Problem

The Water Board is responsible for regulating discharges of waste that may impact surface or groundwater quality. Many of today’s challenges are related to human behavior, some of which may be unique to residents of California. How does water quality information inform the demographics of the areas around it?

Question: Is there a correlation between reported water quality and toxicity metrics with the average income levels or ethnic makeup of a region?

Example Link: http://www.santacruzsentinel.com/article/ZZ/20140426/NEWS/140428112
Methodology

Step 1: Selected the following datasets.
- CEDEN Water Quality and Toxicity 2012-2015
- CA Water Quality Goals
- US Census 2014
- Average Income 2006-2010

Step 2: Inputted data into enterprise built Open Data CKAN Portal.

Step 3: Examined correlations between water quality tests and socio-economic factors.

Step 4: Visualized data using CivicDashboards.
Solution

Links:
http://www.civicdashboards.com/project/cawater
Conclusions

- Negative relationship found between higher levels of several pesticides or chemicals and lower income levels
- Analyte levels also show strong relationship with ethnic makeup of test area
- Greater breadth of data needed but suggests further investigation warranted

Opportunities:
A) Compute Hyperlocal Key Performance Indicators using Challenge data, similar to what we’ve done for other topic areas in CivicDashboards.

B) There are Open Data tools available for archiving, curating, visualizing, and analyzing data. Open Source CKAN is an ecosystem that will enable the public sector to stay current with technological trends while meeting their immediate agency goals. Leveraging a managed service, enterprise open source platform will provide the best of both worlds, accomplishing technological and business needs.