SpaceMonitor

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California Imposes First Mandatory Water Restrictions to Deal With Drought

April 1, 2015
The California Drought lasted 376 weeks

December 27, 2011 - March 5, 2019
Problems

- Excessive water use on a large scale
- Climate change
  - Droughts more frequent
- Waste water = waste money
- Comply with state regulations
How much water do we actually use?
National Breakdown of Water Withdrawals (2015)

- Other: 5.0%
- Industrial: 5.0%
- Public Supply: 12.0%
- Thermoelectric: 41.0%
- Irrigation: 37.0%
California Breakdown of Human Water Use (2015)

- Agriculture: 80.0%
- Other: 20.0%
Take a Step Back ...

- Water is a precious resource
- Scarce resource during droughts
- More water efficiency in agriculture
Solution

- Focus on agricultural sector
- Evapotranspiration (ETa)
  - Amount of water evaporated
  - Data is fairly NEW
- Visualize water usage
Applying ETa

- Area: 85.0 acres
- Crop: Tomatoes
- ETa: 24.72 inches

Graph of Weekly Totals

ETa (inches)

Trial Version


Field ETa — Cohort Mean ETa
Technical Challenges

- Huge dataset
  - 18 million data entries over nearly 5000 fields
  - Long loading times
Easily Expandable to ...

Residential

Business
Final Thoughts

- Proactive approach to water conservation
- Extendable to more sophisticated models
Preserve the Planet
Thank you