

Environmental Federation of Oklahoma

Environmental Justice

October 13, 2021

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Environmental Justice (EJ)

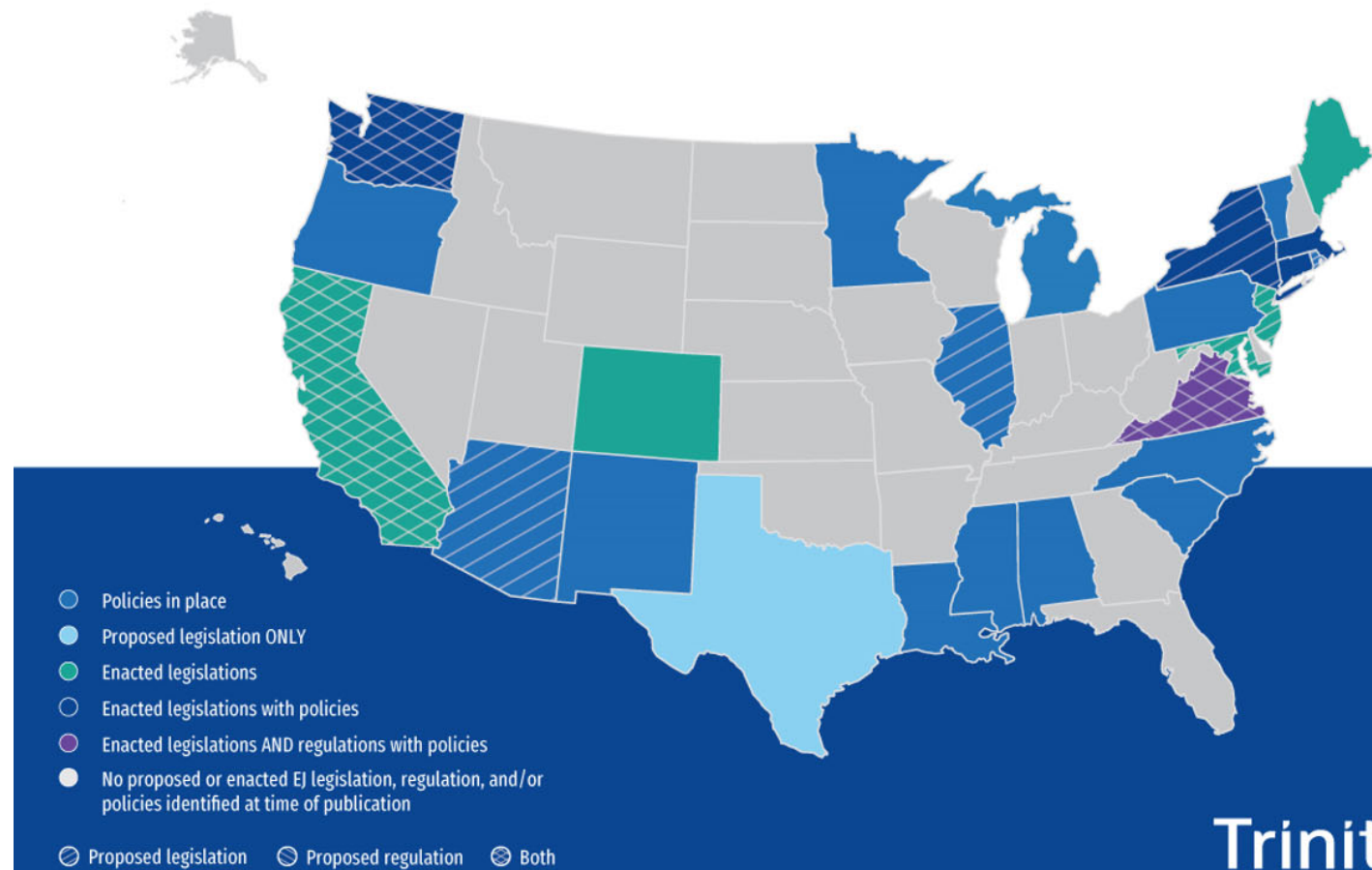
- ▶ Implications for Operators
- ▶ EJ “Basics”
- ▶ EJ Tools Demo
- ▶ EJ Recommendations



EJ Implications for Operators

- ▶ EJ initiatives are “**in motion**” across the country:
 - ◆ Legislation, rules, policies
 - ◆ **Permitting**
 - ◆ Compliance, inspections, enforcement, **monitoring**
- ▶ EJ provides community stakeholders a **voice**, a **channel**, and **data** that can impact your actions and operations
- ▶ Increased need to understand:
 - ◆ your **surrounding community**
 - ◆ **community engagement** may be required

EJ is “in motion”



This figure represents states overall. Individual districts, parishes, or municipalities within a state may vary.

North Carolina

ACTIVE ENERGY RENEWABLE POWER

Environmental Justice Report

North Carolina Department of Environmental Quality
July 31, 2020

1 Introduction

Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This evaluation examines the demographic and environmental conditions in Robeson County, as well as the surrounding census tracts, and the two-mile radius around the property boundary of the Active Energy Renewable Power facility. Finally, the demographics of the entire state of North Carolina are also considered as they compare to both the county and local census tract and radius settings.

An EJ Snapshot was conducted at the beginning of this application process. The Snapshot was distributed to interested community members (if known) and posted to the DEQ website with the relevant permit application. The primary goal of the Snapshot was to encourage comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period. Public comments received were considered in the preparation of this full EJ Report.

2 Environmental Justice Evaluation

The North Carolina Department of Environmental Quality (NCDEQ) has assessed the permit application and the potential impact on communities surrounding the requested permit application. The assessment of potential impacts included:

- Permit application submitted by Active Energy Renewable Power
- Emissions overview
- Study of area demographics (determined by utilizing the US EPA Environmental Justice tool (EJSCREEN) <https://ejscreen.epa.gov/mapper/> and current, available census data. <https://data.census.gov/cedsci/>)
- Comparison of local area demographics to both county and statewide census data
- County health assessment
- Surrounding sensitive receptors
- Local industrial sites (using the NCDEQ Community Mapping System <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4cccb3cc212af8a0b8c8>).

What is Environmental Justice?

► Goal:

Environmental Justice - assure new laws, rules, policies, public investments, and industrial, commercial, and municipal operations **do not cause disparate adverse environmental, health, or safety impact on disadvantaged or vulnerable communities**

- **minority, low-income**, indigenous, linguistically isolated, limited education, young, elderly, distressed communities
- overburdened communities
- climate exposed
- limited access to open spaces, water resources, playgrounds, outdoor recreational facilities

What are the steps in addressing EJ?

5 steps:

- Step 1 – Identification & characterization of EJ areas
- Step 2 – Engagement with EJ communities
- Step 3 – Assessment of potential disparate EJ impacts
- Step 4 – Mitigation (reducing cumulative impacts)
- Step 5 – Sustaining meaningful engagement

EJ Variables & Metrics, Tools, & Analysis

► Variables & Metrics

- Demographic, Vulnerability Indicators
- Environmental Indicators
- EJ Indexes

► EJ Indexes and Common Data Presentation

- EJ Mapping
- Tabular Summaries
- % Comparisons
- EJ Reports

► Analysis Tools / Data

- EJSCREEN
- Census / American Community Survey (ACS) Data
- ArcGIS
- TRI Search Plus
- EnviroFacts

► Analysis Tools / Data (cont.)

- Risk Screening Environmental Indicators (RSEI)
- National Air Toxics Assessment (NATA) & National Emissions Inventory (NEI)
- Enforcement and Compliance History Online (ECHO)
- CalEnviroScreen
- Climate and Economic Justice Screening Tool
- Talkwalker (social analytics, media monitoring)
- Ambient Monitoring, Next Gen monitoring, FLIR cameras
 - ◆ OLD MACT, Gasoline Distribution regs
- Cumulative / Health Risk Assessments
 - ◆ Dispersion Models
 - ◆ EPA Cumulative Risk Guide (EOY 2021?)
 - ◆ EPA Human Health Risk Assessment Protocol (HHRAP)
 - ◆ EPA Hazardous Air Pollutant Exposure Model (HAPEM)
 - ◆ EPA 2003 Framework for Cumulative Risk Assessment (CRA)
 - ◆ California Hot Spots Analysis & Reporting Program (HARP)
 - ◆ BREEZE Risk Analyst

EJ Variables and Metrics (not exhaustive)

EJ Indexes = f (demographic or vulnerability indicators, environmental indicators)

Demographic/Vulnerability Indicators

- ▶ People of color
- ▶ Low income
- ▶ Linguistically isolated
- ▶ Level of high school education
- ▶ < 5 yrs old
- ▶ > 64 yrs
- ▶ Climate exposed
- ▶ Environmentally overburdened
- ▶ Diseases, opioid addiction
- ▶ Food insecurity
- ▶ Unemployment rate
- ▶ Energy shut-offs, energy efficiency program access, % income paying for energy

Environmental Indicators

- ▶ PM_{2.5}
- ▶ Ozone
- ▶ Diesel PM (NATA)
- ▶ Cancer Risk (NATA)
- ▶ Respiratory Hazard (NATA)
- ▶ Traffic Proximity and Volume
- ▶ Proximities:
 - Superfund
 - RMP
 - Hazardous Waste
- ▶ Lead Paint Indicator
- ▶ Wastewater Discharge
- ▶ Pesticide Use
- ▶ Groundwater Threats
- ▶ Data on chrome metal plating
- ▶ Noise
- ▶ Subsidence
- ▶ Vibration
- ▶ Odor



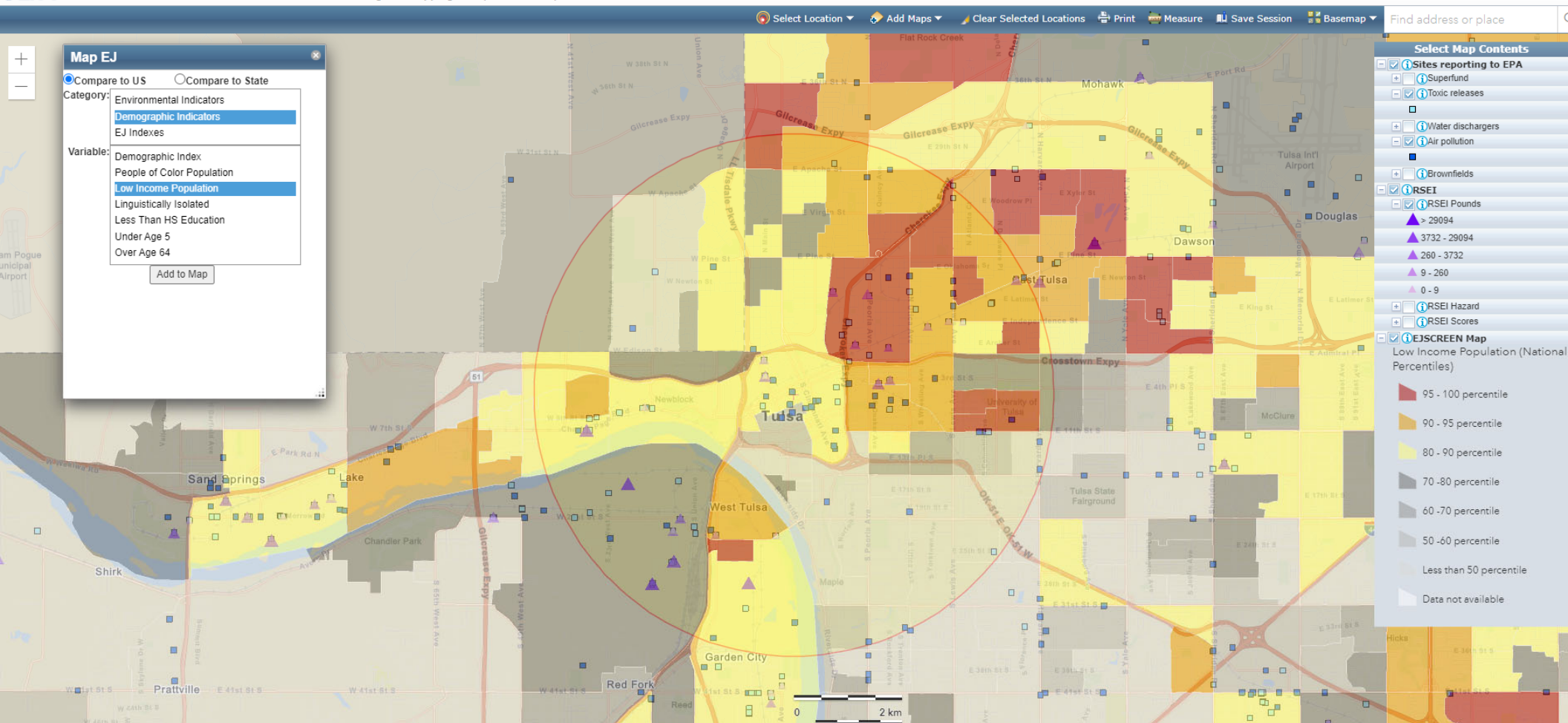
EJSCREEN Demo (live)

- ▶ **Tulsa 100 E 2nd St Tulsa, OK**
(Hyatt Regency)
- ▶ **EJSCREEN Mapping**
 - Demographic Indicators
 - Environmental Indicators
 - EJ Indexes
- ▶ **EJSCREEN Report**
- ▶ **ACS Report**

EJSCREEN – Mapping - Low Income Population

EPA EJSCREEN EPA's Environmental Justice Screening and Mapping Tool (Version 2020)

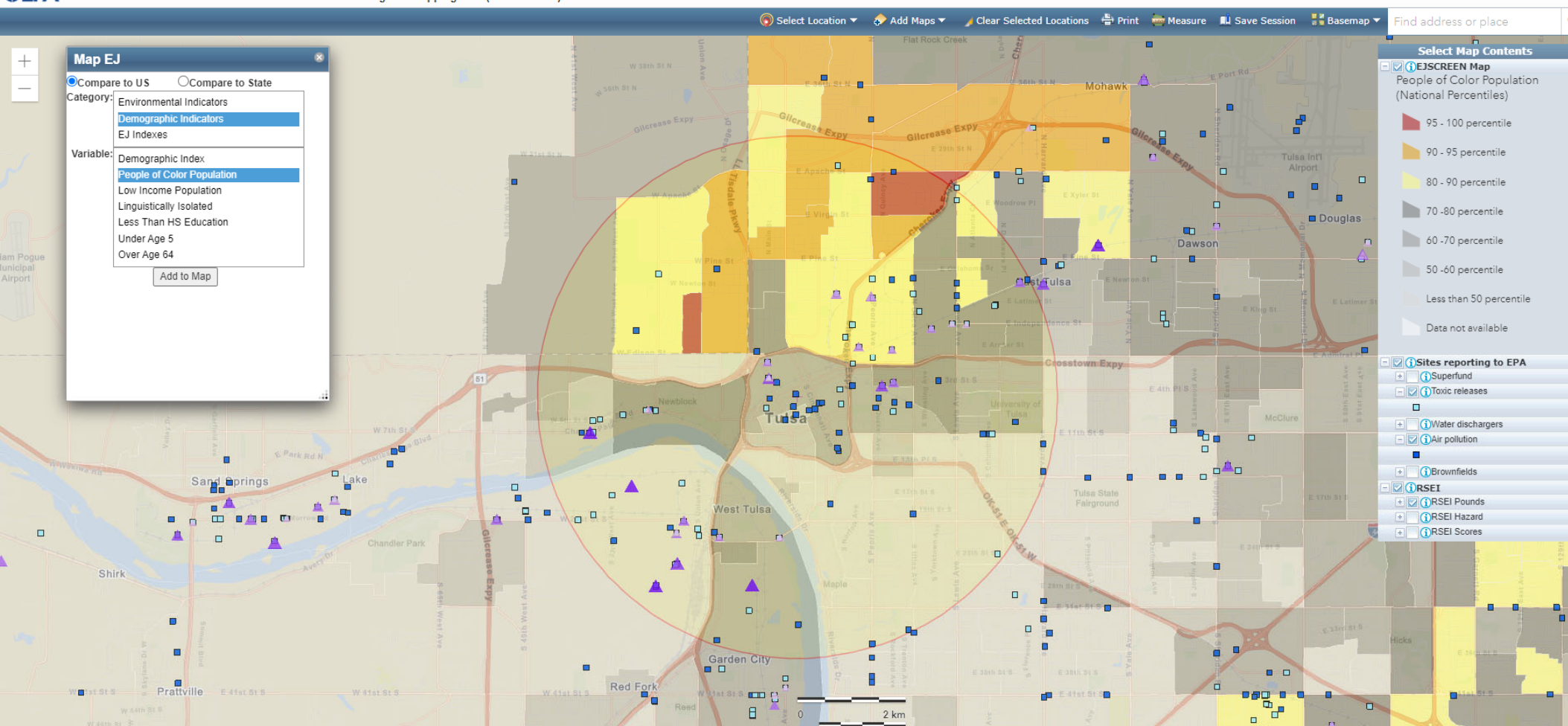
[EJSCREEN Home](#) | [Mobile](#) | [Glossary](#) |



EJSCREEN – Mapping - People of Color Population

EPA EJSCREEN EPA's Environmental Justice Screening and Mapping Tool (Version 2020)

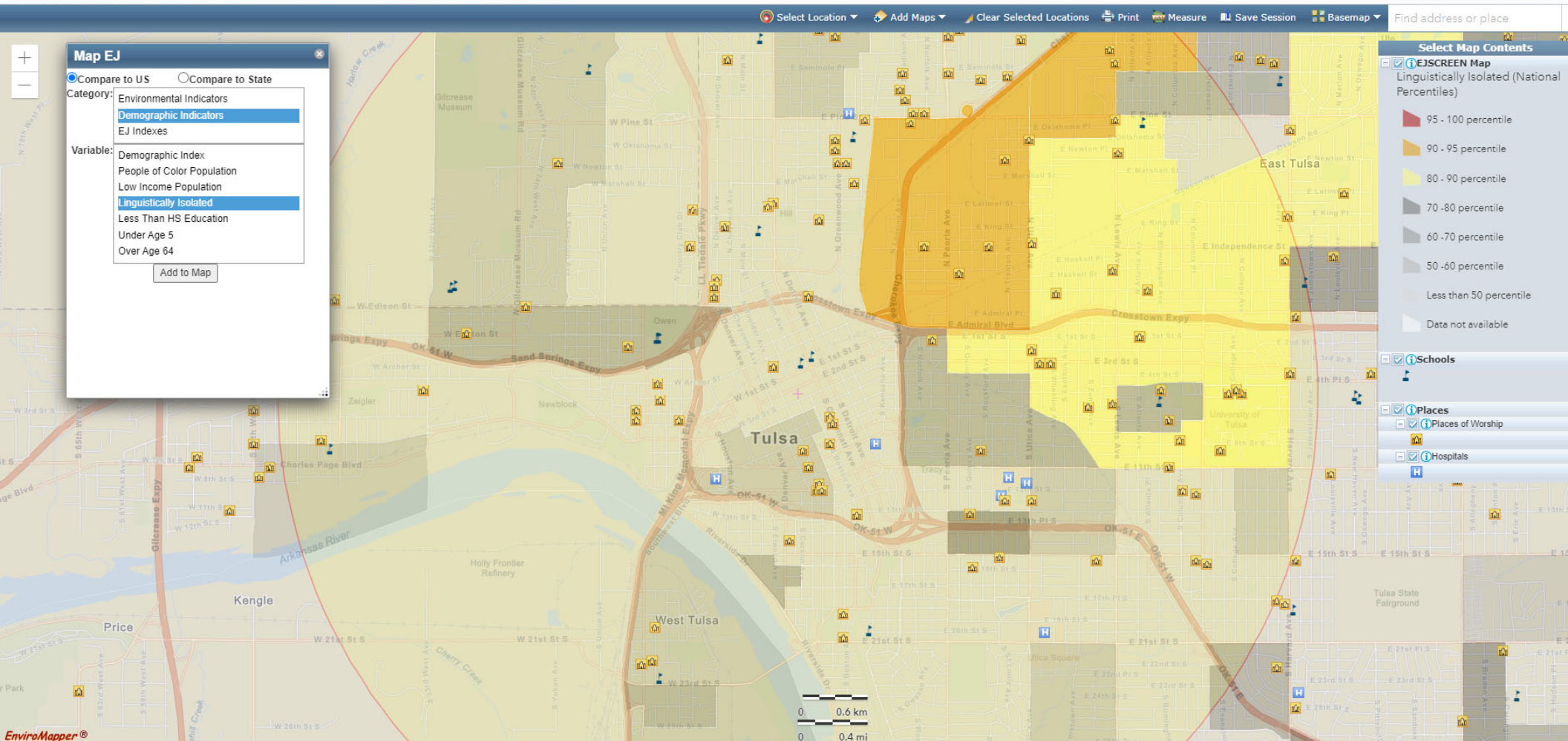
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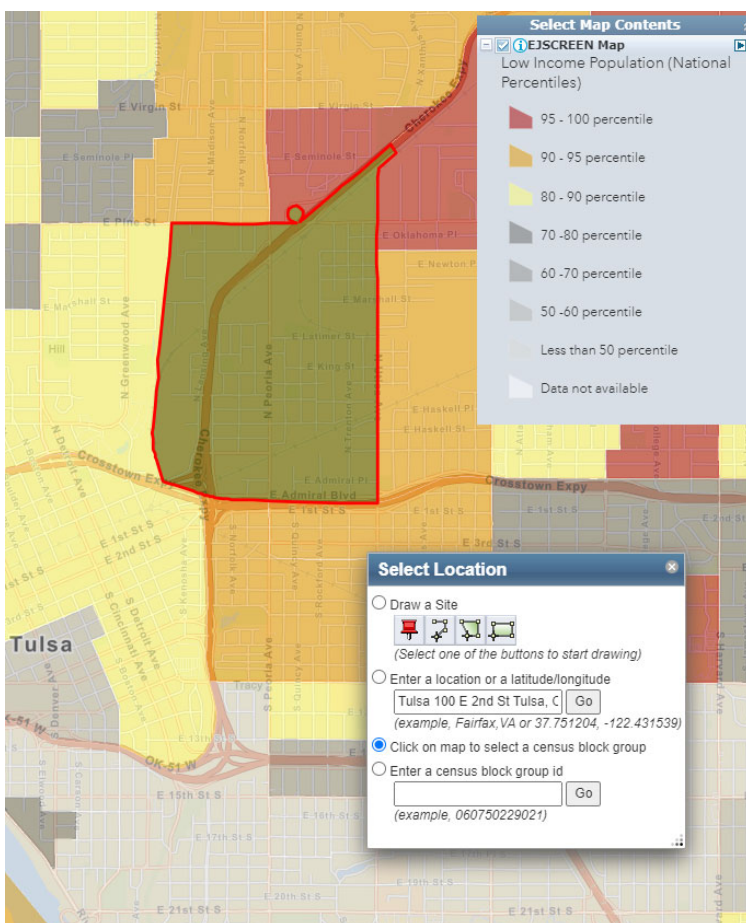
EJSCREEN – Mapping - Linguistically Isolated Population schools, churches, & hospitals

EPA EJSCREEN EPA's Environmental Justice Screening and Mapping Tool (Version 2020)

[EJSCREEN Home](#) | [Mobile](#) | [Glossary](#)



EJSCREEN Standard Report - nearby census block



EJSCREEN Report (Version 2020)

Blockgroup: 401430012001, OKLAHOMA, EPA Region 6

Approximate Population: 1,944

Input Area (sq. miles): 1.20

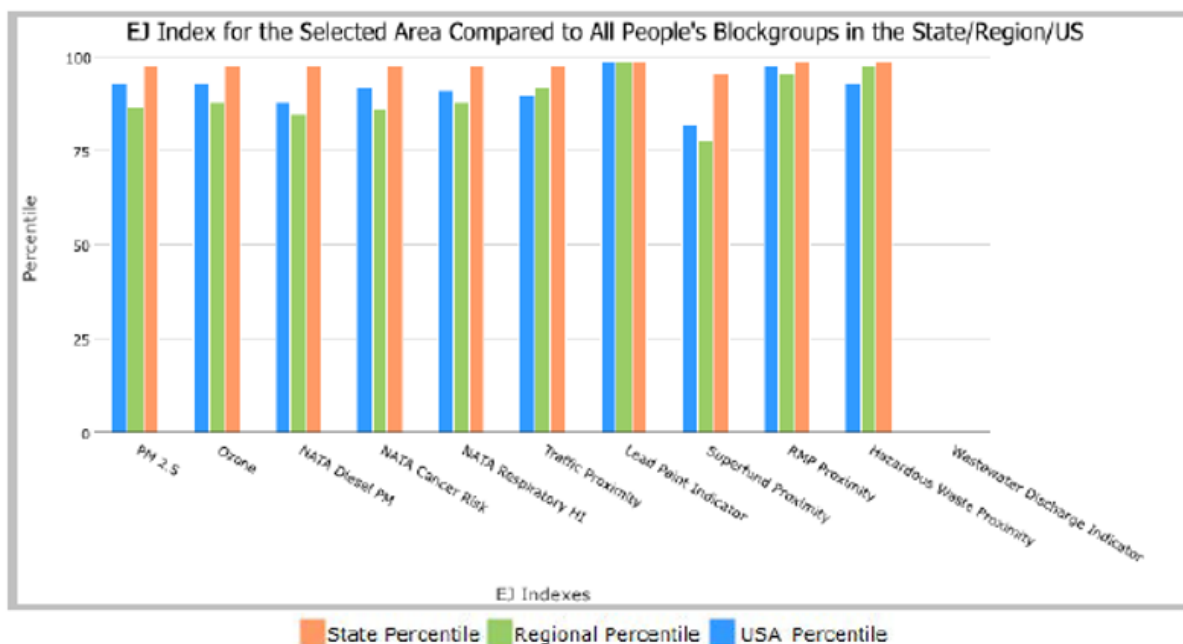


Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	9.9	8.74	89	8.95	91	8.55	88
Ozone (ppb)	46.2	46.9	41	41.8	75	42.9	78
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	0.481	0.292	86	0.401	60-70th	0.478	50-60th
NATA* Cancer Risk (lifetime risk per million)	38	33	94	36	70-80th	32	70-80th
NATA* Respiratory Hazard Index	0.5	0.45	86	0.45	70-80th	0.44	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	760	210	94	400	87	750	76
Lead Paint Indicator (% Pre-1960 Housing)	0.84	0.23	97	0.17	98	0.28	94
Superfund Proximity (site count/km distance)	0.044	0.052	71	0.081	53	0.13	38
RMP Proximity (facility count/km distance)	3.2	0.57	98	0.82	95	0.74	96
Hazardous Waste Proximity (facility count/km distance)	5.1	0.98	98	0.99	97	5	84
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	N/A	0.037	N/A	9.5	N/A	9.4	N/A
Demographic Indicators							
Demographic Index	74%	35%	97	44%	86	36%	92
People of Color Population	76%	34%	95	52%	72	39%	81
Low Income Population	72%	37%	95	37%	93	33%	95
Linguistically Isolated Population	18%	2%	97	6%	88	4%	92
Population With Less Than High School Education	48%	12%	98	16%	94	13%	97
Population Under 5 years of age	6%	7%	51	7%	49	6%	58
Population over 64 years of age	5%	15%	5	13%	11	15%	7

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

EJSCREEN Standard Report – nearby census block

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	98	87	93
EJ Index for Ozone	98	88	93
EJ Index for NATA* Diesel PM	98	85	88
EJ Index for NATA* Air Toxics Cancer Risk	98	86	92
EJ Index for NATA* Respiratory Hazard Index	98	88	91
EJ Index for Traffic Proximity and Volume	98	92	90
EJ Index for Lead Paint Indicator	99	99	99
EJ Index for Superfund Proximity	96	78	82
EJ Index for RMP Proximity	99	96	98
EJ Index for Hazardous Waste Proximity	99	98	93
EJ Index for Wastewater Discharge Indicator	N/A	N/A	N/A



Census Bureau Summary Report



EJSCREEN ACS Summary Report



Location: User-specified polygonal location

Ring (buffer): 0-mile radius

Description:

Summary of ACS Estimates		2014 - 2018
Population		1,944
Population Density (per sq. mile)		1,623
People of Color Population		1,476
% People of Color Population		76%
Households		575
Housing Units		756
Housing Units Built Before 1950		388
Per Capita Income		13,376
Land Area (sq. miles) (Source: SF1)		1.20
% Land Area		100%
Water Area (sq. miles) (Source: SF1)		0.00
% Water Area		0%

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	1,944	100%	151
Population Reporting One Race	1,767	91%	517
White	875	45%	170
Black	215	11%	115
American Indian	52	3%	35
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	625	32%	179
Population Reporting Two or More Races	177	9%	87
Total Hispanic Population	1,070	55%	168
Total Non-Hispanic Population	874		
White Alone	468	24%	112
Black Alone	215	11%	115
American Indian Alone	52	3%	35

Census Bureau Summary Report

	2014 - 2018 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	1,818	100%	146
English	898	49%	133
Spanish	915	50%	148
French	0	0%	9
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	5	0%	8
Associate Degree	74	7%	32
Bachelor's Degree or more	48	4%	27
Population Age 5+ Years by Ability to Speak English			
Total	1,818	100%	146
Speak only English	898	49%	123
Non-English at Home ¹⁺²⁺³⁺⁴	920	51%	131
¹ Speak English "very well"	476	26%	90
² Speak English "well"	134	7%	46
³ Speak English "not well"	219	12%	63
⁴ Speak English "not at all"	91	5%	47
³⁺⁴ Speak English "less than well"	310	17%	78
²⁺³⁺⁴ Speak English "less than very well"	444	24%	91
Linguistically Isolated Households*			
Total	102	100%	34
Speak Spanish	102	100%	33
Speak Other Indo-European Languages	0	0%	9
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	0%	9
Households by Household Income			
Household Income Base	575	100%	40
< \$15,000	126	22%	37
\$15,000 - \$25,000	104	18%	36
\$25,000 - \$50,000	218	38%	51
\$50,000 - \$75,000	77	13%	33
\$75,000 +	50	9%	26
Occupied Housing Units by Tenure			

EJ Recommendations

- ▶ Proceed with **Step 1** – **identify and characterize surrounding EJ areas.**
- ▶ **For sites in an EJ area**, proceed with at least the first part of **Step 2**:
 - ◆ **ID groups represented by the EJ communities** for likely future engagement and
 - ◆ assess **ways to connect** with those groups.
- ▶ As future projects are envisioned, evaluate:
 - ◆ types of potential **Step 3** analyses (EJ impact assessments) and how to perform those analyses and
 - ◆ potential mitigation (**Step 4**) and continued engagement (**Step 5**).

Questions?





Interested in learning more?

We have been and will continue to host a variety of EJ training events and provide EJ news and articles.

Please sign-up to receive this information by:

1. Opening your phone's camera
2. Hold it up to screen over the QR code
3. This should open a form to fill out in your phone's browser

or email Melissa Justen @
mjusten@trinityconsultants.com





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