**Project Title:**

The influence of Superfund sites on the top four cancer rates reported by county in the United States.

**Team Members:** Brenda Daly, Bryan Paynich, Anthony Mutwol, Frank Garcia

**Project Description/Outline:**

Is there a higher incident of cancer in counties that contain a SuperFund site?

A focus on environmental issues has led to the creation of a variety of environmental acts in the United States over the past few decades. In 1980, the US Congress passed the CELCLA ACT. CELCLA stands for the Comprehensive Environmental Response, Compensation and Liability act. This Act is commonly known as Superfund. In this act the government has identified sites known as Superfund sites. These sites have a variety of environment issues that has created negative impacts to the surrounding areas. Once these sites are identified, the legislation requires an environmental impact study, a mitigation process for clean-up, and a requirement to restore the area to its original state.

This project looks into the impact of Superfund sites to the surrounding population. This project will investigate the possible influence of toxic substances on human cancer rates. The project will consider correlations of cancer rates on immediate counties that contain the Superfund sites and compare cancer incident rates to state and national averages.

**Hypothesis:**

Due to the negative environment impact of superfund sites, the expectation is that cancer rates will be higher in the counties that contain Superfund site designations.

**Research Question to Answer:** How do Superfund sites directly correlate with the top four cancers in the U.S.? Top four cancers:

* Lung Cancer.
* Colon Cancer.
* Breast Cancer
* Prostate Cancer.

**Data Sets to be Used:**

1. <https://www.epa.gov/superfund/search-superfund-sites-where-you-live?openpage>
2. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2018/cancer-facts-and-figures-2018.pdf>
3. <https://statecancerprofiles.cancer.gov/index.html>
4. [https://maps.googleapis.com/maps/api/geocode](https://maps.googleapis.com/maps/api/geocode%20/json?address=1600+Amphitheatre+Parkway,+Mountain+View,+CA&key=YOUR_API_KEY)

**Rough breakdown of tasks:**

* Export data off of cancer.gov site for each state for each of the four cancer types
* Convert zip codes of the Superfund site to the county
* Find the latitude/longitude of each county
* Create visualization: Overall cancer incident for cancer type in U.S.
* Overall cancer incident per state for cancer type
* Map with marker (of different color) if
* Compare rates of cancer to the county average