SpaceMonitor

UC SANTA BARBARA engineering
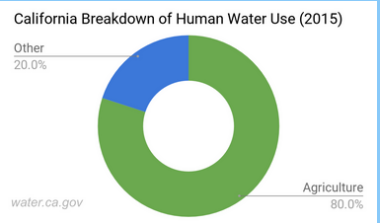
PowWow

Agricultural Data Comparison and Visualization

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Motivation

- Reduce water use on large scale
- Combat climate change
- 80% of human water use in California is dedicated to agriculture

California Breakdown of Human Water Use (2015)
Other 20.0%
Agriculture 80.0%
water.ca.gov

User Interface

- Green/Red coloring based on water anomaly detection algorithm
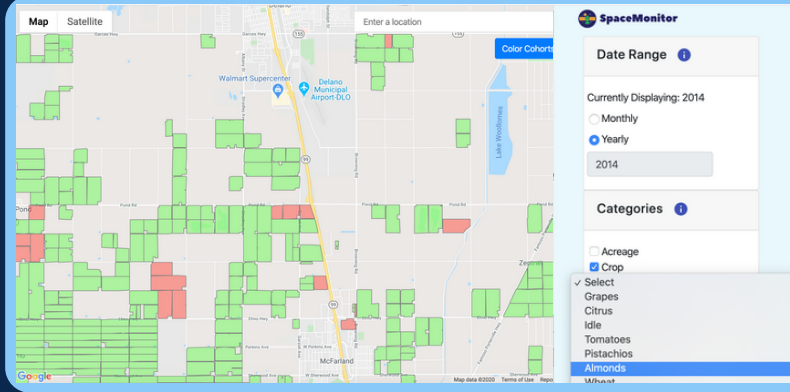- Search a farm by location and apply filter options

Solution

- Track usage in agricultural sector
- Visualize water usage throughout a time period
- Compare water usage between similar fields
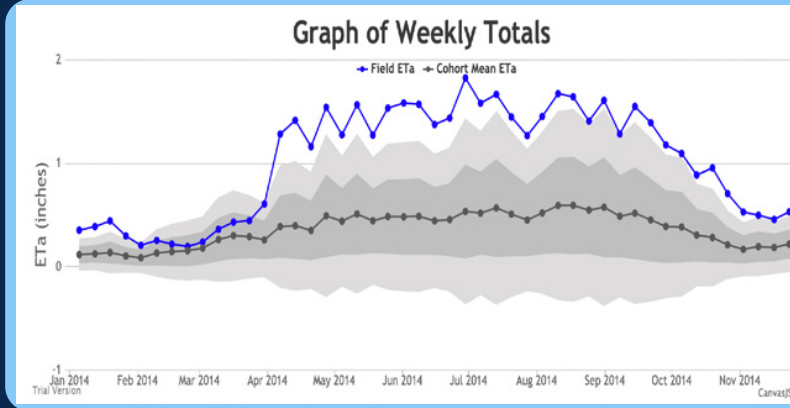- Can be extended to track water use in other sectors

Graph of Weekly Totals

- View water usage for any farm over a period of time
- Compare against the average water usage of similar farms

Innovation

- One of first applications built using this satellite dataset
- Resource conservation districts can be more proactive vs reactive

Technologies

- Google Maps API
- Heroku
- Firebase
- React
- PostgreSQL
- Docker
- QGIS
- Flask