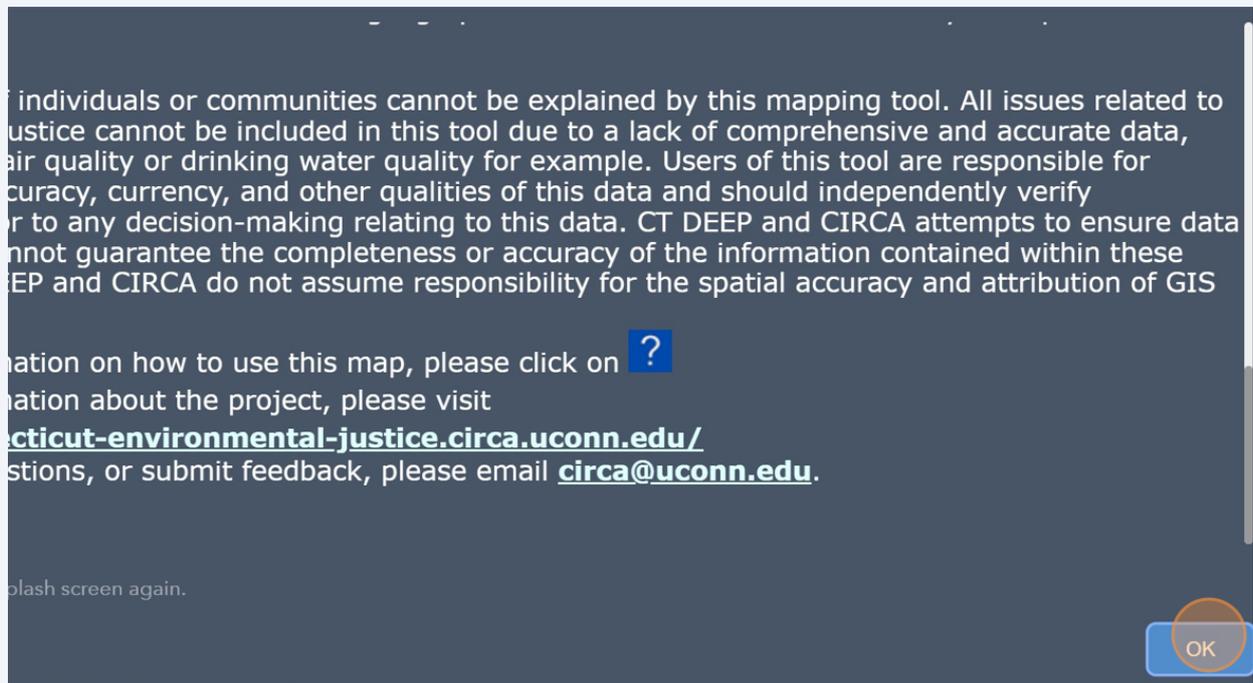


How to Use the Environmental Justice Screening Tool

This document is a step-by-step guide to use the widgets and features of the environmental justice screening tool via internet browser.

1 Navigate to Environmental Justice Screening tool.

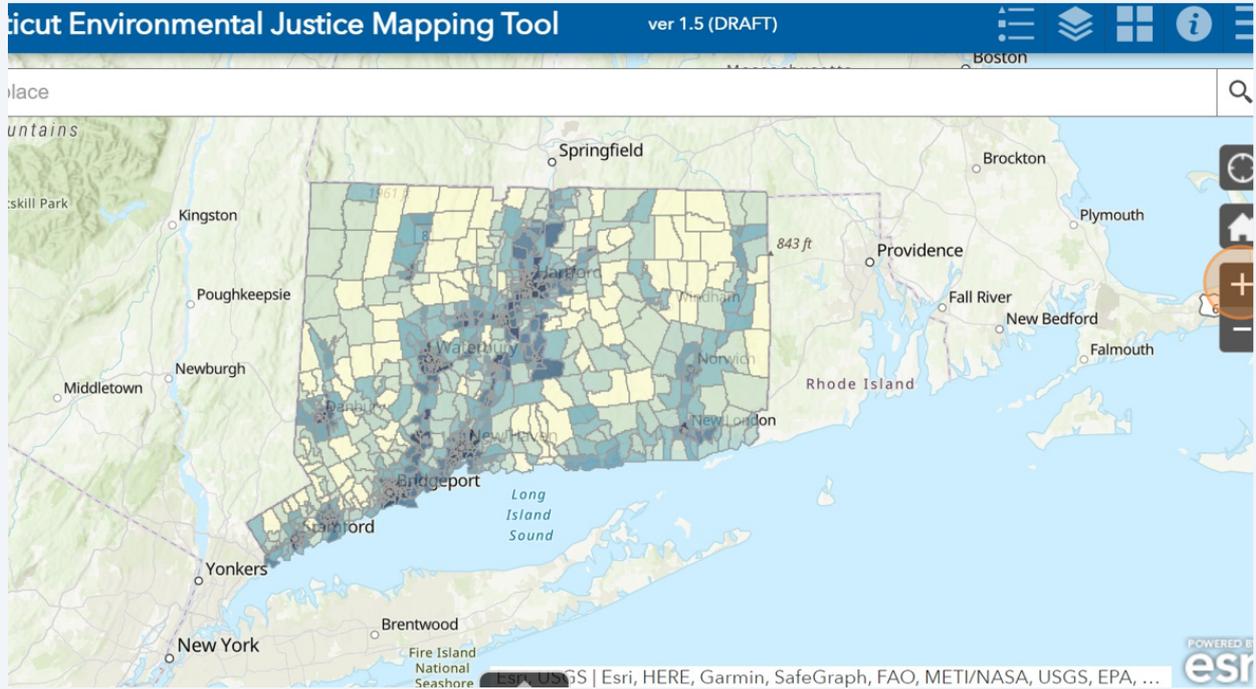
2 The initial welcome screen give a general information about the tool, the disclaimers and how to react the help. Click "OK" to move on to the tool.



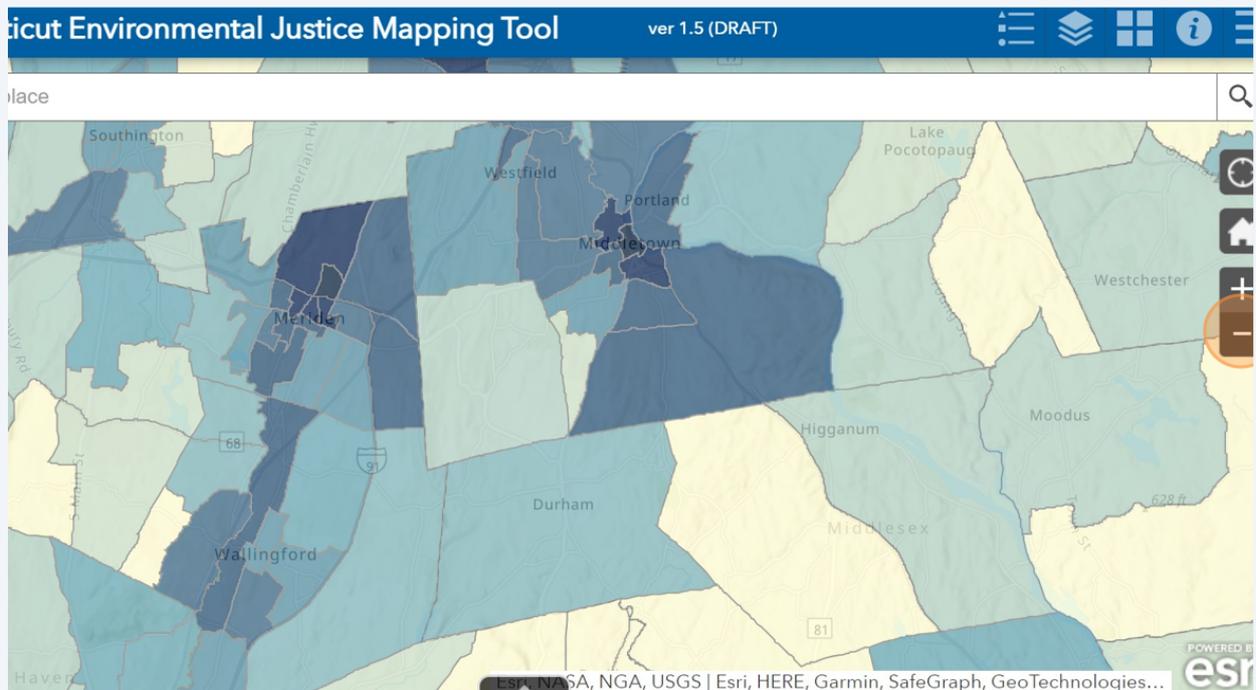
 Tip! Click on "Do not show splash screen again." to not see this welcome screen again.

Widgets for Navigation

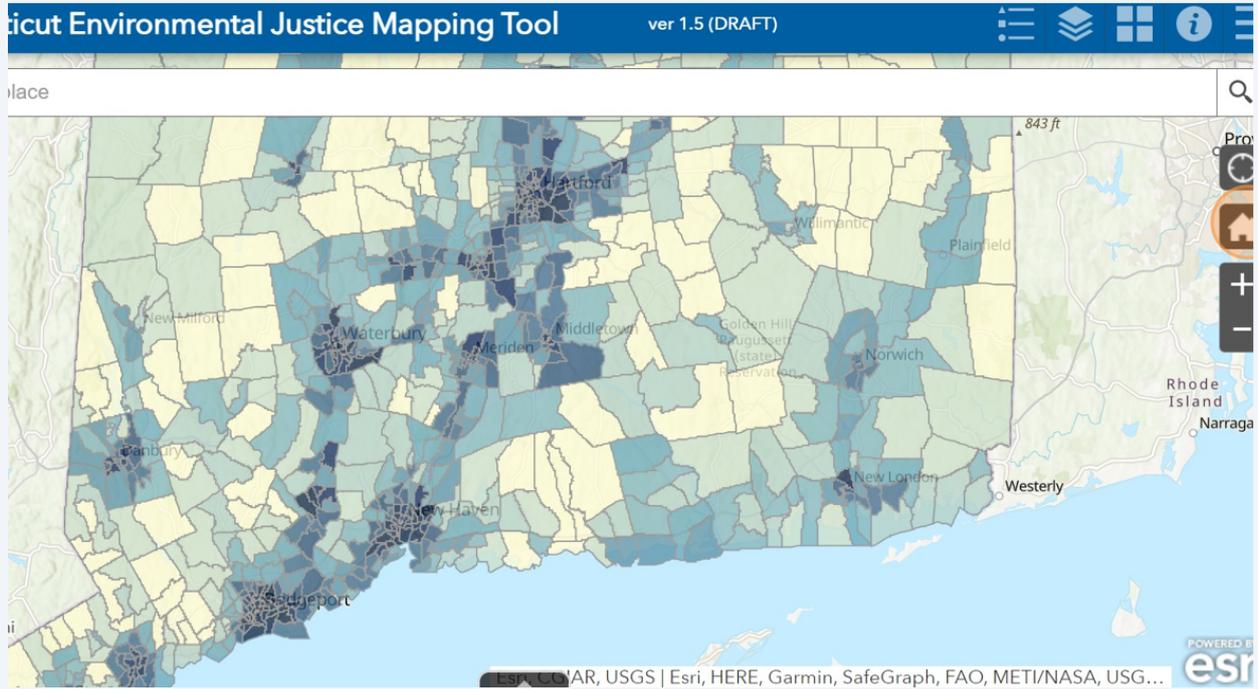
3 Click "+" to Zoom in to the map.



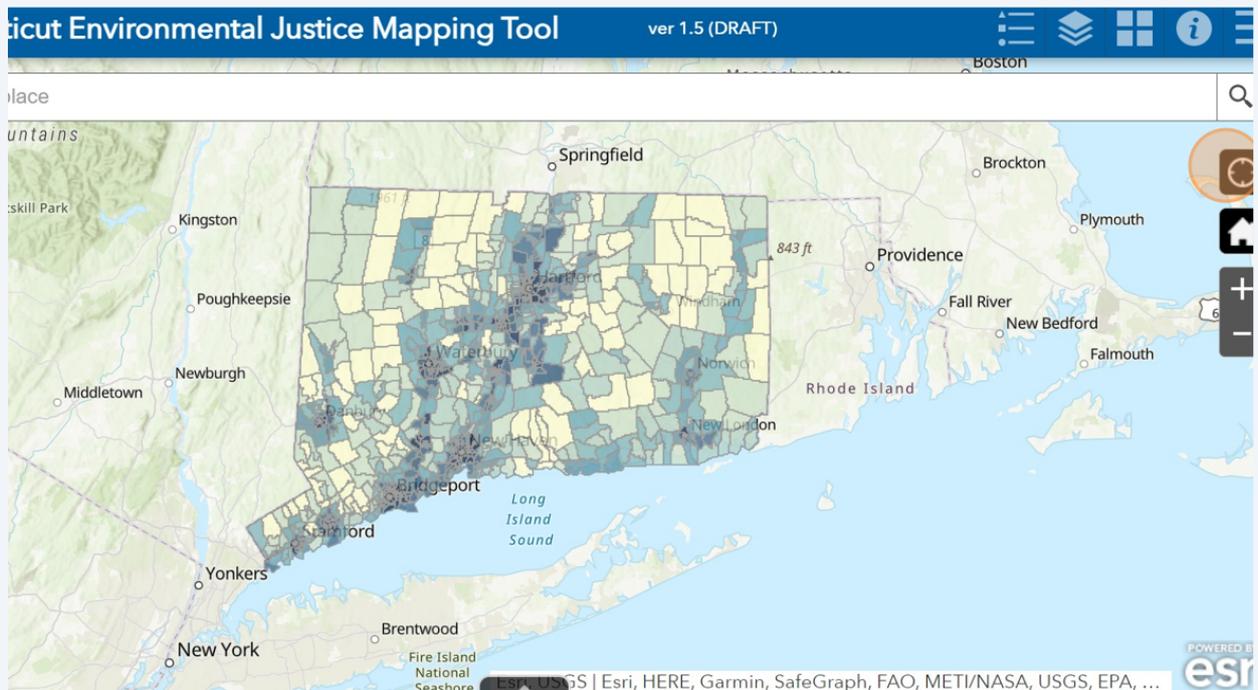
4 Click "-" to Zoom out from the map.



5 Click here.



6 Click here if you would like to find your exact location through your browser.

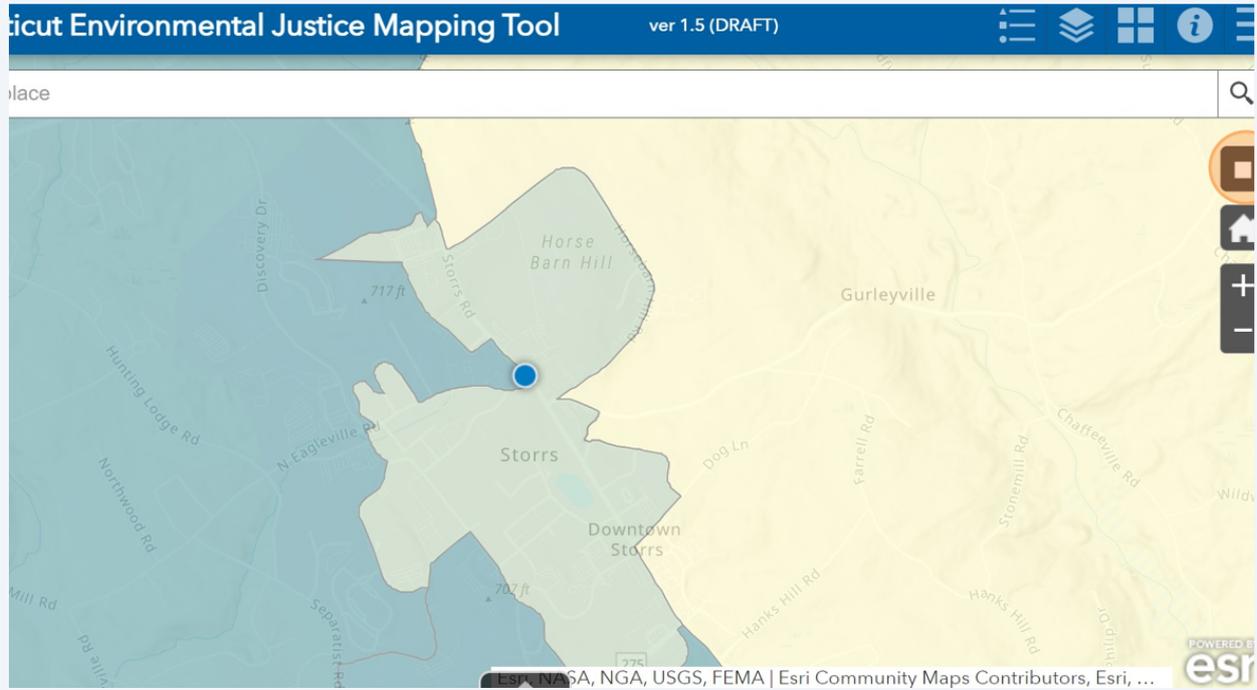




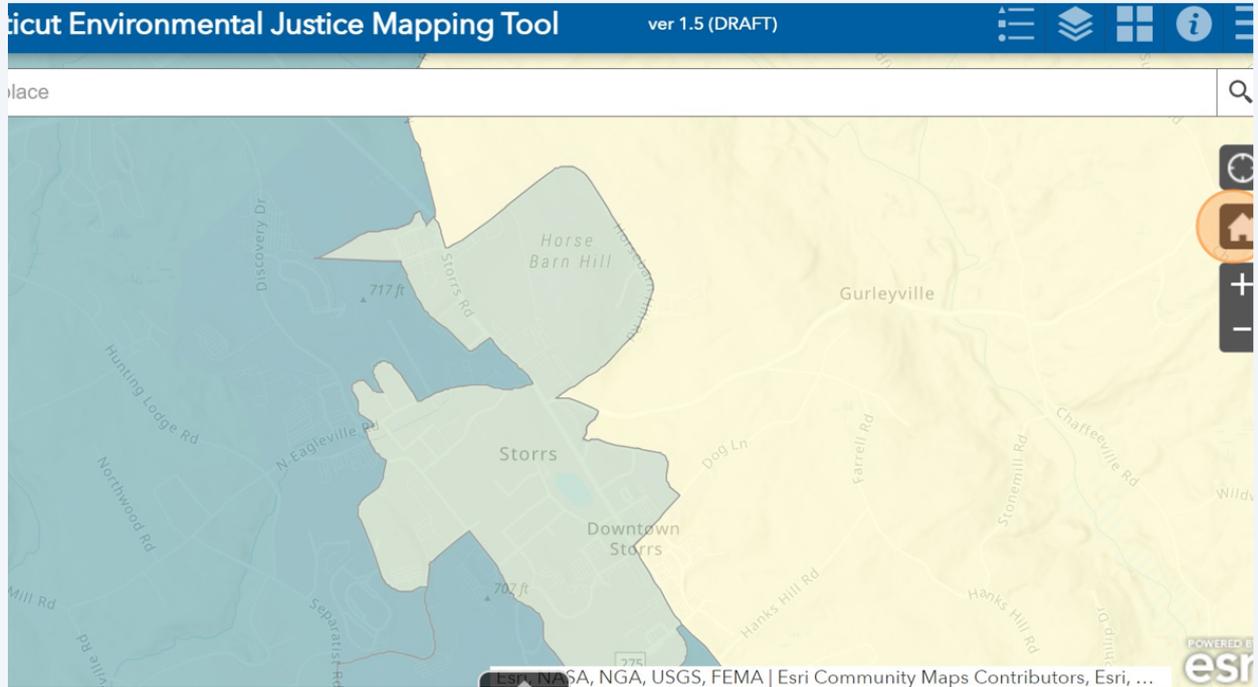
Caution! Browser location services should be open to using this tool.

7

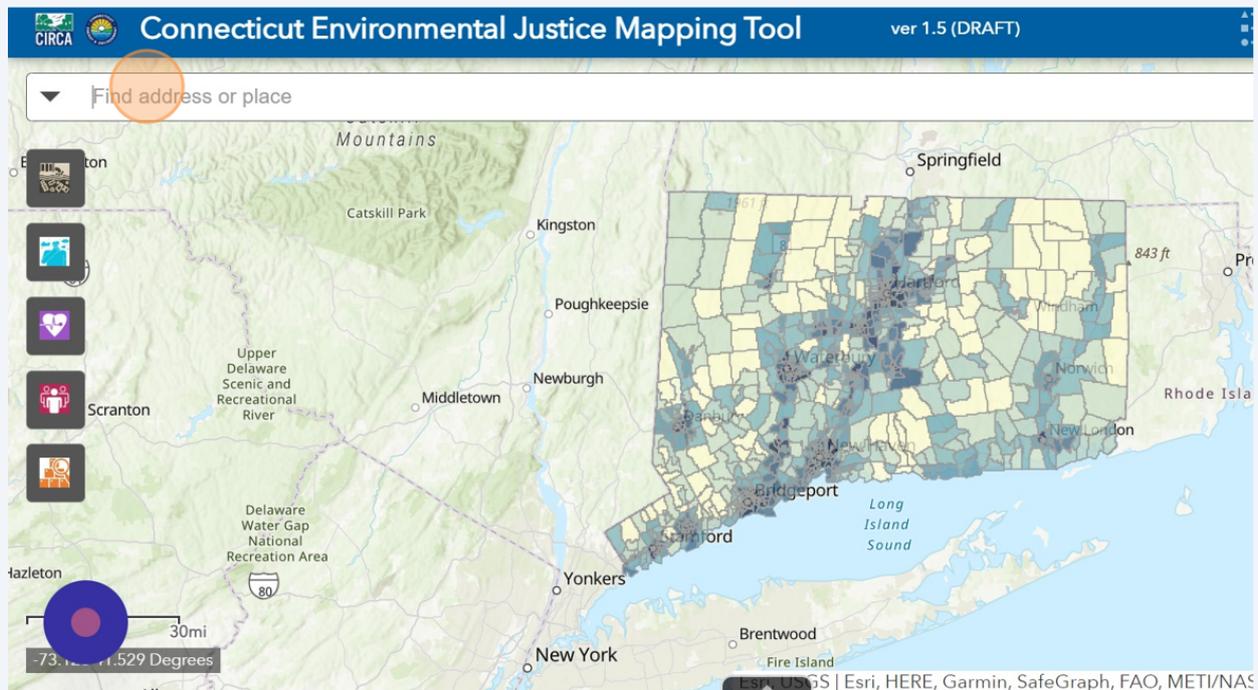
Click here to stop using your current location.



8 Click Home button to visualize the whole state.

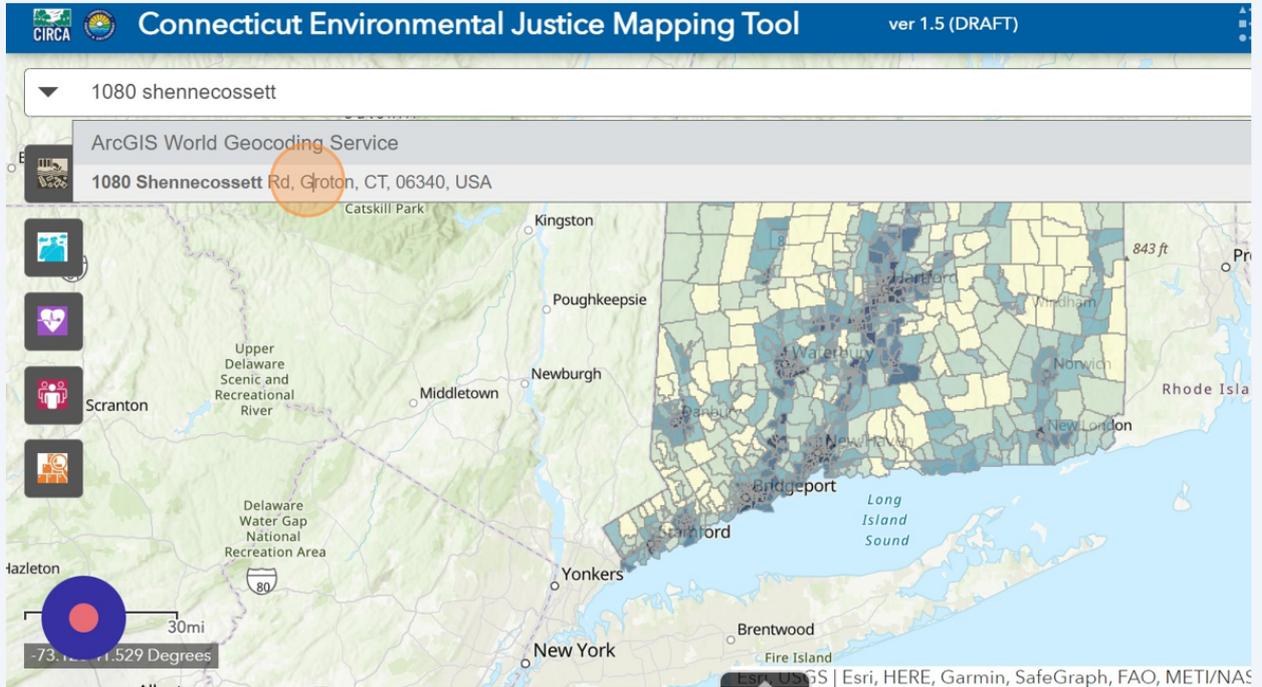


9 Click the "Find address or place" field and find a specific place.



10

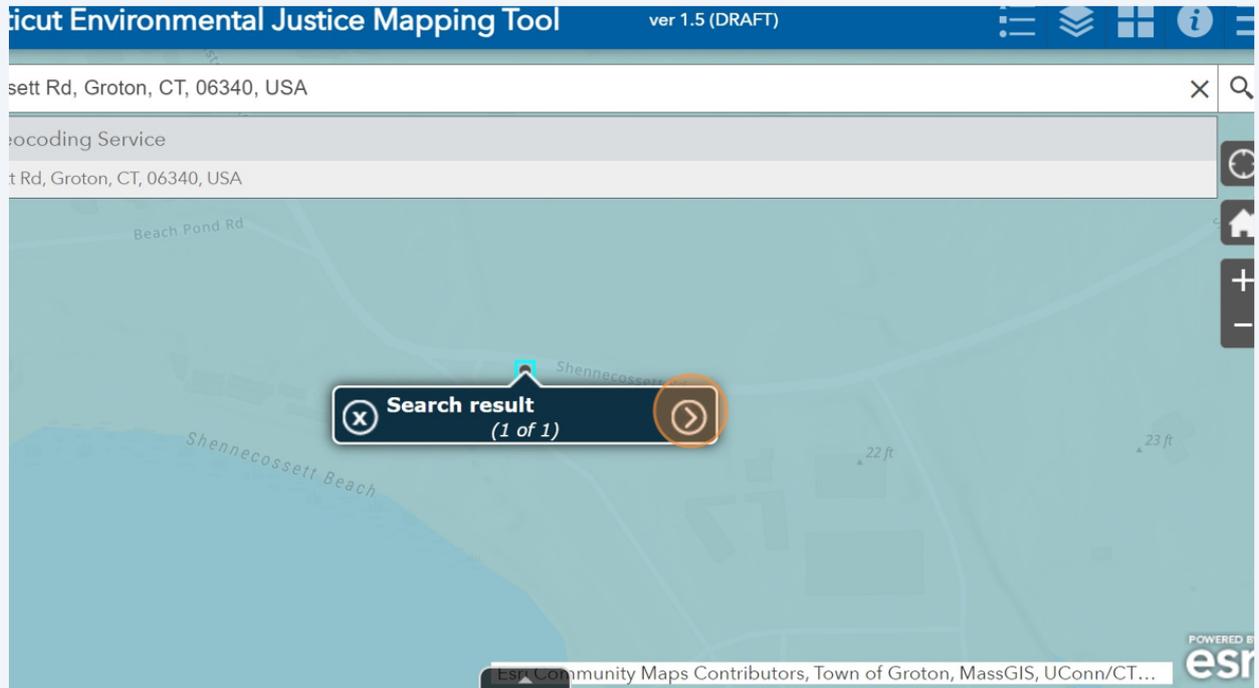
When you are typing the address, the ArcGIS World Geocoding Service will autocomplete. Click to the address to move the map to the exact location.



Caution! The exact address search is smaller resolution than the map. The map only displays census tracts. Please zoom out or click to the nearest census tract.

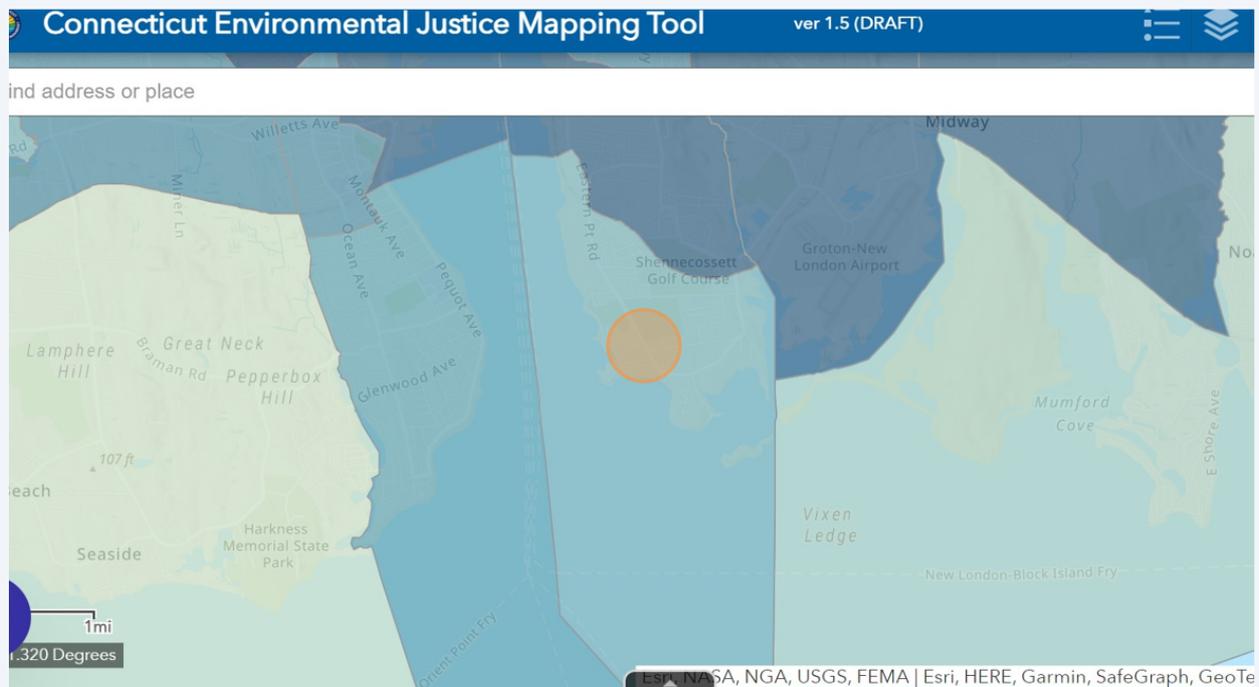
11

If the address is typed, then please click "x" and zoom out to see the specific census tract that the address is located.



12

Click on the census tract that has the address to display specific pop-up information.



13 Click ">" to display the pop-up.



14 Click "x" to close any pop-ups.



15 Click on ">" to display the pop-ups.

 (3 of 3)

Environmental Justice Index at Census Tract 8401 in Willington, Tolland

Compared to all census tracts in the state, this tract is in the 29.35th percentile and ranked **2.90 out of 10** are shown by darker areas on the map and represent higher potential cumulative impacts.

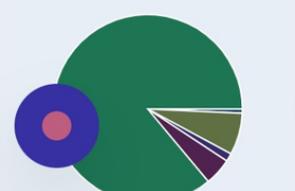
Environmental Justice Index score represents a total potential environmental risk for each census tract in pollution burden and population's socioeconomic and health factors.

This tract has 5,586 people over a 33.52 square mile area.

23.70% of the community is under the 150% below the federal poverty level. The median income is \$78,3 rate is 19.50%. There are 13.87% of minoritized group in Census Tract 8401.

Race/Ethnicity Distribution in Census Tract 8401, at Willington

Hover your mouse over to see the percentage of race/ethnicity distribution in Census Tract 8401



Caution! Pop-ups related to the each layer can show differently depending on the device that is being used. Please click on ">" to view the pop-ups.

16

Click ">" next to the graphs to see every available graph. Hover your mouse over to display specific information about the graphs.



(1 of 1)

Environmental Justice Index at Census Tract 7026 in Groton, New London

Compared to all census tracts in the state, this tract is in the 36.06th percentile and ranked **3.60 out of 10** are shown by darker areas on the map and represent higher potential cumulative impacts.

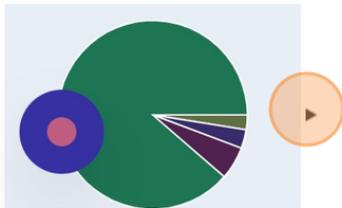
Environmental Justice Index score represents a total potential environmental risk for each census tract in pollution burden and population's socioeconomic and health factors.

This tract has 1,147 people over a 4.23 square mile area.

2.91% of the community is under the 150% below the federal poverty level. The median income is \$114,6 rate is 57.40%. There are 11.77% of minoritized group in Census Tract 7026.

Race/Ethnicity Distribution in Census Tract 7026, at Groton

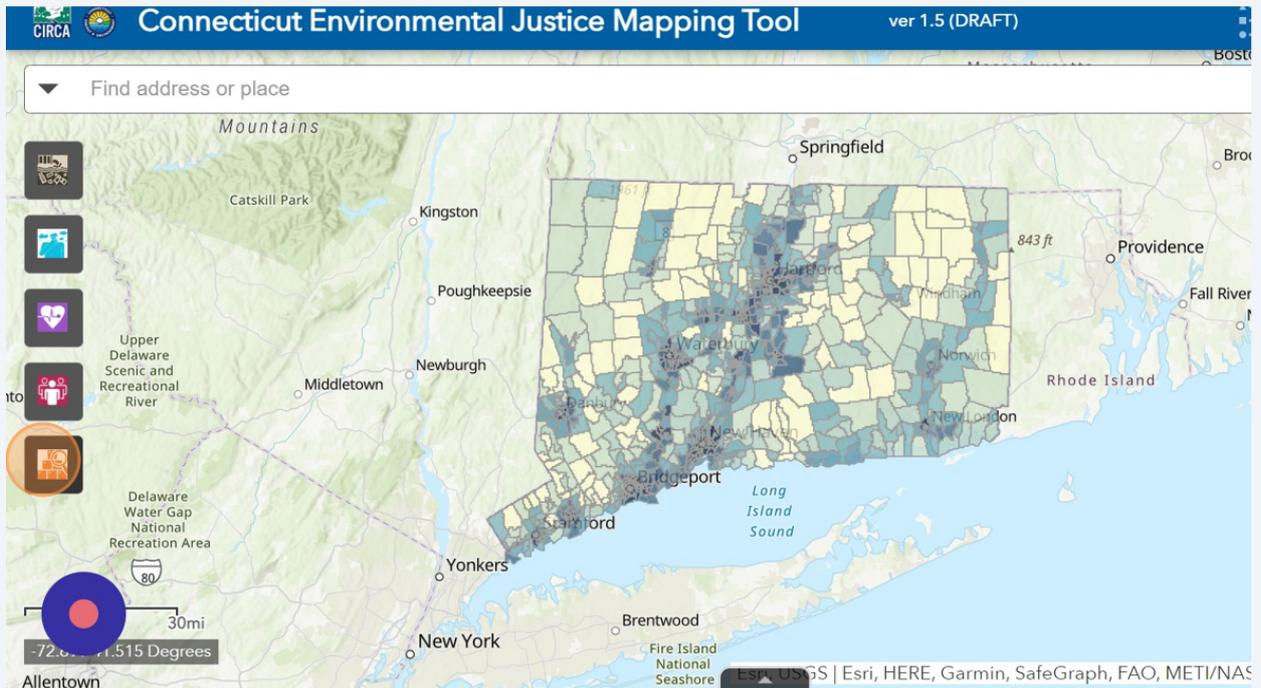
Hover your mouse over to see the percentage of race/ethnicity distribution in Census Tract 7026



Displaying different indicators and indices

17

Click on left-hand side widgets to display specific indicators and indices. There are five widgets that show, Potential Pollution Sources, Potential Pollution Exposure, Health Sensitivity, Socioeconomic Factors and Composite Indices.



Tip! Please see what each icon represents. Each category of indicators will have the same color scheme.

18

Once the widgets for indicators and indices are clicked, a list of layers will be shown.

Connecticut Environmental Justice Mapping Tool Index

Search for address or place

Layers

- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

19

Click and unclick each to display specific layers.

Connecticut Environmental Justice Mapping Tool Index

Search for address or place

Layers

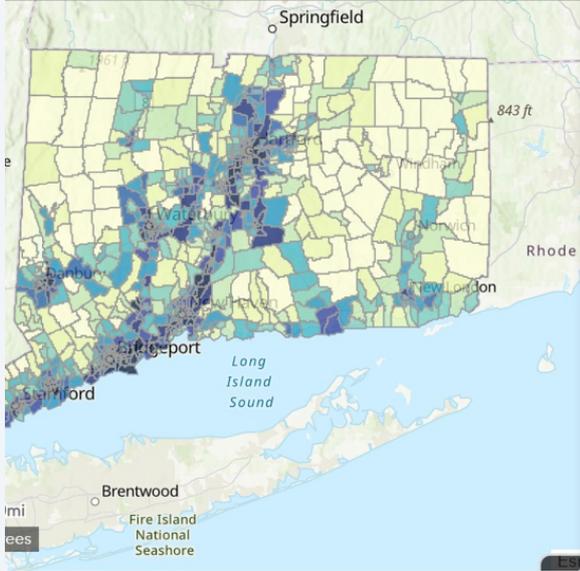
- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

Connecticut Environmental Justice Mapping Tool

Index



Address or place



Layers

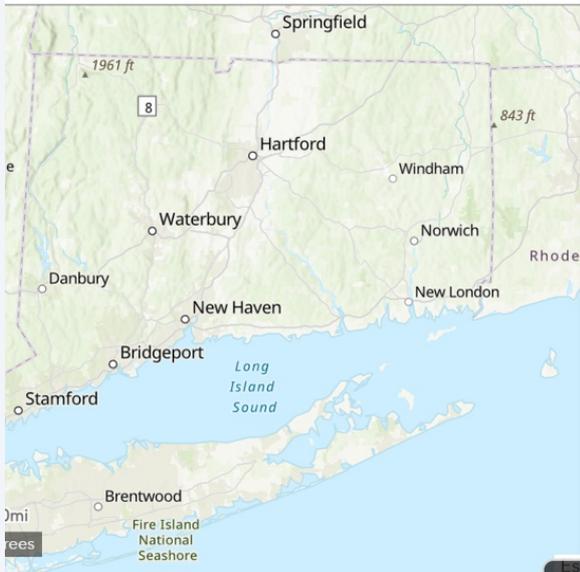
- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

Connecticut Environmental Justice Mapping Tool

Index



Address or place



Layers

- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

Connecticut Environmental Justice Mapping Tool Index

Layers

- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

 Caution! Please unclick each layer before displaying a different layer.

20 Click "Close window" to close the specific widget layers.

Connecticut Environmental Justice Mapping Tool Index

Layers

- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

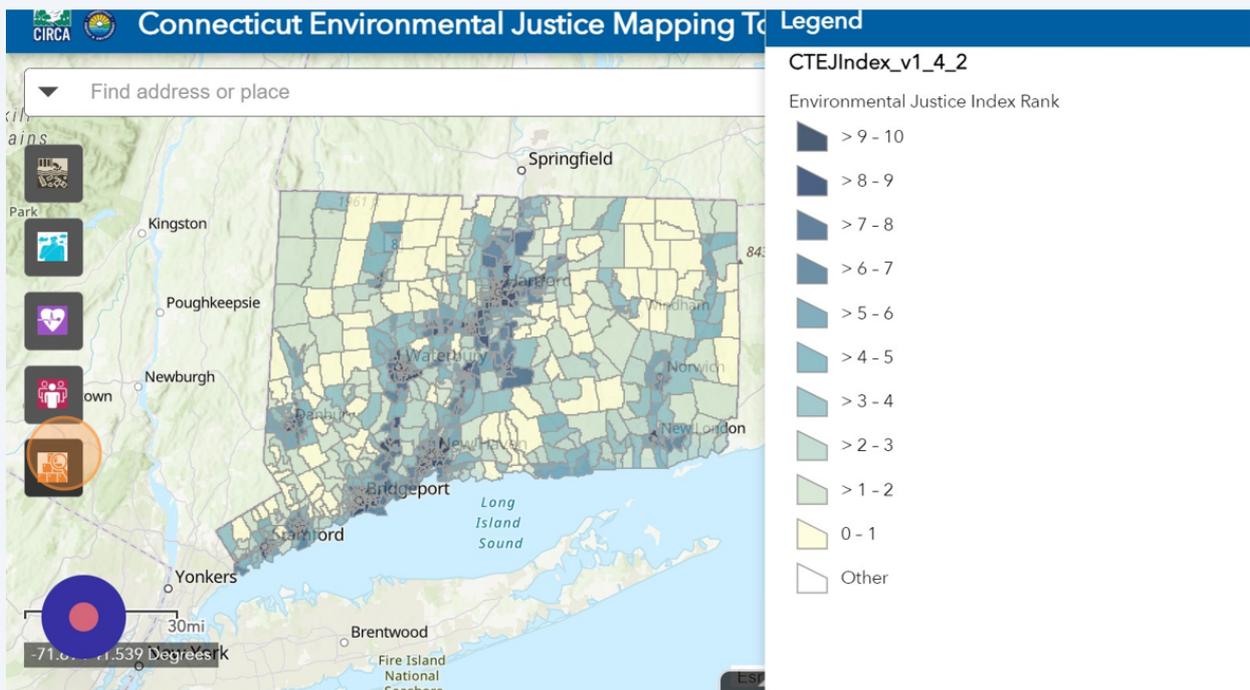
Widgets for displaying more information



Tip! All the widgets for displaying more information are in the top right corner. of the screen.

21

Click on the "Legend" widget to display the color coding scheme.

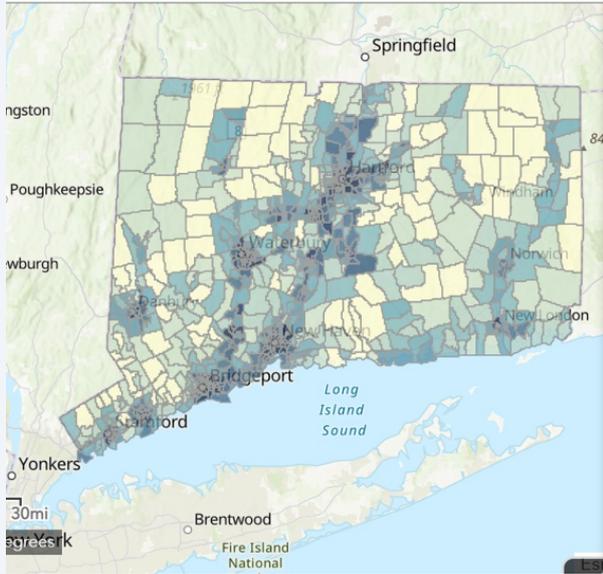


22

Alternatively, click " Expand " for each layer to see their specific legend. Click "Collapse"

Connecticut Environmental Justice Mapping Tool Index

Address or place

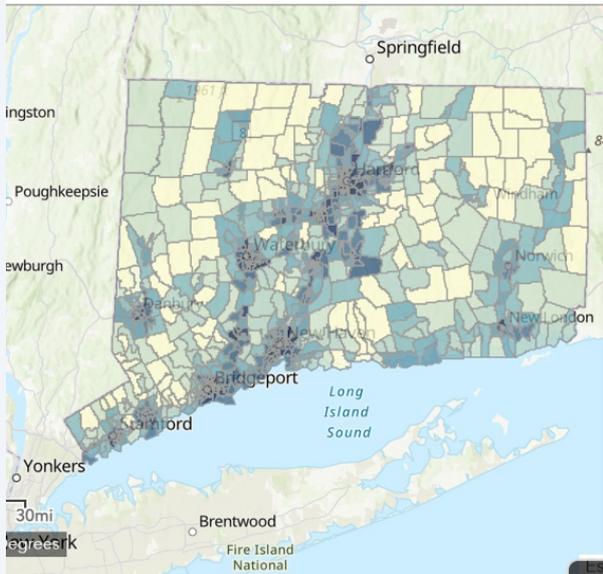


Layers

- CTEJIndex_v1_4_2
- Pollution Burden
- Pollution Sources
- Pollution Exposure
- Sensitive Population
- SocioEconomic Factors
- Health Sensitivity

Connecticut Environmental Justice Mapping Tool Index

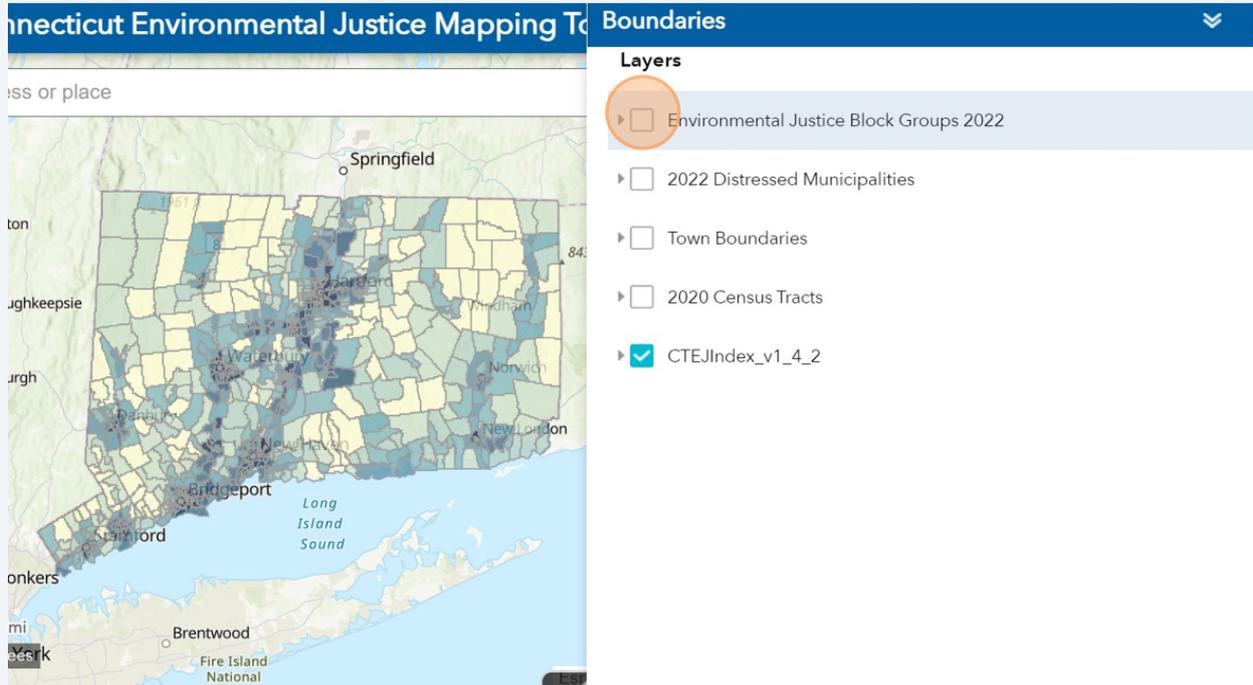
Address or place



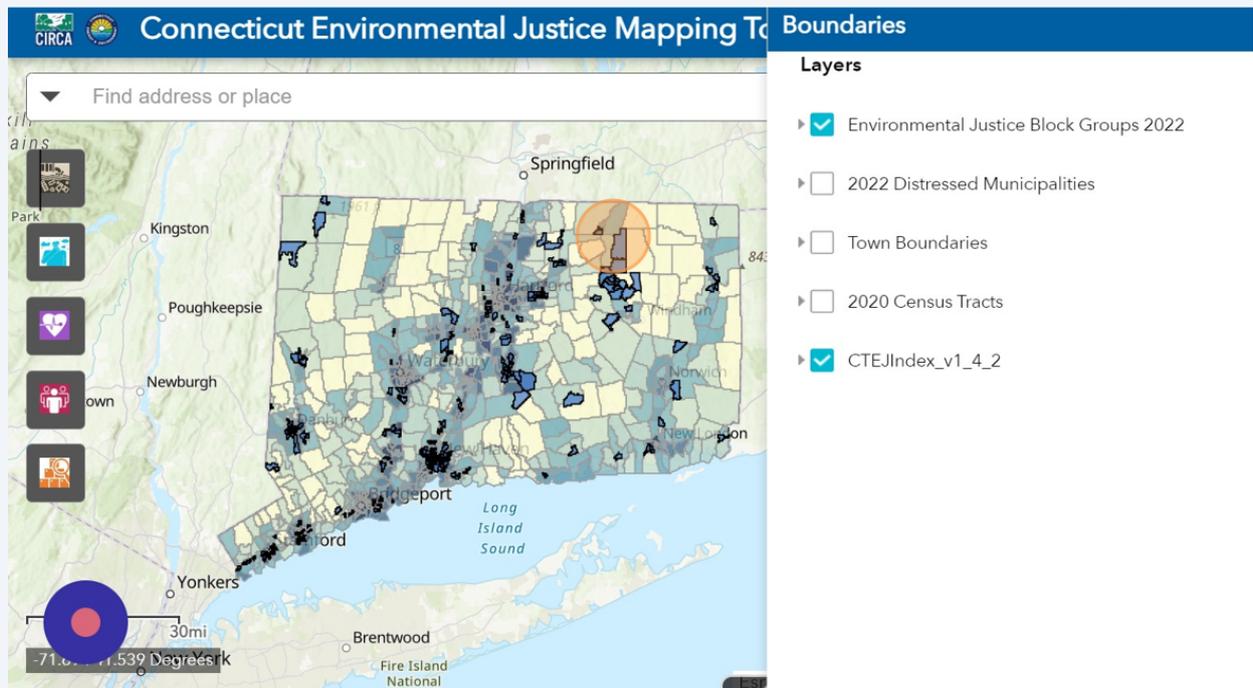
Layers

- CTEJIndex_v1_4_2
- Environmental Justice Index Rank
- > 9 - 10
 - > 8 - 9
 - > 7 - 8
 - > 6 - 7
 - > 5 - 6
 - > 4 - 5
 - > 3 - 4
 - > 2 - 3
 - > 1 - 2
 - 0 - 1
 - Other

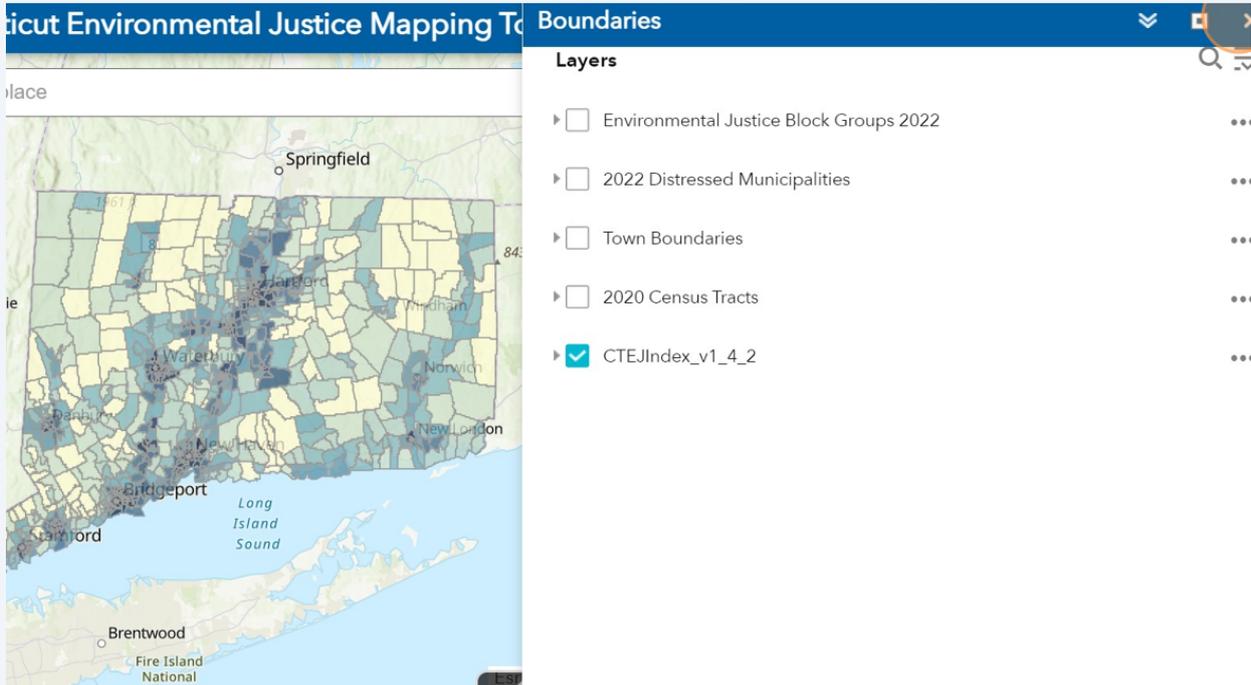
23 Click on the "Boundaries" to overlay specific boundaries over the layers.



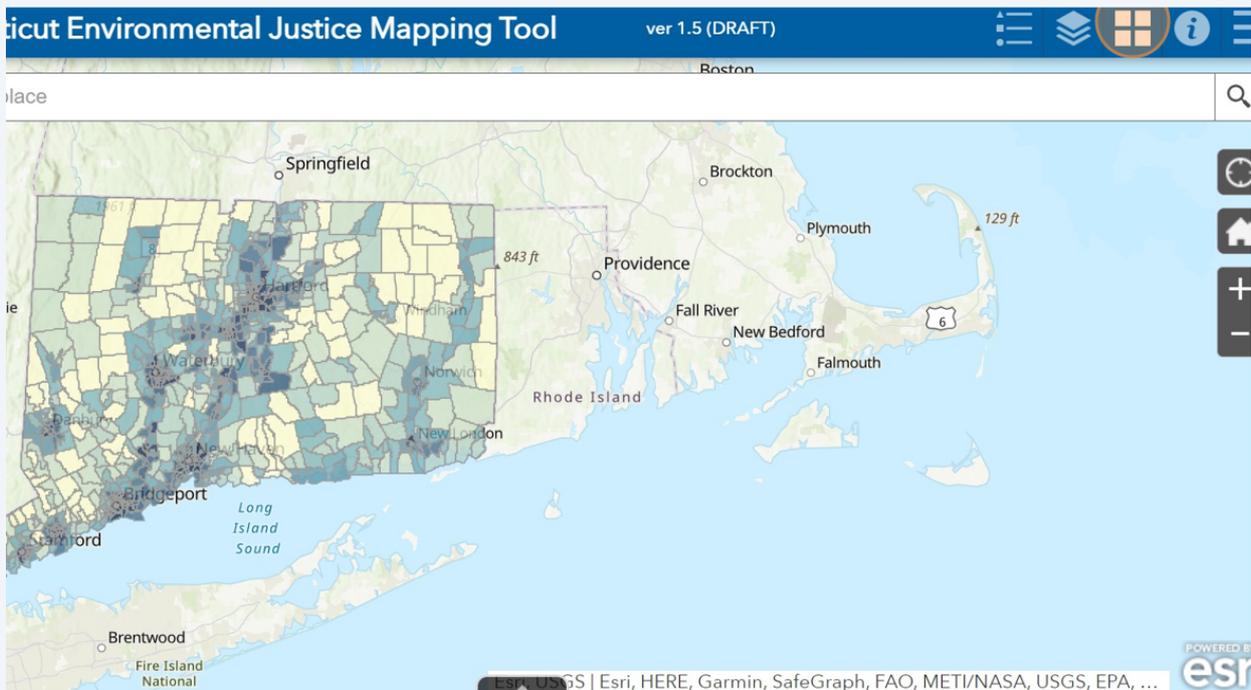
24 The selected boundary layer will overlay on the selected layers.



25 Click "x" to close window.

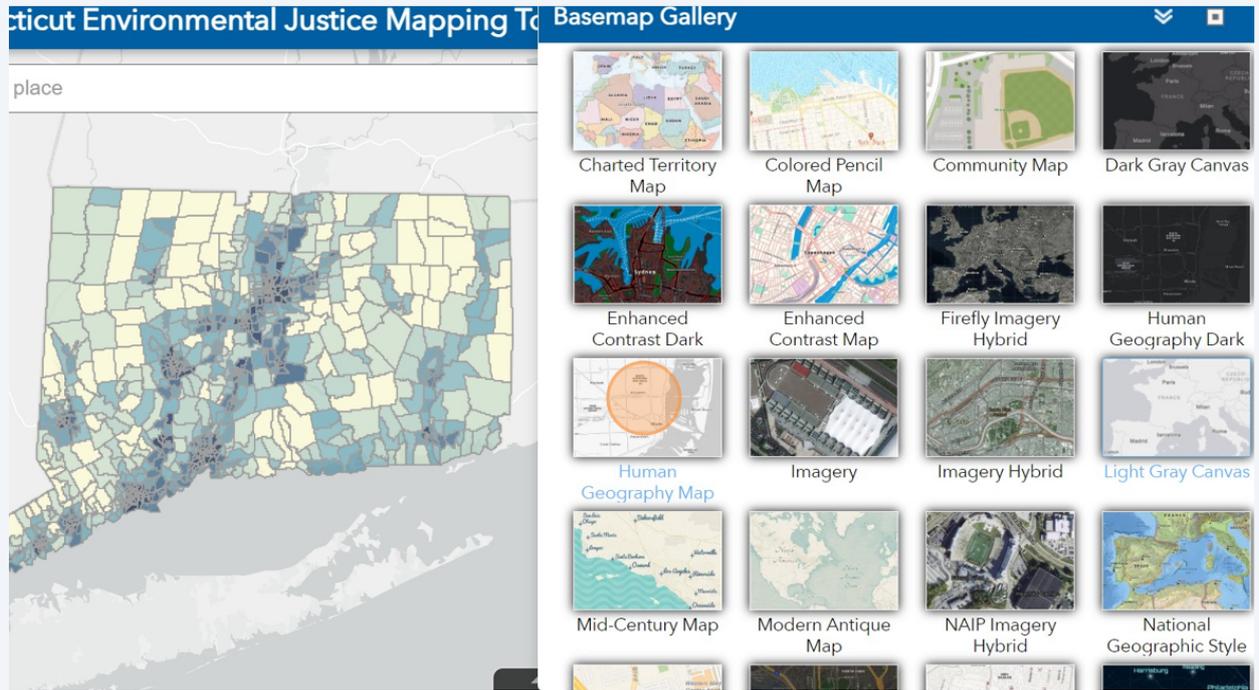


26 Change the "Basemap Gallery" using the icon.



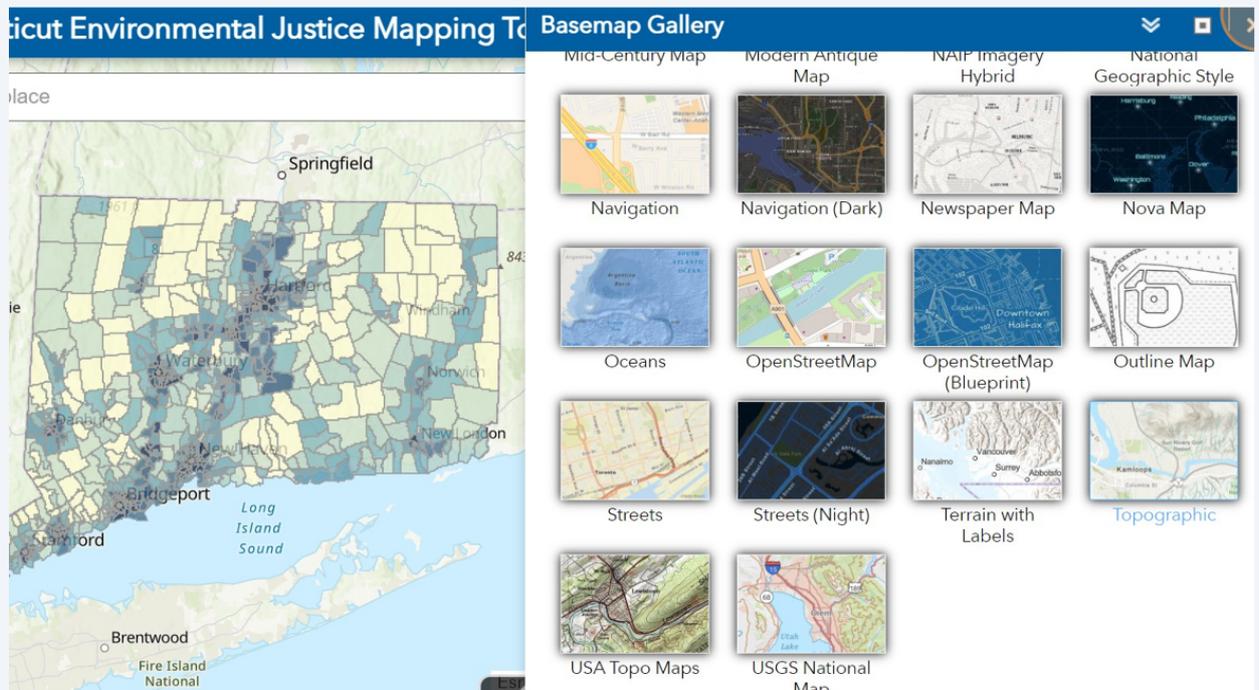
27

Click any of the base maps in the gallery to change the Basemaps.

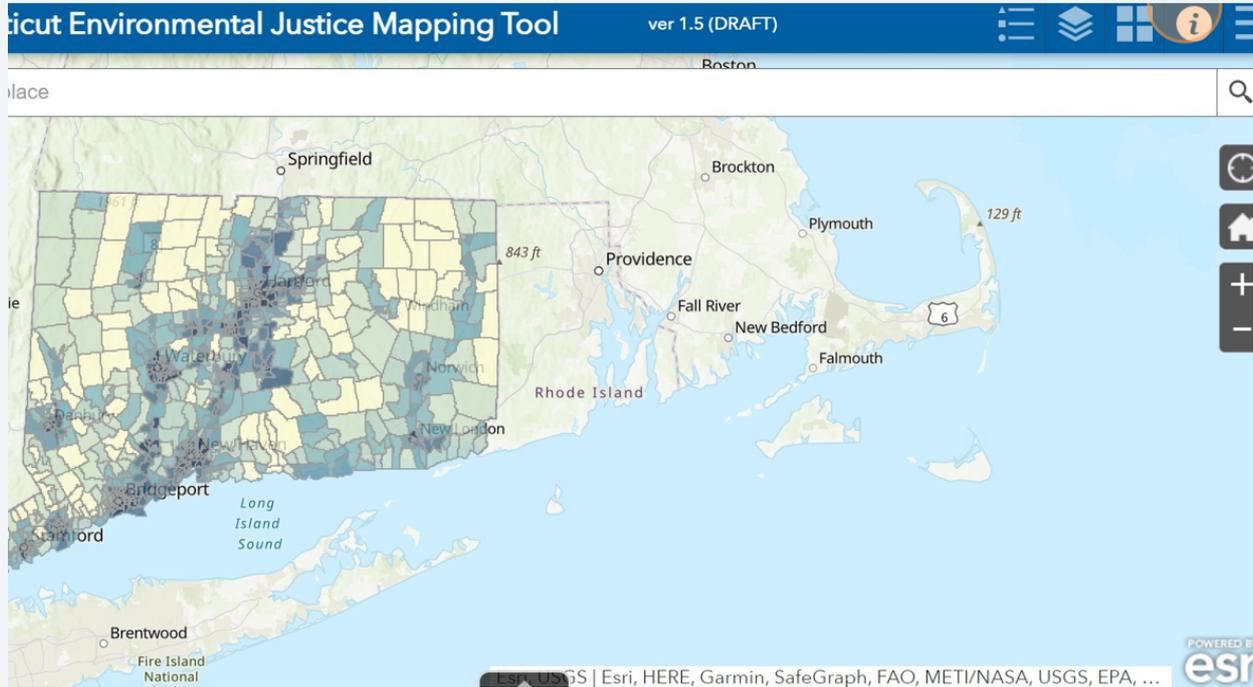


28

Click "Close window"



29 Click the "Infographic" icon to get more information about the tool.



30 Infographic will give short information "About Data and Map Presentation". Click "x" to close the window.

About Data and Map Presentation

...tracts within the state. The ranking provides a common scale to compare various indicators at the community level and to assess the cumulative impact of the indicators across communities. The map displays the ranks from 1 (least impacted) to 10 (most impacted) (Figure 1). Rankings can help to highlight areas where certain hazards or impacts are more severe and can be used to identify patterns in the distribution of environmental risks. They will not provide how much the difference is between each tract.

Darker areas = Higher rankings = Higher potential risk

Least impacted								Most impacted	
1	2	3	4	5	6	7	8	9	10
30% of communities	30% of communities	30% of communities	30% of communities	30% of communities	30% of communities	30% of communities	30% of communities are similarly impacted	30% of communities	30% of communities
70% of communities are less impacted							20% of communities are more impacted		

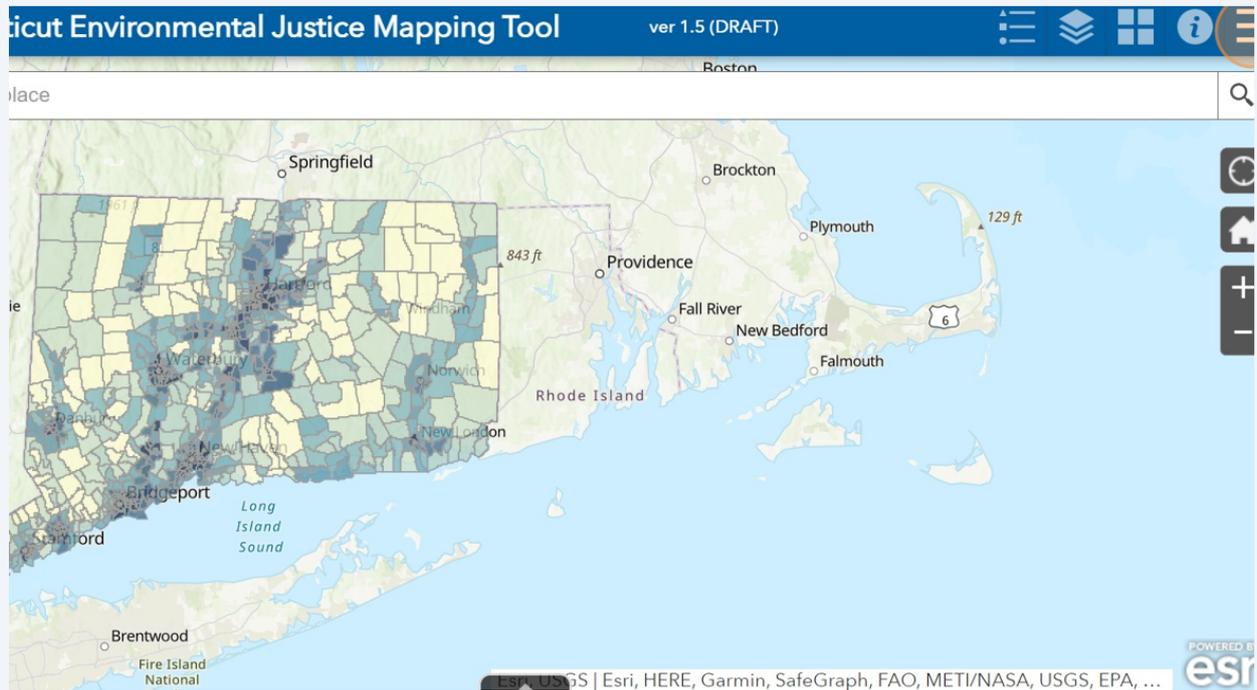
Figure 1: Rank representation of the indicators and indices

For example, suppose the community has a rank of 8 for asthma indicators. In that case, asthma indicators similarly impact about 10 percent of census tract communities, 70 percent of tracts are less impacted, and 20 percent are more impacted (Figure 1).

When geographical areas do not have indicators (e.g., census areas do not have the facilities or data is uncertain), it is excluded from percentile and ranking calculation. This way, ranking scores can be considered comparisons between a state's census tracts where affected areas are present.

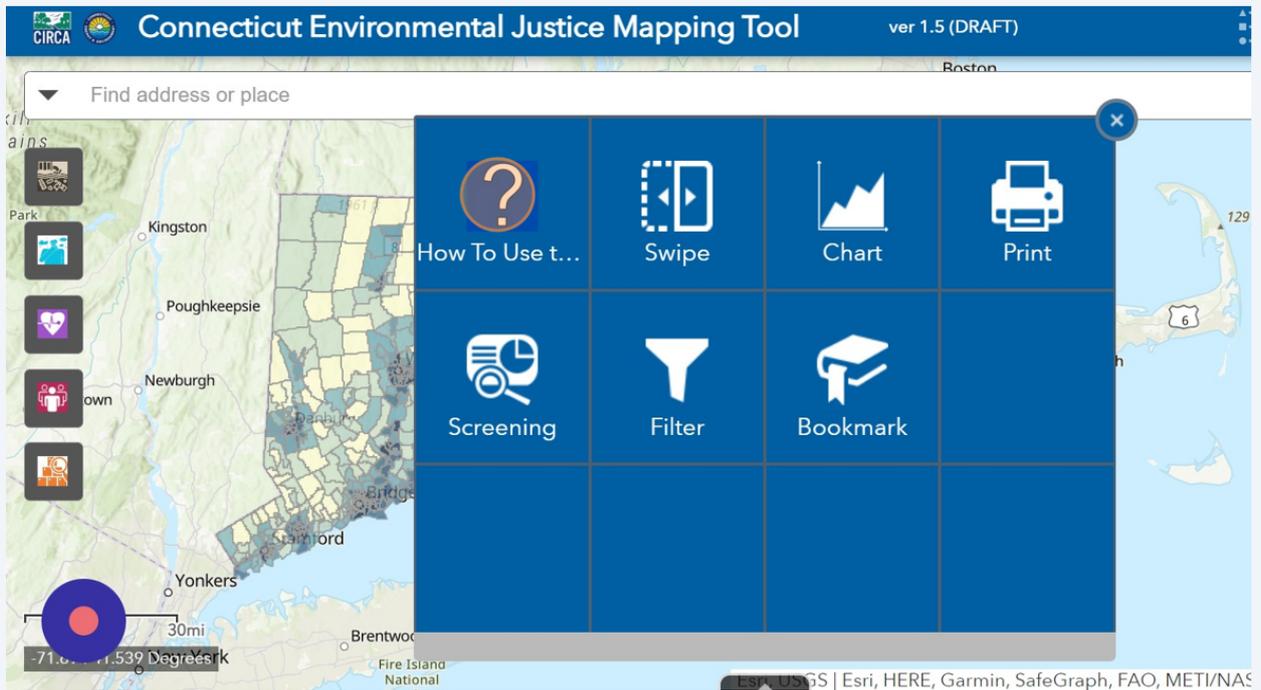
31

Click this image to see more widgets.

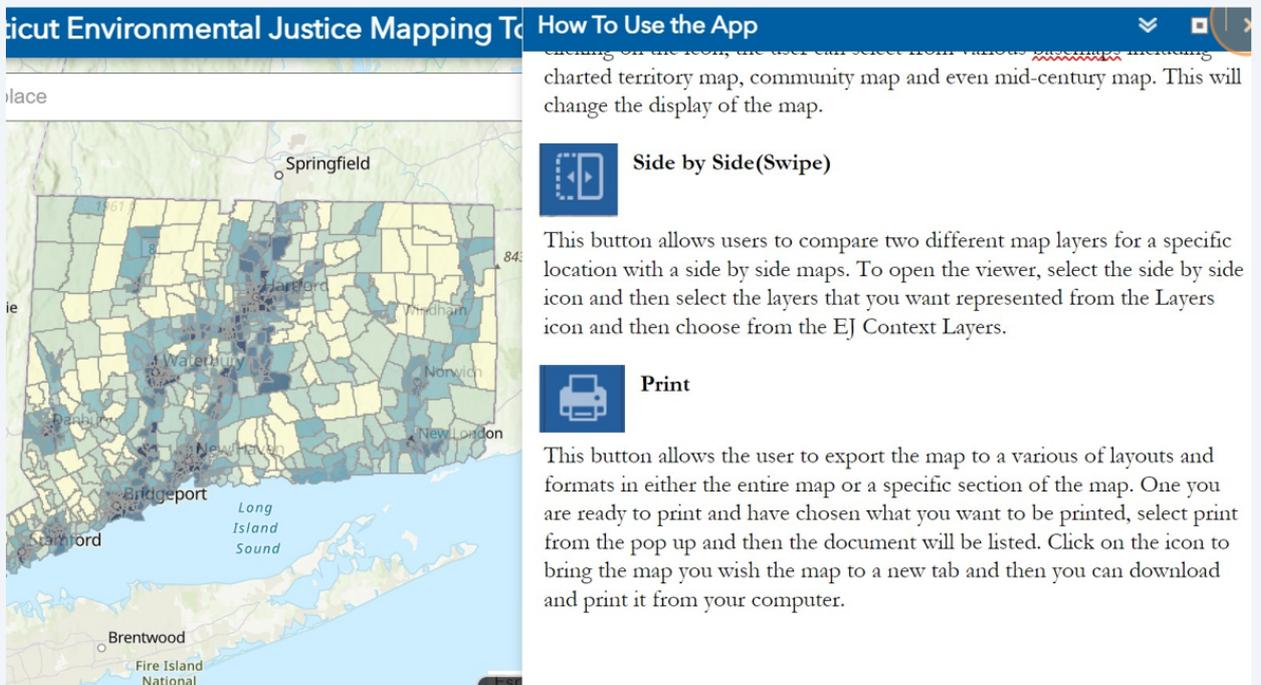


Caution! This icon may show more or fewer widgets depending on the device being used to display the mapping tool. Tables and phones tend to show more widgets under the icon, whereas big screens show fewer. The total number of widgets does not change based on the visualization device.

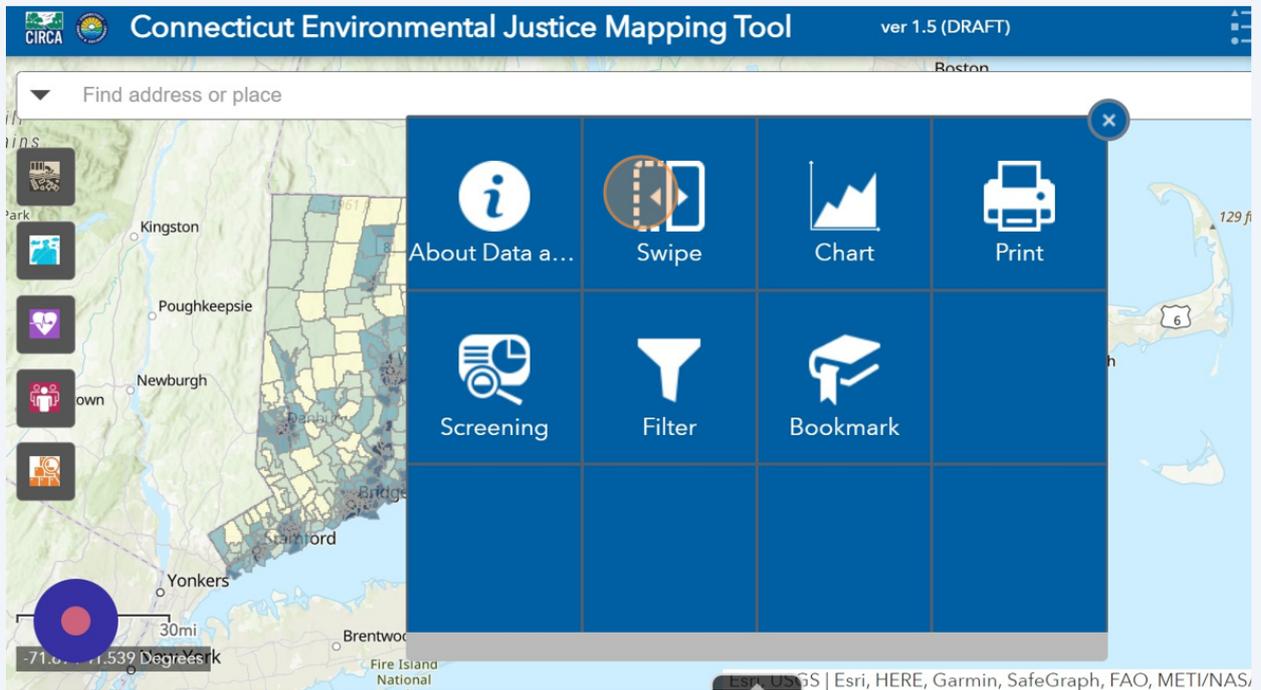
32 Click "Question Mark" to reach "How to Use the App".



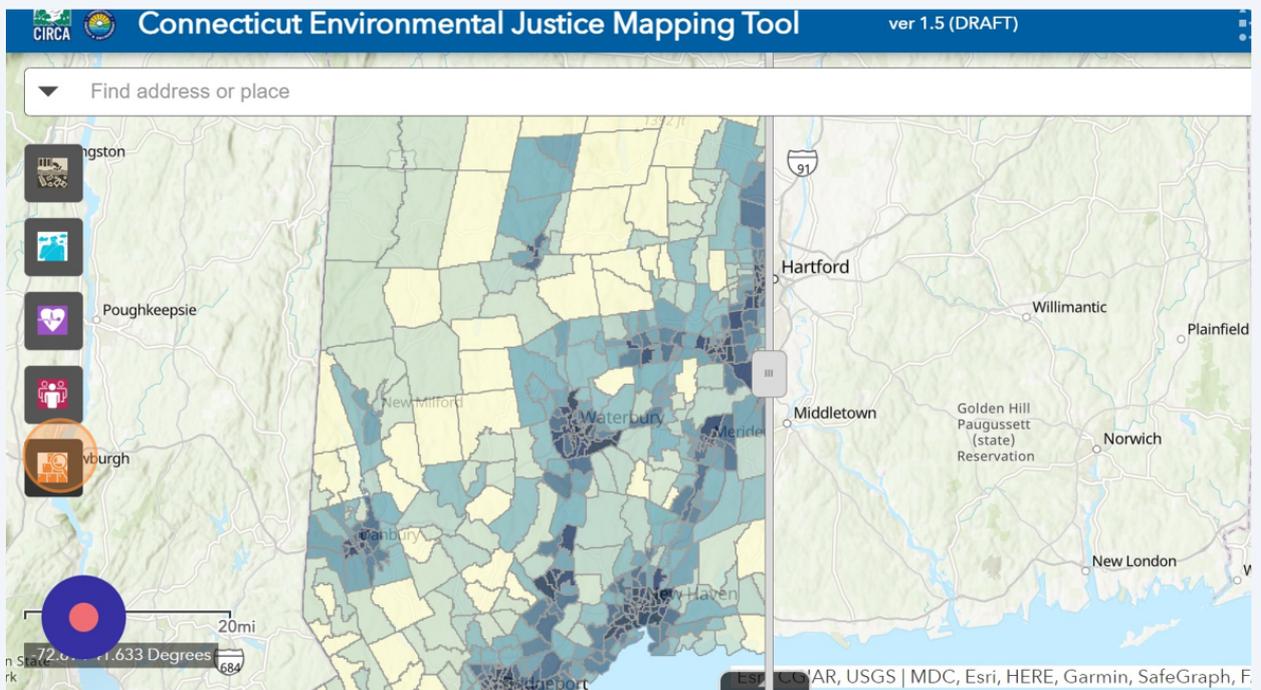
33 "How to Use the App" includes the description and how to use information about the widgets of the tool.



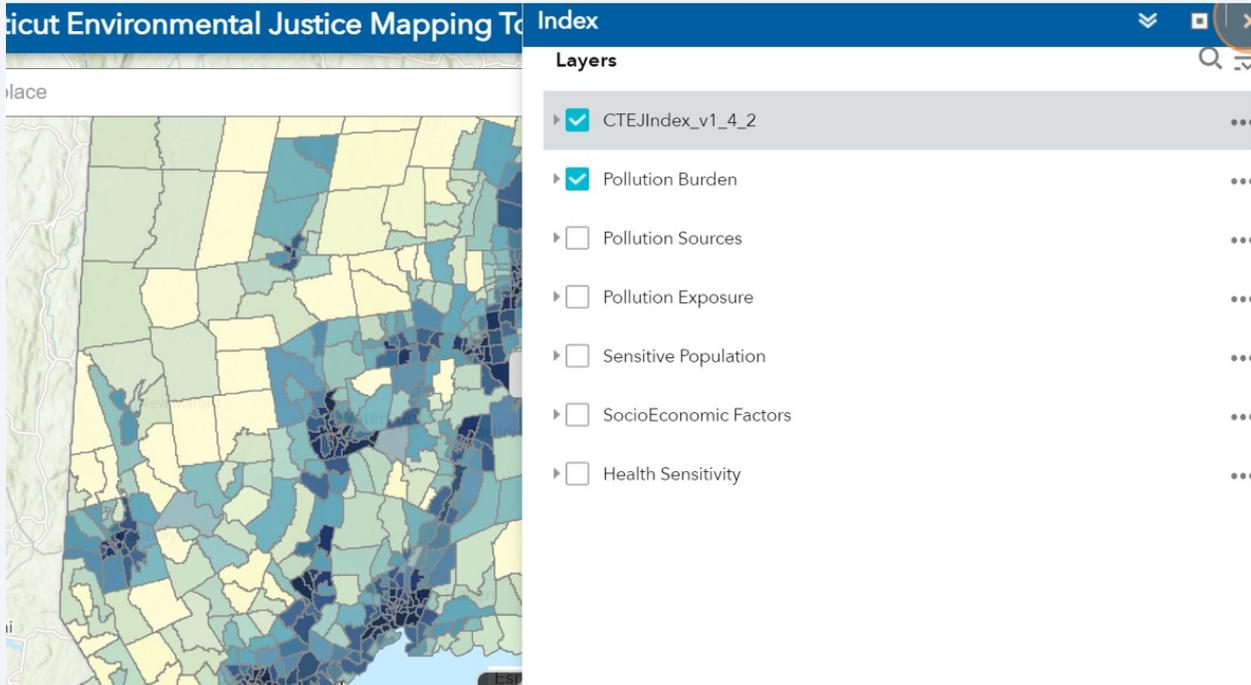
34 Click "Swipe" to display two layers side by side.



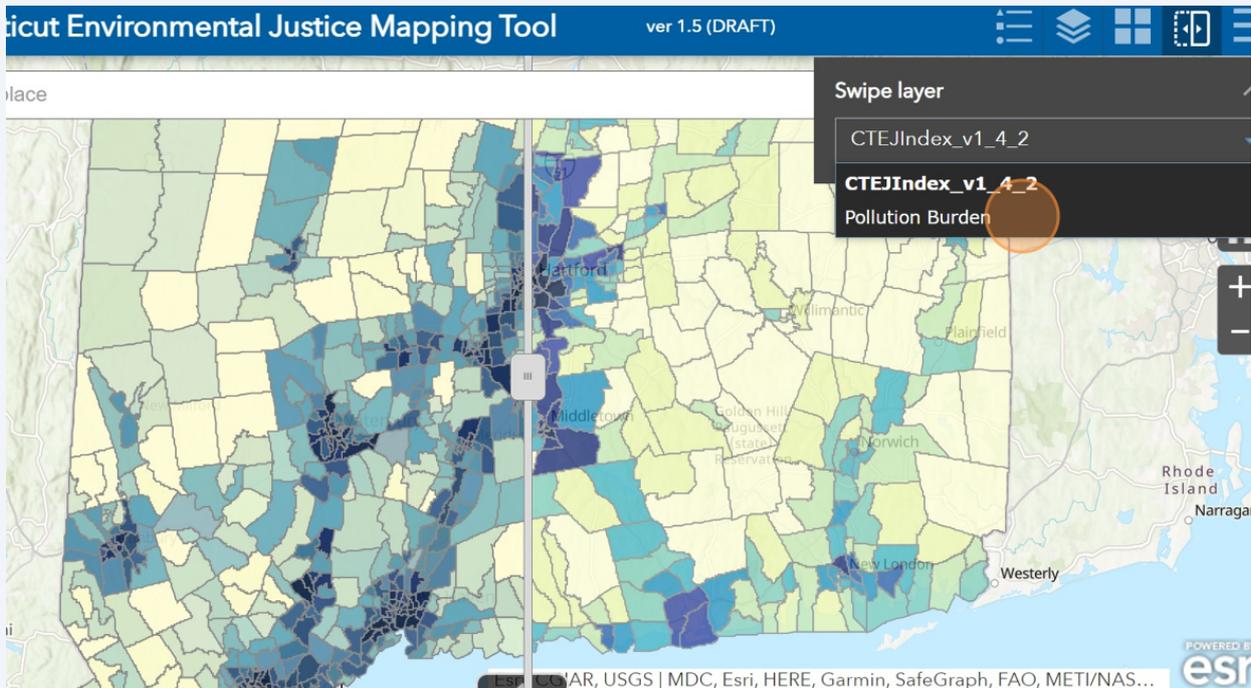
35 "Swipe" divides the screen into two. Chose any layer from the Indicator and Indices widgets to overlay and swipe between layers.



36 Swipe works best with chose any two layers.



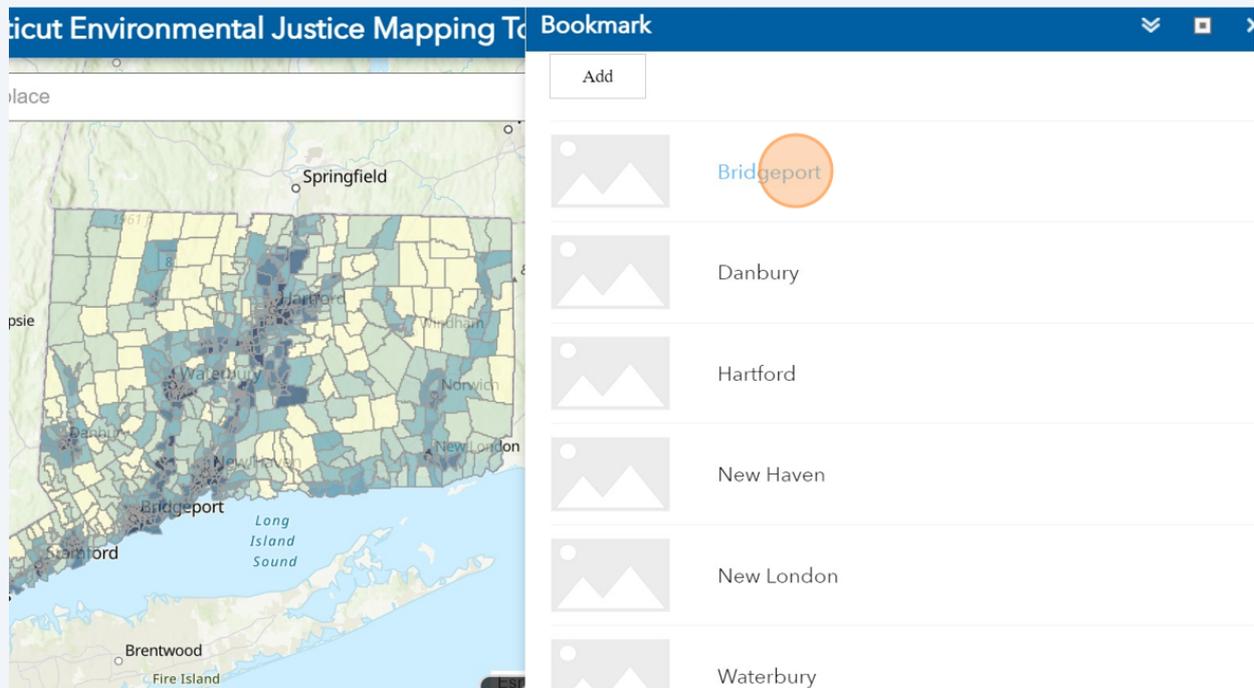
37 The top layer on the swipe is on the left side of the screen and the bottom layer will be on the right side of the screen. Move the swipe panel to visualize overlaying layers.



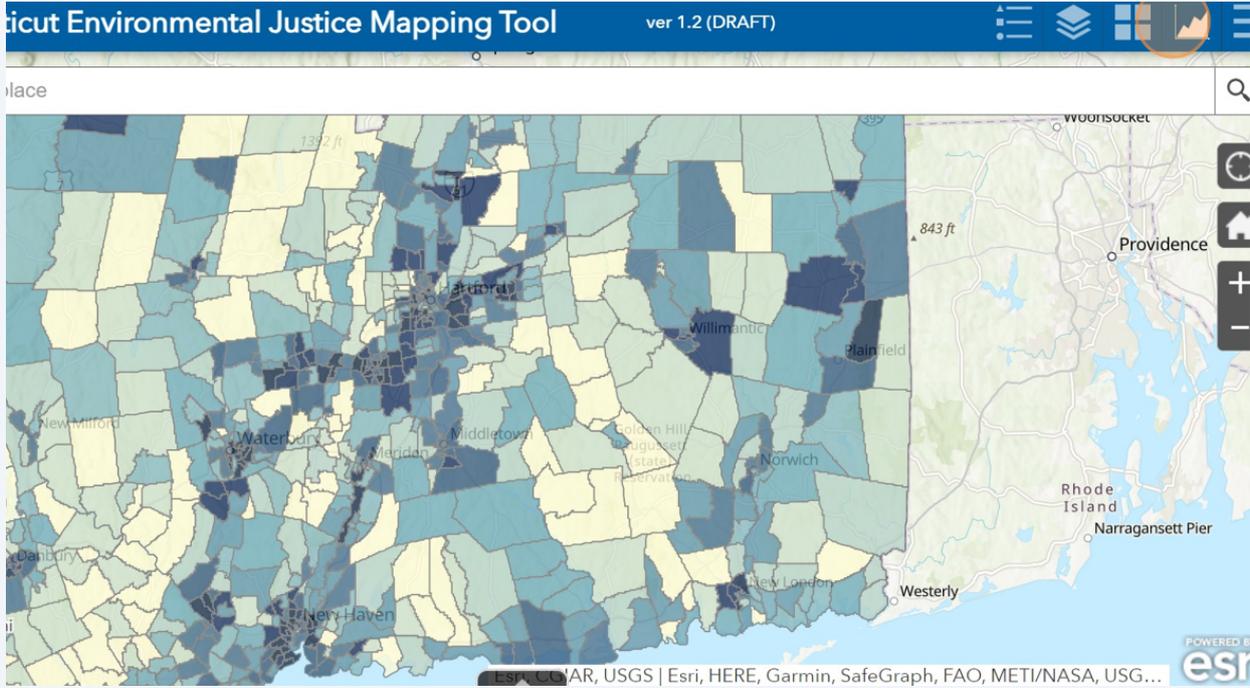
38 Click on the "Bookmark" icon to jump into the specific EJ towns.



39 Bookmark will show six towns that have the highest EJ ranks.



- 1 Click "Chart" to display the CT EJ Index scores for a specific town region in a graphical form.



2 Click "CTEJIndex"

Connecticut Environmental Justice Mapping Tool Chart

Click one of the following task items to execute chart.

CTEJIndex_v12

Clear

3 Click "Use spatial filter to limit features"

Connecticut Environmental Justice Mapping Tool Chart

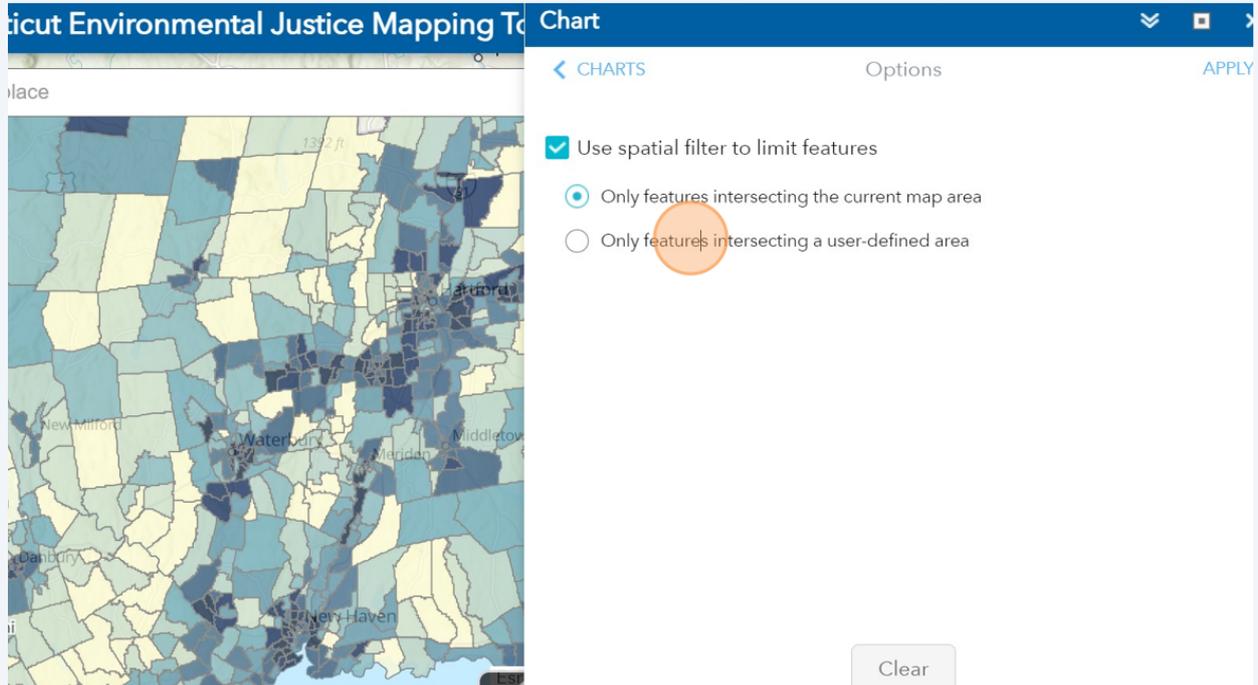
Options APPLY

Use spatial filter to limit features

Clear

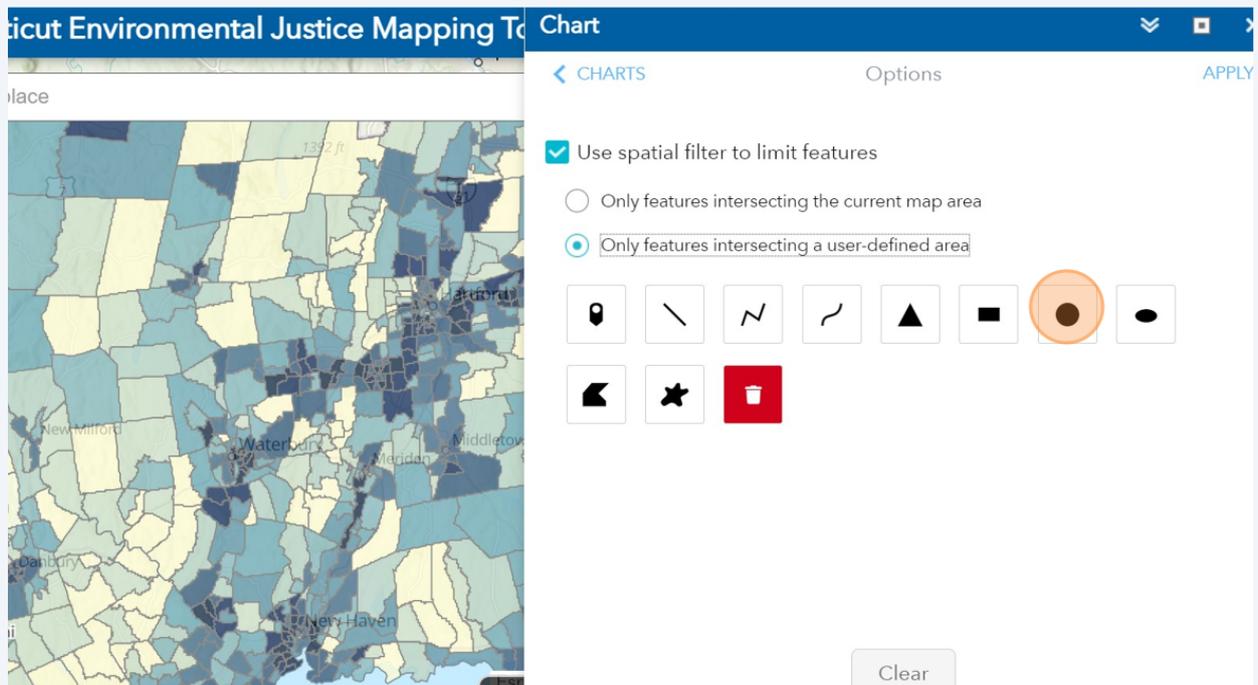
4

There are two options to use the spatial filter. Click "Only features intersecting a user-defined area"

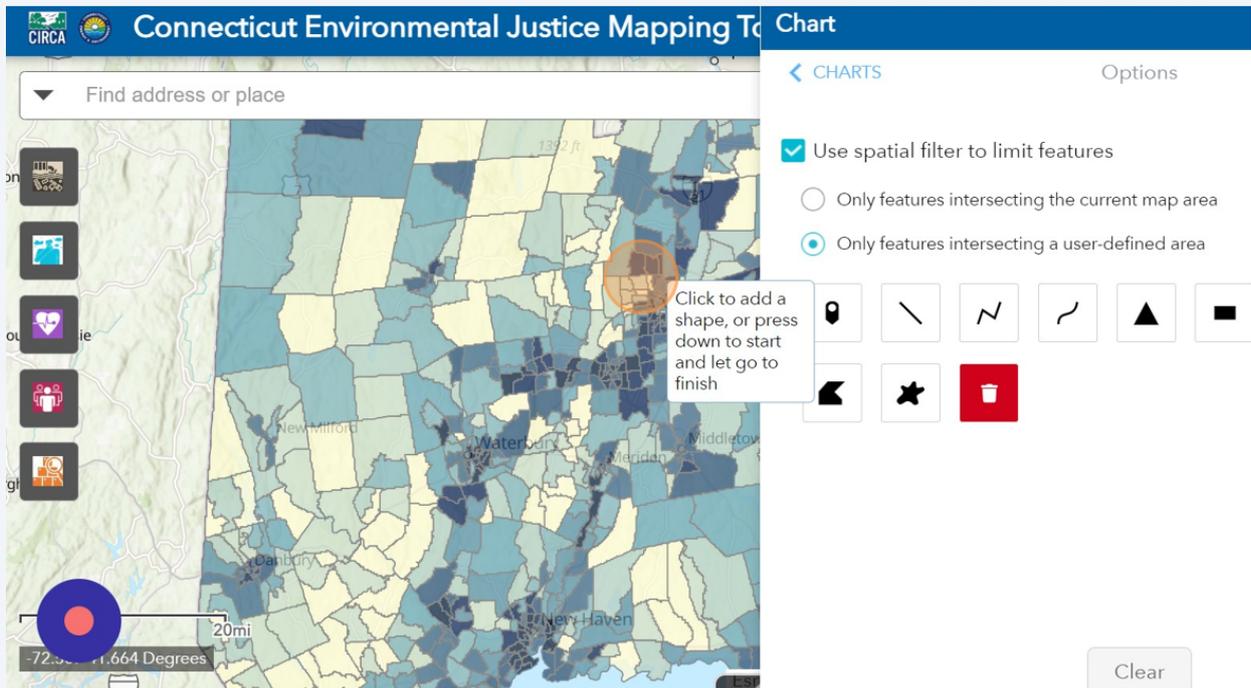


5

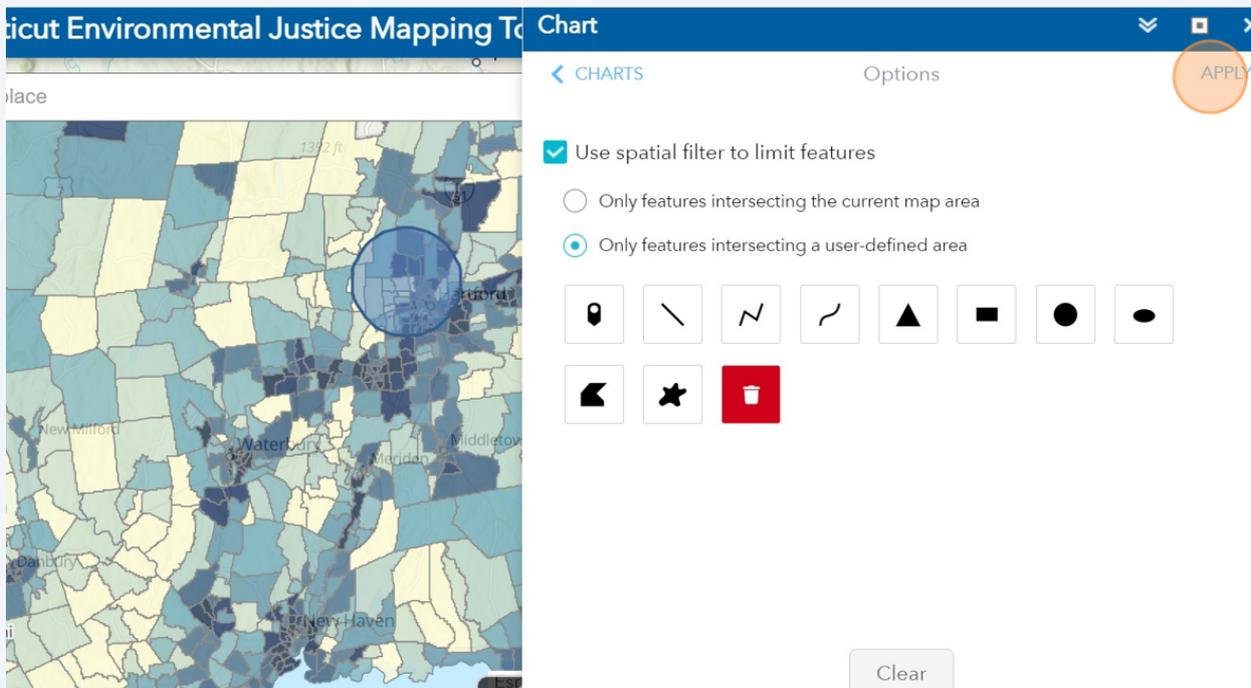
Chose and click on any of the drawing tools. In this tutorial, we chose circle icon. Click on Trash Bin to delete the drawing.



6 Instructions on how to use each selection tool are present. Select any region.

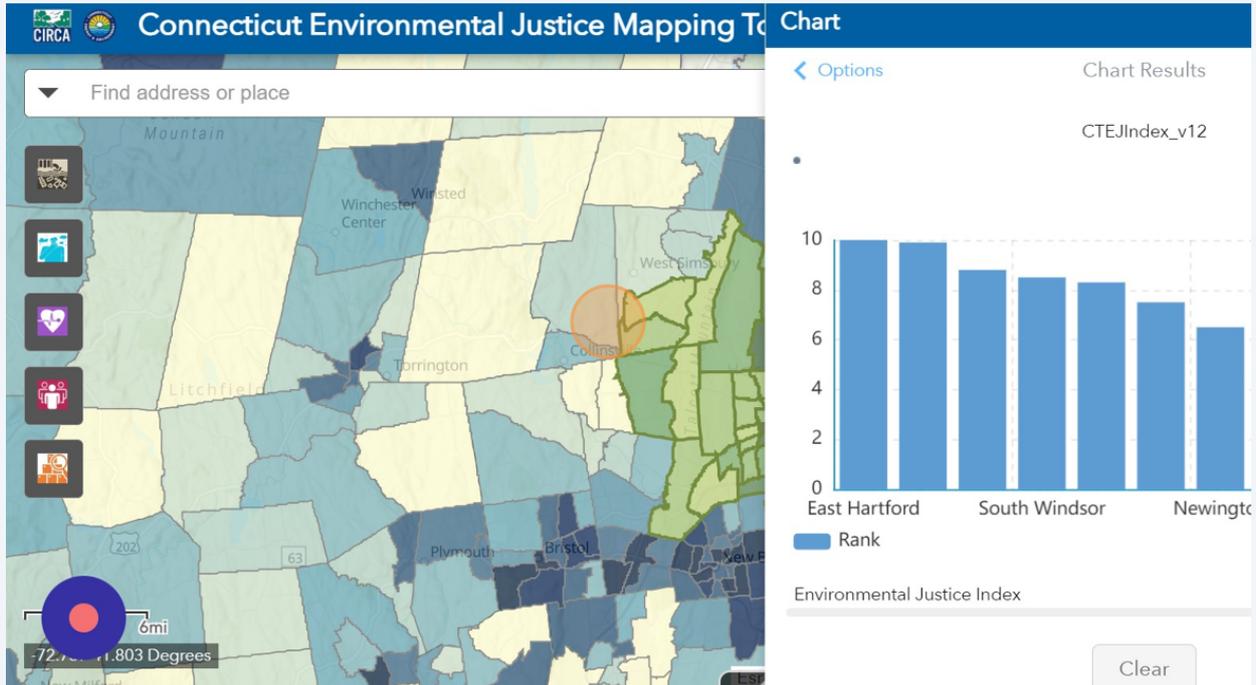


7 Click "APPLY"



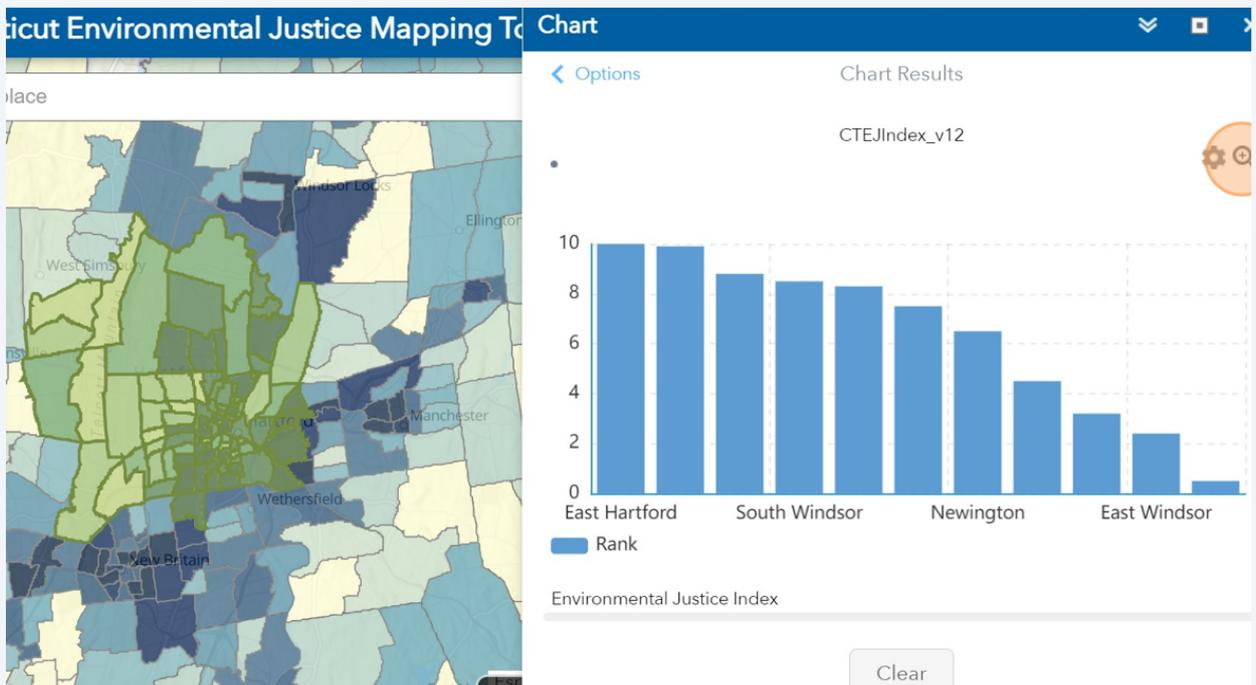
8

Chart widget will display the Environmental Justice Ranks of the selected towns in descending order via a graph. Hover your mouse over to see the specific score of each town.

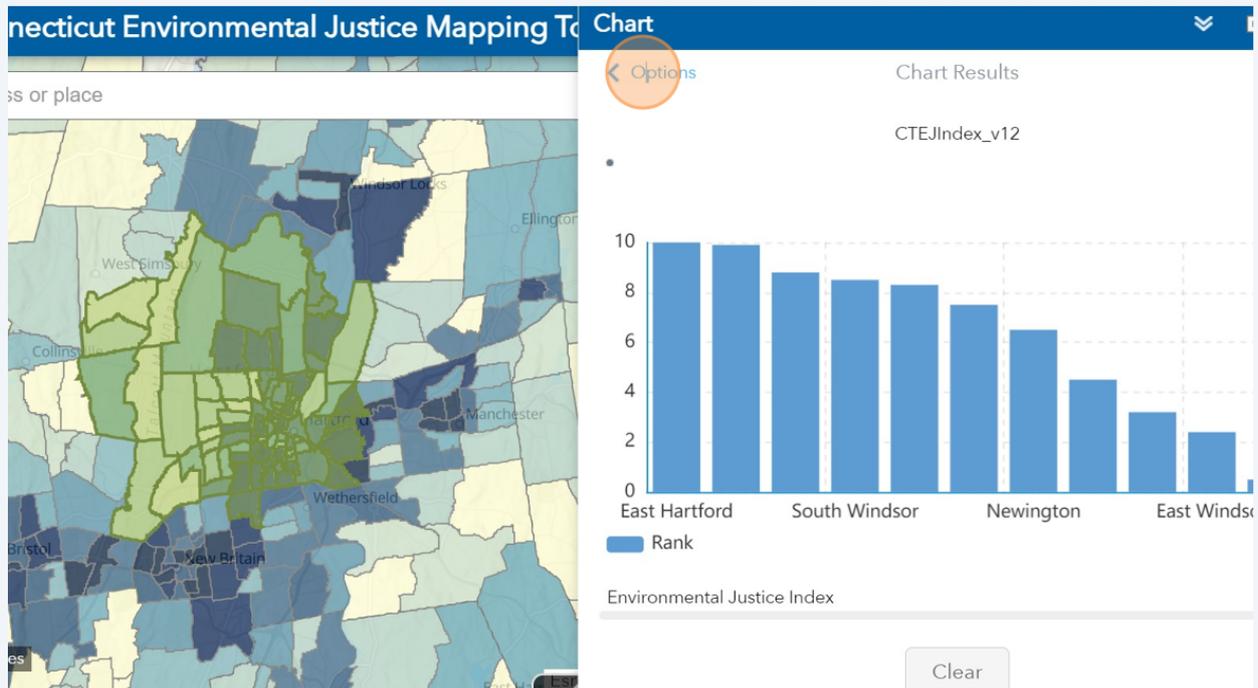


9

Click here to maximize the graph.



10 Click "Options" to go back to the settings again.



11 Click "Clear" to delete the selected area.

The screenshot shows the 'Connecticut Environmental Justice Mapping Tool' interface with the 'Options' menu open. The menu is titled 'Options' and has a 'Clear' button highlighted with an orange circle. The menu includes a checked checkbox for 'Use spatial filter to limit features' and two radio button options: 'Only features intersecting the current map area' and 'Only features intersecting a user-defined area'. Below these are several icons for different shapes and lines, and a red trash can icon for clearing the selection.

12

Alternatively, click on "Only features intersecting the current map area" to display the graph for the current screen. Click Apply.

Connecticut Environmental Justice Mapping Tool Chart

Options

Use spatial filter to limit features

Only features intersecting the current map area

Only features intersecting a user-defined area

APPLY

Clear

13

Move the toggle to display a smaller or bigger range of the graph.

Connecticut Environmental Justice Mapping Tool Chart

Options Chart Results

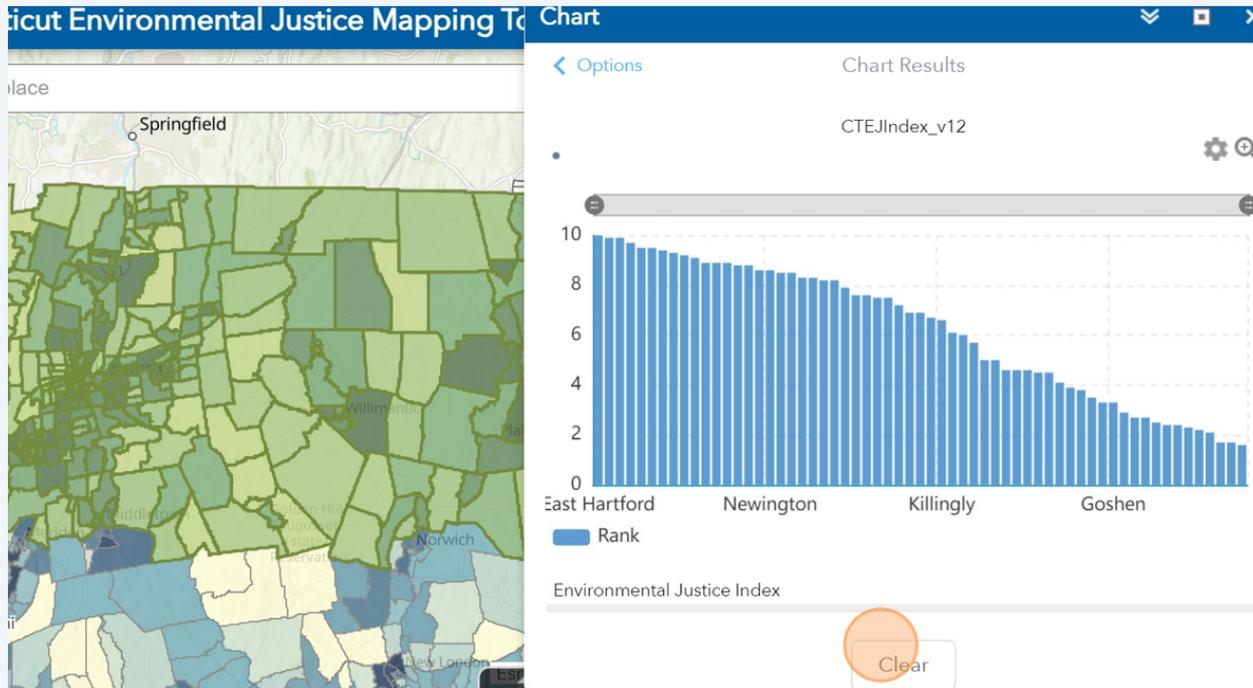
CTEJIndex_v12

Rank

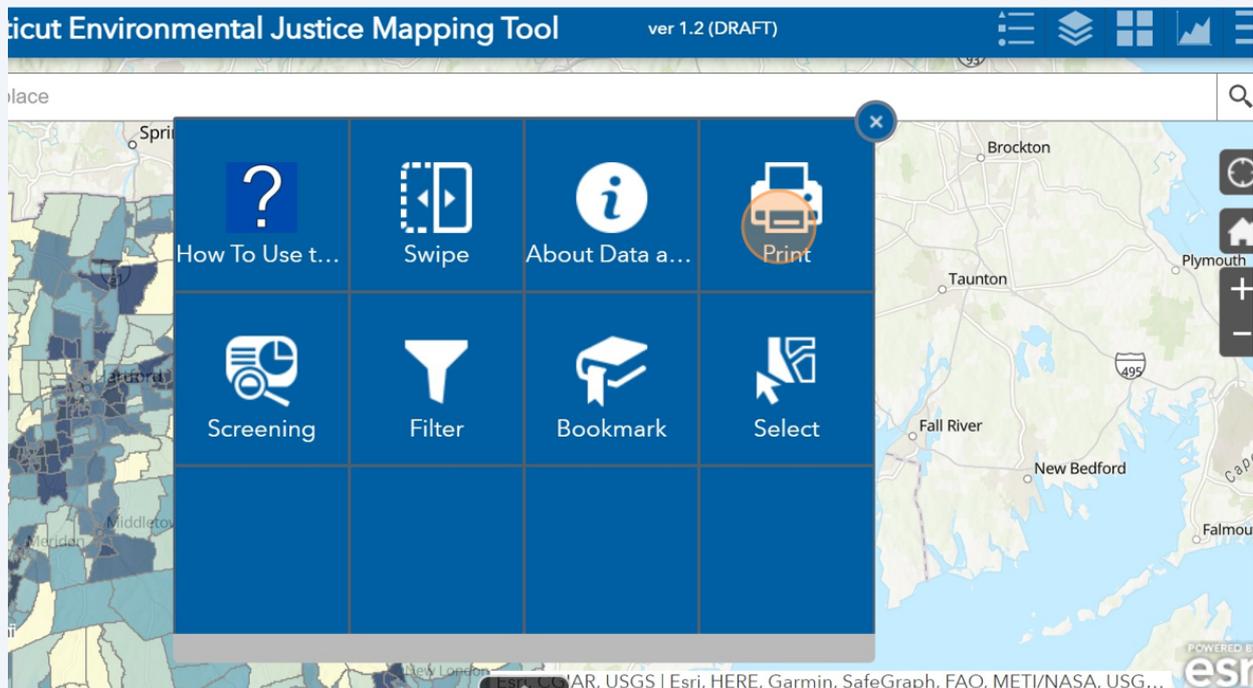
Environmental Justice Index

Clear

14 Click "Clear" to remove the selection.



15 Click "Print" widget to save pdf version of any region in the map.



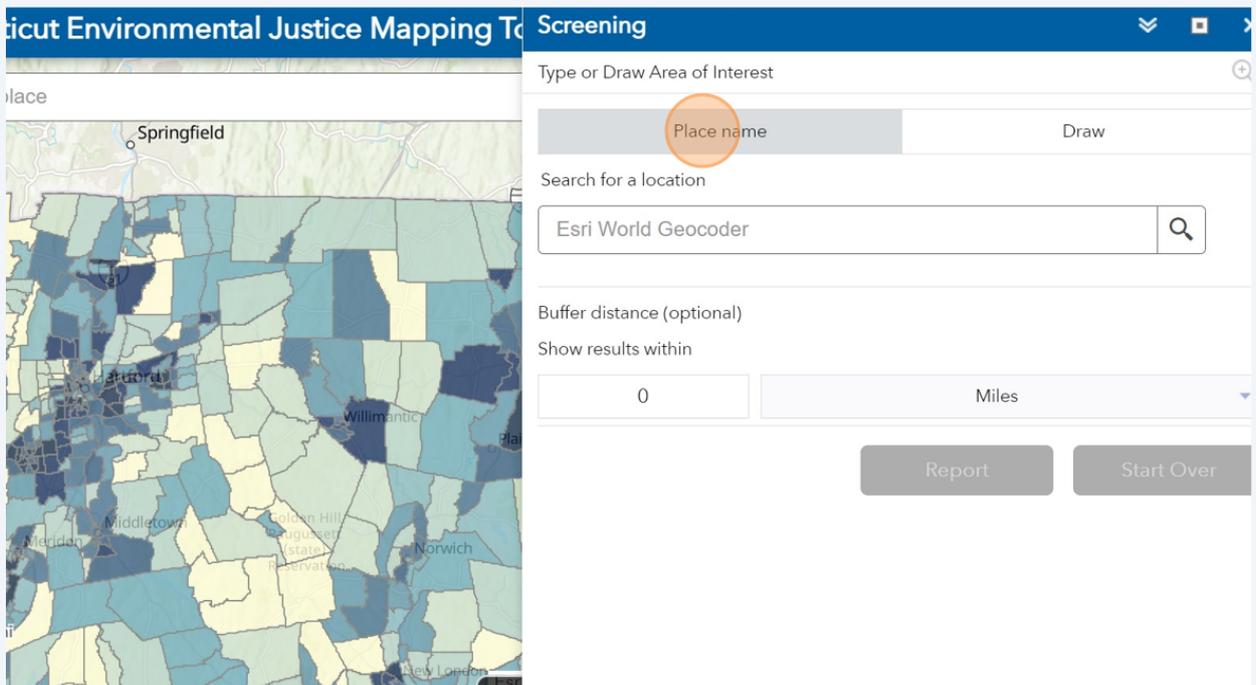
16

Click this image to use the "Screening" widget. This widget shows the tabled version of the ranks for cumulative indices.

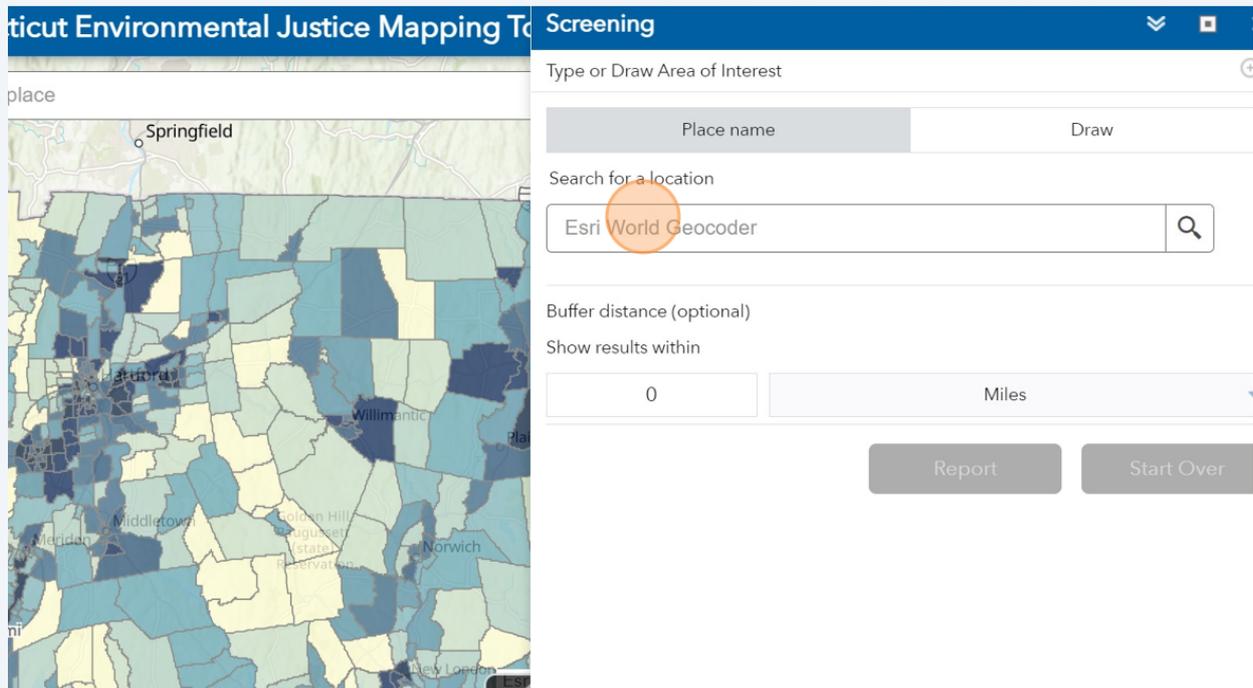


17

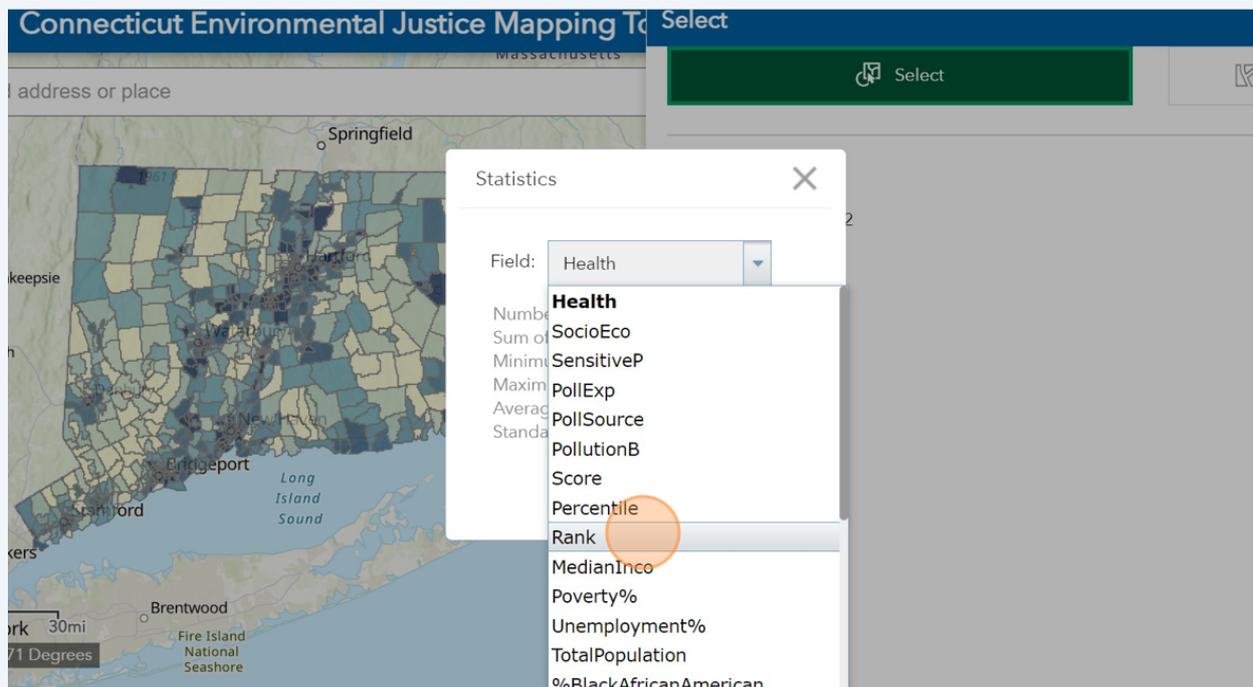
Type or Draw Area of Interest. To type it, Click "Place name"

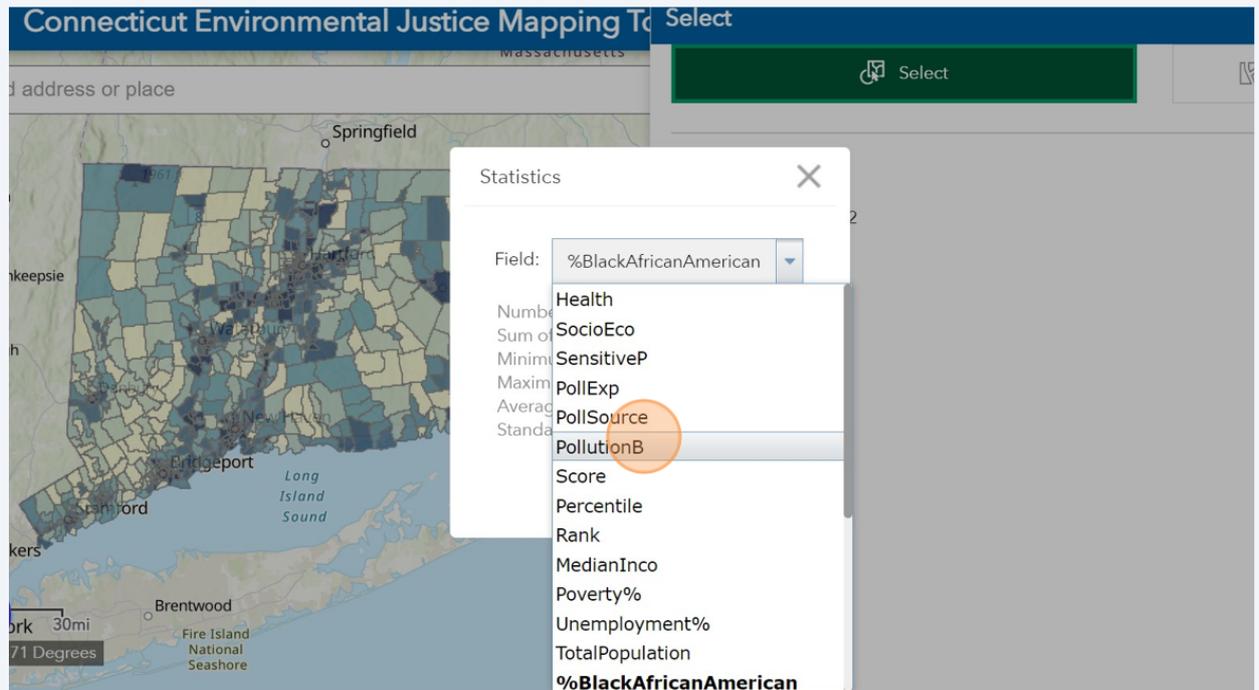
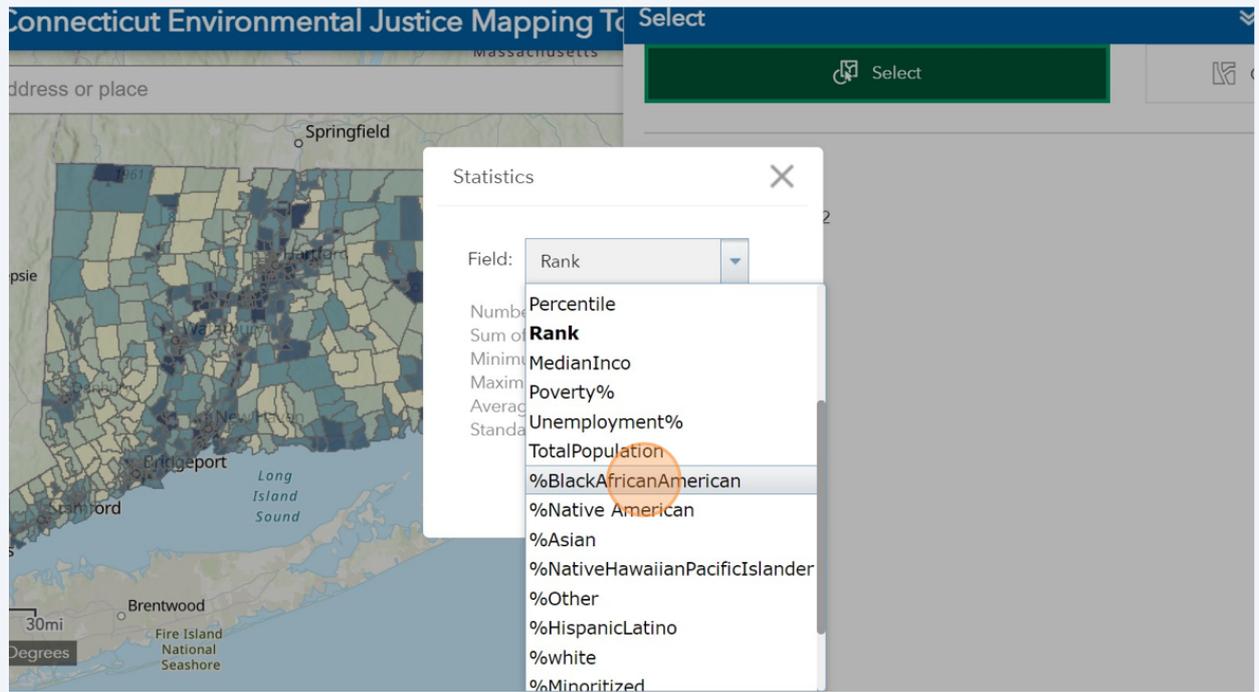


18 Click the "Esri World Geocoder" field and type the location name or address.



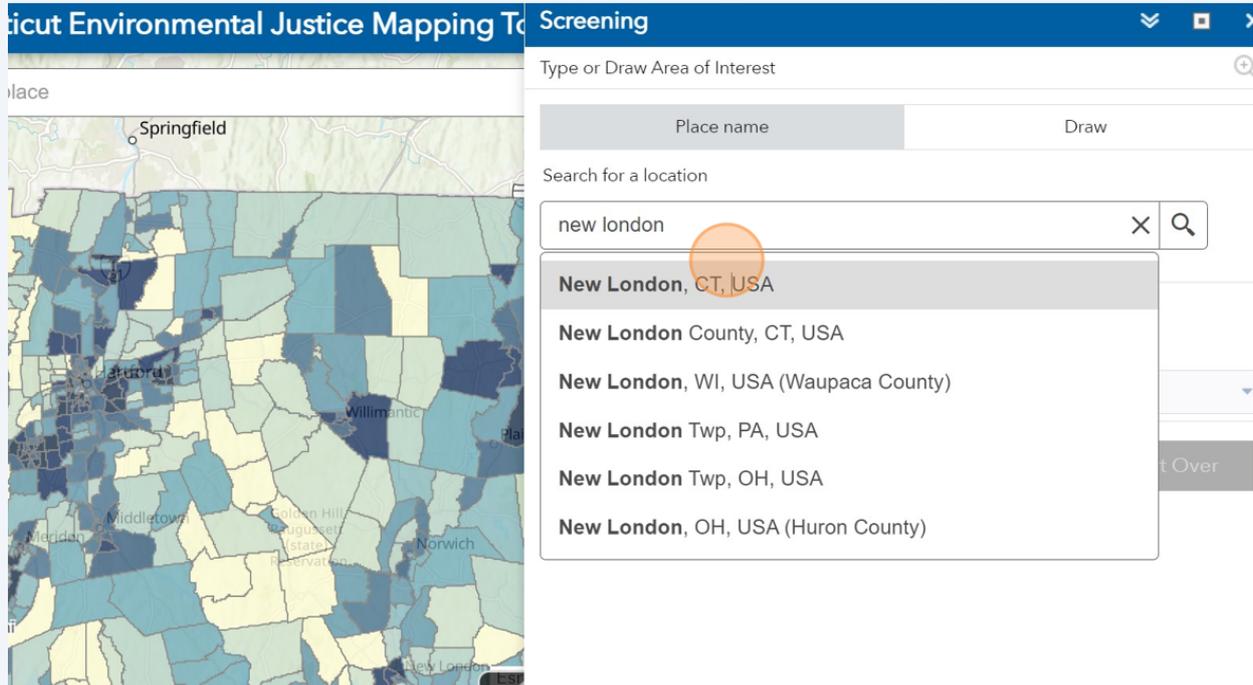
19 Choose any of the layer information from the drop-down menu.





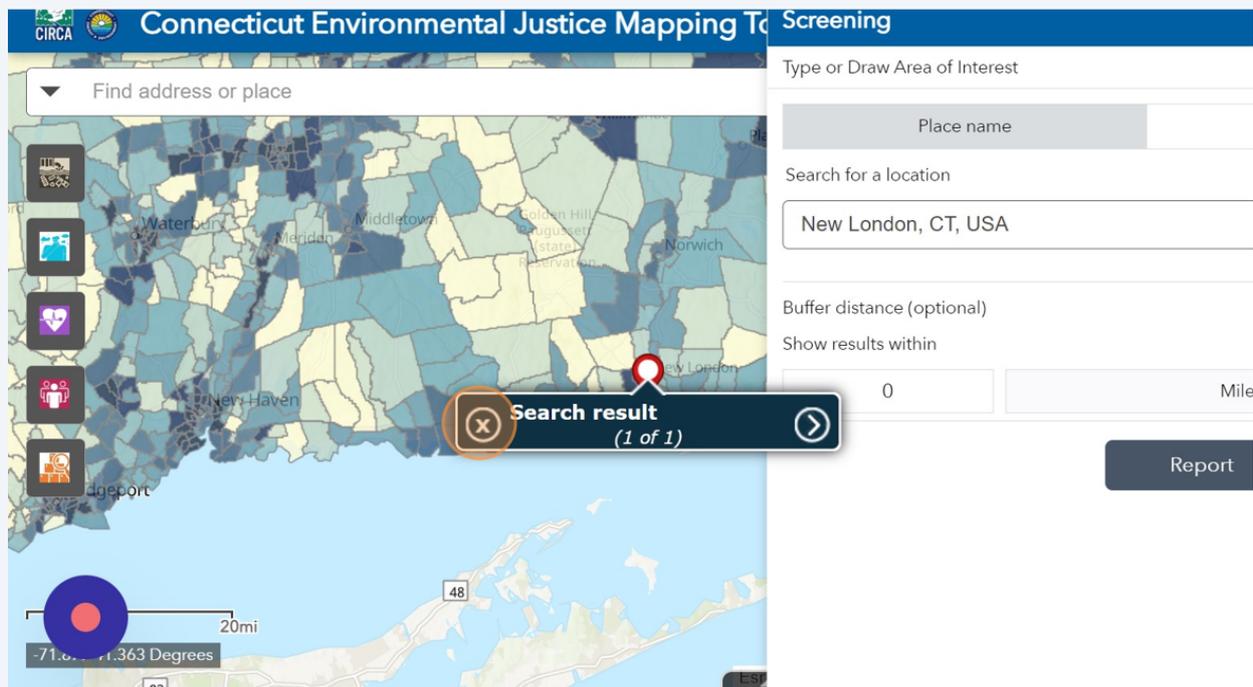
20

The addresses will display drop down, select the specific address.

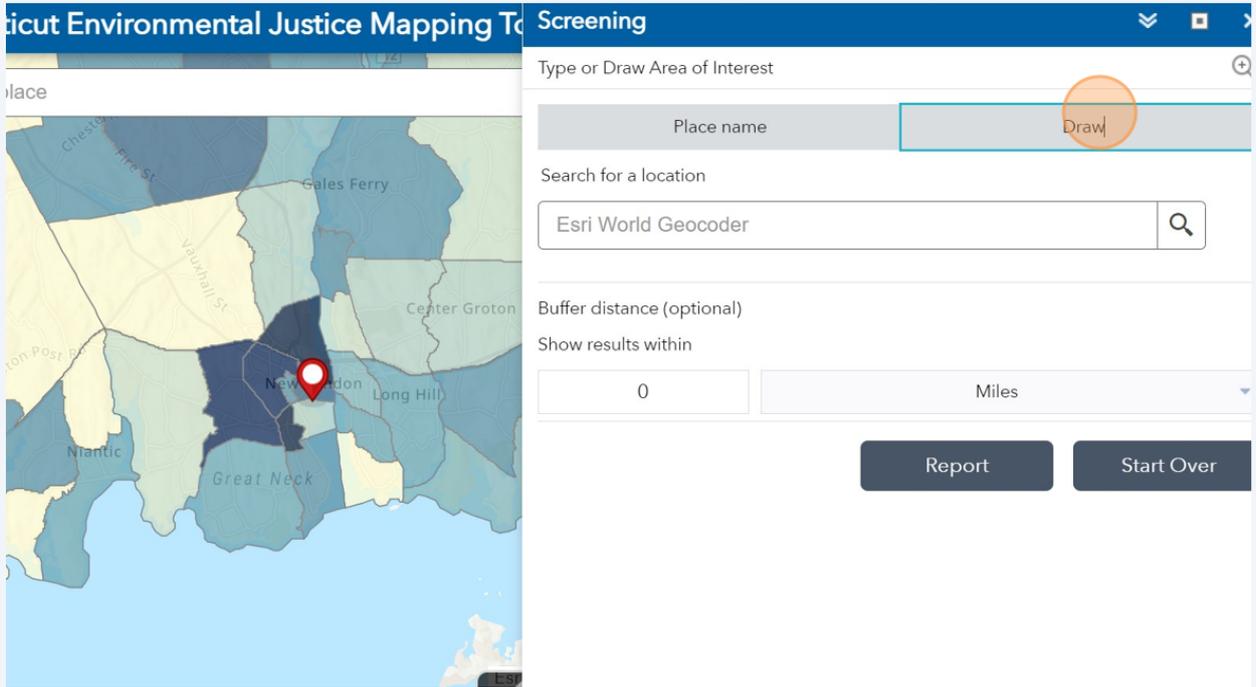


21

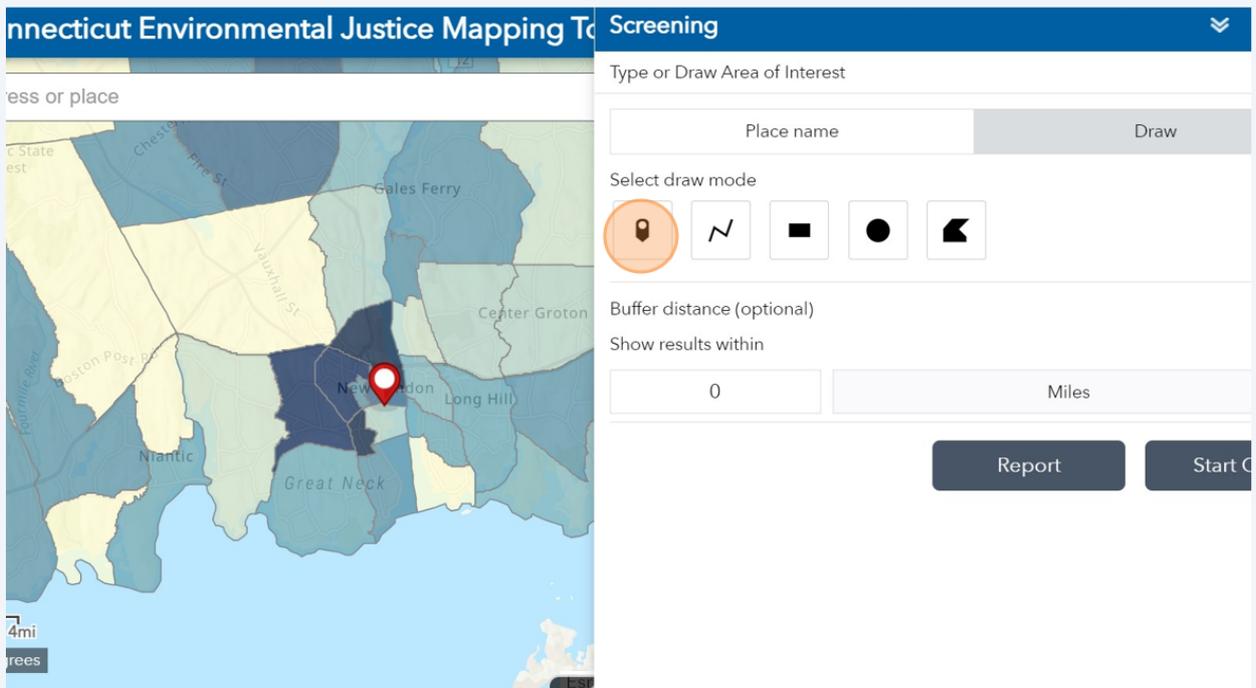
The specific place name will result in selecting one tract that it locates in. In order to chose bigger region, chose "Draw" and close the search result



22 Click "Draw"



23 Draw will have specific modes to use.



24

All the composite indices rank for "Intersected features" will be ready to report. Click on the top right icons to download or print in excel form.

Connecticut Environmental Justice Mapping Tool Screening

Report

Back Area: 290

- CTEIndex_v12
- Sensitive_Population_v12
- PollutionSources_v12
- PollutionExposure_v12
- HealthSensitivity_v12
- SocioEconomic Factors_v12

25

Click on "+" to see each index information for the selected tracts.

Connecticut Environmental Justice Mapping Tool Screening

Report

Back Area: 290

CountyName: New London County

town: New London

Poverty%: 51.38

MedianInco: 30424

Score: 80.91

Area: 42,9

- Sensitive_Population_v12
- PollutionSources_v12
- PollutionExposure_v12
- HealthSensitivity_v12
- SocioEconomic Factors_v12

26 Click "Back" to go back to the selection area. "x" to close the window.

Connecticut Environmental Justice Mapping Tool

Screening

Report

Back

Area : 290,01

GEOID10:	09011690400
Tract_Name:	Census Tract 6904
CountyName:	New London County
town:	New London
Health:	7.5
SocioEco:	8.2
Score:	7.850000
Percentile:	81.42
Rank:	8.1

Area: 5,273,9

GEOID10:	09011702600
Tract_Name:	Census Tract 7026
CountyName:	New London County
town:	Groton
Health:	4.1
SocioEco:	0.9

27 Click this image to use the "Select" widget. This widget will show the specific stats about the selected region.

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

How To Use t... Swipe About Data a... Chart

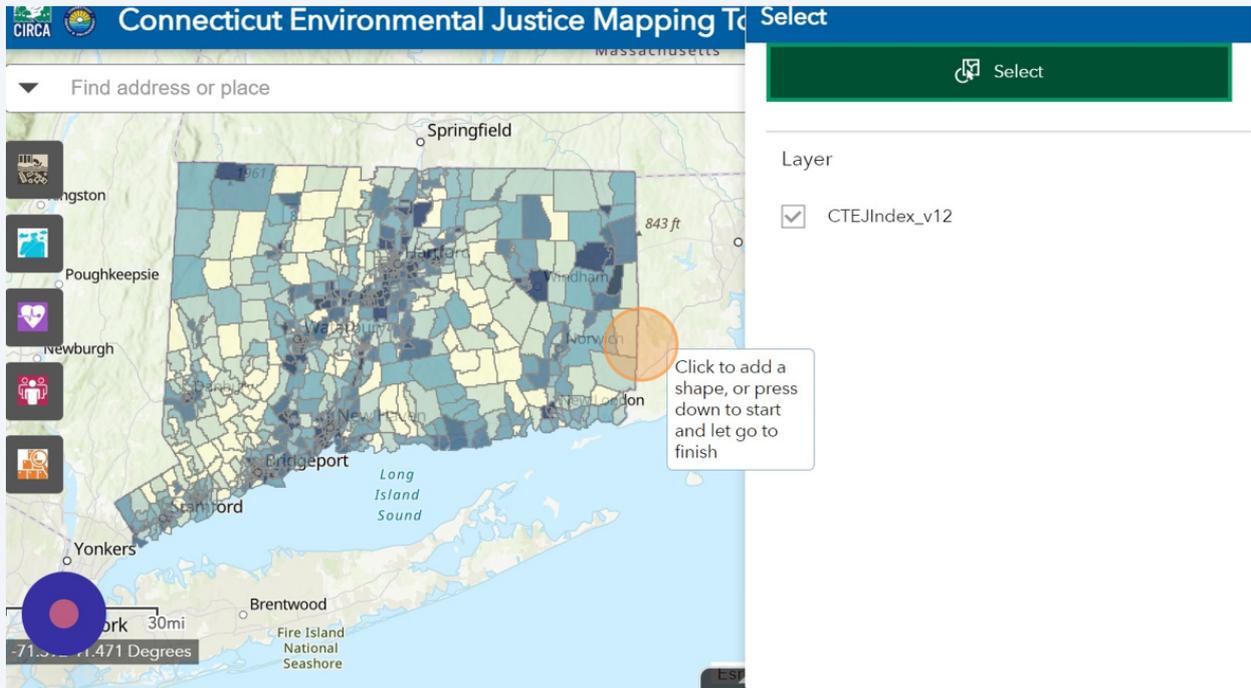
Print Screening Bookmark Select

129 ft

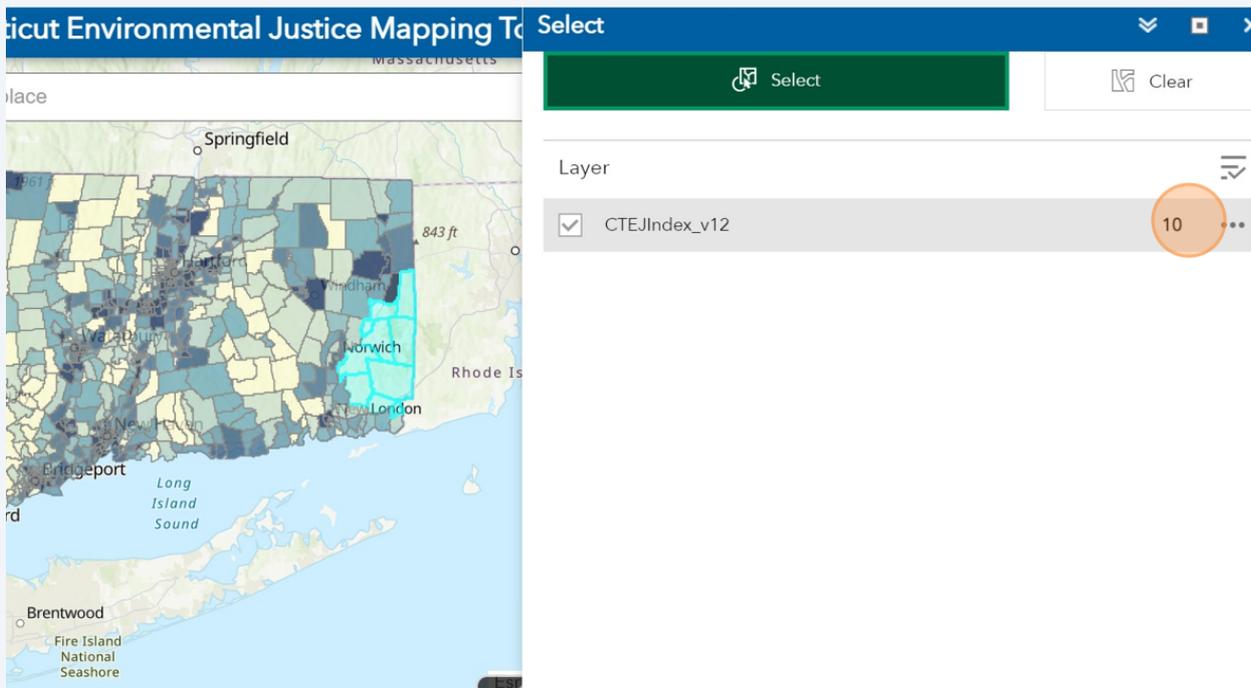
POWERED BY esri

ESRI, USGS | Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, ...

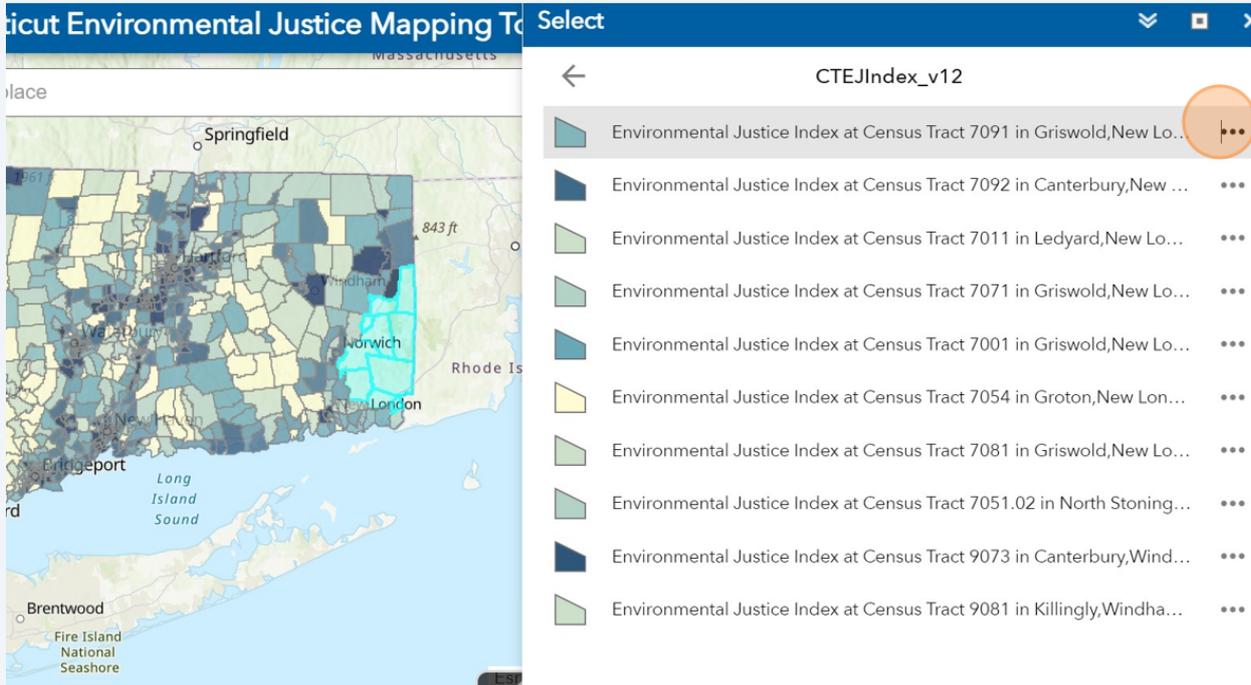
28 Draw the region that you want to display the CT EJ Index.



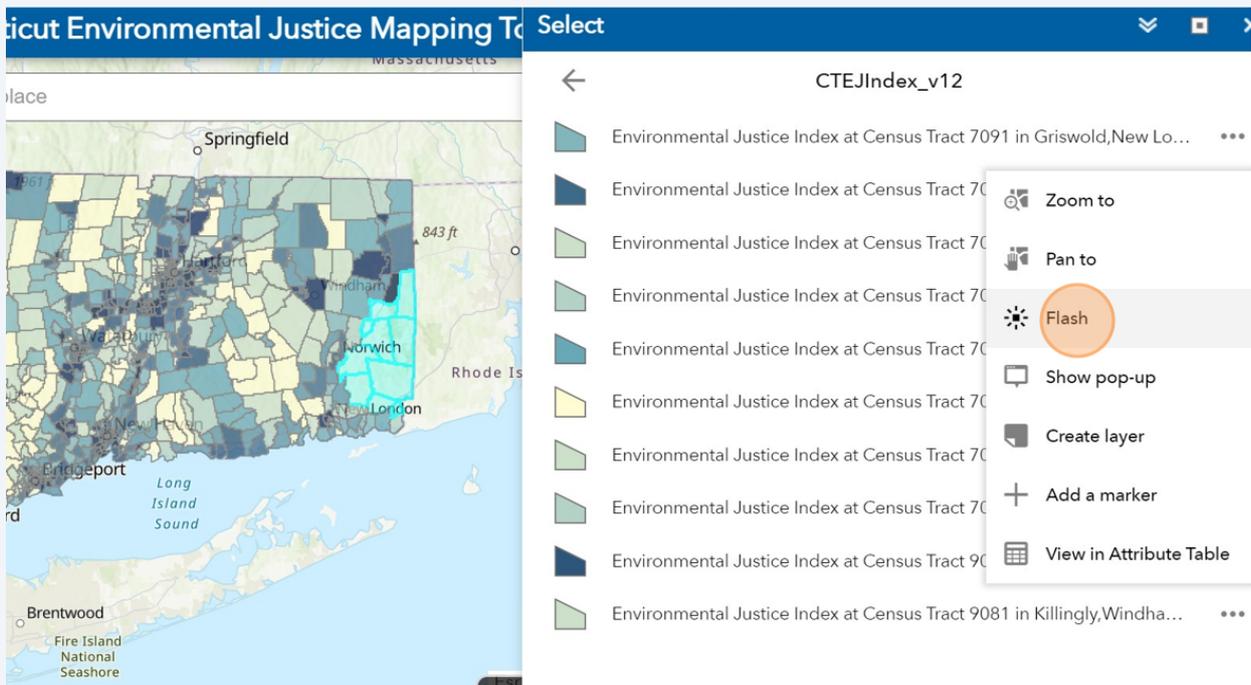
29 It will highlight the selected tracts and show how many is selected.



30 Click on "...".

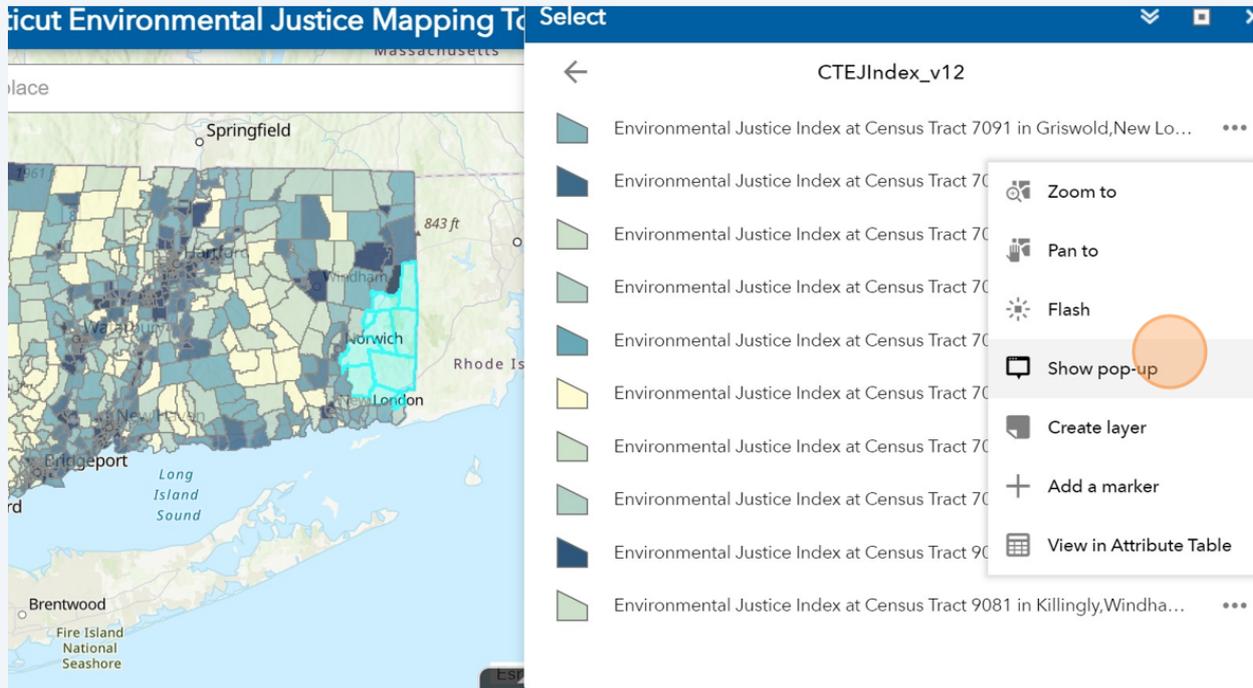


31 Click "Flash" to highlight the specific selected tract



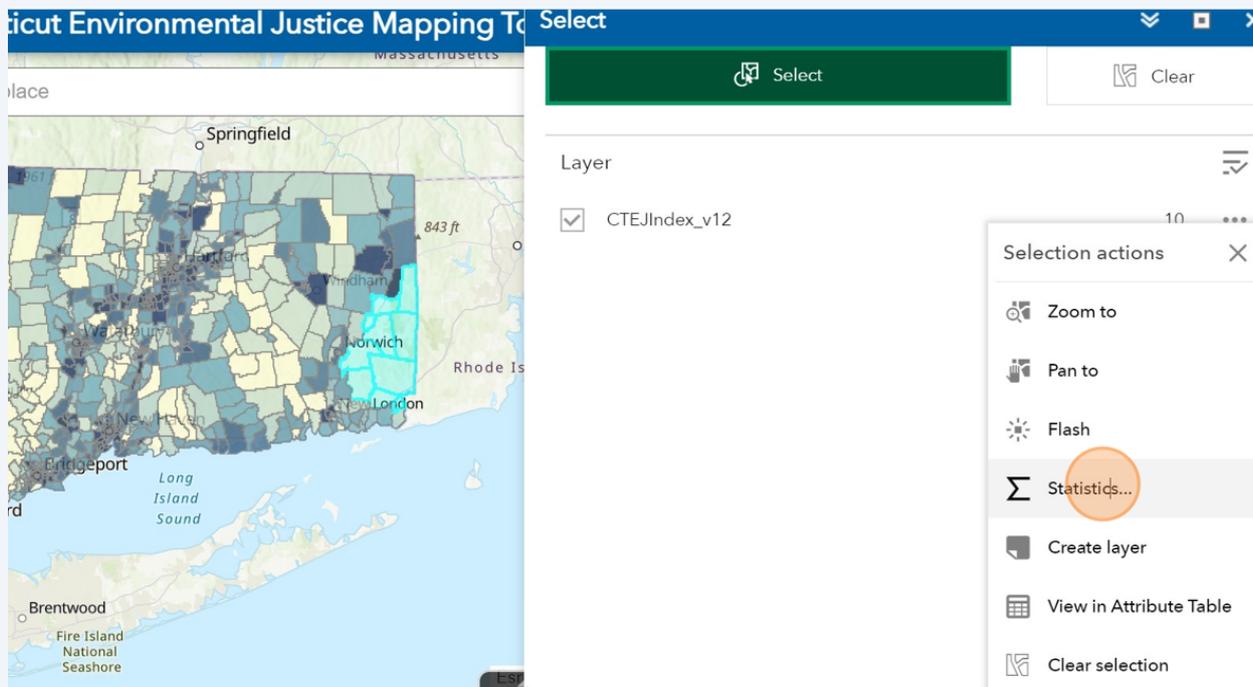
32

Each "... " has Zoom to, Pan To, Flash, Show Pop-up, Create Layer, Add Marker and View Attribute Table.

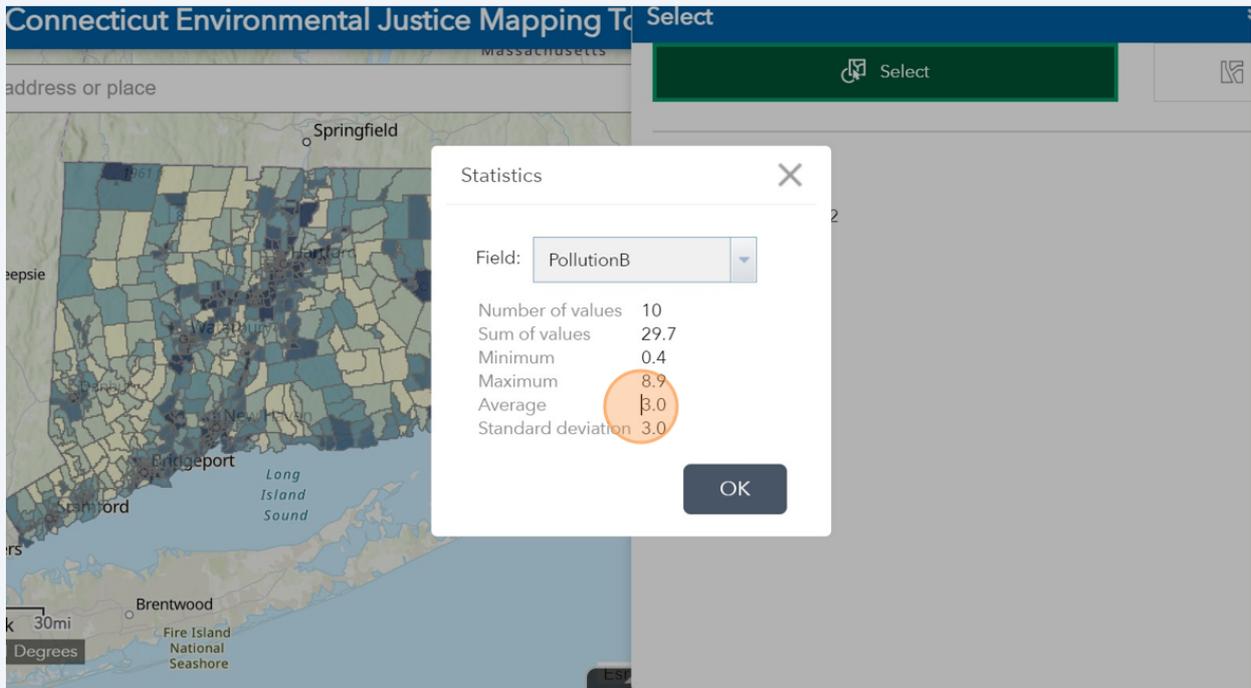


33

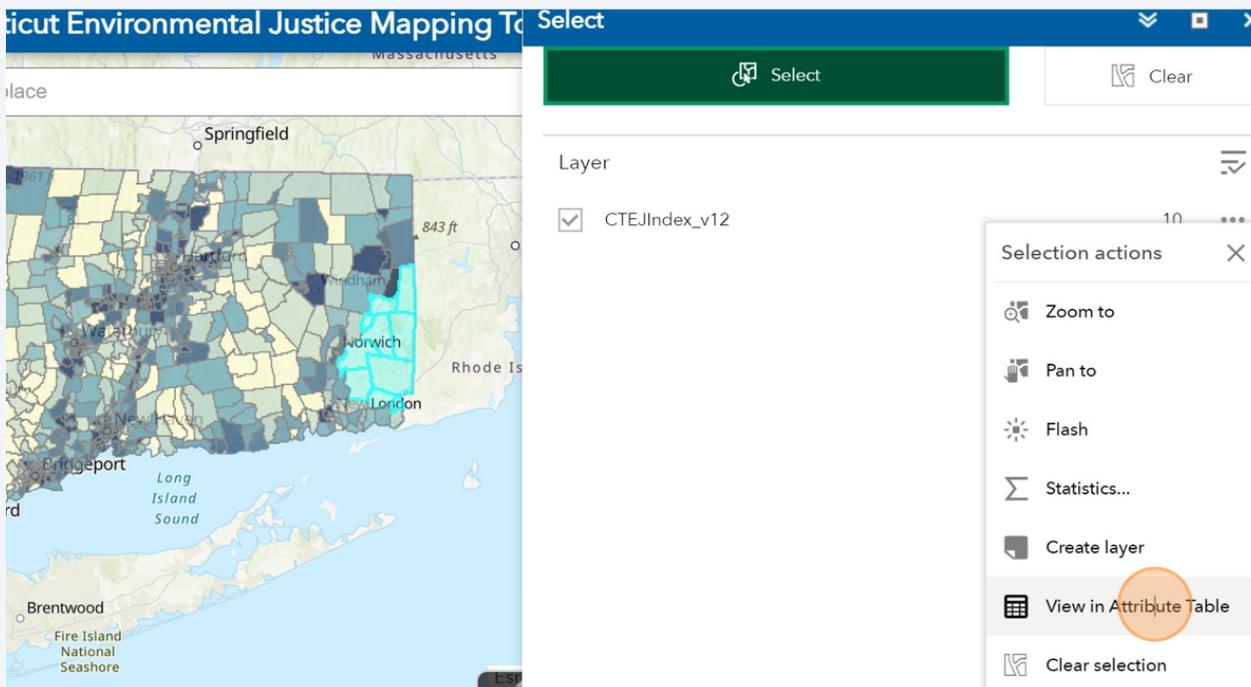
Click "... " to learn about the statistics of the selected tracts for CT EJ Index.



34 For the selected field, it will display the statistics of that layer.



35 Click "..." and chose "View in Attribute Table" to see the tabled CT EJ Index information for the selected layers.



36 The attribute table will pop-up from the bottom.

The screenshot shows the 'Connecticut Environmental Justice Mapping Tool' interface. A map of Connecticut is displayed with various census tracts highlighted in shades of blue and green. A search bar at the top left contains the text 'Find address or place'. A 'Select' button is visible in the top right corner. Below the map, the layer 'CTEJIndex_v12' is selected. The attribute table below the map shows the following data:

GEOID10	Tract_Name	CountyName	town	Health	SocioEco	SensitiveP	PollExp	Pol
09011709100	Census Tract 7091	New London County	Griswold	5.2	3.2	4.0	2.8	5.0
09011709200	Census Tract 7092	New London County	Canterbury	3.2	7.0	5.0	3.9	6.0
09011709300	Census Tract 7093	New London County	Griswold	5.3	4.4	4.7	3.4	5.1

6 features 6 selected

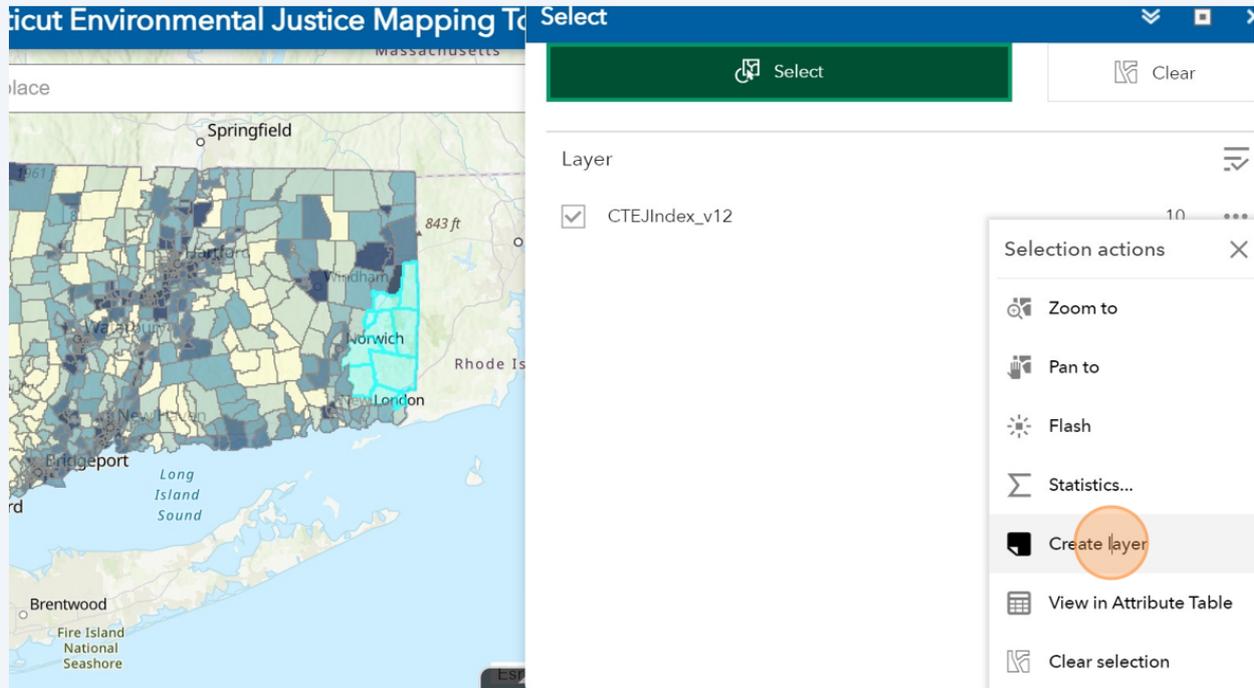
37 Click "Hide Attribute Table"

The screenshot shows the 'Connecticut Environmental Justice Mapping Tool' interface. The map of Connecticut is visible, and the attribute table is hidden. A 'Select' button is visible in the top right corner. Below the map, the layer 'CTEJIndex_v12' is selected. The attribute table below the map shows the following data:

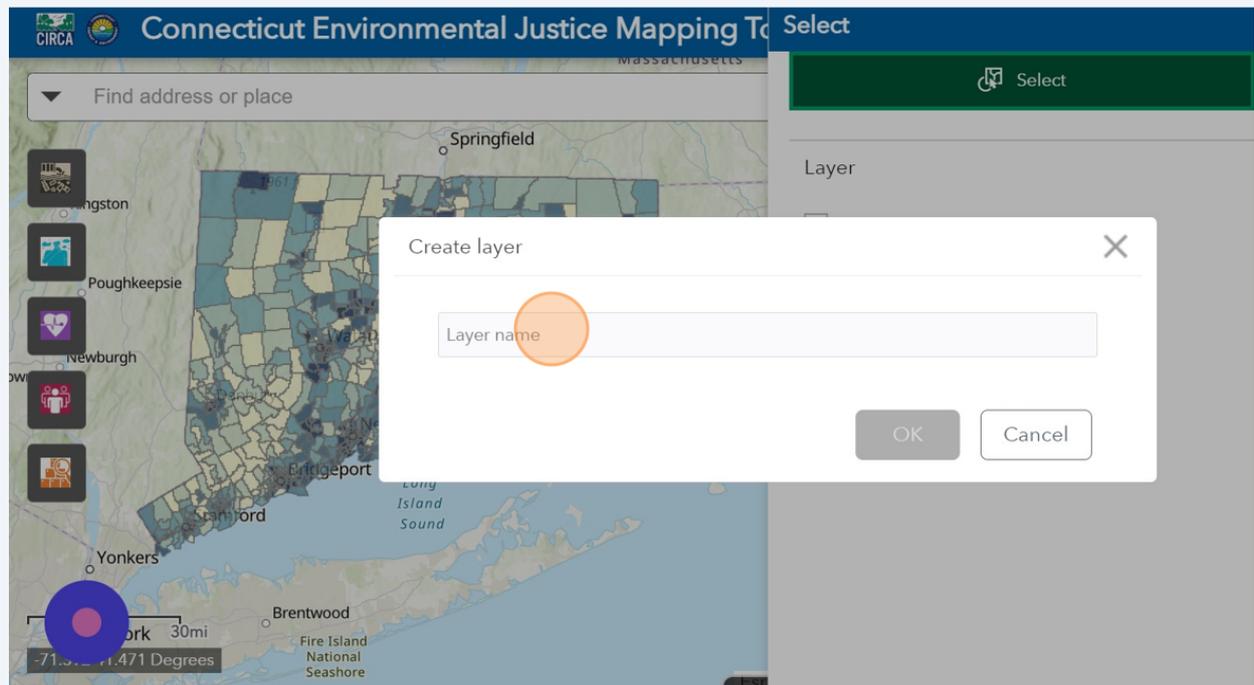
ion	%BlackAfricanAm	%Native American	%Asian	%NativeHawaiian%	%Other	%HispanicLatino	%white	%Minoritized	A
	2.21	1.05	0.16	0.00	0.36	2.13	91.46	5.91	3
	0.00	0.93	4.23	0.00	0.98	2.78	86.79	8.91	5
	0.17	1.14	4.62	0.00	0.37	0.94	87.18	7.24	3

ected

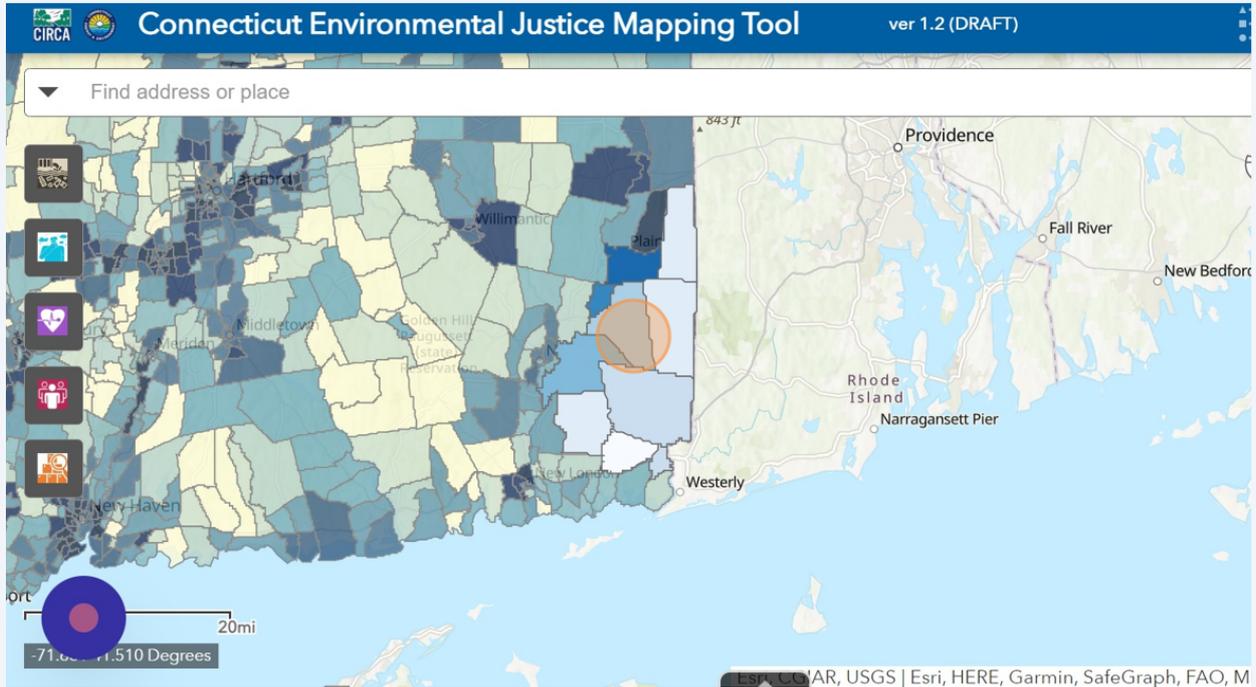
38 Click "..." and "Create layer" to create a CT EJ Index map for the selected region.



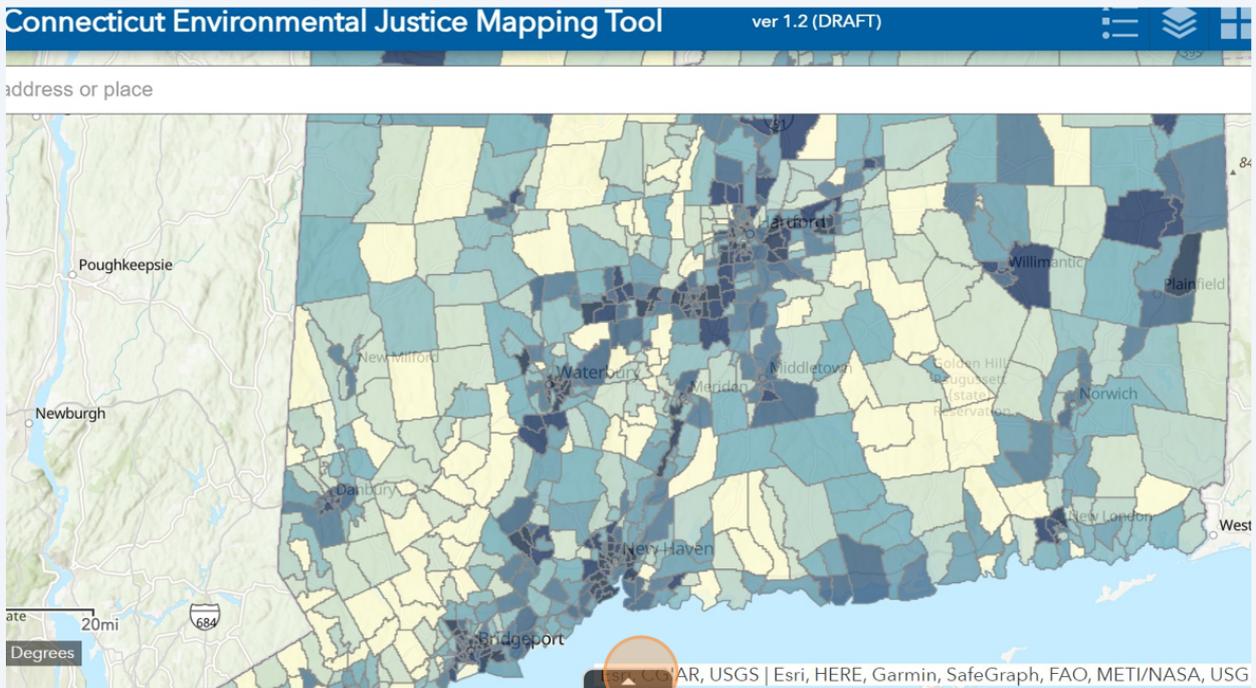
39 Click the "Layer name" field and name it.



40 The new layer will be created and added to the map.



41 Click "Open Attribute Table"



42 The attribute table for the displayed layer will be shown.

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

AfricanAm	%Native American	%Asian	%NativeHawaiian	%Other	%HispanicLatino	%white	%Minoritized	Area_sqMil
	1.05	0.16	0.00	0.36	2.13	91.46	5.91	31.66
	0.93	4.23	0.00	0.98	2.78	86.79	8.91	5.41
	0.32	0.87	0.51	0.00	2.88	95.78	5.48	39.79

43 Click "Show/Hide columns" to hide any field.

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

CTEJIndex_v12

Options Filter by map extent Zoom to Clear selection Refresh

- Show selected records
- Show related records
- Filter
- Show/Hide columns

Name	CountyName	town	Health	SocioEco	SensitiveP	PollExp	Pol	
100	Census Tract 9073	Windham County	Canterbury	4.5	6.4	5.5	4.2	7.1
100	Census Tract 9081	Windham County	Killingly	6.4	4.9	5.7	2.5	3.1

5 features 0 selected

44 Click "Filter"

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

CTEJIndex_v12

Options Filter by map extent Zoom to Clear selection Refresh

Show selected records Show related records Filter Show/Hide columns

name	CountyName	town	Health	SocioEco	SensitiveP	PollExp	Pol
County	County						
tract	Windham County	Canterbury	4.5	6.4	5.5	4.2	7.1
9073	Windham County						
100	Census Tract	Killingly	6.4	4.9	5.7	2.5	3.1
9081	Windham County						

5 features 0 selected

45 Click "Add expression" to filter out specific tracts. If a set of expressions is needed, use "Add set".

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Filter

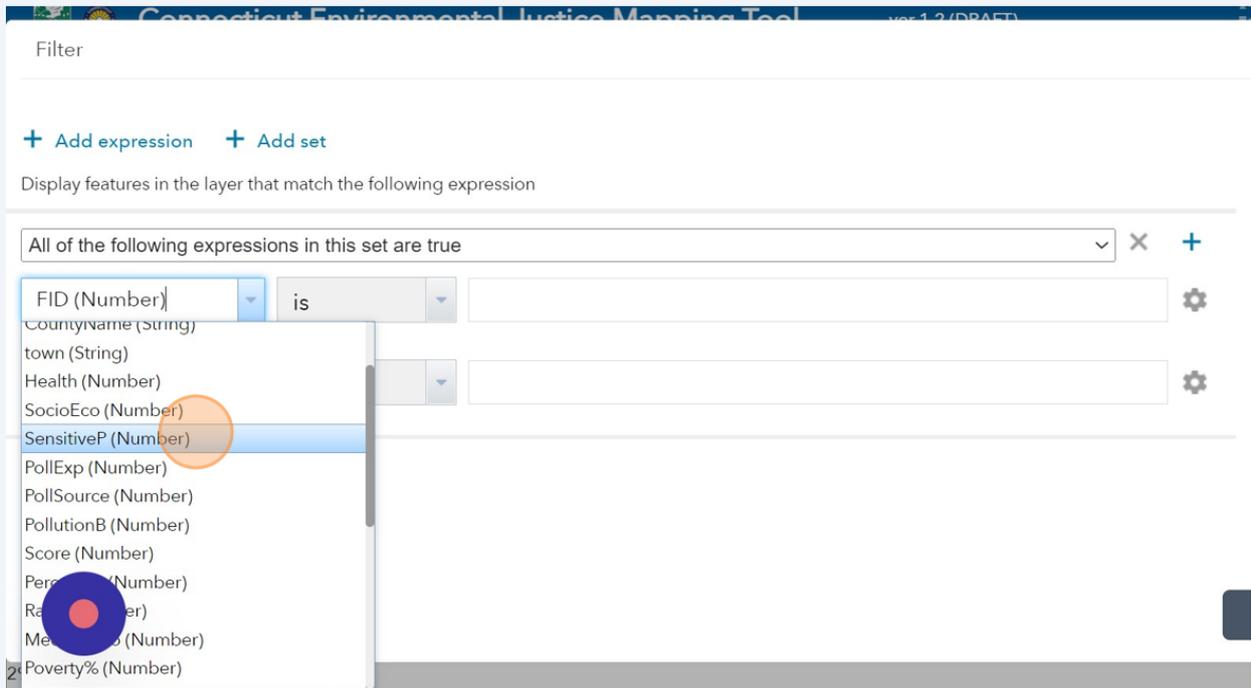
+ Add expression + Add set

Display features in the layer that match the following expression

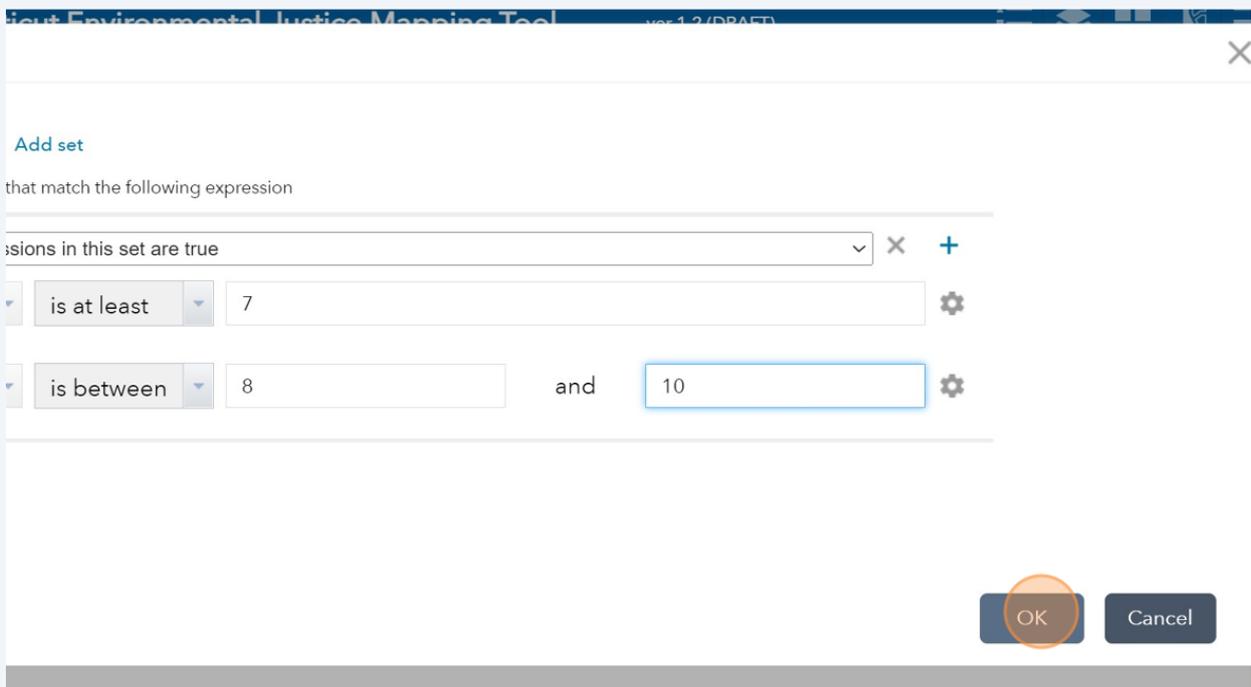
Without filter expressions defined, this query task will list all features in the specified data source.

5 features 0 selected

46 Chose any fields and the filtering options.



47 Click "OK"



48

The map and attribute table will only display the tracts that satisfy the filter criteria.

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

Tract	CountyName	town	Health	SocioEco	SensitiveP	PollExp	PollSource	PollutionB
Tract	Hartford County	Hartford	8.7	8.0	8.6	5.7	5.0	6.7
Tract	Hartford County	Bloomfield	8.2	8.8	8.8	6.4	4.5	6.3

49

Click the number of displayed features will be shown on the bottom left.

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

CTEJIndex_v12

Options Filter by map extent Zoom to Clear selection Refresh

GEOID10	Tract_Name	CountyName	town	Health	SocioEco	SensitiveP	PollExp	PollutionB
	5381							
09003524700	Census Tract 5247	Hartford County	Hartford	8.7	8.0	8.6	5.7	5.0
	5244	Hartford County	Bloomfield	8.2	8.8	8.8	6.4	4.5

57 features 0 selected

50 Click "Hide Attribute Table"

Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

Map showing Hartford area with a red circle highlighting the attribute table icon.

	Tract_Name	CountyName	town	Health	SocioEco	SensitiveP	PollExp	PollSource
	5381							
700	Census Tract 5247	Hartford County	Hartford	8.7	8.0	8.6	5.7	5.0
400	Census Tract 5244	Hartford County	Bloomfield	8.2	8.8	8.8	6.4	4.5

Selected

51 Click this image to "Filter" the tracts that has ranks larger than a specific score.

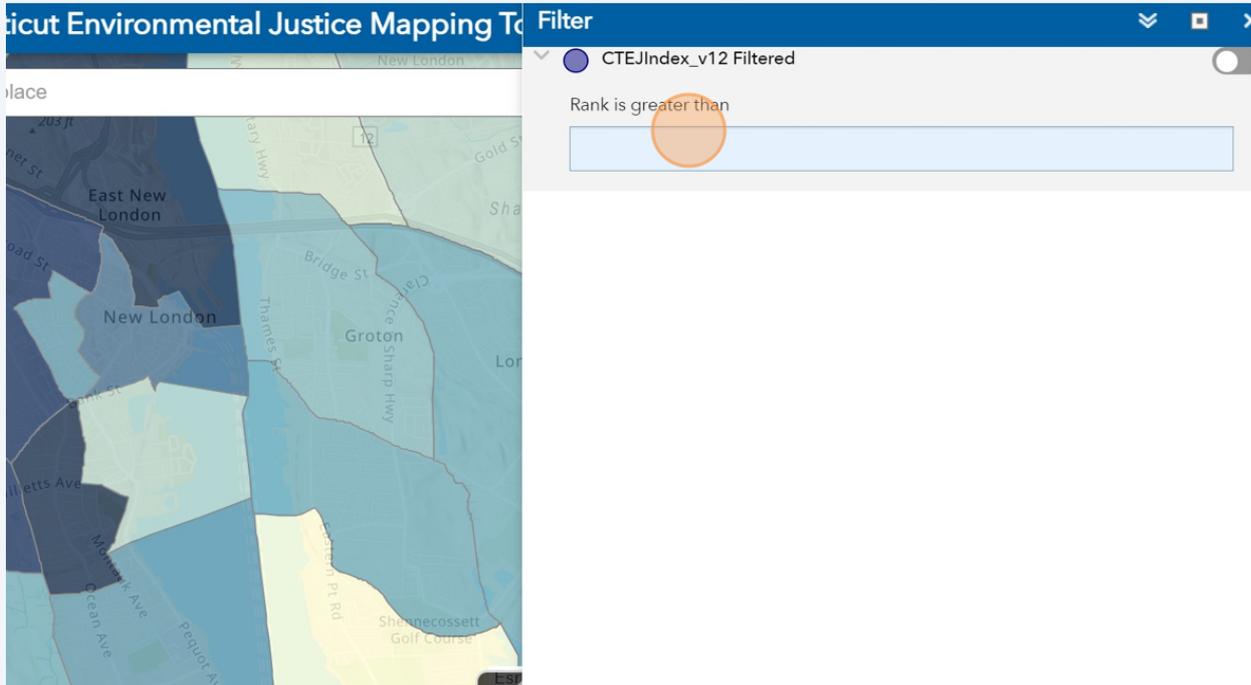
Connecticut Environmental Justice Mapping Tool ver 1.2 (DRAFT)

Find address or place

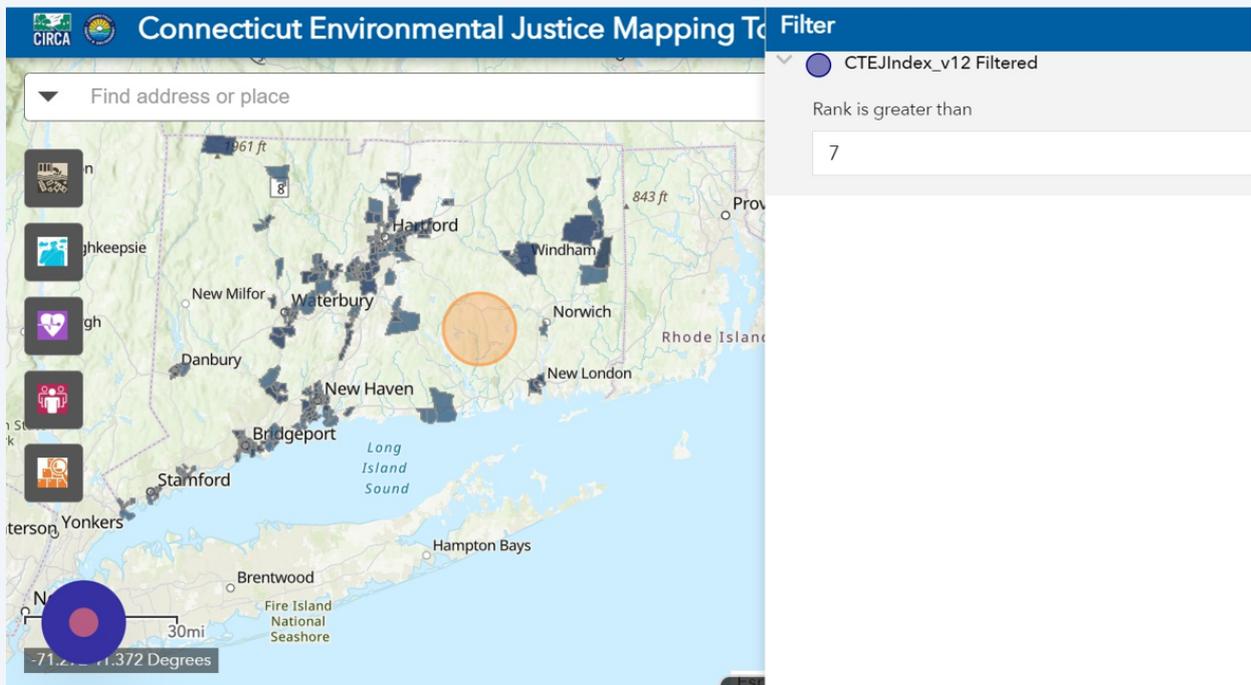
Map showing New London area with a blue overlay menu.

How To Use t...	Swipe	About Data a...	Chart
Print	Filter	Bookmark	Select

52 Click the "Rank is greater than" field and type a number between 1 to 10.



53 The map will show the tracts with ranks greater than the typed number. Turn off the toggle to close this filtered layer.





Tip! The application will include any other features for each indicator and index. Please click on "... " to examine them all.