



FRANCISCAN ACTION NETWORK



“Awakening to Environmental Justice” Workshop Series:

Part One - How to use the Opportunity Atlas

Background:

The Opportunity Atlas is an initial release of social mobility data, the result of a collaboration between researchers at the US Census Bureau, Harvard University, and Brown University. The statistical summaries reported in this paper have been cleared by the Census Bureau's Disclosure Review Board.

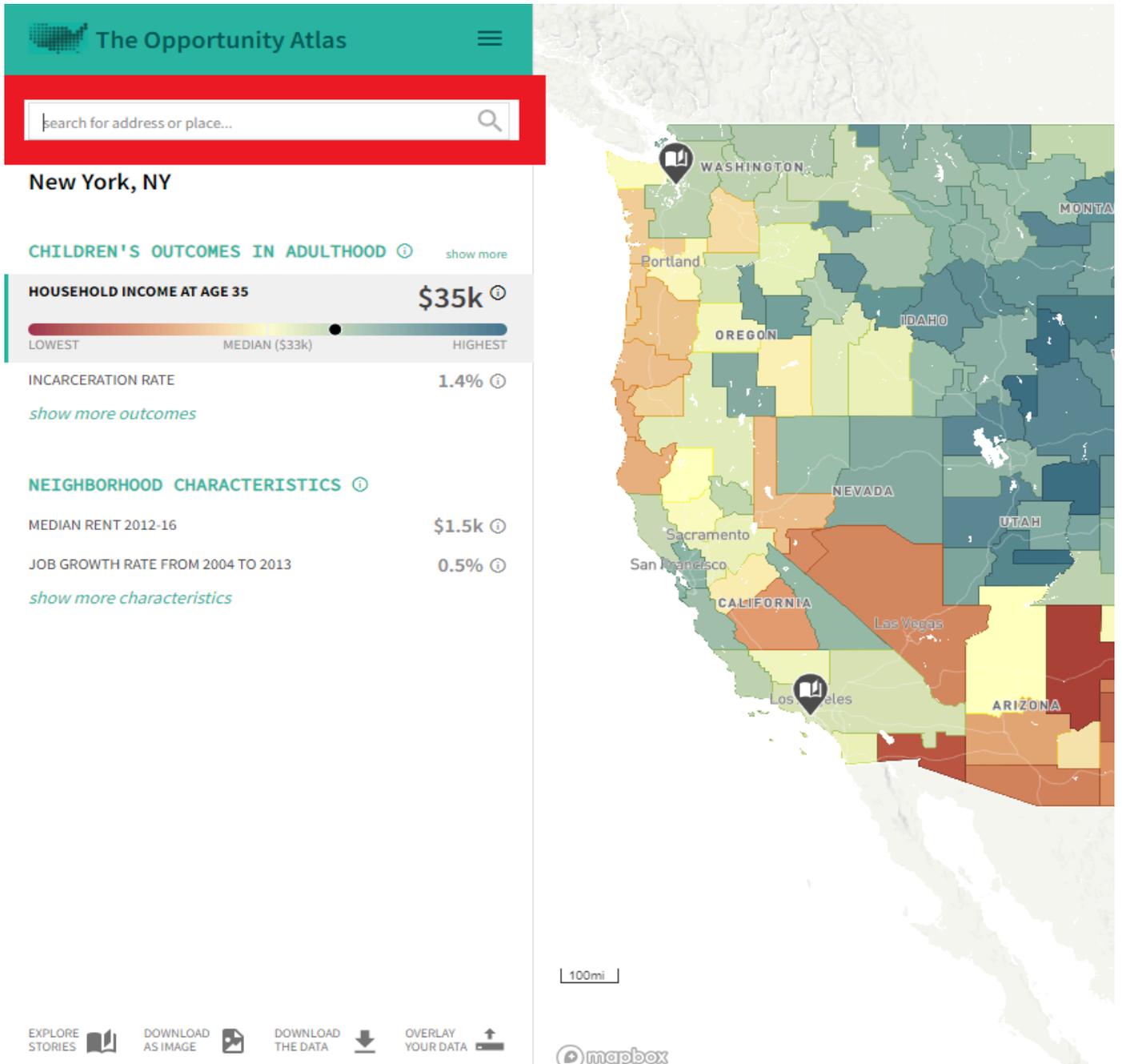
Why are we using this resource?

The Opportunity Atlas gives us valuable insight on the demographics of census tracts, which are usually as large as a small neighborhood, although the tool can accumulate data as large as the county level. Working off the knowledge that environmental injustice often works in communities of color, migrant communities, and/or low-wealth, we can pinpoint areas to search for cases of environmental injustice.

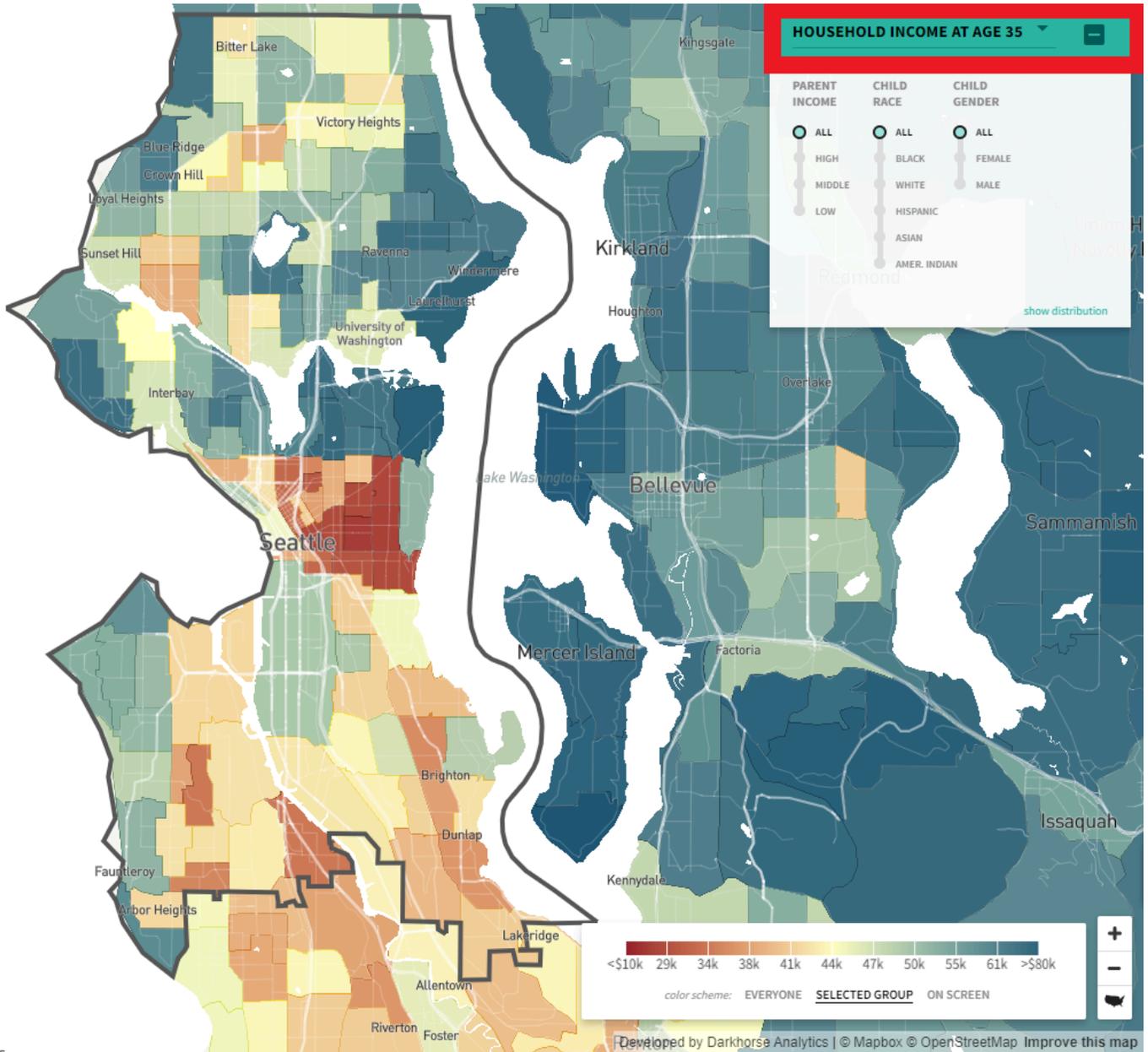
Instructions:

1. Navigate to [the Opportunity Atlas](http://www.opportunityatlas.org) (www.opportunityatlas.org) on your internet browser.
2. Once you are on the website, press the “begin exploring” button to access the mapping tool.

3. When you “land” on the mapping tool, it will show you all the census tracts in the United States. We will be using the city of Seattle, Washington as our example. I will use the search bar in the upper-left side of the tool to search for this location



4. Once the tool zooms into the map of the city of Seattle, I will begin looking for areas with demographic information common to communities marginalized by environmental injustice. The first of the four criteria we will be focusing on is the “Median household income of residents 2012-16”. This criterion can be found in the drop-down box of the map legend at the upper-right corner of the map, which is on the default setting, “Household income at age 35.”



5. Click the drop-down box, scroll to the “neighborhood characteristics” section, and then click “Median household income of residents 2012-16.” A new map should be generated.

The screenshot shows a web-based data tool interface. On the left is a map of Seattle with various neighborhoods labeled: Bitter Lake, Kingsgate, Blue Ridge, Crown Hill, Loyal Heights, Sunset Hill, Interbay, Fawcett, and Arbor Heights. The city name 'Seattle' is also visible. On the right is a panel titled 'HOUSEHOLD INCOME AT AGE 35' with a dropdown menu. Below this is a section titled 'CHILDREN'S OUTCOMES IN ADULTHOOD' with a list of metrics and their descriptions. A red box highlights the metric 'Median Hhold. Income of Residents in 2012-16'. Below that is a section titled 'NEIGHBORHOOD CHARACTERISTICS' with another list of metrics.

HOUSEHOLD INCOME AT AGE 35

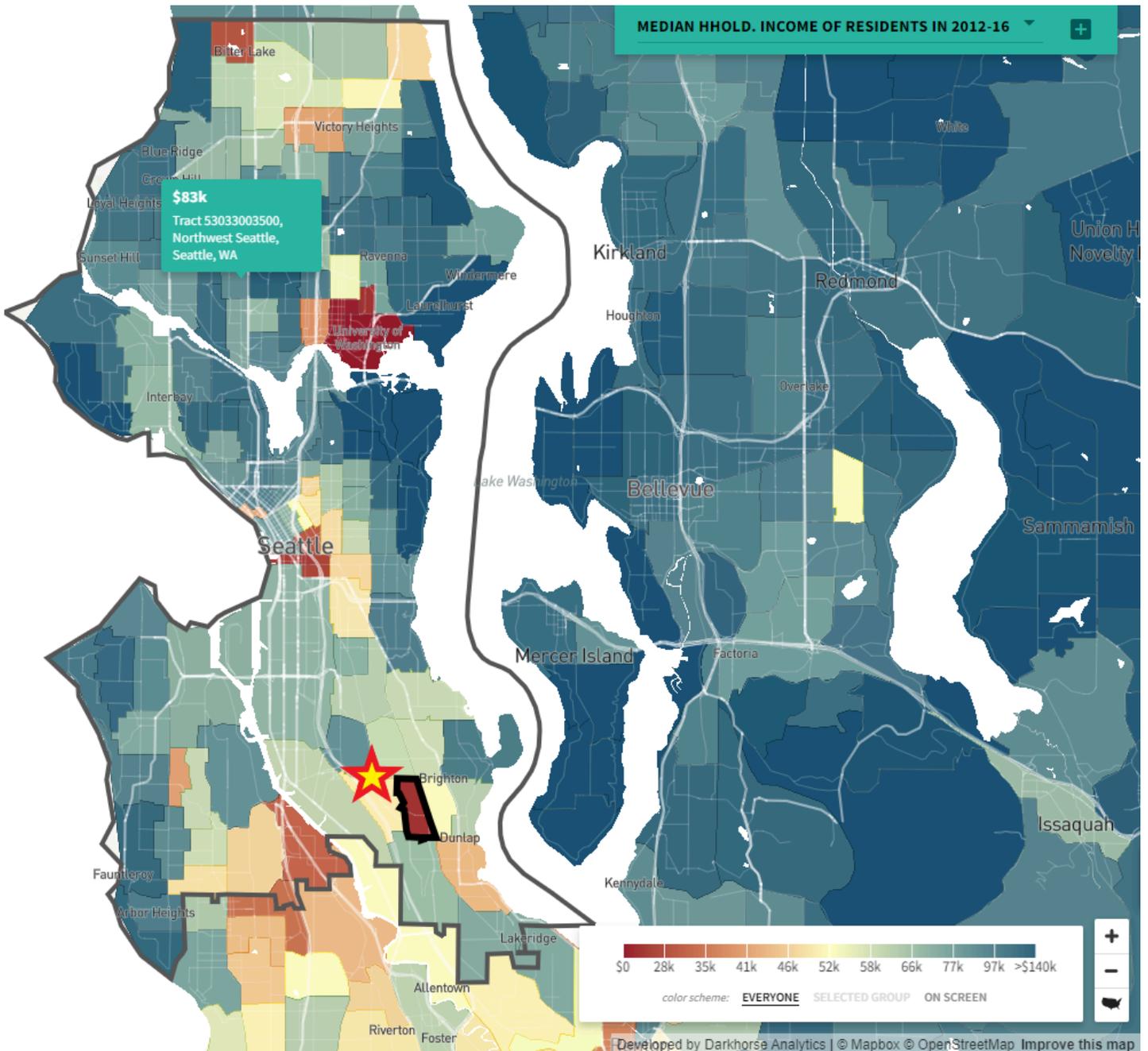
CHILDREN'S OUTCOMES IN ADULTHOOD
Children's outcomes in adulthood by neighborhood where they grew up

Household Income at Age 35	Average annual household income in 2014-15
Incarceration Rate	Fraction incarcerated on April 1, 2010
Teenage Birth Rate (women only)	Fraction of women who had a child between ages 13-19
Individual Income (Excluding Spouse) at Age 35	Average annual individual income (excluding spouse) in 2014-15
Fraction Married at Age 35	Fraction who were married in 2015
Spouse's Income at Age 35	Average individual income for spouses
Employment Rate at Age 35	Fraction who have positive earnings in 2015
High School Graduation Rate	Fraction with a high school degree or GED
College Graduation Rate	Fraction who hold a 4-year college degree
Hours Worked Per Week at Age 35	Average hours worked per week
Hourly Wage (\$/hour) at Age 35	Average hourly wage rate (\$/hour)
Frac. in Top 20% Based on Household Income	Fraction with household income in the top 20%
Frac. in Top 1% Based on Household Income	Fraction with household income in the top 1%
Frac. in Top 20% Based on Indiv Income	Fraction with individual income in the top 20%
Frac. in Top 1% Based on Indiv. Income	Fraction with individual income in the top 1%
% Staying in Same Commuting Zone as Adults	Fraction who stayed in the same commuting zone as where they grew up
% Staying in Same Tract as Adults	Fraction who stayed in the same tract as where they grew up
Household Income (Stayed in Commuting Zone)	Average household income for children who stayed in the same commuting zone
Individual Income (Stayed in Commuting Zone)	Average individual income for children who stayed in the same commuting zone
Household Income for U.S. Natives	Household income for children with U.S. born mothers
Household Income for Immigrants	Household income for children with immigrant mothers
Individual Income for U.S. Natives	Individual income for children with U.S. born mothers
Individual Income for Immigrants	Individual income for children with immigrant mothers
Number of Children	Number of children below age 18 in 2000

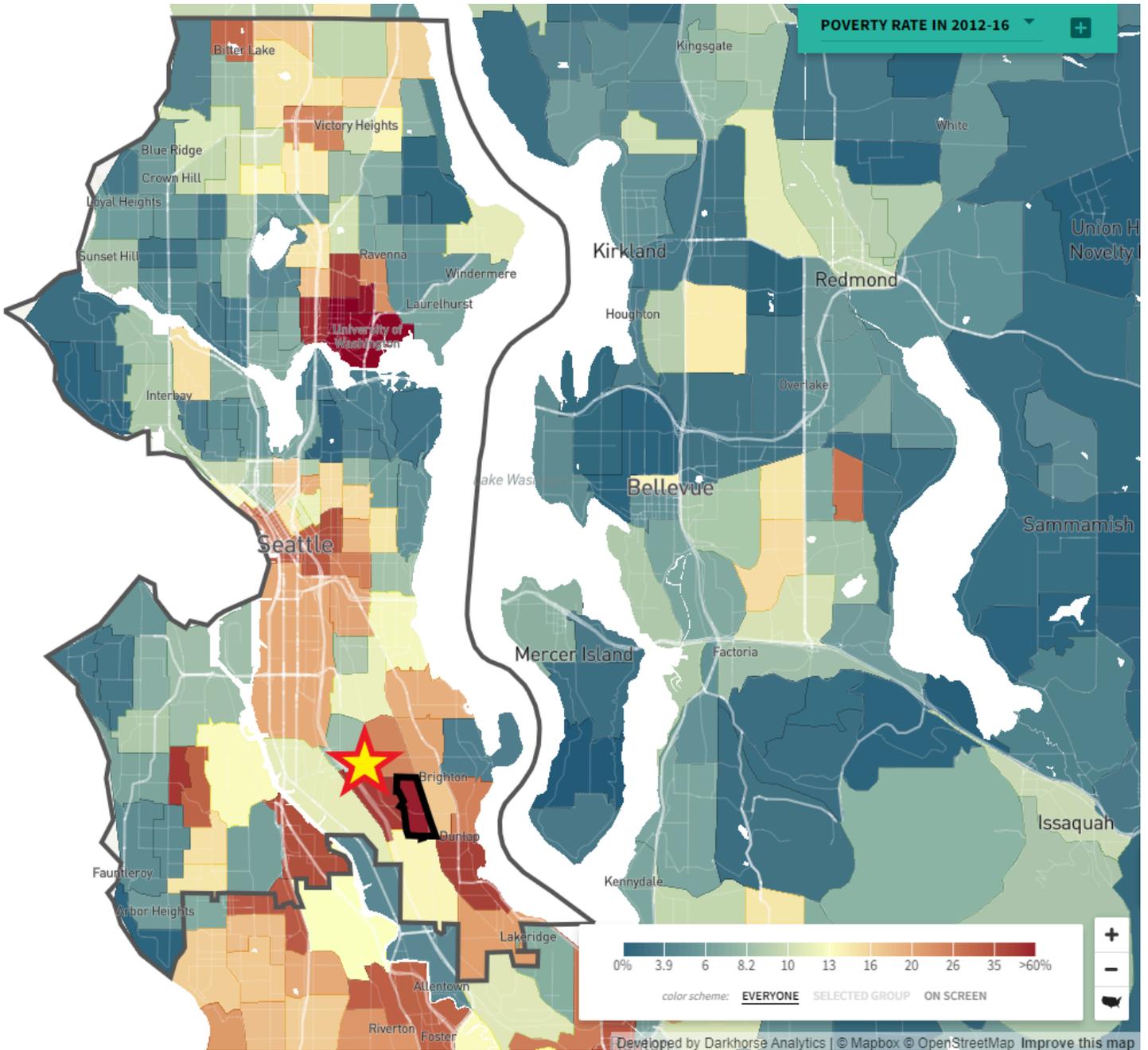
NEIGHBORHOOD CHARACTERISTICS
Neighborhood characteristics and characteristics of current residents in each area

Median Rent 2012-16	Median rent in this area between 2012-16
Job Growth Rate from 2004 to 2013	Average annualized job growth rate from 2004 to 2013
Median Hhold. Income of Residents in 2012-16	Median household income in 2016
Median Hhold. Income of Residents in 1990	Median household income in 1990
Poverty Rate in 2012-16	Fraction of residents below the federal poverty line in 2012-16
Fraction College Graduates in 2012-16	Fraction of residents over age 25 with a college degree 2012-16
Fraction Non-White in 2010	Fraction of residents who self-identify as a race/ethnicity other than white non-Hispanic
Foreign-Born Share in 2012-16	Fraction of residents born outside the U.S. 2012-16
Fraction Single Parents in 2012-16	Fraction of children growing up in single-parent families 2012-16
Population Density in 2010	Number of residents per square mile in 2010
Density of Jobs in 2013	Number of jobs per square mile in 2013
Fraction with Short Work Commutes in 2012-16	Fraction of residents who commute fewer than 15 minutes to work in 2012-16
Census Response Rate (Social Capital Proxy)	Fraction of 2010 Decennial Census forms returned by mail, a proxy for social capital

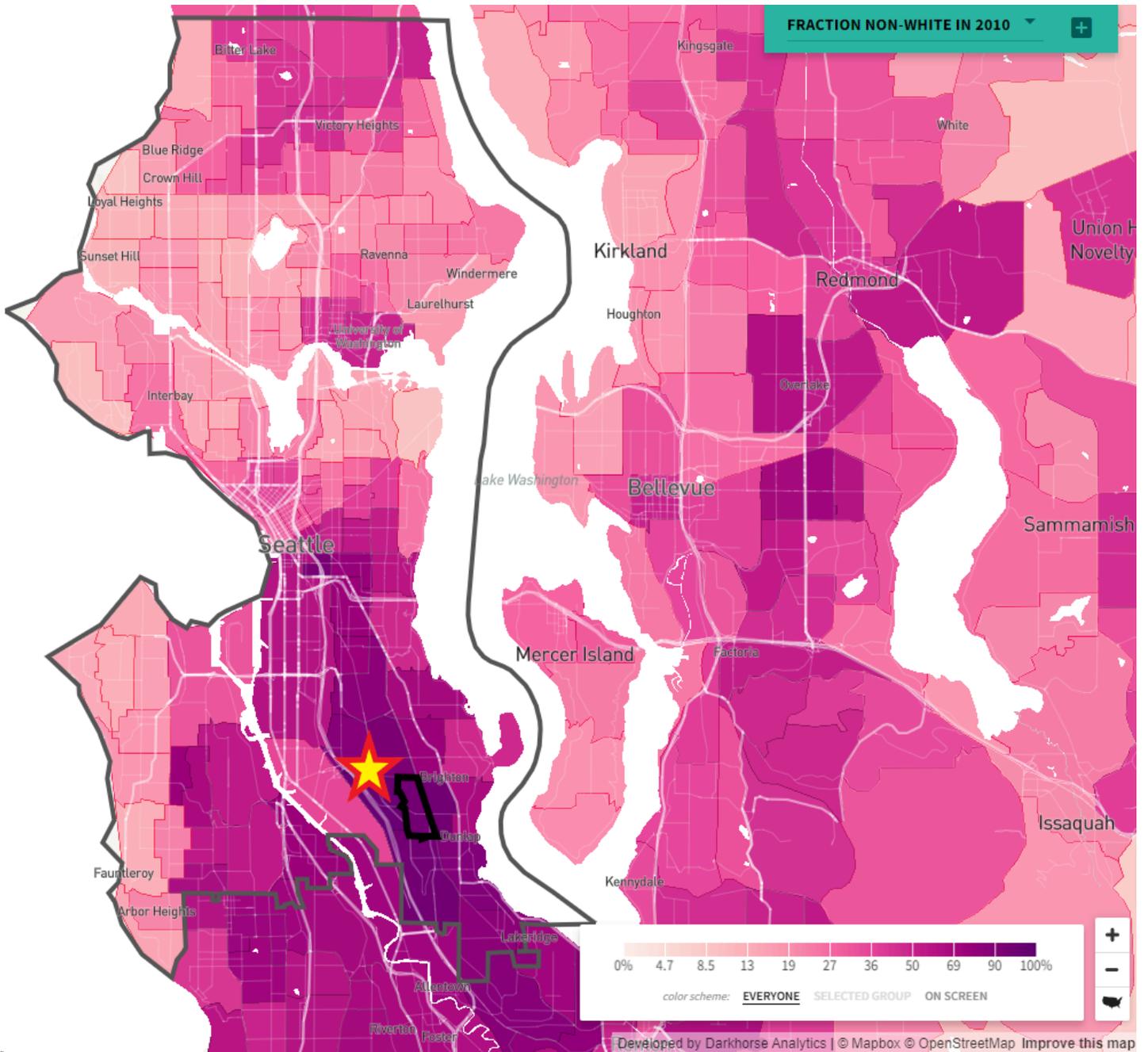
6. Once your map of the “Median household income of residents in 2012-16” loads, examine your map to find the area of the lowest income, or the most red-colored area, and click on it to outline its boundaries.



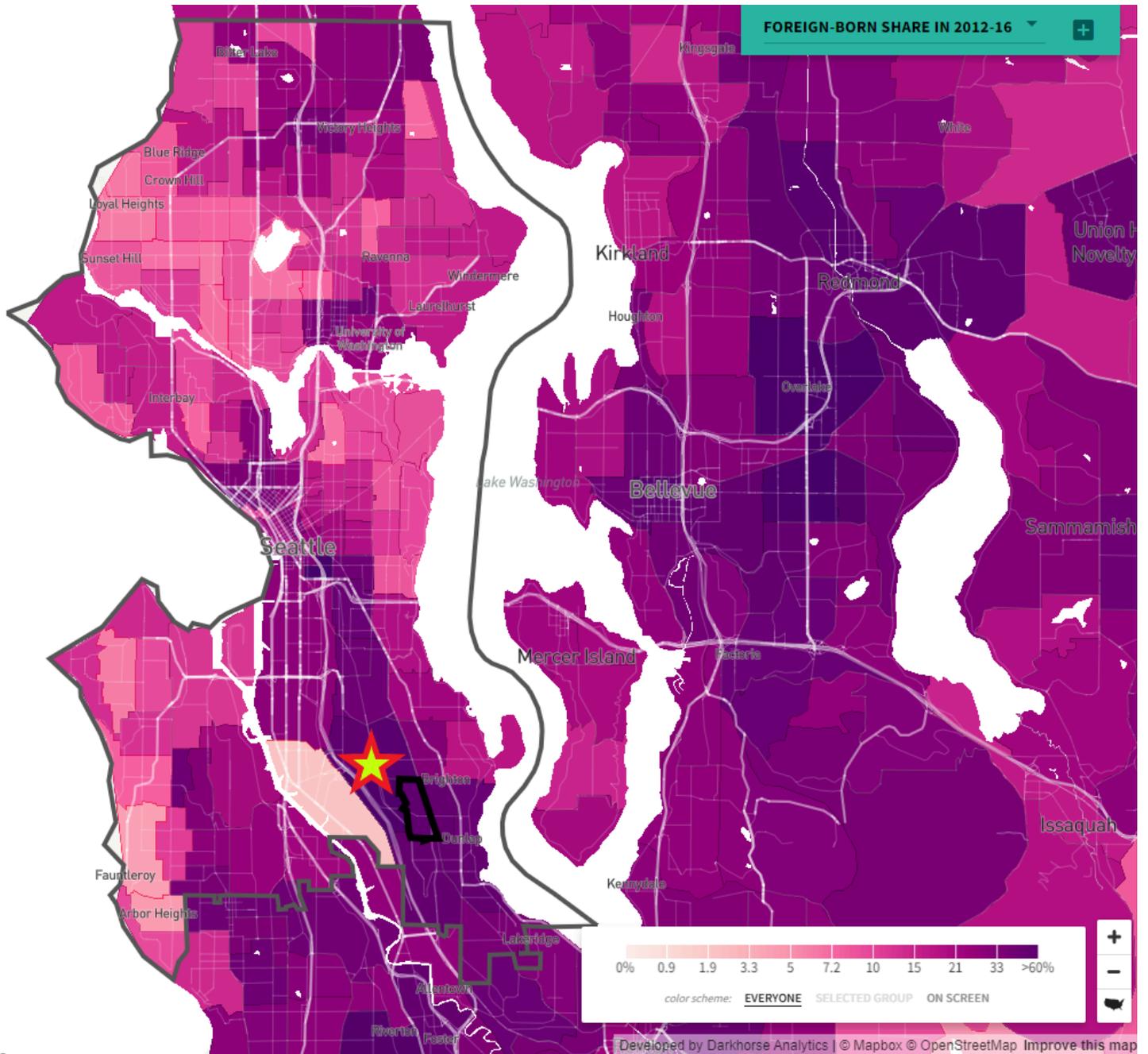
7. Let's return to the drop box. Under "neighborhood characteristics" click on "Poverty Rate in 2012-16" and look to see if the area you highlighted in step six, also has a high poverty rate. (The redder, the higher the poverty rate is.)



8. Likewise, we will repeat this operation in the dropdown box for the criteria “Fraction Non-white in 2010” to see if our highlighted area is a community of color. (The darker purple denotes communities of color.)



9. Finally, we will repeat this operation in the dropdown box for the criteria “Foreign born share in 2016” to see if our highlighted area is a community of color. (The darker purple denotes migrant communities.)



The most marginalized communities will have a low income and high poverty rate, percentage of people identifying as non-white, and foreign-born population. The more of these qualifiers your highlighted area matches, the more likely it is to be an environmental justice community.

Part Two - How to use the EJScreen Tool

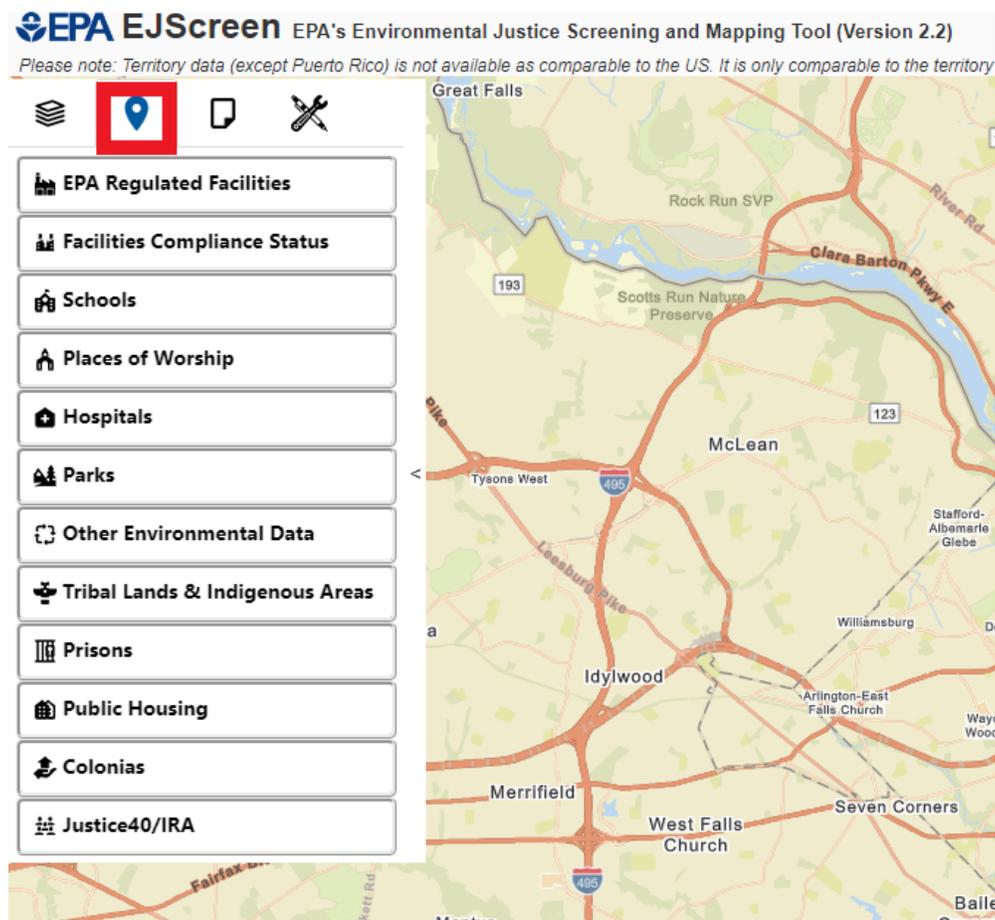
EJScreen is an EPA's environmental justice mapping and screening tool that provides EPA and the public with a nationally consistent dataset for combining environmental and demographic socioeconomic indicators. This resource is intended to better meet the EPA's responsibilities related to the protection of public health and the environment in a manner that is consistent with President Clinton's 1994 [Executive Order 12898](#), President Biden's [Justice40 initiative](#) (Executive Orders 14008 and 14096), and the goals of [EJ 2020](#), EPA's environmental justice strategic plan.

Why are we using this resource?

The EJScreen Tool gives us the opportunity to verify our hypothesis from the Opportunity Atlas: to see if our marginalized area was, in fact, an environmental justice community. It also has all the EPA's current data which environmental injustices affect each area, which pollutants are present, if the pollution is an active violation, and when the last action by the EPA was taken to address the injustice. We can also find the sources of the pollution for the area and use this information to look for organizations and activists in our third and final research step.

Instructions:

1. Navigate to [the EJScreen Tool](http://www.ejscreen.epa.gov/mapper/) (www.ejscreen.epa.gov/mapper/) on your internet browser.
2. Once you are on the website, it will automatically show you a map of your community.
 - a. If you would rather search for a different location, there is a search bar at the upper right corner of the website.
3. First, let's find the environmental justice areas in our community. In the navigation toolbar in the upper-left corner of the webpage, select the second tab called "Places", which looks like a map pinpoint.

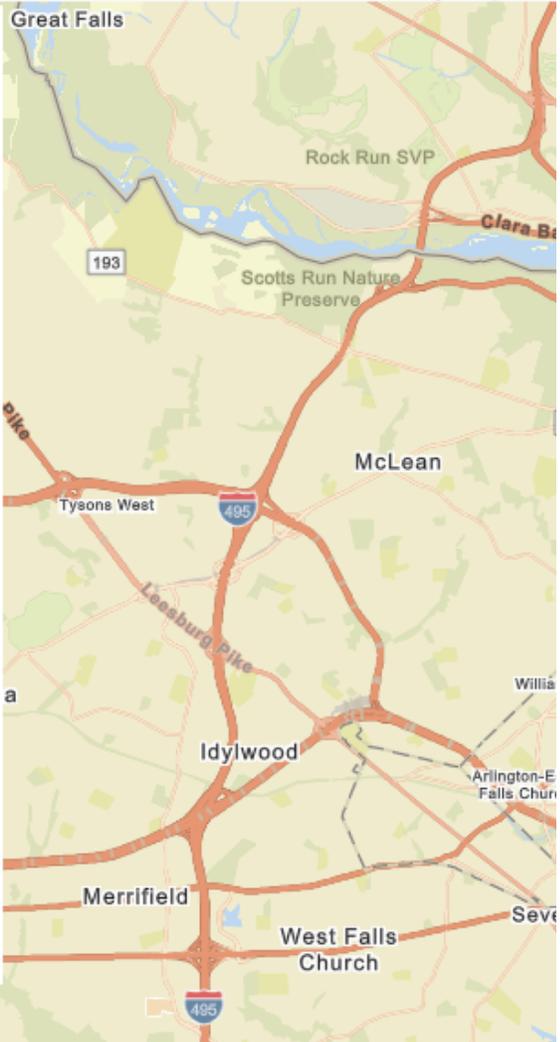


4. This tab contains designated locations shown in each list line. Select with is “Justice40/IRA” areas at the bottom of the list.

EPA EJScreen EPA's Environmental Justice Screening and Mapping Tool (Ver
Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparabl

Icons: Layers, Location, Print, Edit

- EPA Regulated Facilities
- Facilities Compliance Status
- Schools
- Places of Worship
- Hospitals
- Parks
- Other Environmental Data
- Tribal Lands & Indigenous Areas
- Prisons
- Public Housing
- Colonias
- Justice40/IRA**



5. Two additional options will populate under this tab. Select the “Justice40/CEJST” option to see the environmental justice communities in your map area.

EPA EJScreen EPA's Environmental Justice Screening and Mapping Tool (Version 4.0.0) [View Help](#)

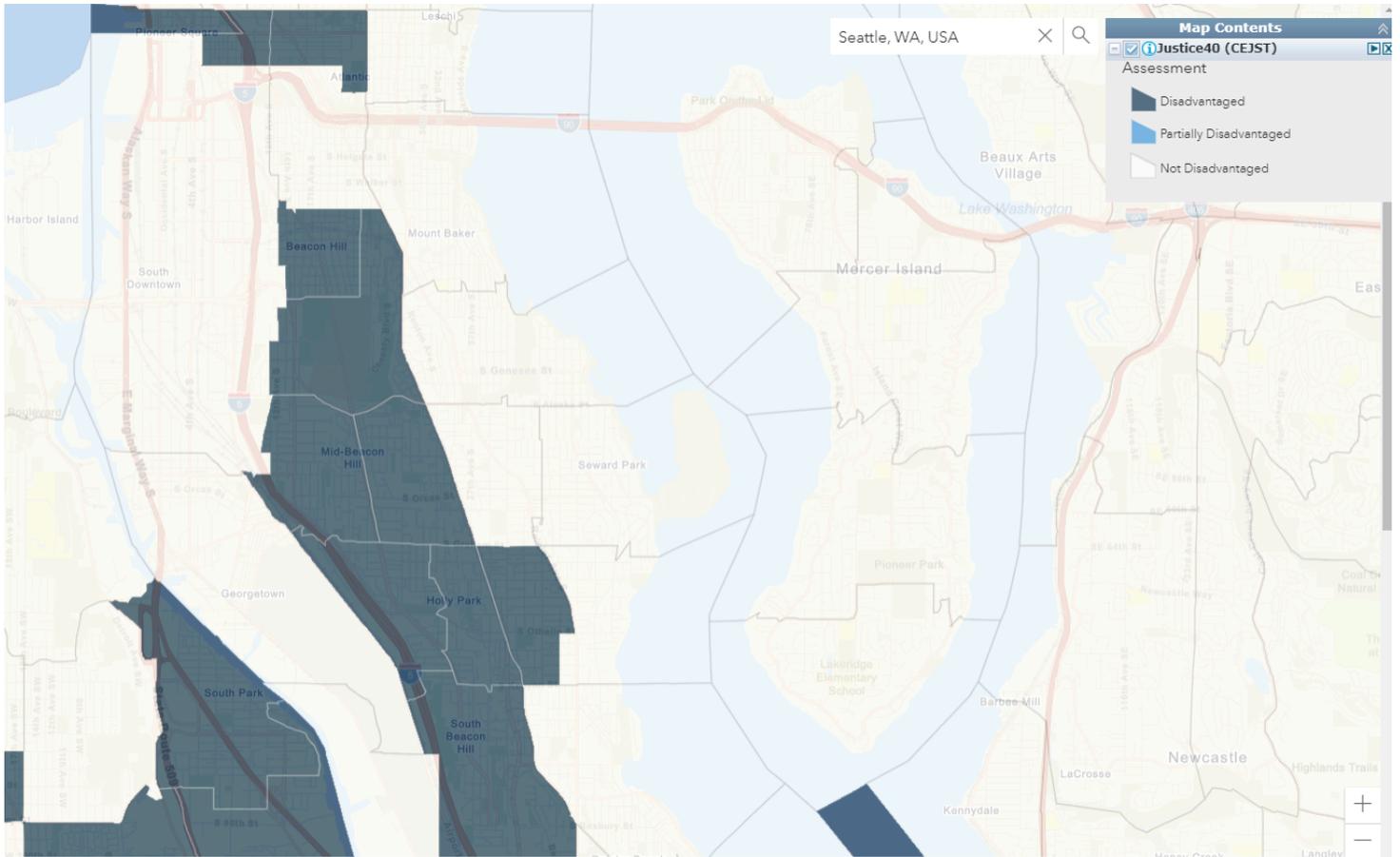
Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparable to the US.

Layers:

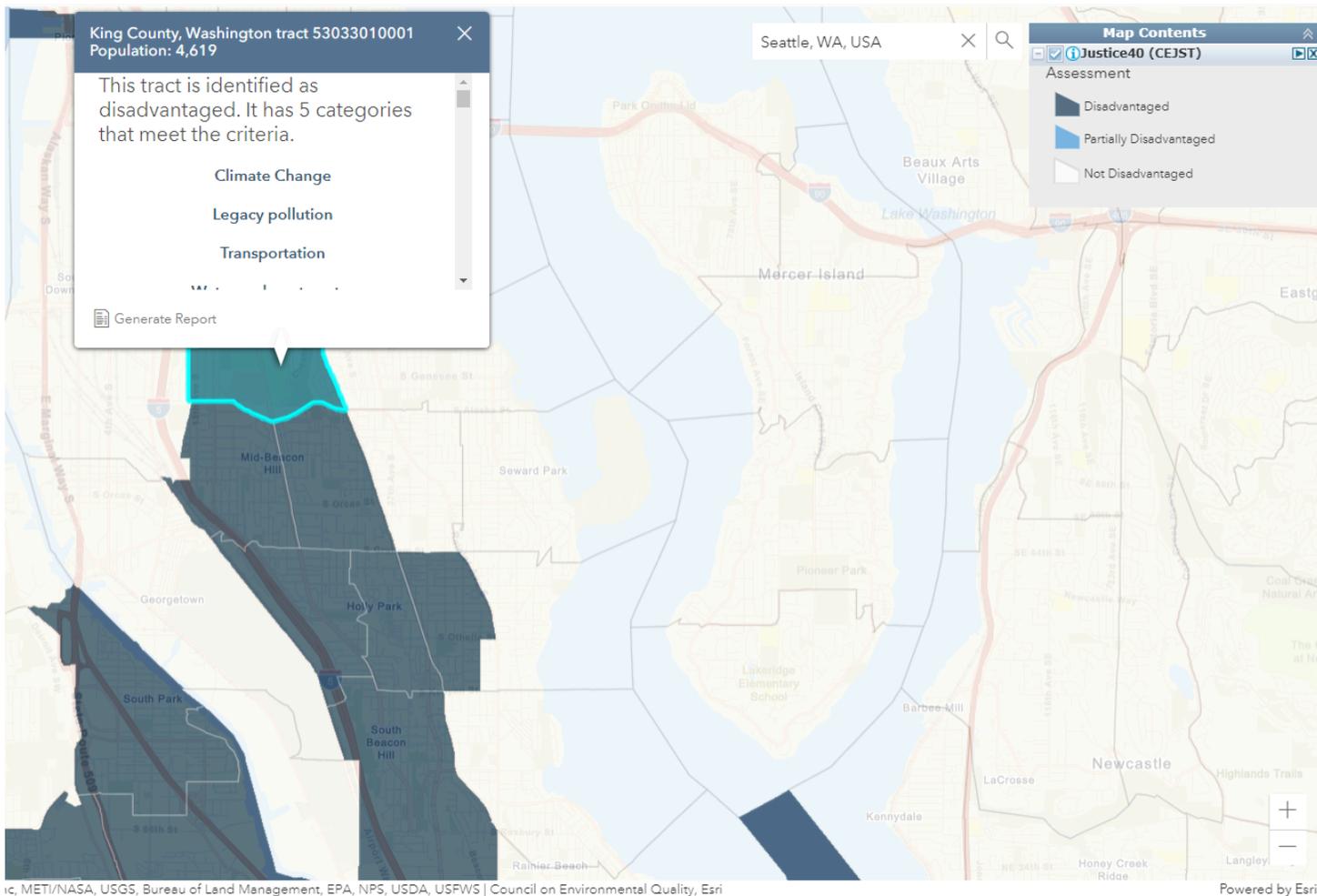
- EPA Regulated Facilities
- Facilities Compliance Status
- Schools
- Places of Worship
- Hospitals
- Parks
- Other Environmental Data
- Tribal Lands & Indigenous Areas
- Prisons
- Public Housing
- Colonias
- Justice40/IRA**
 - Justice40 (CEJST)
 - EPA IRA Disadvantaged Communities

Map Labels: Great Falls, Rock Run SVP, Clara B, Scotts Run Nature Preserve, 193, McLean, Tysons West, 495, Loesboro Pike, Idylwood, Merrifield, West Falls Church, Mantua, Wakefield, Annandale, George Mason, Park, Brad...

6. The map which loads should be white and blue. Please note that it may take a few seconds to fully load.

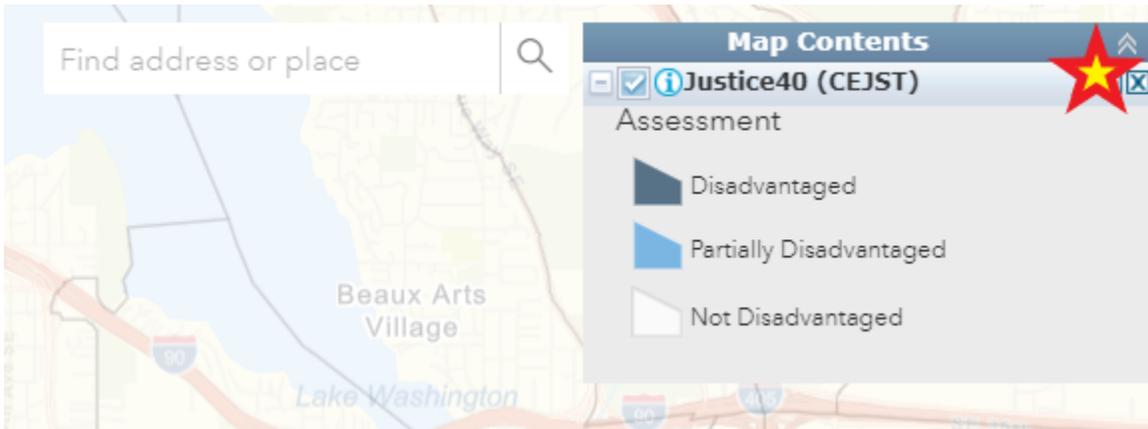


7. Let's click on the environmental justice community designated as "disadvantaged" in dark blue, which is closest to our highlighted area from the Opportunity Atlas.

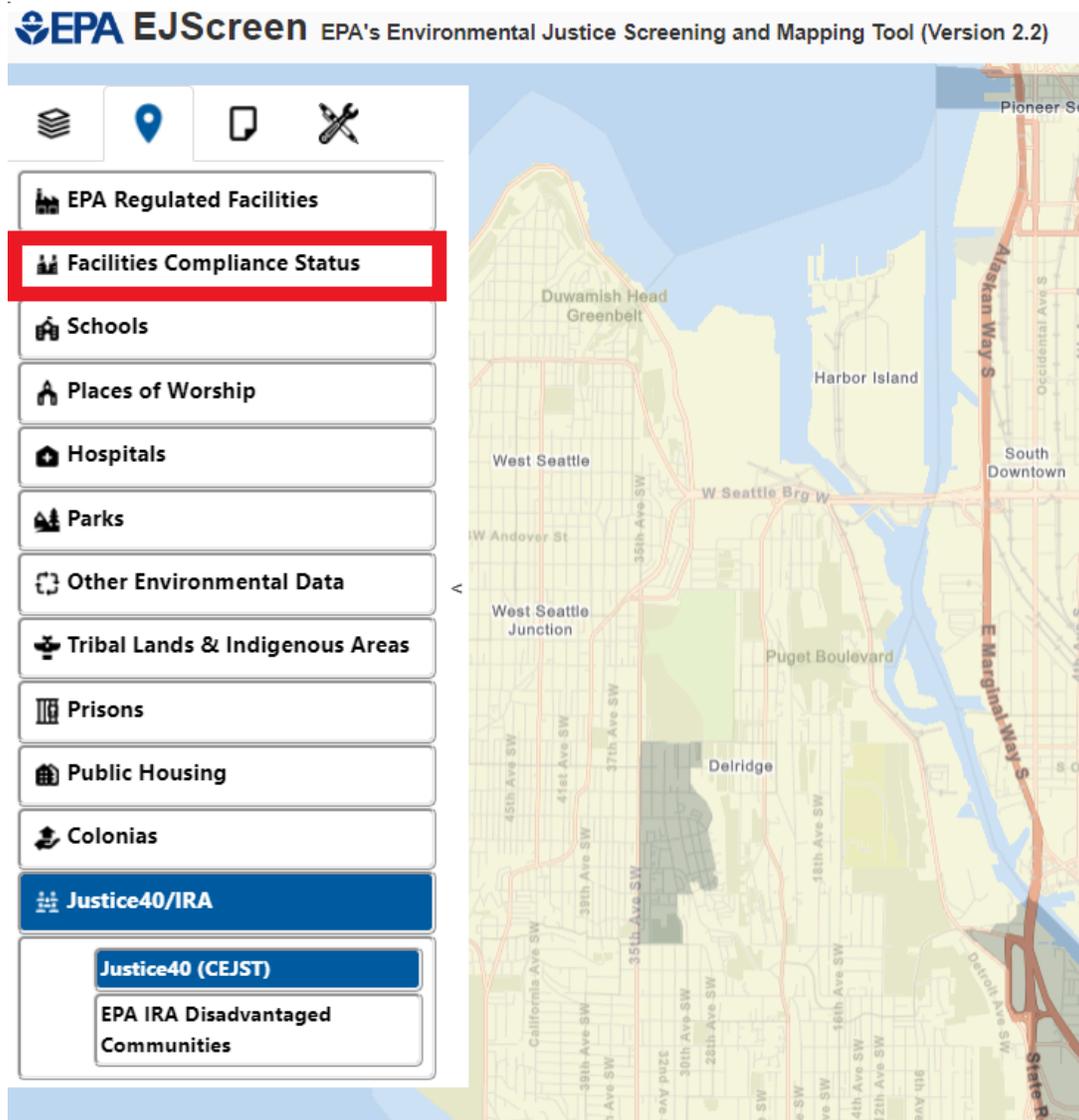


8. This will generate a report telling us the environmental injustices this area faces. Scroll through the report, taking special care to note:
- Categories that meet the criteria
 - Diagnosed diabetes among adults
 - Current asthma among adults
 - Coronary heart disease
 - Diesel particulate matter exposure (percentile)
 - PM2.5 (particulate matter) in the air
 - Traffic proximity and volume
 - Leaky underground storage tanks
 - Water and Wastewater Disadvantaged

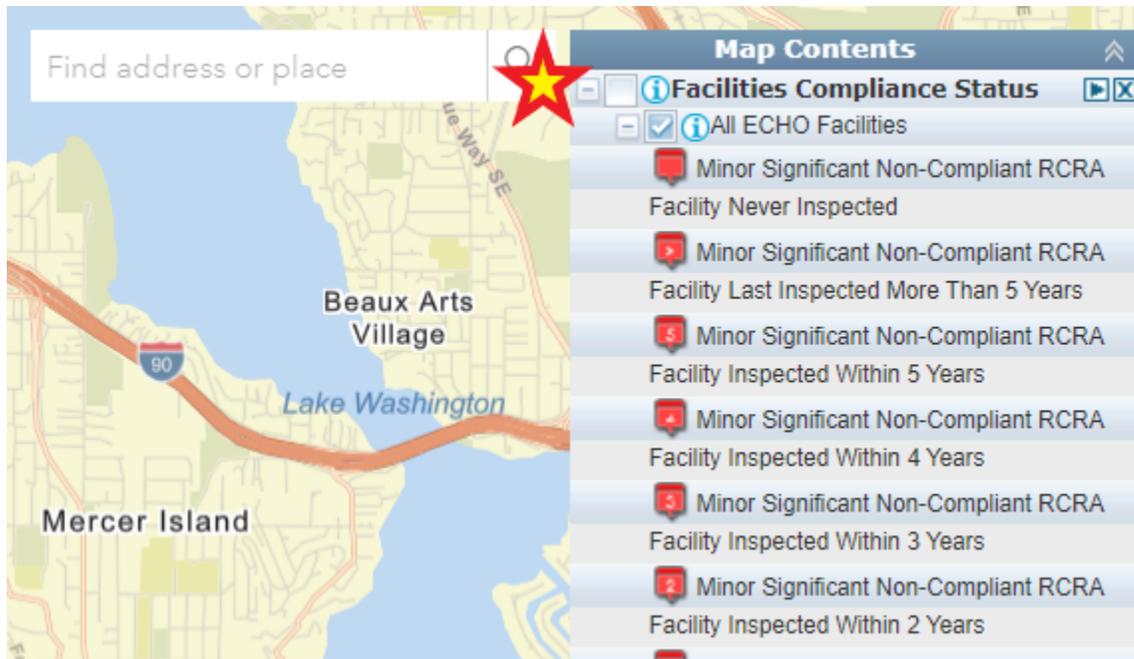
9. Our next step is to see which facilities are polluting this area. To be able to see these locations, we need to remove our current map layer. To do this, go to the box in the upper right corner to press X on the line item for Justice40 (CEJST) area, since it will hinder us from clicking on the locations of potential polluters.



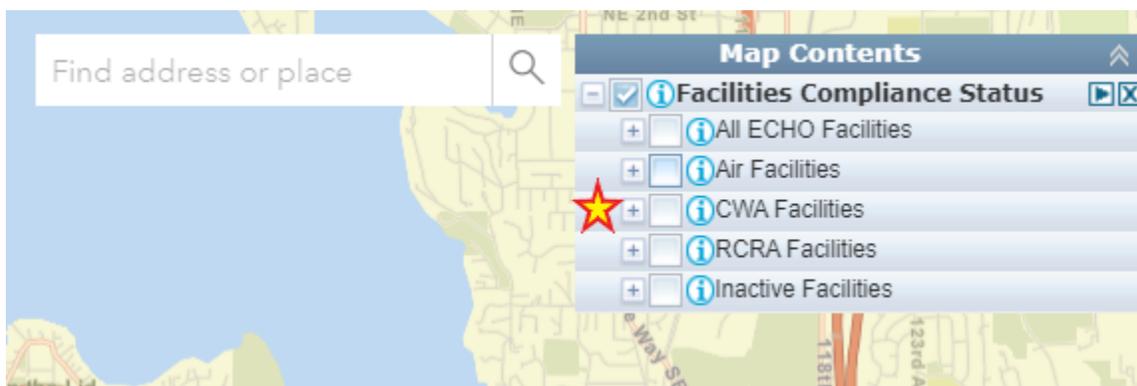
10. In the upper left corner, select the line item "Facilities Compliance Status."



11. To show the locations of EPA regulated facilities in your map area, we will need to check the box in the upper right corner which denotes these facilities.

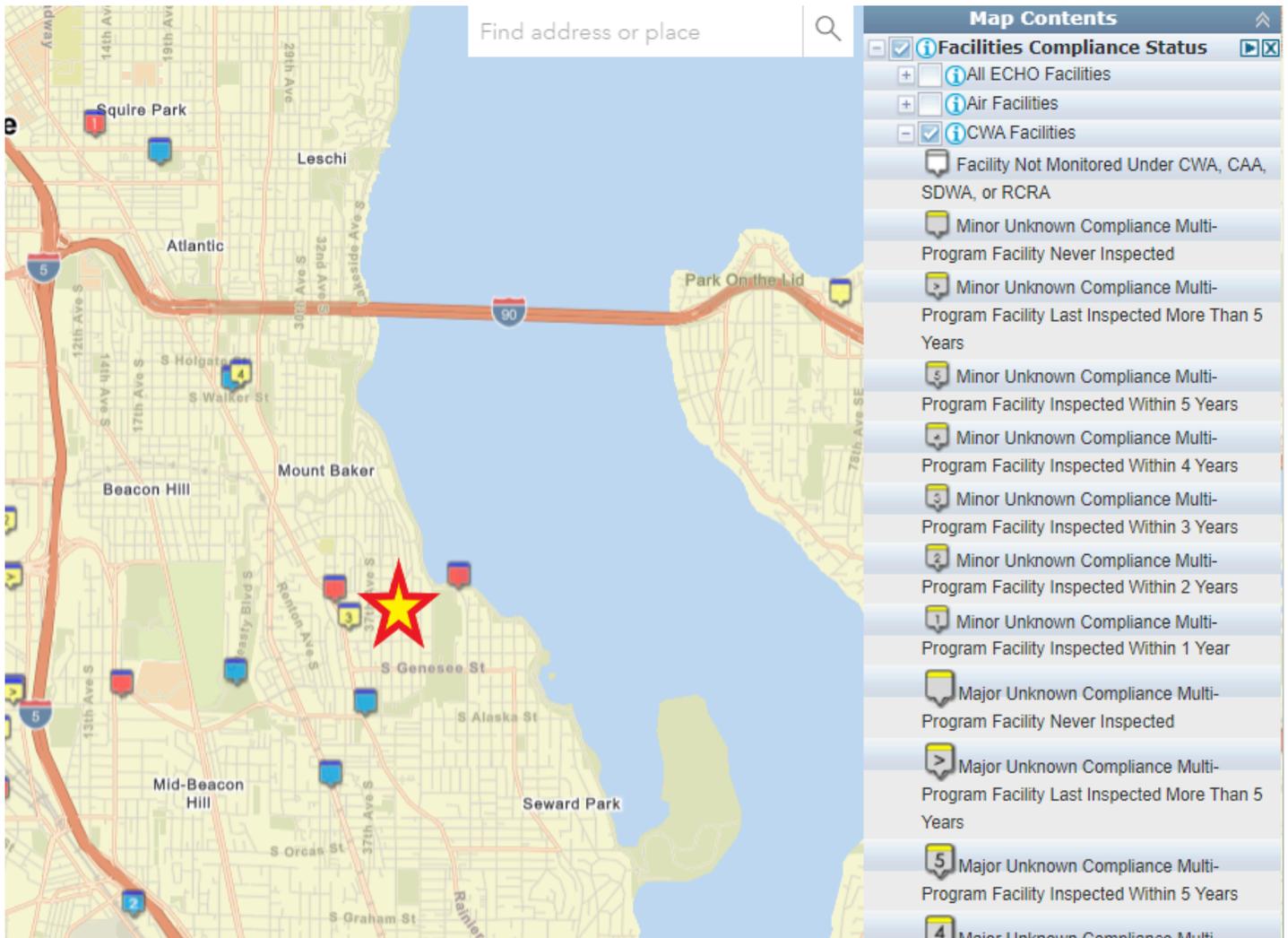


12. The entities in yellow and red are the polluters of concern. Depending on the information you gathered about the area from question 7 (where we investigated the EPA's criteria and percentile data), you might have identified health factors or other impacts that correlate with a specific type of pollution (air, water, soil, etc.) For our example in Seattle, we saw that there are significant air and water pollutants in the area. In my map legend in the upper-left corner, I can see that "All ECHO Facilities" is selected. It is preferable to narrow down your search to types of polluters, so I will uncheck the box for "All ECHO Facilities" and first check the box next to "CWA [Clean Water Act] Facilities" to view potential water polluters.



13. Seeing this map result, I can see a few yellow and red air pollution sources around the area of interest. Please note that the polluters might not be directly inside the community. Pollution from nearby sources might travel due to differences in elevation and topography in your area. Start in the immediate area and work your way outward.

14. Using our Seattle example, I can see a “level 3” polluter.



15. Selecting the icon on its location, I can see many data points on this pollution source. Scroll through the report, taking special care to note:
- The facility name
 - CWP Status (if there is a violation identified)
 - CWP CURRENT VIOL (if the violation is current)
 - CWP DATE LAST INSPECTION: (last inspection date)
 - LIM POLLUTANT (provides a list of pollutants emitted from the facility)

The screenshot shows a map interface with a search bar at the top center containing the text "Find address or place". On the left, a popup window titled "CWA Facilities" displays the following data:

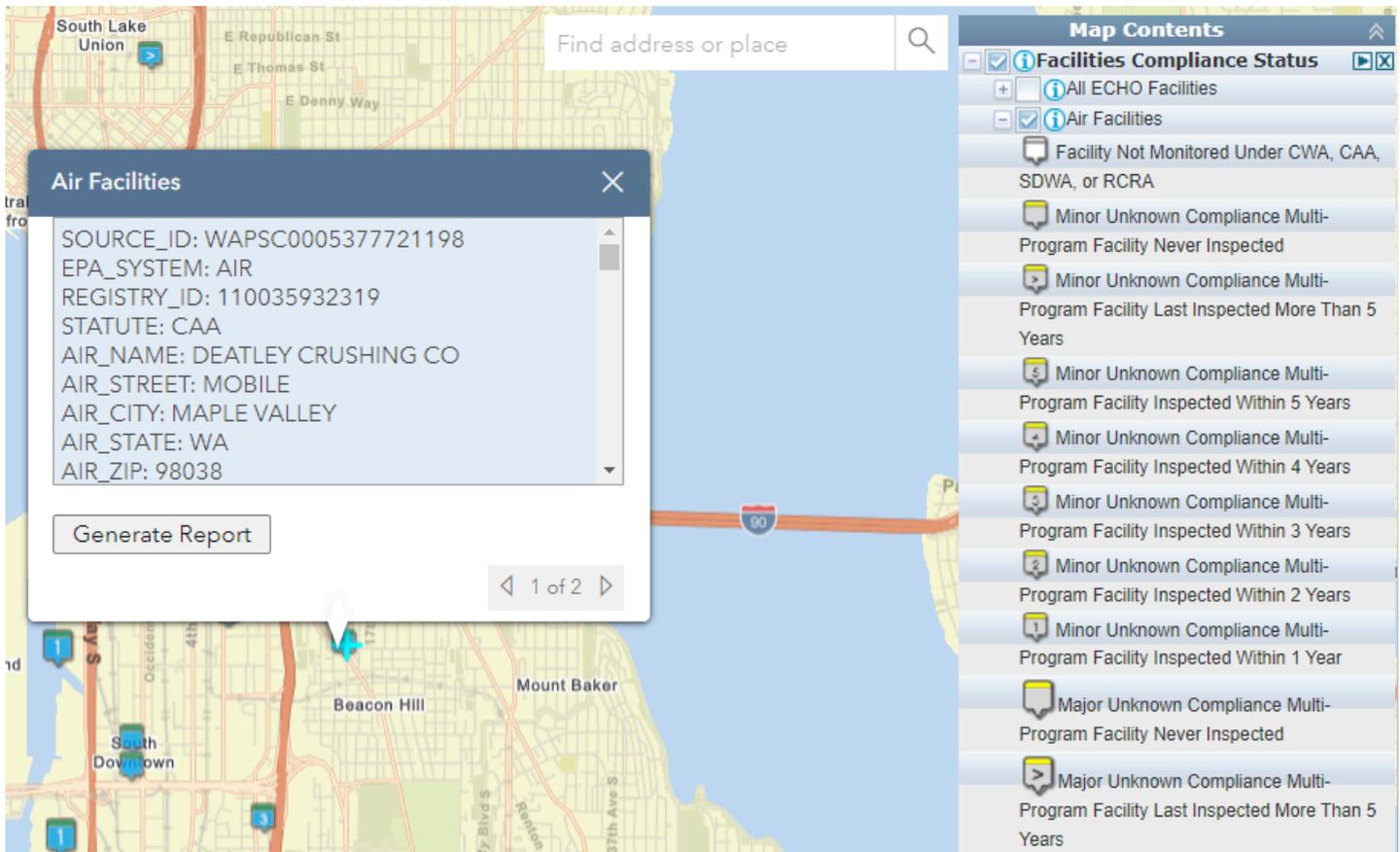
```
SOURCE_ID: WAR000500
EPA_SYSTEM: ICP
REGISTRY_ID: 110000489622
STATUTE: CWA
CWP_NAME: DARIGOLD RAINIER AVE PLANT
CWP_STREET: 4058 RAINIER AVE S
CWP_CITY: SEATTLE
CWP_STATE: WA
CWP_STATE_DISTRICT: Null
```

Below the data is a "Generate Report" button. On the right side, a "Map Contents" legend is visible, showing a list of facility types with checkboxes. The "Facilities Compliance Status" checkbox is checked, and the "CWA Facilities" checkbox is also checked. Other facility types include "All ECHO Facilities", "Air Facilities", "RCRA Facilities", and "Inactive Facilities".

16. In a similar fashion, we will now look for air polluters in the area we've researched. Using the legend upper right, deselect the "CWA Facilities" box, and instead check "Air Facilities."

This screenshot shows the "Map Contents" legend with the "Air Facilities" checkbox checked and the "CWA Facilities" checkbox deselected. A red star is placed next to the "Air Facilities" checkbox. The search bar at the top still contains "Find address or place".

17. Selecting the nearest source of air pollution to my area of interest, I will again click on the icon of its location and gather data on its emissions, taking special care to note:
 - a. Facility name
 - b. AIR UNIVERSE (how significant the amount of emissions is)
 - c. AIR CURR COMPL STATUS (if the facility is in compliance with air regulations)
 - d. AIR LAST EVAL DATE (date of the most recent inspection)
 - e. PCTILE CANCER US (percentile of cancer)
 - f. PCTILE RESP US (percentile of respiratory issues)
 - g. PCTILE TRAFFIC SCORE US (percentile of traffic through the area)

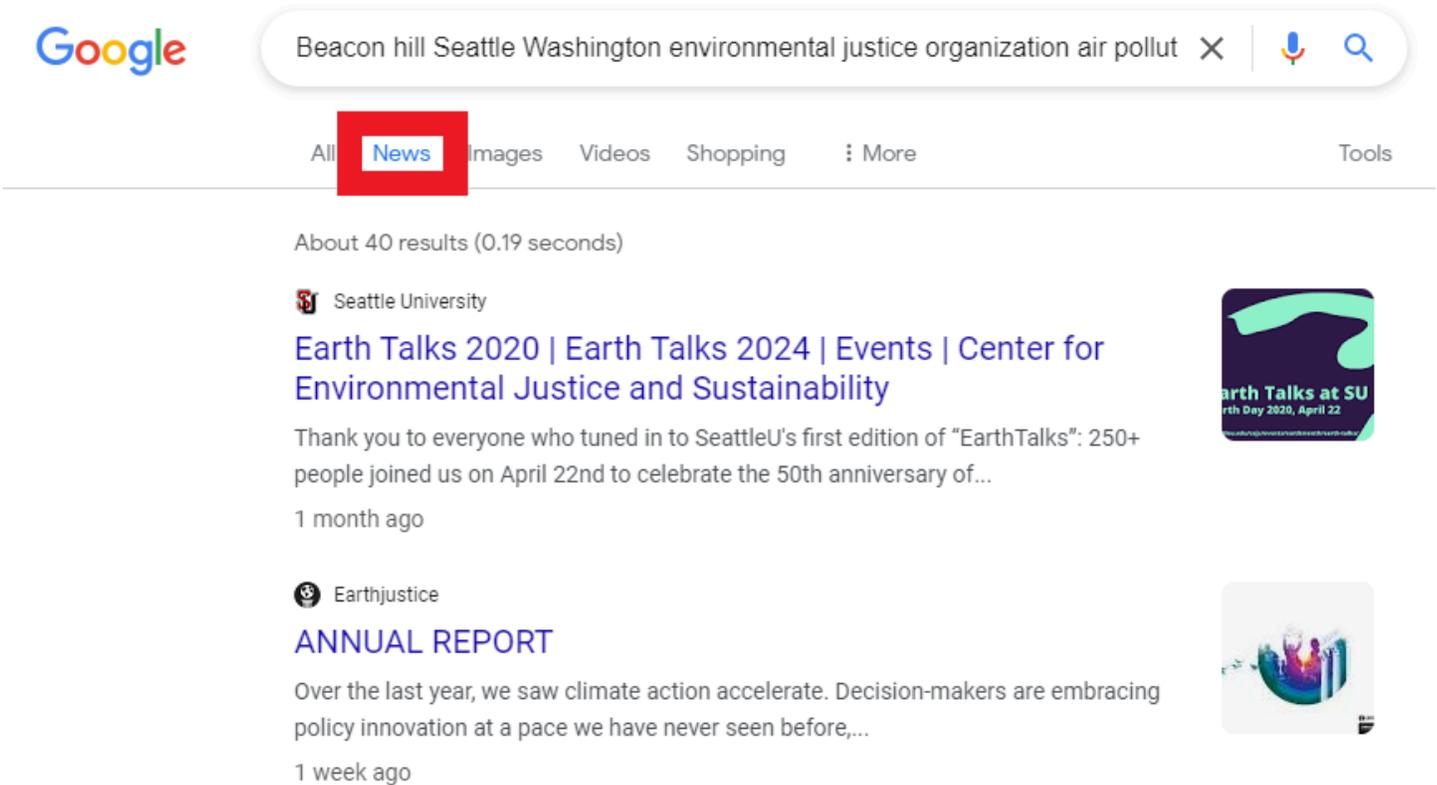


18. Finally, go over your notes to see which pollutants and polluters are of interest, so we can target specific organizations, activists, and advocates working for environmental justice on these data points.

Part Three - How to use Keywords in Google

1. Navigate to [Google](http://www.google.com) (www.google.com [usually the default browser]).
2. In the search bar, put insert these keywords. Syntactical accuracy is not of importance here.
 - a. Area/neighborhood name
 - b. Environmental justice
 - c. Residents
 - d. Organizations
 - e. Air (or water, soil, etc.) pollution

3. Using these four key words and phrases, Google will populate a list of results containing these words in their contents. The default search tab “All” will be useful in helping you find general website listings containing our search items. It is more likely that you will find organizations under the “All” tab than under the other filters Google offers.
 - a. Note: When searching for organizations, there are many options. We encourage you to support the efforts of smaller, grassroots organizations, since these are the folks who are most likely to be affected by the change they seek. However large the size of the organization you choose to engage with, be sure that they align with your personal values.
4. What might be most indirectly useful in our case is to look at relevant news items. To do this, navigate to the “News” tab, directly under the search bar, to filter out results with our key words and phrases that are specifically news articles.



5. News articles are directly helpful to get to know the history, context, and current happenings on a case of environmental injustice. News articles often feature interviews or quotes from local activists, be sure to take note of any authors writing on the issue that are members of the affected environmental justice community. The news article is even more likely to be helpful and to feature affected voices if it is a local newspaper, as in our example, the Seattle Times.

It can be intimidating to “cold call” folks to gather information on their initiatives, especially when they are still a new, small organization. In our second workshop, we will learn how to reach out to these folks, and any grassroots organizations they are affiliated with working on local cases of environmental injustice, in a manner of respectful solidarity which maintains their agency.