# Environmental Justice Screening Tools: Powerful Platforms with Potential Pitfalls

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# **Environmental Justice Indices** and Tools are Proliferating

Environmental justice (EJ) requirements are increasingly being incorporated into legislation, regulations, and funding programs at the state and federal level. States, such as California, Maryland, Michigan, and New Jersey, and federal programs have developed EJ screening tools that provide access to environmental and demographic information to support these programs.



## **Comparing EJ Tools**

Using a hypothetical case study of a contaminated sediment site, we compare five widely used EJ screening tools. We summarize the differences in the tools' data sources, index methodology, and interpretation of screening results to identify potential pitfalls of using the tools to evaluate EJ considerations at such sites.



### **KEY ENVIRONMENTAL JUSTICE CONSIDERATIONS**

- Is the surrounding community an "overburdened community" (OBC) or community with EJ concerns under state law? If so, do additional environmental permitting obligations apply?
- Do screening tool results align with on-ground observations and community concerns?
- What is the history of the property's involvement and relations with community?
- What opportunities are available to engage with the community through uses of the property?
- What are the risks from residual/ environmental issues associated with prior site uses and planned remedial actions?

# **Case Study: Hypothetical Contaminated Sediments Site**

### **Location: Trenton, NJ**

**CLIENT:** E.U.-based pharmaceutical manufacturer that wants to purchase and redevelop the site to construct a manufacturing facility

**SITE:** Former manufacturing facility with documented releases of chemicals, resulting in sediment contamination at levels that pose risks to humans and the environment

## **Potential Pitfalls in Developing Environmental Justice Impact Statements (EJIS)**

- Indicators may be redundant or have interactions (e.g., open space, flooding, impervious surfaces).
- Measures are based on percentiles and comparison to the 50th percentile.
  - The 51st percentile is equally as bad as the 99th percentile.
  - Projects that improve outcomes from the 99th to the 51st percentile would not change the EJIS stressor total, but those that improve conditions from the 51st to the 49th would.
- EJIS scores are based on the location of the facility, not impacts—downstream or wind impacts may be missed.
- Permitting decisions cannot consider potential job creation, but income is a key criterion for identifying OBCs.
- Project may improve the EJIS metrics, but may not improve community conditions and/or meet community needs/values (e.g., gentrification).



## Although EJ tools are developed to support similar objectives, they vary in the data and methods used for aggregating information. Each tool has its own strengths and weaknesses, and data should be validated on the ground through sampling and consultation.

		EJ EnviroScreen 2.1 (EJSCREEN)	CalEnviroScreen 4.0	CEJST	Dept HHS EJ Index	NJ EJ Impact Statement (EJMAP)
	Overall EJ Index Score	×	$\checkmark$	×	$\checkmark$	$\checkmark$
Indicators	Calculation of Index Score	Multiplicative	Multiplicative	N/A	Additive	Additive
	Spatial Scale (Census Boundary)	Block Groups	Tracts	Tracts	Tracts	Block Groups
	Units	Percentile	Percentile	Binary	Percentile	Score (Sum of Binary Results)
	Defines/Identifies OBCs	$\checkmark$	×	$\checkmark$	×	$\checkmark$
	Exposure/Environmental	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Socioeconomic	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Community	X	×	$\checkmark$	$\checkmark$	$\checkmark$
	Health	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	Climate Change	$\checkmark$	×	$\checkmark$	×	$\checkmark$
	Race	$\checkmark$	×	×	$\checkmark$	$\checkmark$



# Conclusion

EJ Screening tools vary in methodology, data inputs, and, notably, the goals they are intended to support. It is critical that users understand these differences in selecting the right tool for the job.

As many states follow the lead of New Jersey, California, Michigan and others, we will likely see new indicators/stressors, approaches to identifying overburdened communities, and regulations and policies for incorporating EJ objectives.

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