Diving into air pollution data with ArcGIS online tool

West Oakland AB617 Steering Committee Meeting
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4. What information or insights can you get from the tool

Click link to go to online map
https://arcg.is/1Cf50L
1. What’s in the mapping tool
What’s in the mapping tool

• Data layers include (so far)
  o Google/EDF air pollution collected during mid-2015 to mid-2016
  o Kaiser/EDF health risk analysis results
  o Sensitive receptor locations such as schools, childcare centers, senior housing and care facilities
  o Locations of truck related businesses and truck routes

• Developed with input from WOEIP
• Use publicly available data
• More data can be added
• Access on browser, no account or login needed
2. How to use the tool
Click on Layers to see the list of all Data Layers available.

Check box to make layer appear. You can check multiple boxes. For example, here the Black Carbon and Truck Magnets layers are checked.
Click on Legends to see what the colors or icons represent.
Click on icon to see more information in pop-up window. Here you can see the name of trucking business.
3. Where did data come from
Click on About, then on More Information to see where the data came from.
See Description for data source and details about the dataset.

Description

From the West Oakland Works list we selected businesses categorized as “shipping, trucking, and transportation” to include in this data layer. Data may be incomplete and/or not fully updated.

Layers

Truck_Businesses

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Background on West Oakland Air Pollution Studies

**Data:** Emission inventories for West Oakland, CA: 1 stationary site

- **Regulatory air pollution monitoring for West Oakland, CA:** 1 stationary site using fast response sensors on Google Street View cars.

**Finding:** Within West Oakland, some areas had 5-8 times higher median pollution levels than others. Many parts of the neighborhood had higher air pollution than levels measured at the central regulatory monitor.

**Data:** Electronic medical records of 41K people insured by Kaiser Permanente health care, linked with air pollution at residential address.

- **Finding:** Elderly residents (age 65+) living in areas of West Oakland with the highest concentrations of NO\(_2\) would have >40% greater risk of a cardiovascular disease event than those in less polluted areas of the neighborhood.

Several data layers came from results of studies conducted by EDF and partners.
4. What information or insights can you get from the tool
Example 1: Where black carbon levels are higher than area median & schools/child care centers

Many schools and child care centers are in areas with higher than average BC levels.
Example 2: Areas where black carbon levels is above area median, truck routes & truck magnets, and where people live

Confirms that Prescott/Lower bottom area experiences higher pollution.

Truck prohibition is moot here as there are truck destinations.
Example 3: Potential impact on residents who live near industrial zone and where trucks frequent Poplar St is a prohibited truck route but there are no residential homes nearby. Certain sections of Adeline are lined with residential homes and see elevated black carbon pollution.
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