



# Environmental Justice In California: How We Arrived Here

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July 10, 2017



# Acknowledgment

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- Walker Wieland
- Andrew Slocombe
- Laura August
- Anna Smith



# History of EJ in CA

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- Awareness – early – late 90s
- Initial Acknowledgment – early 2000
- EJ Policies and Actions ARB Dec 2001
- Cumulative Impacts – ARB / CalEPA 2004
- EJ Definition in Statute – 1999, First in US

# Environmental Justice

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## Statutory definition of environmental justice

- “Environmental justice means the **fair treatment of people** of all races, cultures, and incomes with respect to the **development, adoption, implementation** and **enforcement** of environmental laws, regulations, and policies.”
  - Gov. Code §65040.12(e)
- Question remains – What is Fair

## EQUALITY VERSUS EQUITY



In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.



In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.



In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.

Equality

Fair/Equity

Justice

# Winning Battle Vs War -2001

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"It shall be the ARB's policy to strengthen our outreach and education efforts in all communities, **especially** low-income and minority communities, so that all Californians can fully participate in our public processes and share in the air-quality benefits of our programs."

**Missed opportunity to get Penalty money**

# Cumulative Impacts

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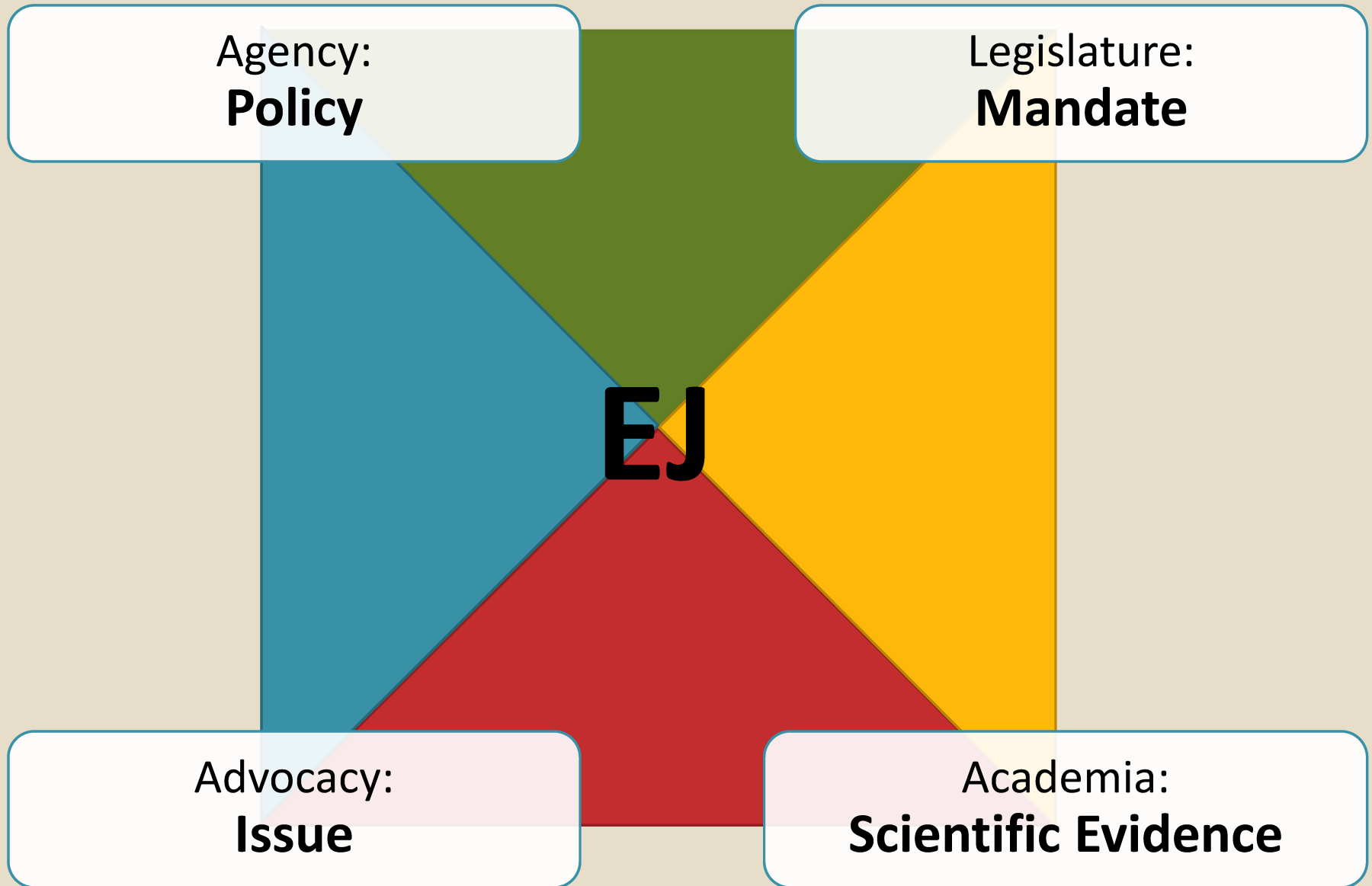
It shall be the ARB's policy to assess, consider, and reduce cumulative emissions, exposures, and health risks when developing and implementing our programs. (2001)

After 3 years, CalEPA (2004)

Cumulative impacts means exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area .....

Critical Step: Risk to Impact Paradigm

# EJ Progress under New Paradigm



# Policy Vs. Mandate

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- Leadership Intent & Action – Requirement
- Short-term – Long-term
- Easy to modify or cancel – not easy
- Accountability & Enforcement ??
- Challenge in the court ??
- > 25 laws related to EJ, not all explicit
- Bureaucracy – 2 Ms

# Major Push for EJ in CA

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- AB -32 Global Warming Solutions Act 2006
- Cumulative Impacts
- Benefit Disadvantaged Communities
- No definition or directive
- Community Benefits Fund – 2007
- AB 1405 – 2008, Vetoed in 2009

# Major Push for EJ in CA

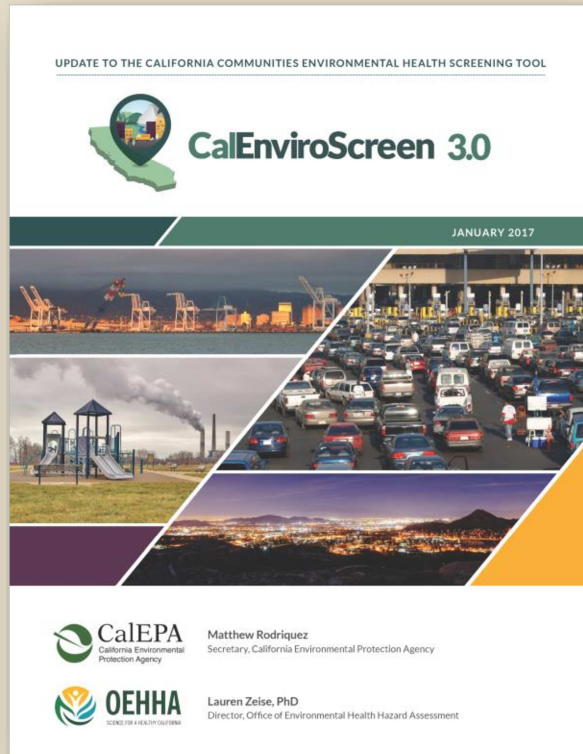
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- SB 535 – definition and directive
- Ambiguity – benefits
- Implementation & Accountability
- EJSM by USC - funded by ARB & CEC
- CalEnviroScreen – Dr. George Alexeeff
- Disadvantaged Communities - CalEPA
- DACs prioritization and funding from multiple agencies



# CalEnviroScreen 3.0

Released January 2017



- Place based approach or Spatial analysis of California Communities resulting from Pollution Burden and Population Vulnerability.
- Relative Scale
- 20 indicators combined into a single ranked score.
- Census tract scale (~8,000).

Available at: <http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>



# CalEnviroScreen Components

## Exposures

*People have contact with pollution*

## Environmental Effects

*Adverse environmental conditions caused by pollutants or sources*

## Sensitive Populations

*Populations with biological traits (including health status) that may magnify the effects of pollutant exposures*

## Socioeconomic Factors

*Community characteristics that result in increased vulnerability to pollutants*



# Criteria for Indicator Selection

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1. Contributes to understanding the component
  - Pollution indicators - health-relevant, widespread
  - Population indicators - linked to vulnerability to pollution
2. Publicly available
3. Location-based and detailed
4. Good scientific quality
  - e.g., covers the state, accurate, current

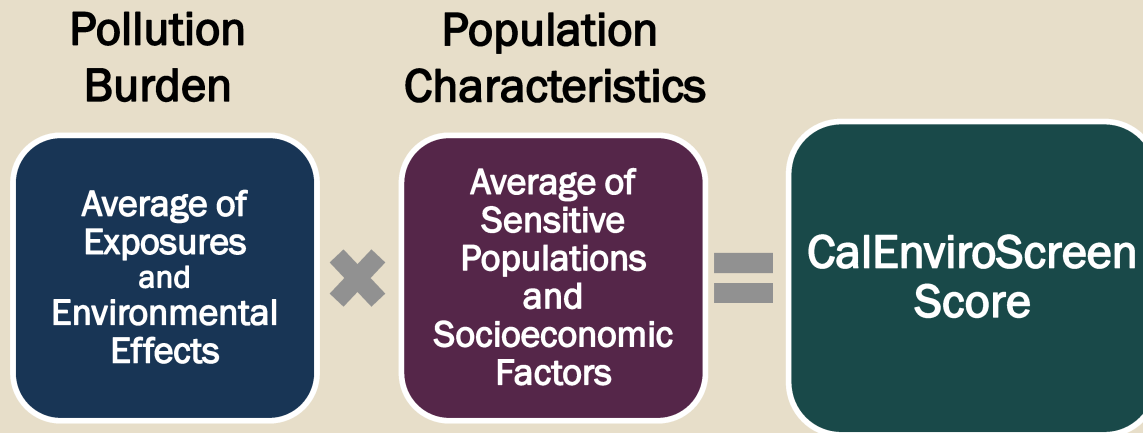


# Indicators

| <i>Pollution Burden</i>                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                    | <i>Population Characteristics</i>                                                                                                             |                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposures                                                                                                                                                                                                                                                                     | Environmental Effects                                                                                                                                                                                                              | Sensitive Populations                                                                                                                         | Socioeconomic Factors                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• PM 2.5 Concentrations</li> <li>• Ozone Concentrations</li> <li>• Diesel PM Emissions</li> <li>• Drinking water Contaminants</li> <li>• Pesticide Use</li> <li>• Toxic Releases from Facilities</li> <li>• Traffic Density</li> </ul> | <ul style="list-style-type: none"> <li>• Cleanup Sites</li> <li>• Groundwater Threats</li> <li>• Hazardous Waste Facilities and Generators</li> <li>• Impaired Water Bodies</li> <li>• Solid Waste Sites and Facilities</li> </ul> | <ul style="list-style-type: none"> <li>• Asthma</li> <li>• Cardiovascular Disease (<b>NEW</b>)</li> <li>• Low Birth Weight Infants</li> </ul> | <ul style="list-style-type: none"> <li>• Educational Attainment</li> <li>• Housing Burdened Low Income Households (<b>NEW</b>)</li> <li>• Linguistic Isolation</li> <li>• Poverty (2x)</li> <li>• Unemployment</li> </ul> |

# Calculating CalEnviroScreen Scores

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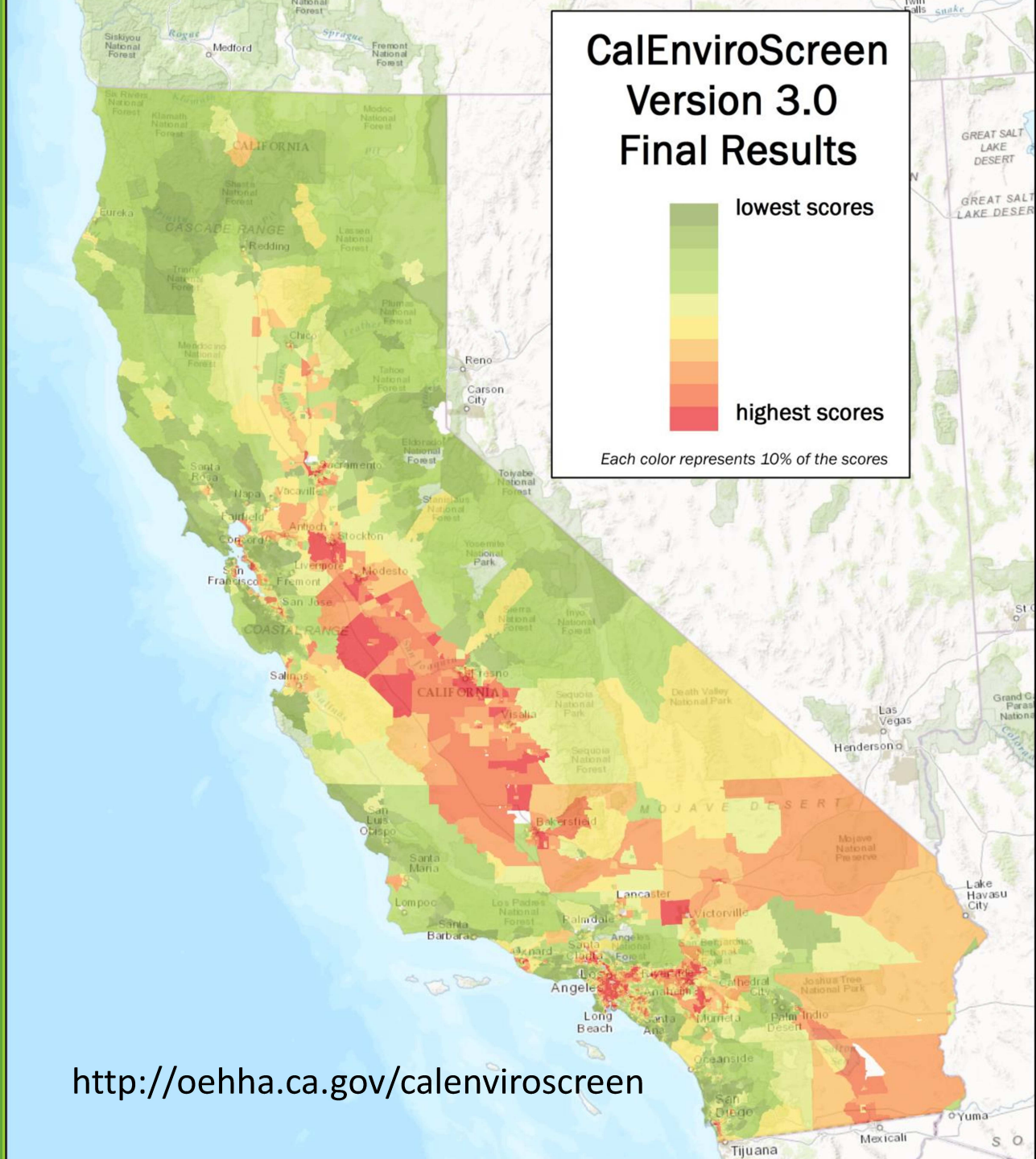


- CalEnviroScreen score is calculated by combining all indicator scores; allows for comparison of different areas
- Higher scores mean greater pollution burdens and population vulnerability.





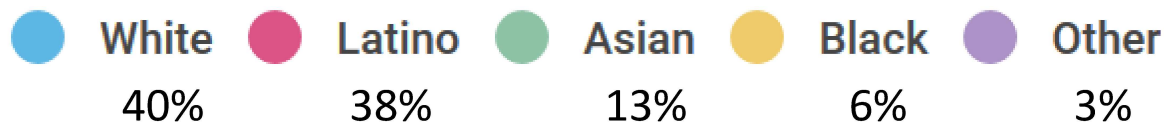
<http://oehha.ca.gov/calenviroscreen>



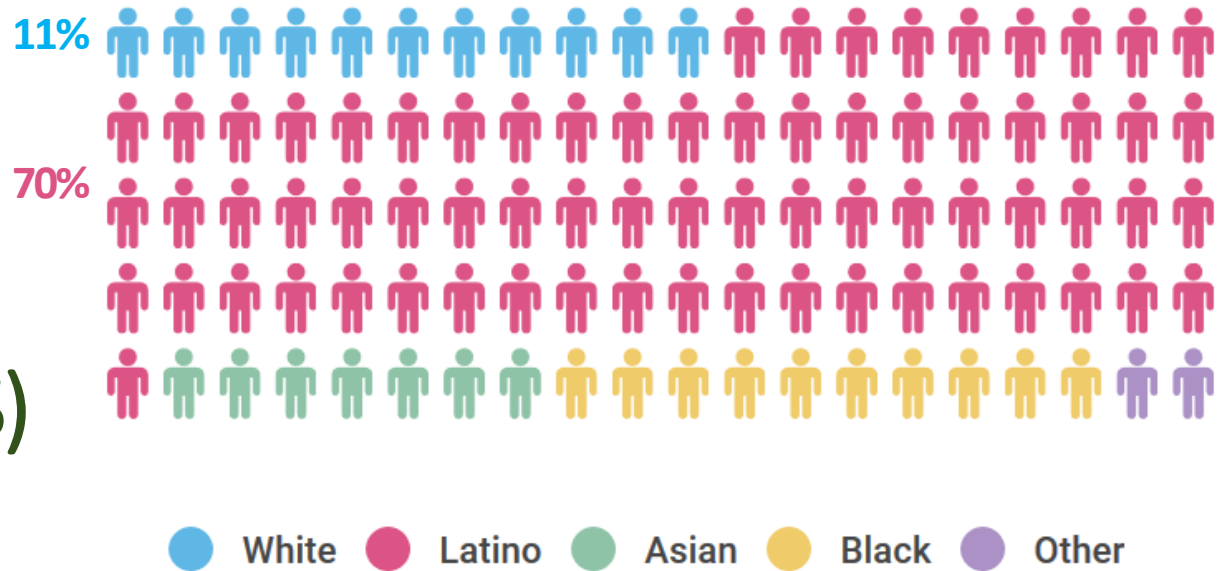
# Analyses of CalEnviroScreen Data

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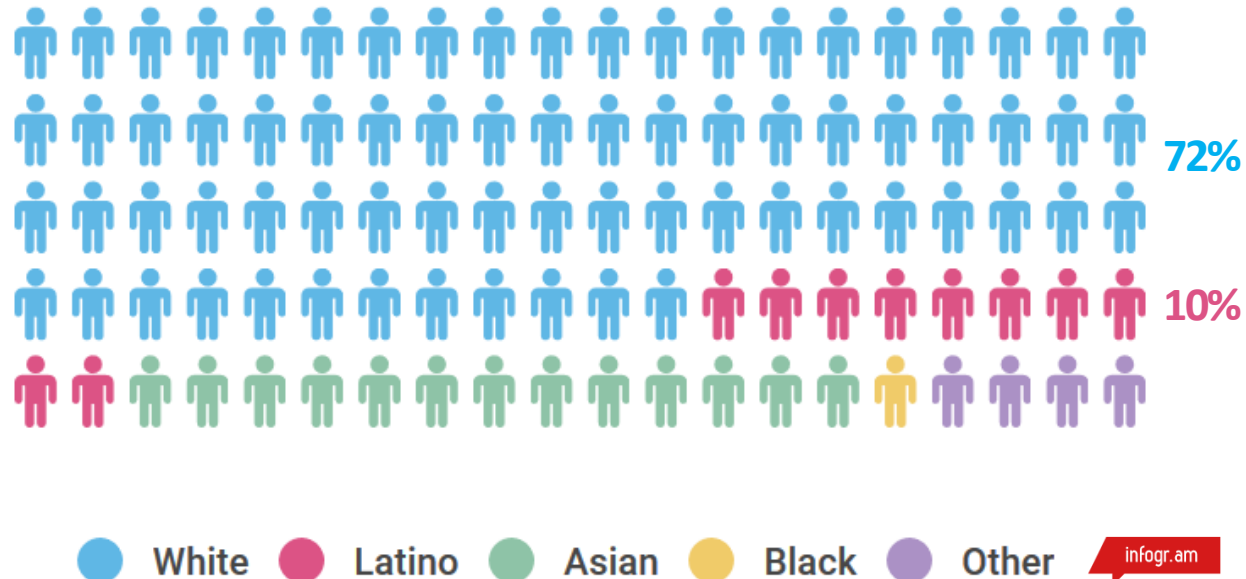
# California Demographics



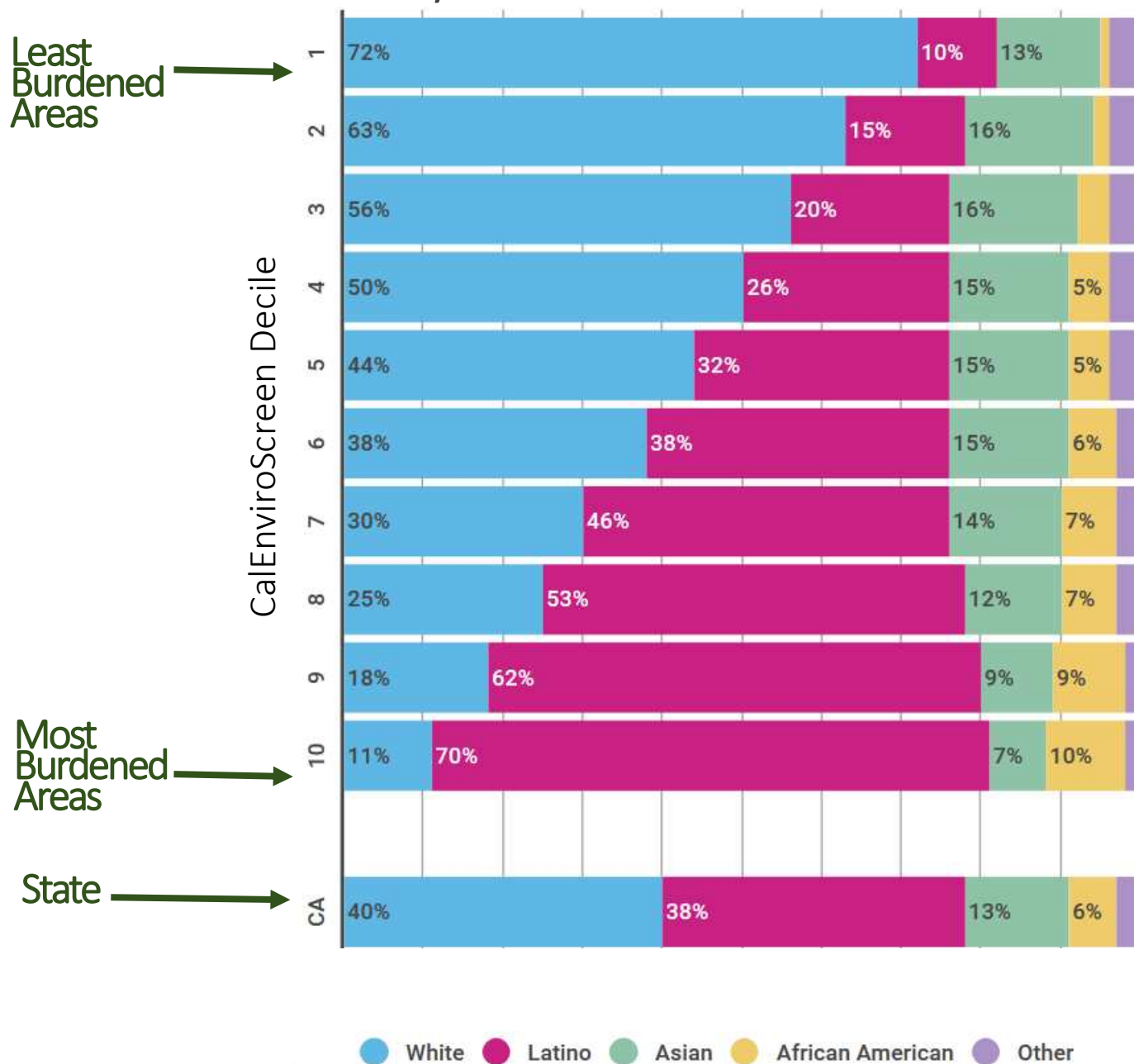
# CA Most Burdened Areas (Top 10% CES)



# CA Least Burdened Areas (Lowest 10% CES)



# CA Race/ethnicity for each decile of CalEnviroScreen 3.0

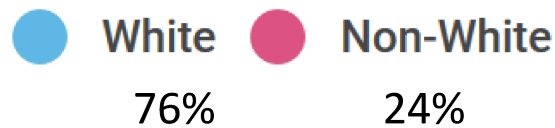


# Michigan Analysis

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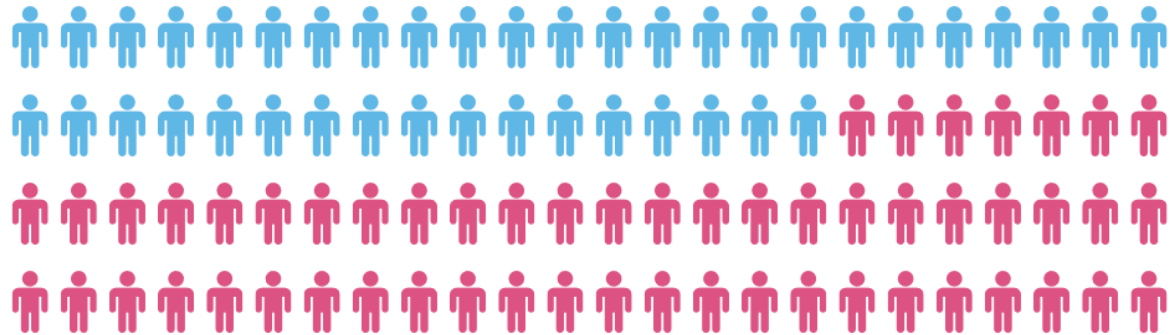
- Feasibility demonstration
- Readily available EJSCREEN data – Applied CalEnviroScreen Method
- Exposure: 6 Indicators
- Env. Effects: 5 indicators (1/2 weighted)
- SES: 3 indicators
- No Sensitive Population Component

# Michigan Demographics



# Michigan Most Burdened Areas (Top 10%)

43%



● White ● Non-White

# Michigan Least Burdened Areas (Lowest 10%)

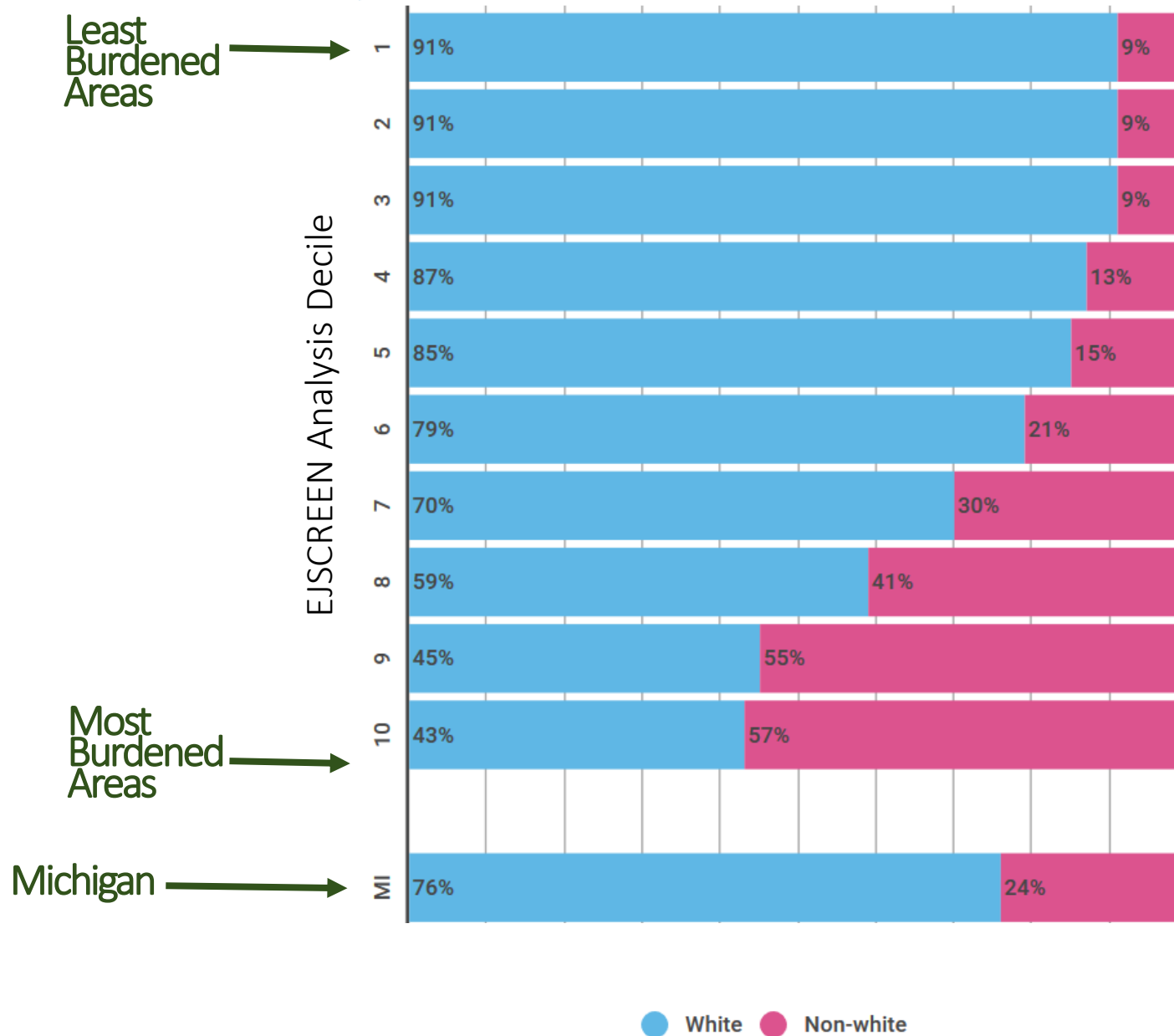


● White ● Non-White

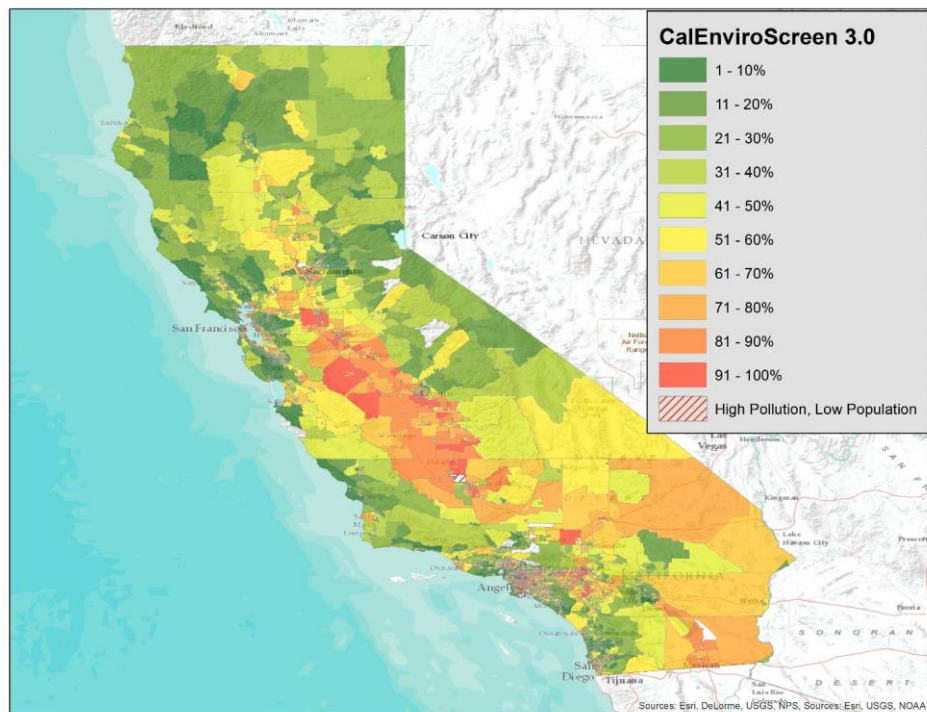
by EJSCREEN Analysis

info@ejam

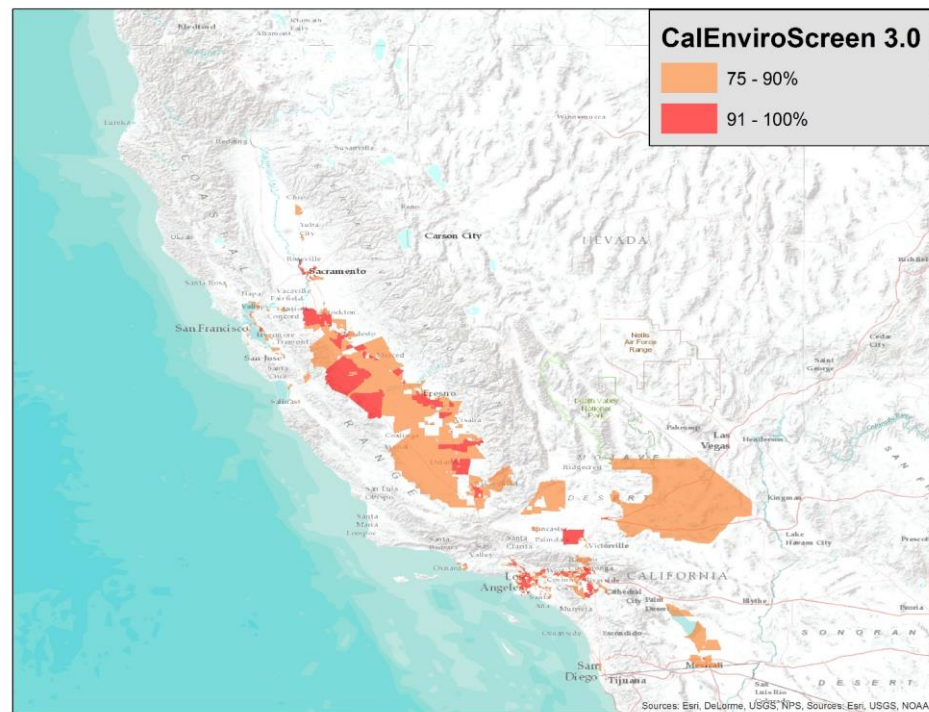
# Michigan ethnicity for each decile of EJSSCREEN Analysis



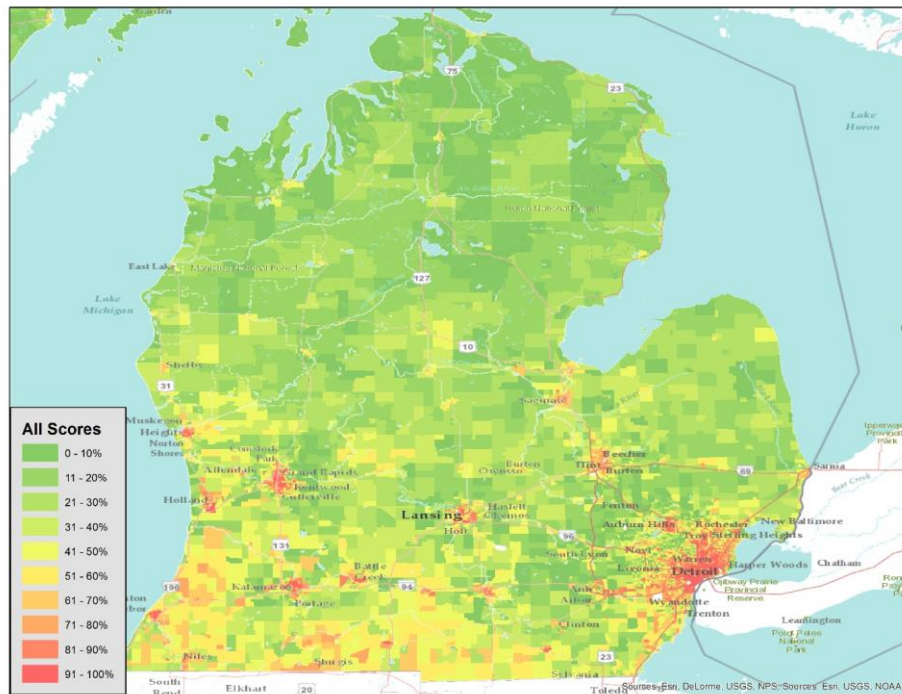
## CalEnviroScreen 3.0



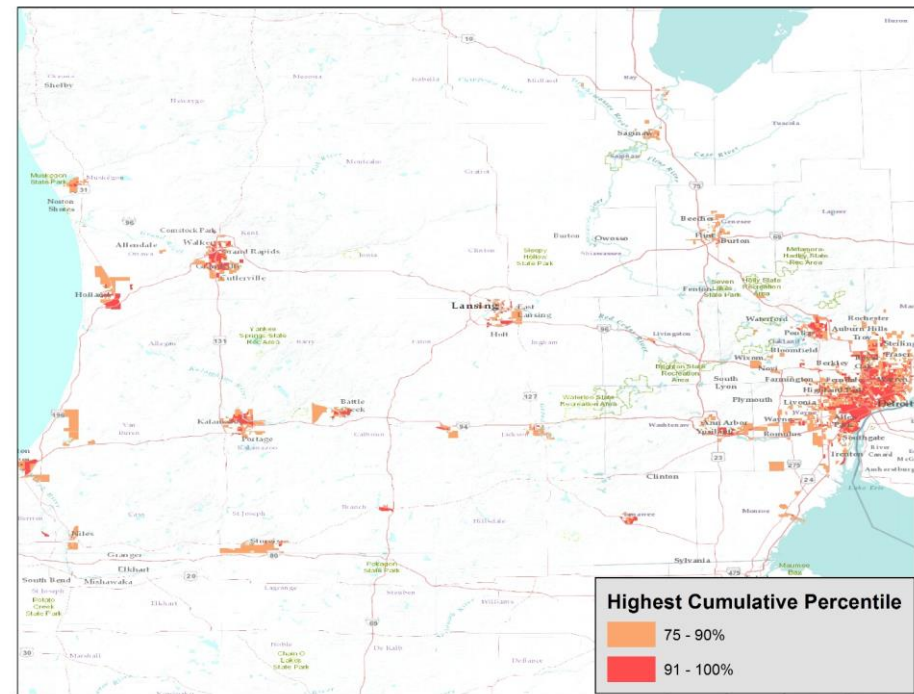
## Top 10 and 25% Census Tracts



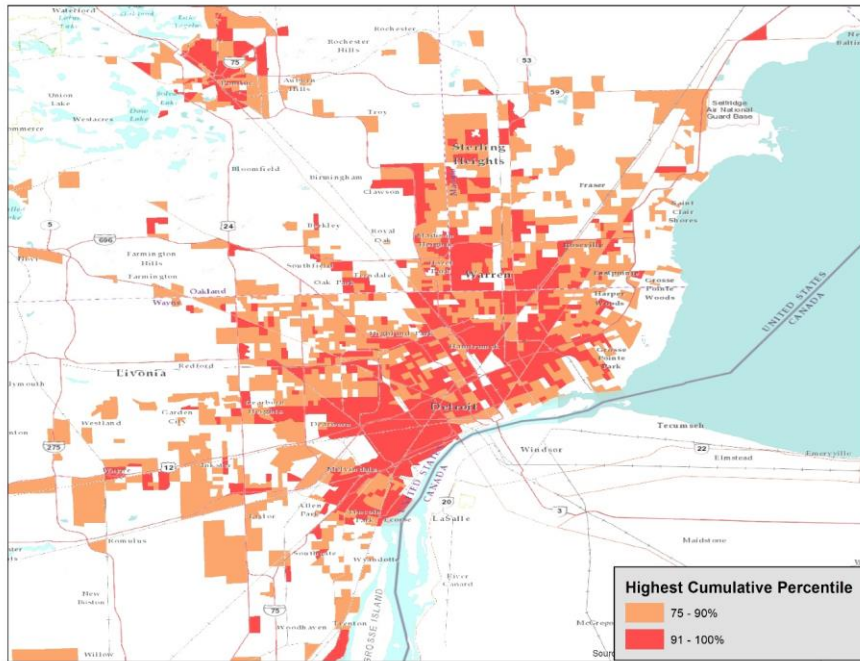
Cumulative Impact results using EJSSCREEN Data



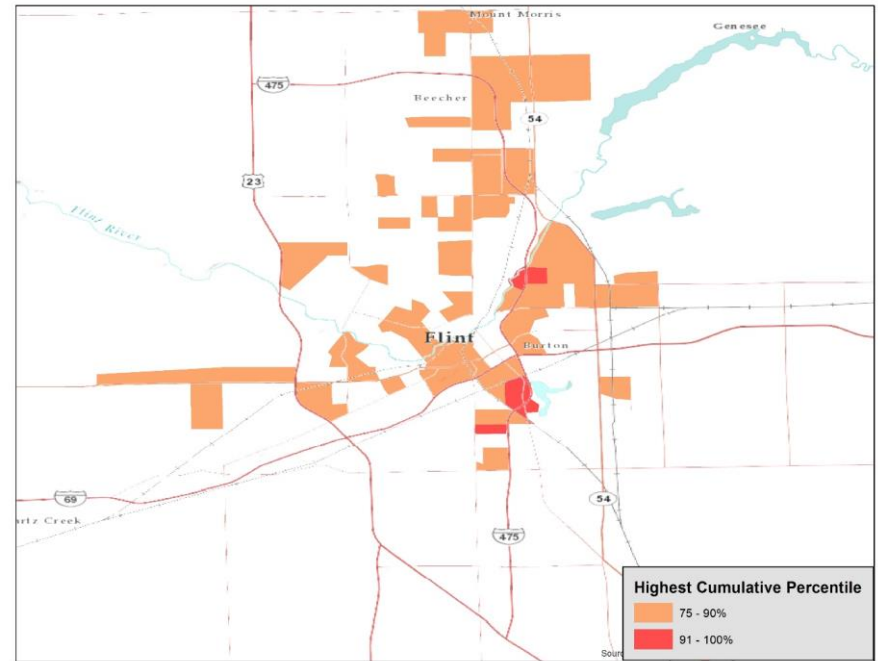
Tracts in top 25%



**Top 10 & 25% Census Tracts in Detroit area**



**Top 10 & 25% Census Tracts in Flint area**



# What's Next and Critical

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- Incentives & Resource Allocation – Continue
- Prioritize areas for local action
- Avoid creating or worsening DACs with in-fill
- Include consideration of cumulative impacts in land-use approval process
- Integrate cumulative impacts consideration into permitting at the local, regional and state level

# My mentors of EJ – thank you

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|                 |                                       |
|-----------------|---------------------------------------|
| Carlos Porras   | Communities for better Environment    |
| Jane Williams   | California Communities against toxics |
| Diane Takvorian | Environmental Health Coalition        |
| Shabaka Heru    | Society for Positive Action           |
| Henry Clark     | West County Toxics Coalition          |
| Margaret Gordon | West Oakland                          |
| Richard Moore   | New Mexico                            |
| Charles Lee     | U.S EPA                               |