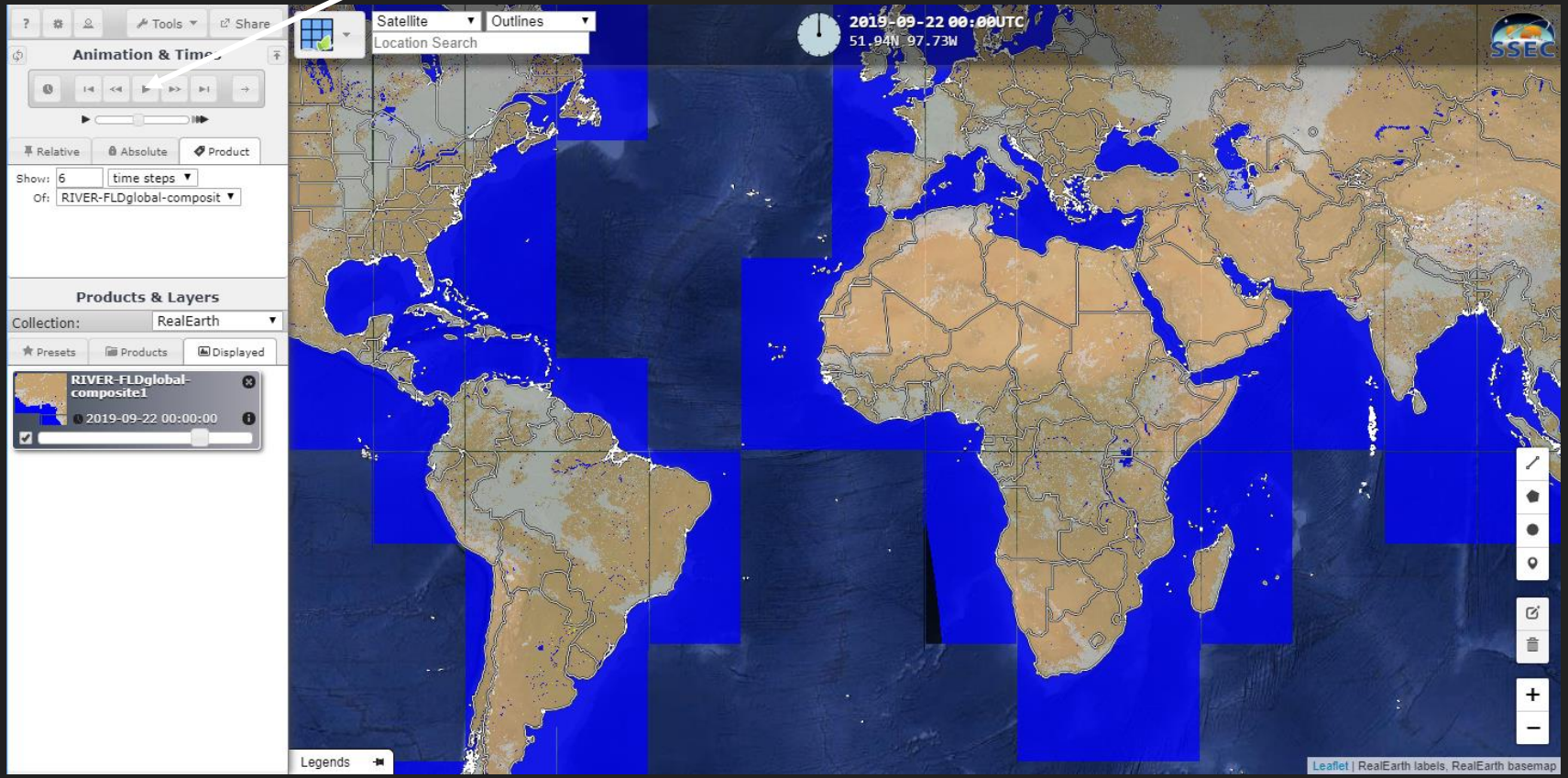
RealEarth Browser – Stepping through timesteps

You can step though timesteps by using the forwards and backwards buttons, indicated by arrows, or by using the left (backwards) and right (forwards) buttons on the keyboard



RealEarth Browser – Animate product

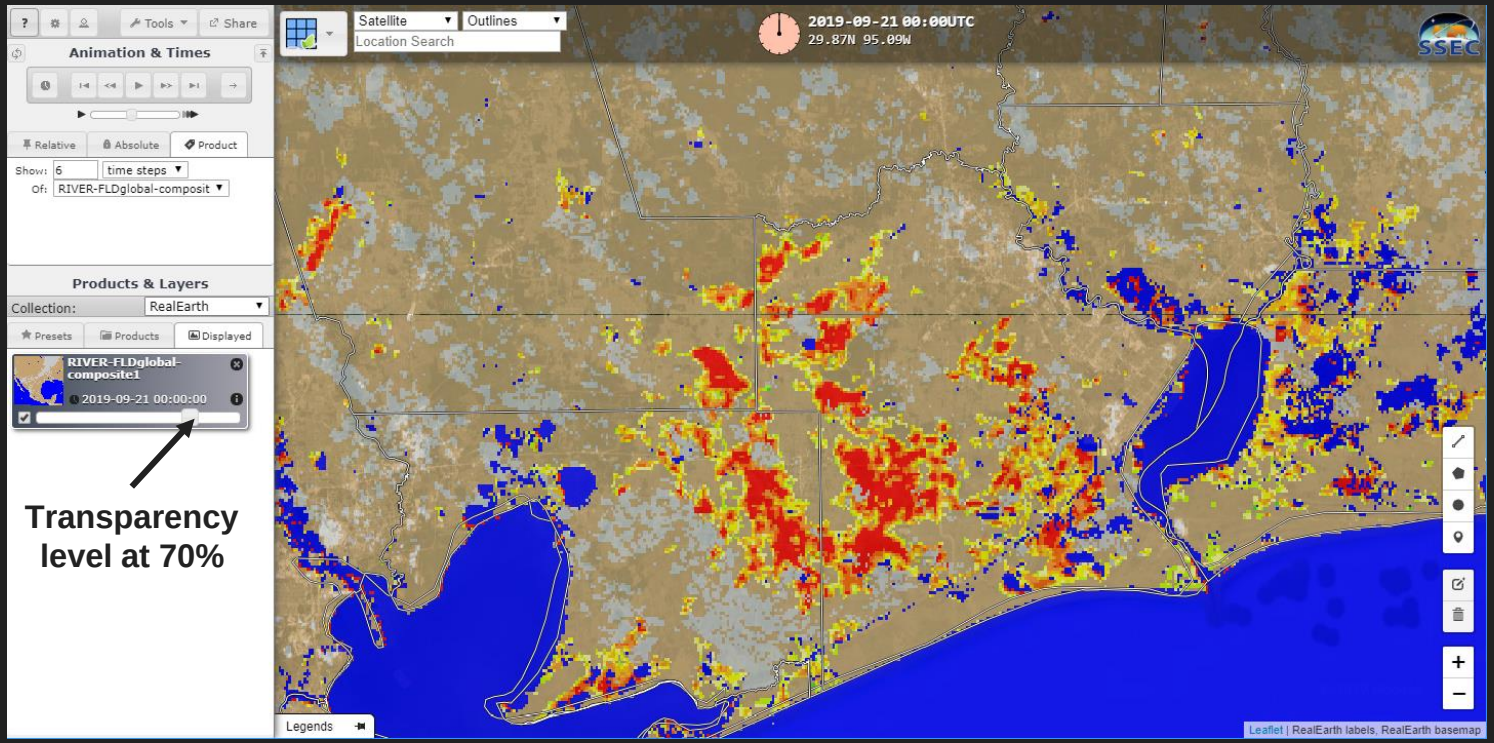
You can animate the timesteps by clicking on the “play” button.



RealEarth Browser – Change transparency level

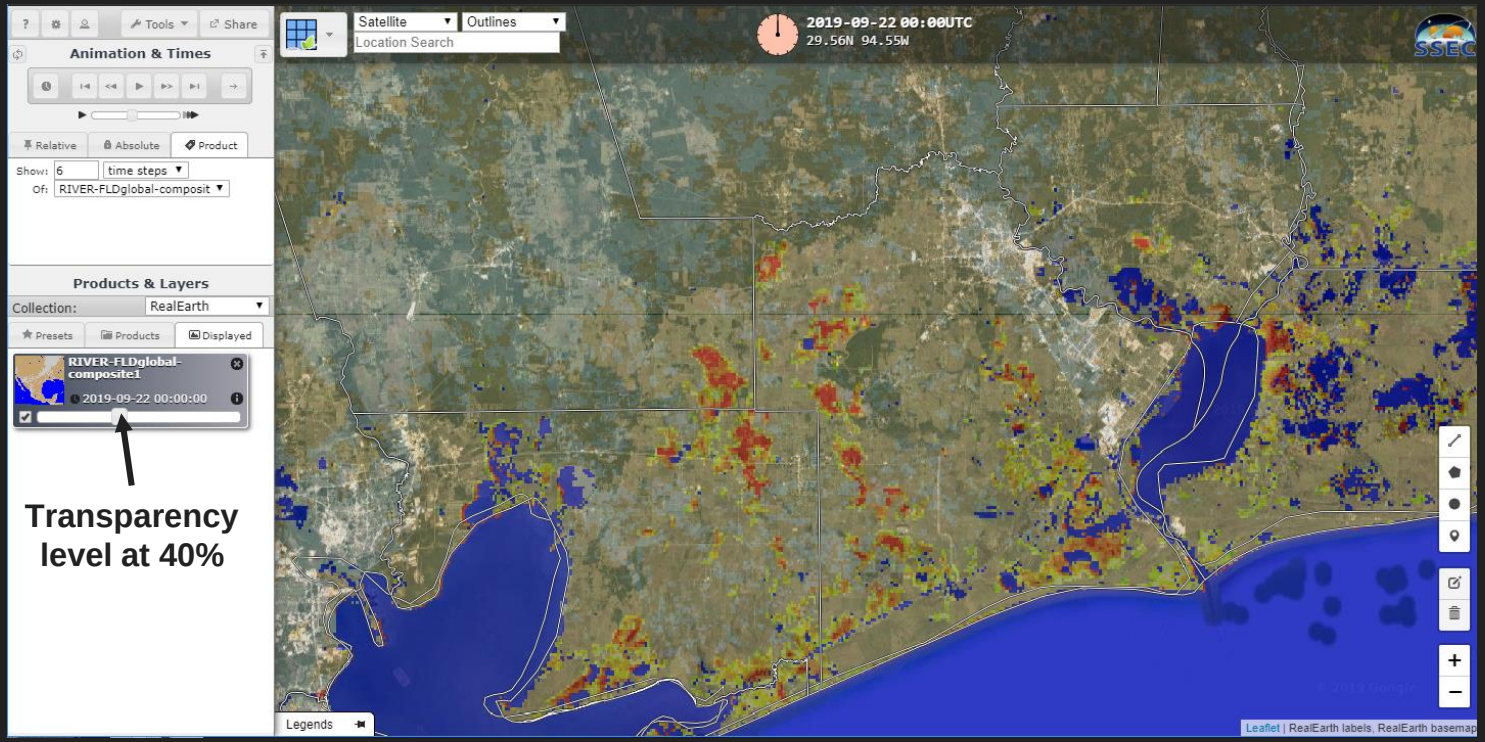
The default transparency level for the links provided is 70%. However, users can change this to see if flooding is impacting a population center or just open land.

This example will look over the Beaumont area after TD Imelda on 21 September



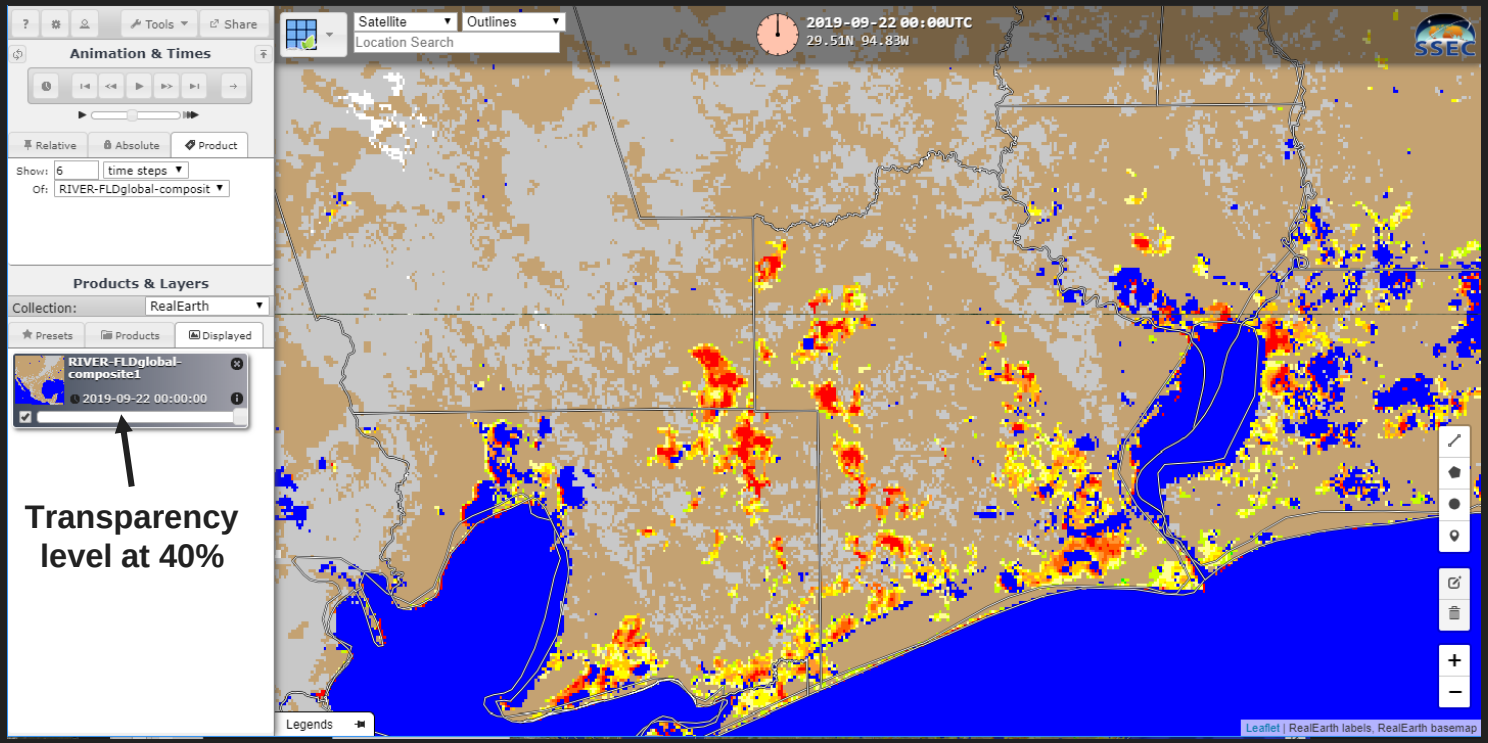
RealEarth Browser – Change transparency level

By sliding the transparency level bar with the mouse to the left, the transparency is now at **40%**.
Note how features such as highways and cities can be seen from the background satellite map



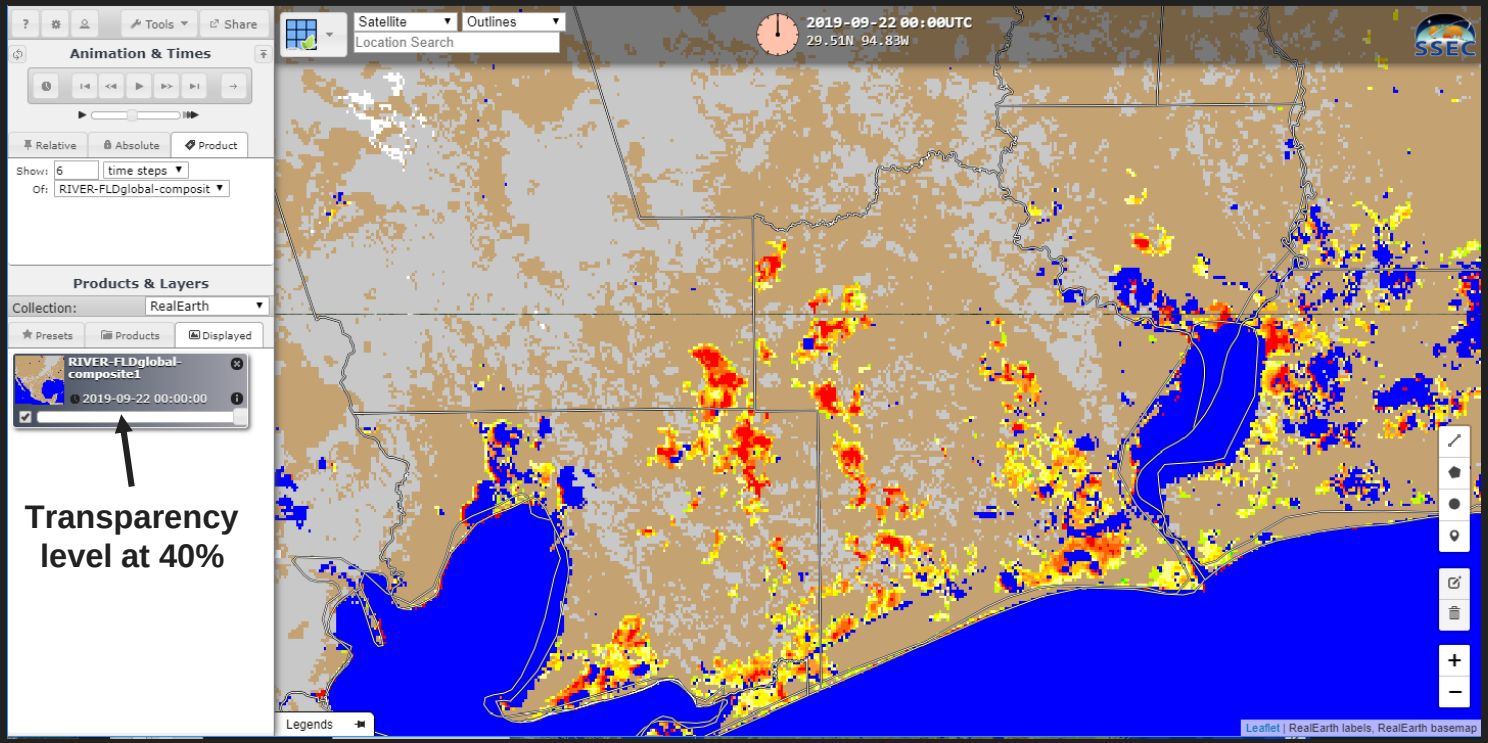
RealEarth Browser – Change transparency level

By sliding the transparency level bar all the way to the right,, the transparency is now at **100%**. Note how the background satellite map can no longer be seen.



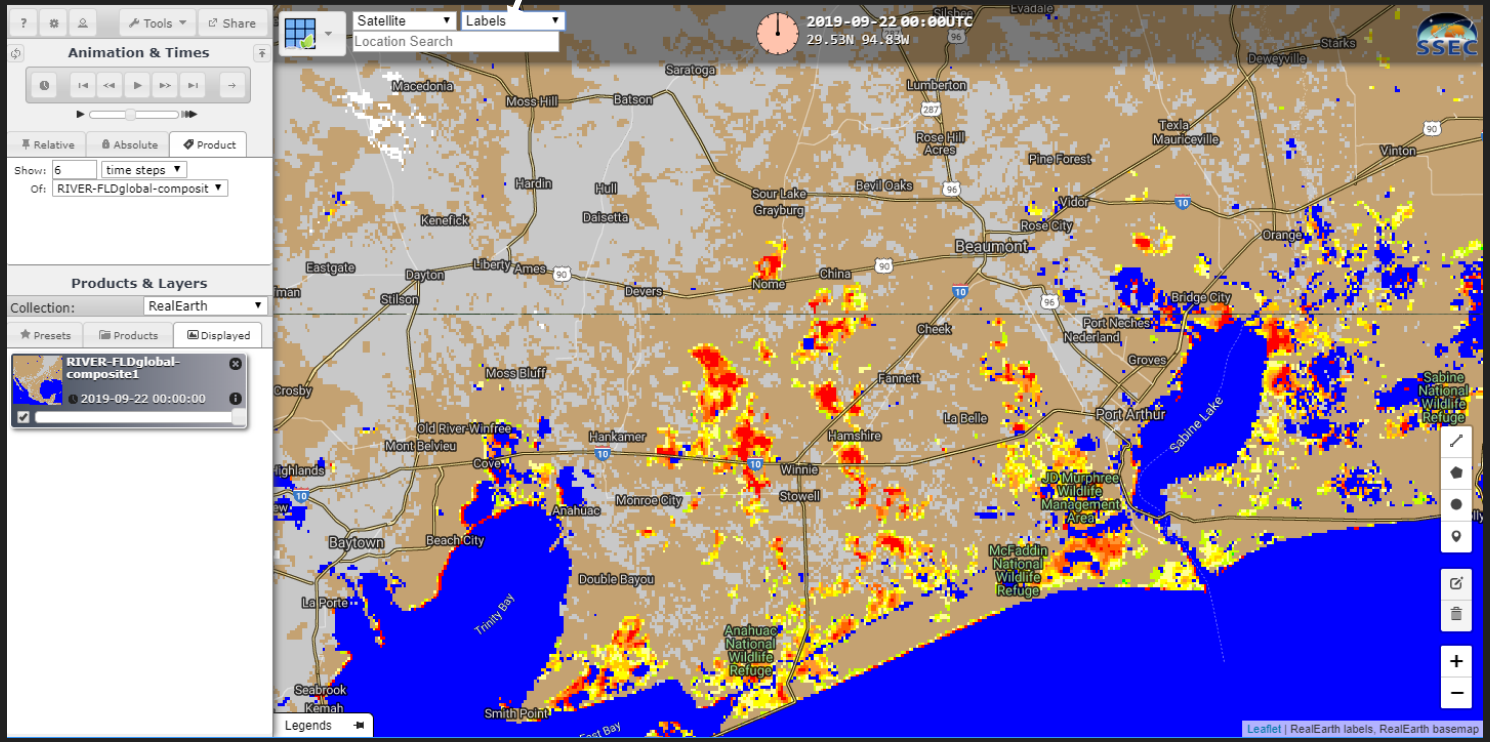
RealEarth Browser – Change transparency level

By sliding the transparency level bar all the way to the right,, the transparency is now at **100%**. Note how the background satellite map can no longer be seen.



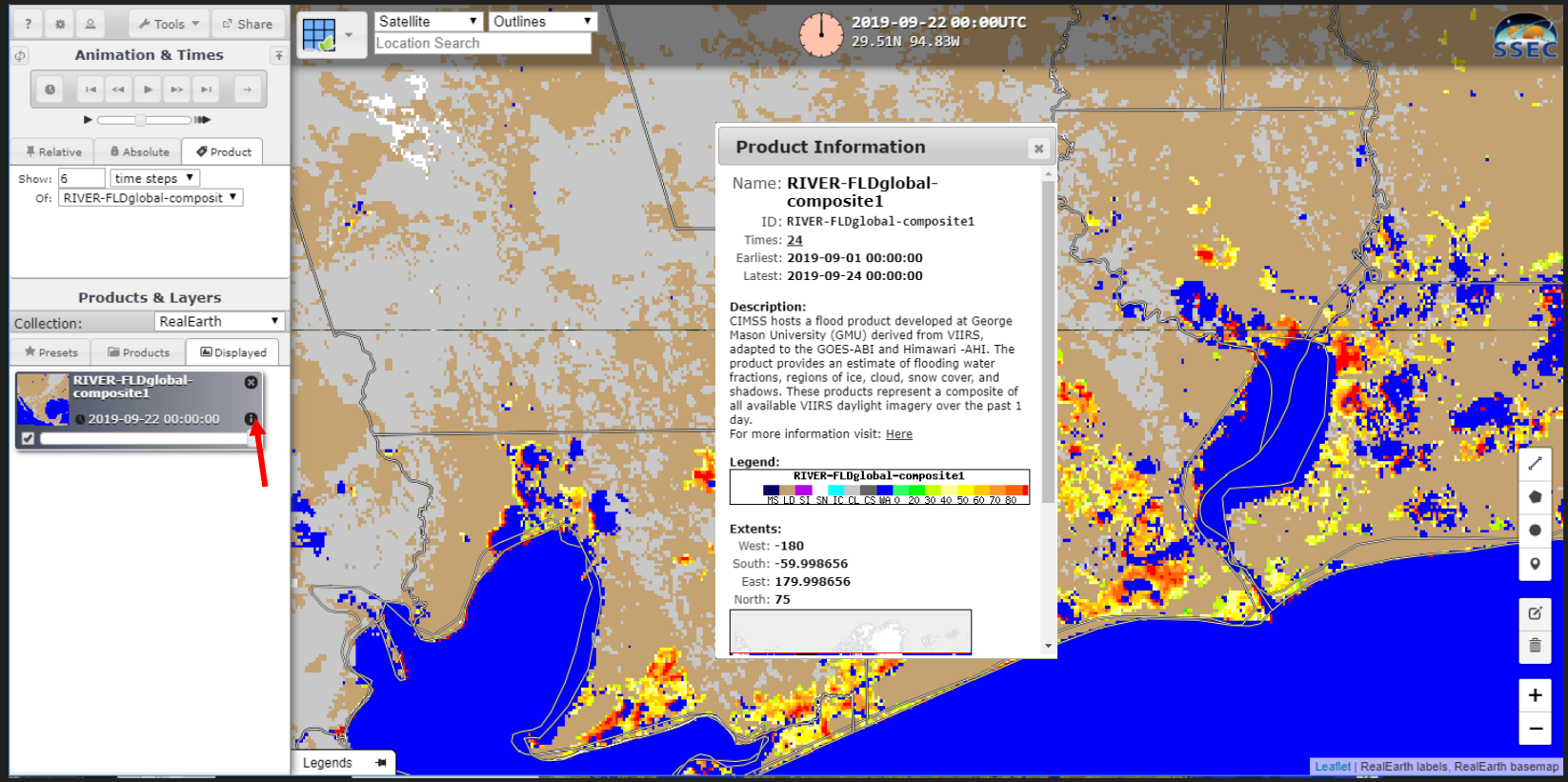
RealEarth Browser – Change labels

You can also change what labels are displayed by using the pull down tab in the display window and making a selection (“Labels” in this case)



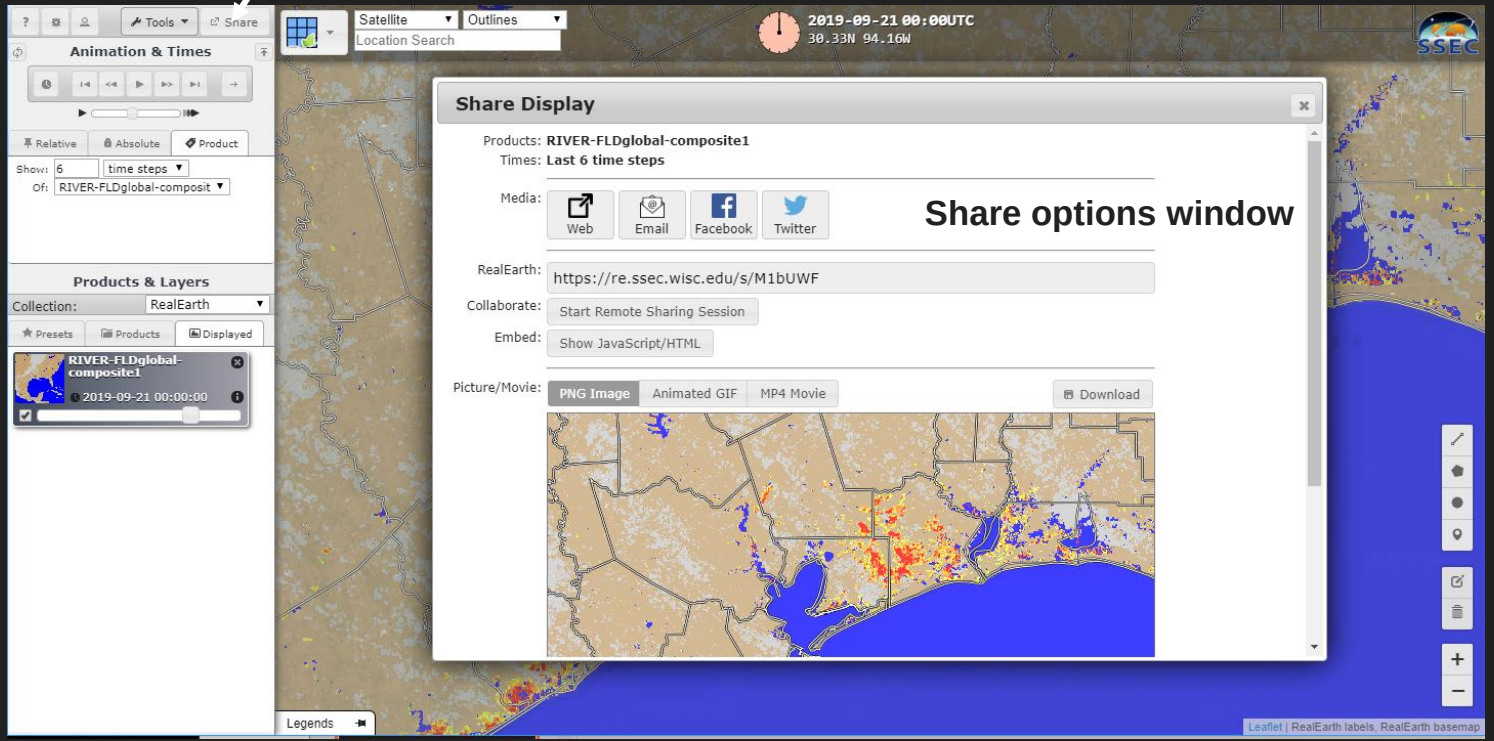
RealEarth Browser – Product Information

By clicking on the “i” button (indicated by red arrow), you can get information on the product being displayed.



RealEarth Browser – Sharing

You can also share links and images by clicking on the “Share” button. This will put bring up a display which will provide a variety of methods of sharing, including limited GIS-friendly outputs as well as GIS links.



Other information

- SSEC RealEarth
  - RealEarth documentation site (http://realearth.ssec.wisc.edu/doc/)
  - Note that these products are also available on RealEarth App (available for Android and Apple)

- Note that these products are not supported 24/7 but do have a high reliability of uptime.

- If there are more technical RealEarth questions or WMS or WTMS links for various products, please contact Sam Batzli (sabatzli@wisc.edu) and William Straka (wstraka@ssec.wisc.edu)