GRAT™: Public Layer Viewer

Objective

The GRAT public layer viewer is a map based tool that allows any user to view the public data used in GRAT. It requires no account or user log-in. It is important to note that the more extensive full functionality of GRAT, which uses significant proprietary data from each water district, can only be accessed by users from each district or GSA for their use in making resource management decisions.

Public Layers

GRAT public layer viewer ("GRAT Viewer") can be accessed from any web browser that is connected to the Internet. No additional special software is required. The key public datasets shown in GRAT Viewer are identical to the "Key Consideration Layers" of the full functional GRAT. We are looking for ways to add more GRAT functionality to the GRAT Viewer. GRAT Viewer can be accessed here: https://gratviewer.earthgenome.org/

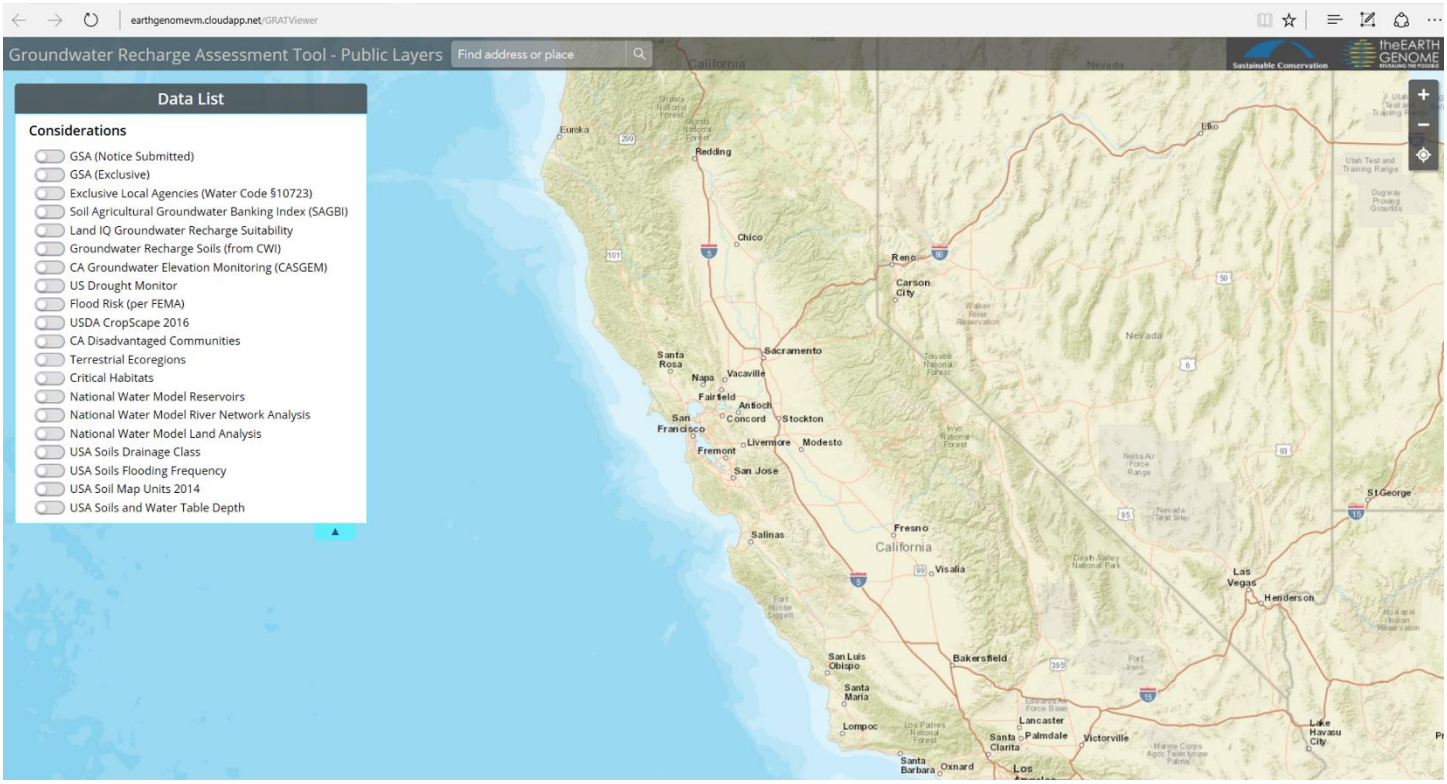

Figure 1. GRAT public layer viewer (GRAT Viewer) main interface

The Data List in the upper left corner shows the layers available. Datasets are displayed on the map by moving each toggle to the right, either individually or in combination to see data overlays. The datasets are grouped in this order:

- GSA (Groundwater Sustainability Agency) data from the CA Department of Water Resources (DWR). This shows the location of existing and now forming GSAs
- Soil and geologic suitability data for groundwater storage, both by UC Davis SAGBI and also Land IQ. Also, rechargeable soils data from NRCS/CWI is also included
- Groundwater data from the CA Department of Water Resources (DWR). Shows well depth by well ID/location
- US Drought Monitor as published by USDA and NOAA
- Flood risk as published by FEMA

- USDA CropScape data, showing which crops are being grown in California
- Disadvantaged Communities data, as used by the State of California, for social/citizen considerations
- Ecoregions and critical habitat data, for possible consideration of environmental concerns
- NOAA's recently released National Water Model, that simulates observed and forecast streamflow
- Soils data, as made available by Esri's Living Atlas, that consolidates data from NRCS SSURGO (Natural Resources Conservation Service, Soil Survey Geographic Database)

Conclusion: GRAT Viewer

This collection of datasets, consolidated in one location, will allow anyone in the public to see where there are water availability concerns (groundwater, drought and flood), what soils may be best suited for recharge, what crops are growing in those locations, and the potential impact on local communities and the environment. We've also added the NOAA National Water Model and SSURGO datasets for those more sophisticated water stakeholders. As we continue to develop the full functional GRAT, we are looking forward to adding more capabilities to the GRAT Viewer.

This viewer is especially useful for showing additional GSAs what data is already available and encouraging them to incorporate their own proprietary data in GRAT to localize the full functionality of GRAT for decision making support.