



# ADDRESSING ENVIRONMENTAL JUSTICE IN YOUR COMMUNITY



STAR Communities Webinar  
October 15, 2015

## AGENDA

- ★ Welcome and Overview of STAR Communities – Kristi Wamstad-Evans
- ★ Presentation of EPA's EJSCREEN tool – Tai Lung
- ★ Houston's work on environmental justice – Lisa Lin
- ★ Baltimore's work on environmental justice – Alice Kennedy
- ★ Facilitated Discussion with Panelists and Audience Questions

**NOTE:** Due to the number of participants, the audience will be muted. Please submit questions via questions box.

# TODAY'S PRESENTERS



*Tai Lung*  
EPA Office of  
Environmental Justice



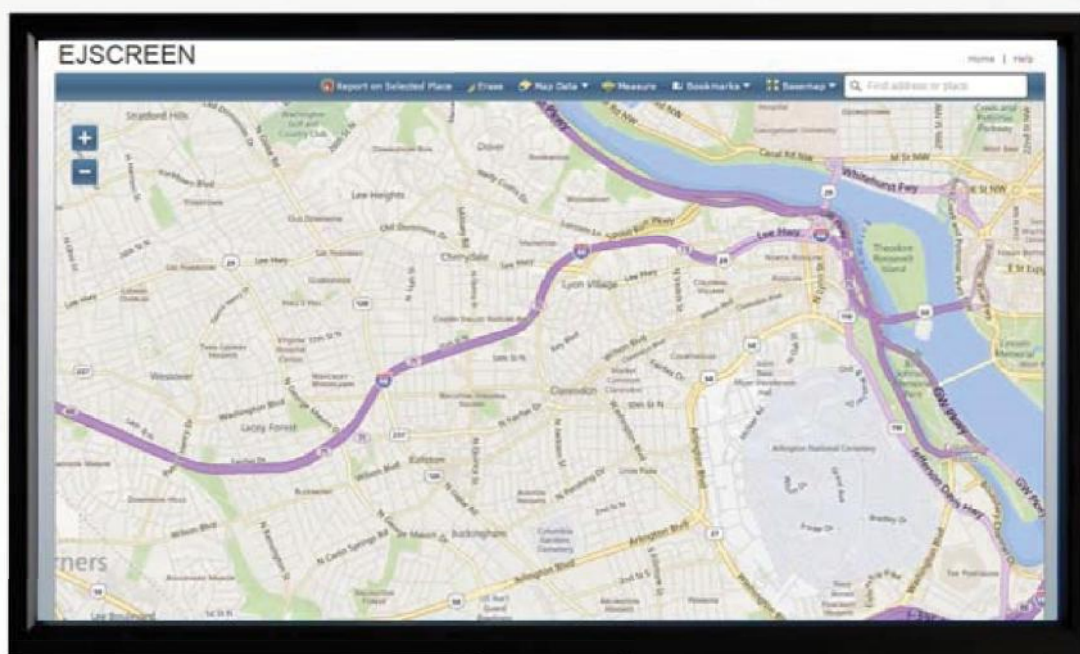
*Lisa Lin*  
City of Houston, TX



*Alice Kennedy*  
City of Baltimore, MD



*Kristi Wamstad-Evans*  
STAR Communities (moderator)



# EJSCREEN: EPA's Environmental Justice Screening Tool



October 15, 2015



# Environmental Justice Defined

EPA has defined environmental justice as, “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.”

<http://www.epa.gov/environmentaljustice/>



# Background of EJSCREEN

- EPA's new tool for nationally consistent EJ screening and mapping
- Web-based Geographic Information System (GIS) tool and data
- Product of Plan EJ 2014
- Builds upon [National Environmental Justice Advisory Committee report](#) on EJ screening, and prior EPA experience
- Peer reviewed by experts in 2013



# Key Features

- 12 EJ Indexes – one for each environmental indicator
- Annually updated demographics – from most recent U.S. Census Bureau American Community Survey (ACS)
- Web accessible
- Standard printable reports, maps, and bar graphs
- Higher resolution maps
- Raw data downloads will also be available



# How Can EJSCREEN Be Used?

- A tool for everyone – a basis for further dialogue, engagement, and examination
- EPA is not requiring our state and tribal partners to use EJSCREEN in any context
- EPA uses EJSCREEN in various contexts
  - Outreach and engagement
  - Many aspects of environmental programs
  - Geographically-based initiatives



*EPA outreach meeting after Hurricane Katrina (2006)*



# Limitations For Using EJSCREEN

- EJSCREEN is a starting point. It is a pre-decisional screening tool; does not direct final outcomes for EPA.
- EJSCREEN highlights places for further review for the potential for EJ concerns.
- Baseline screening should be supplemented with local information and experience.
- Should **not** be used to label areas as “EJ Communities.”





# Limitations For EJSCREEN Data



*Potential pesticide exposure is one of many environmental issues that is not in EJSCREEN because of insufficient data coverage.*

- Demographics are based on 5-year averages of US Census American Community Survey data.
- Environmental and proximity indicators are screening-level proxies for exposure or risk – not actual exposure or risk.
- EJ Indexes do not cover all environmental or community issues. Always consider additional local information.



# Geographic Unit is the Block Group

- Over 217,000 block groups in the U.S.
- The average block group has about 1,400 residents.
- Highest resolution available for most EJSCREEN data.

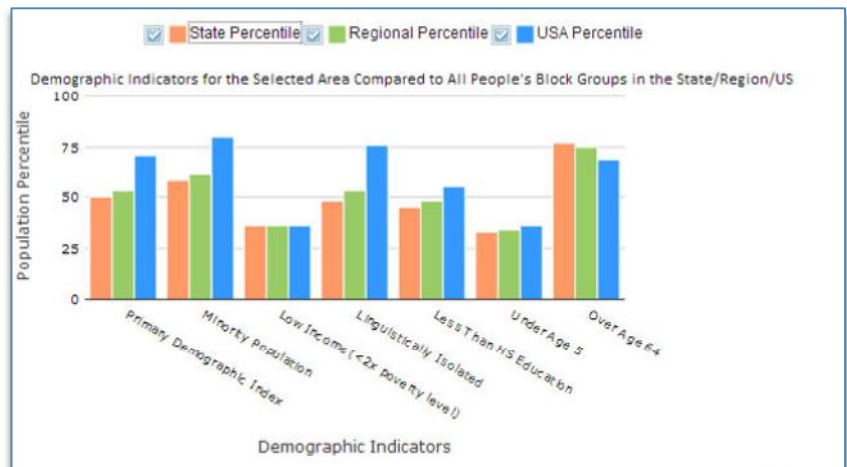


*The small colored irregular polygons are block groups*



# Results Are Ranked as Percentiles

- Percentiles put indicators into common units of 0 – 100.
- For example, a place at the 80th percentile nationwide means 20% of the US population has a higher value.
- Ranking values as percentiles allows comparison of indicators measured with different units. It does not mean the risks are equal or comparable.



# EJSCREEN Data

- 12 EJ indexes, which combine environmental data and the demographic index.
- 12 environmental indicators that measure potential exposure, hazard/risk, and proximity.
- 6 demographic indicators from the ACS 5 Year Annual Survey.



*Proximity to traffic is one of the 12 environmental indicators*



# Environmental Indicators

<u>Environmental Indicator Raw Data Type (Units)</u>	<u>Indicator Descriptor</u>	<u>Year Data published</u>
<b>Particulate Matter</b> (PM2.5 in µg/m3)	Potential Exposure	2011
<b>Ozone</b> (ppb)	Potential Exposure	2011
* <i>National Air Toxics Assessment (NATA) Diesel PM in (µg/m3)</i>	Potential Exposure	N/A
* <i>NATA Air Toxics Cancer Risk (risk per million people)</i>	Hazard/Risk	N/A
* <i>NATA Respiratory Hazard Index</i>	Hazard/Risk	N/A
* <i>NATA Neurological Hazard Index</i>	Hazard/Risk	N/A
<b>Lead Paint Indicator</b> (% pre-1960s Housing)	Potential Exposure	2008-2012
<b>Traffic Proximity</b> (daily traffic count/distance to road)	Proximity	2011
<b>Proximity to National Priority List</b> sites (count/km distance)	Proximity	2013
<b>Proximity to Risk Management Plan</b> facilities (count/km distance)	Proximity	2013
<b>Proximity to Treatment Storage Disposal Facilities</b> (count/km distance)	Proximity	2013
<b>Proximity to Major Direct Water Dischargers</b> (count/km distance)	Proximity	2013





# Demographic Indicators

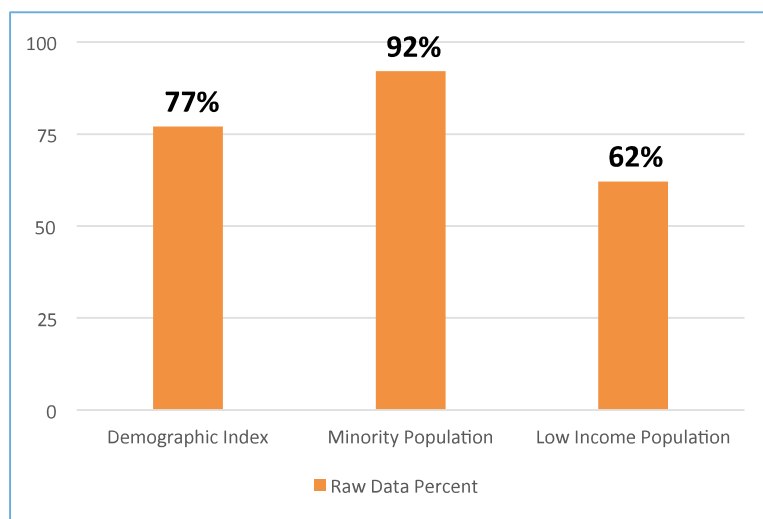
<u>Demographic Indicator</u>	<u>Description</u>	(Source: 2008-20012 ACS Estimates)
<b>Low-Income</b>	% of block group population at or below twice the federal “poverty level.”	
<b>Minority</b>	All people other than non-Hispanic white-alone individuals.	
<b>Less than high school education</b>	% of people age 25 or older without a high school diploma.	
<b>Linguistic isolation</b>	% of people in household in which all members over age 14 years speak English less than “very well.”	
<b>Individuals under age 5</b>	% of people in a block group under the age of 5.	
<b>Individuals over age 64</b>	% of people in a block group over the age of 64.	



# Demographic Index

$$\text{Demographic Index} = \frac{(\% \text{ low-income} + \% \text{ minority})}{2}$$

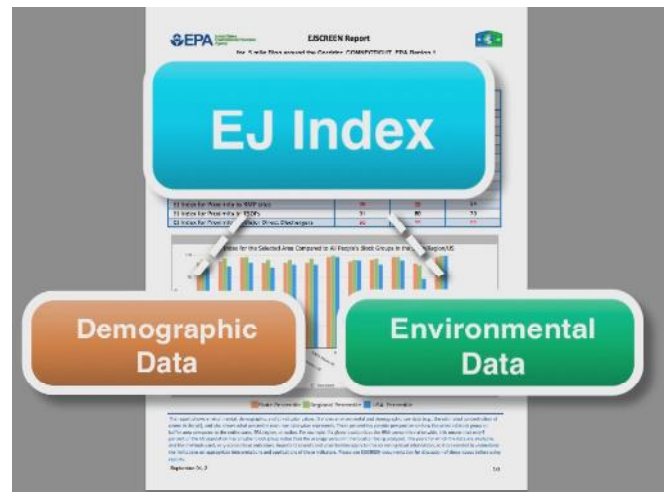
Example Calculation - Demographic Index  $77\% = (92\% + 62\% = 144\%)/2$



# What does the EJ Index mean?

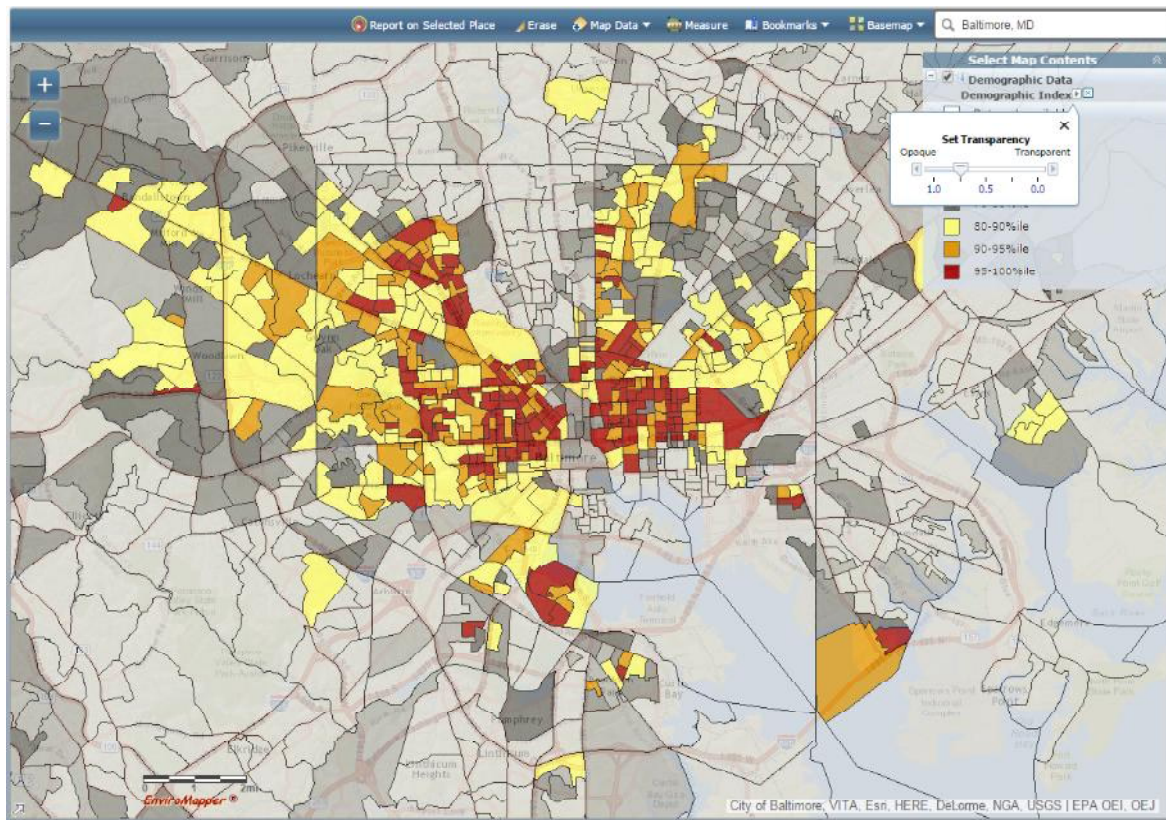
The EJ index combines environmental and demographic data to highlight areas where vulnerable populations may be disproportionately impacted by pollution. It also considers the population of the block group.

It helps identify areas that may have higher pollution burdens and vulnerable populations present.



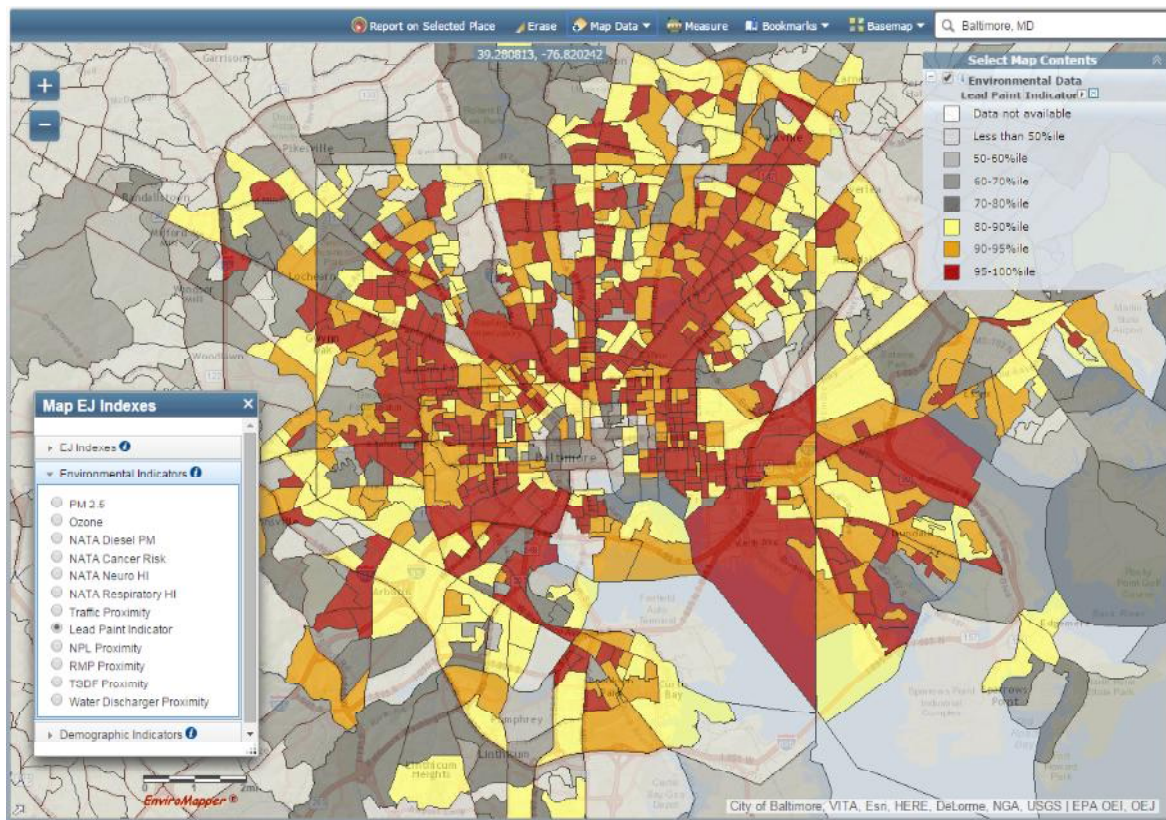
# Maps of Environmental Indicators, Demographic Indicators, and EJ Index Data

Baltimore, MD—  
Demographic Index



# Maps of Environmental Indicators, Demographic Indicators, and EJ Index Data

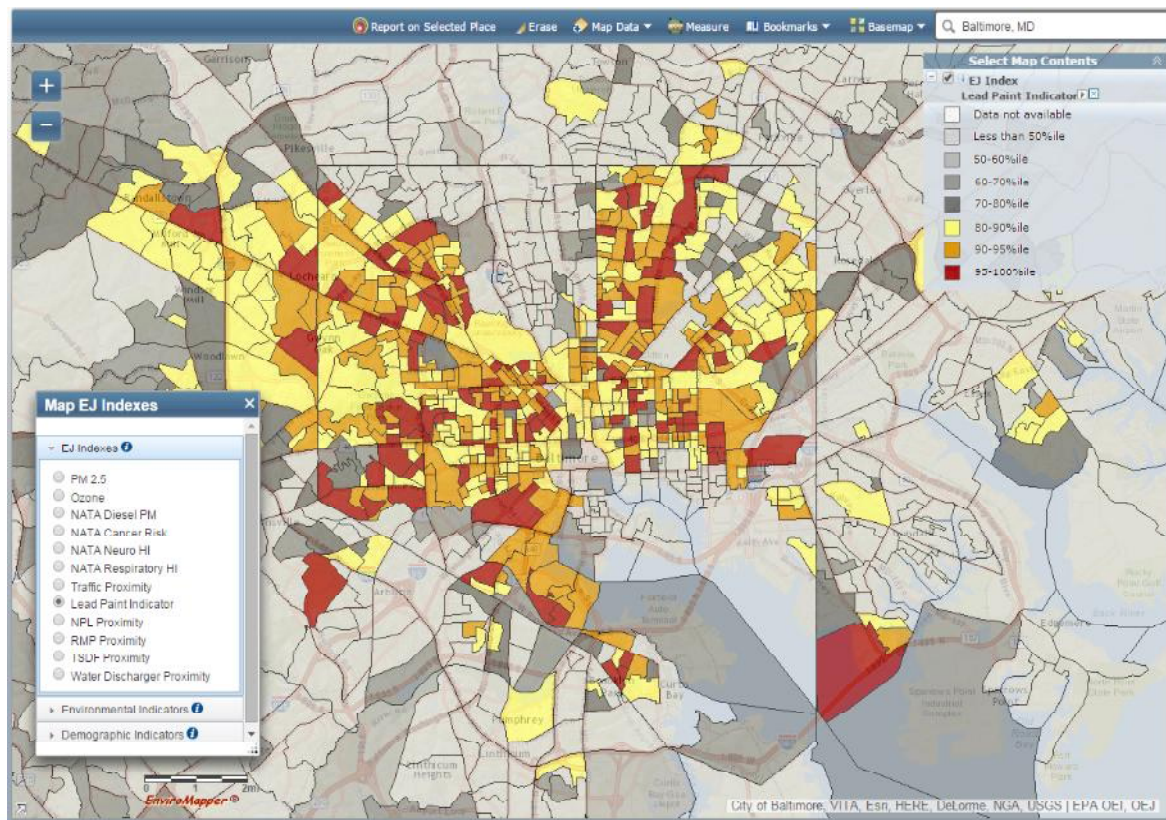
Baltimore, MD –  
Lead Paint Indicator





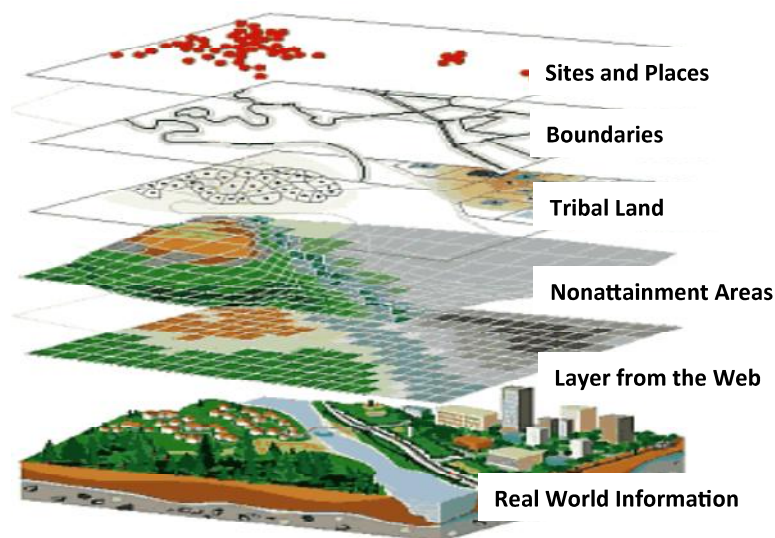
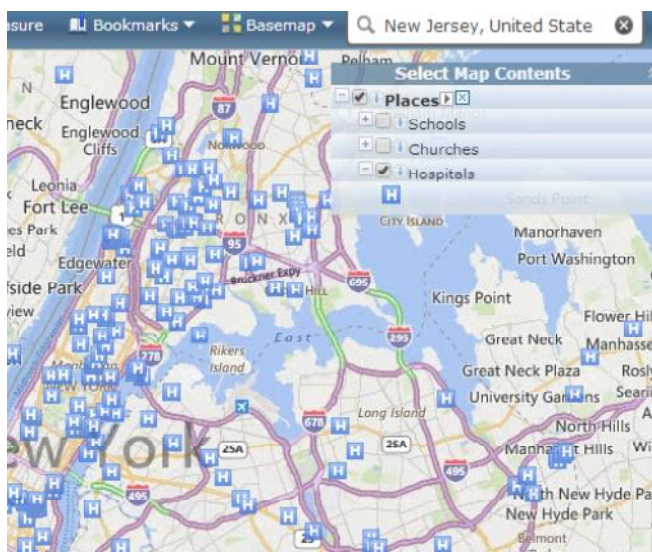
# Maps of Environmental Indicators, Demographic Indicators, and EJ Index Data

Baltimore, MD –  
EJ Index for Lead Paint



# EJSCREEN has Many Other Map Layers

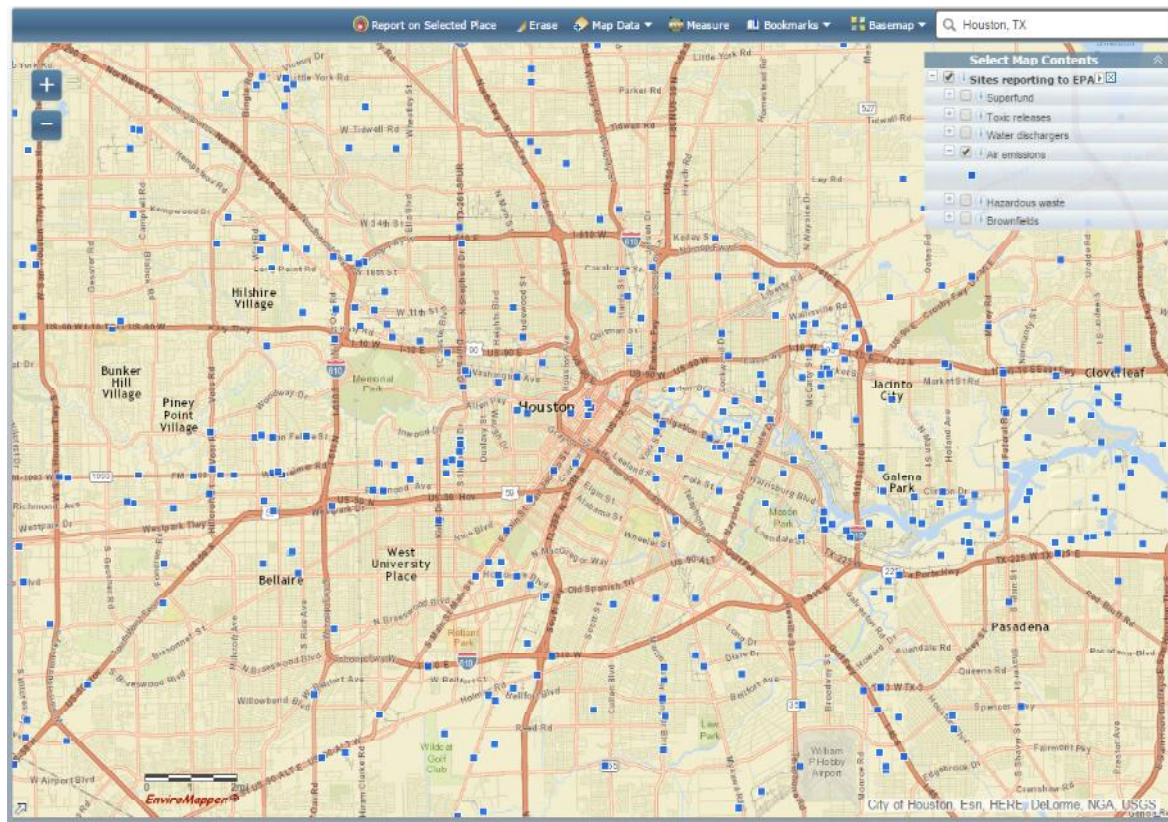
EJSCREEN adds many other types of data by overlaying various datasets (called “layers”)





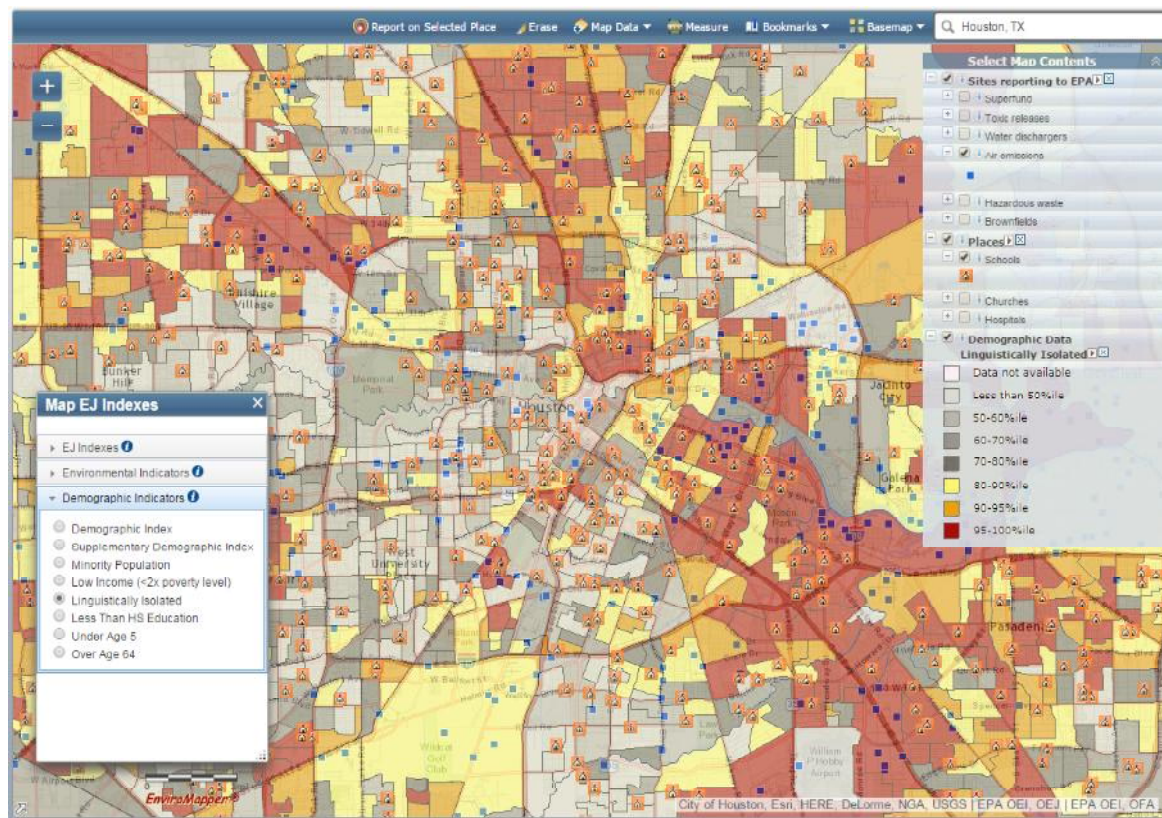
# Layering Map Information

Houston, TX –  
Standard Base Map  
& Facilities with  
Air Permits



# Layering Map Information

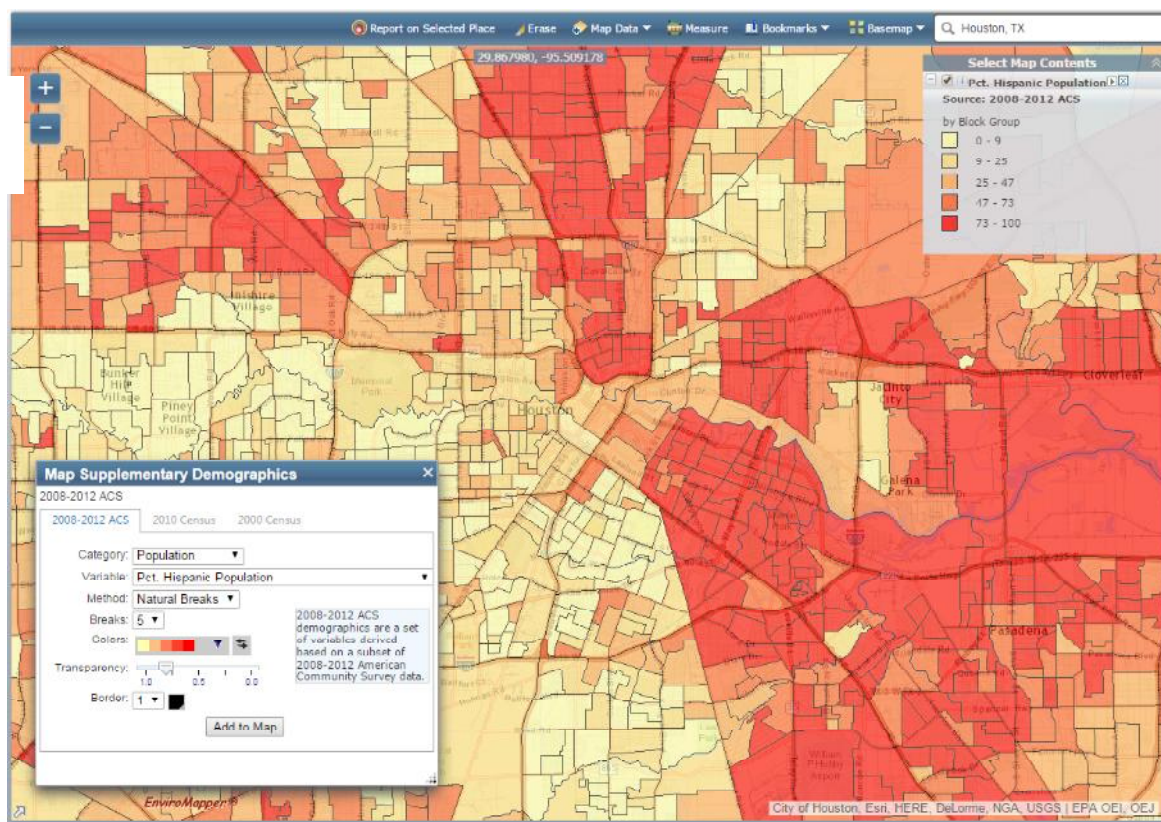
Houston, TX –  
With Linguistically  
Isolated Households,  
School Locations, &  
Facilities with Air  
Permits





# Layering Map Information

Houston, TX – Standard  
Base Map

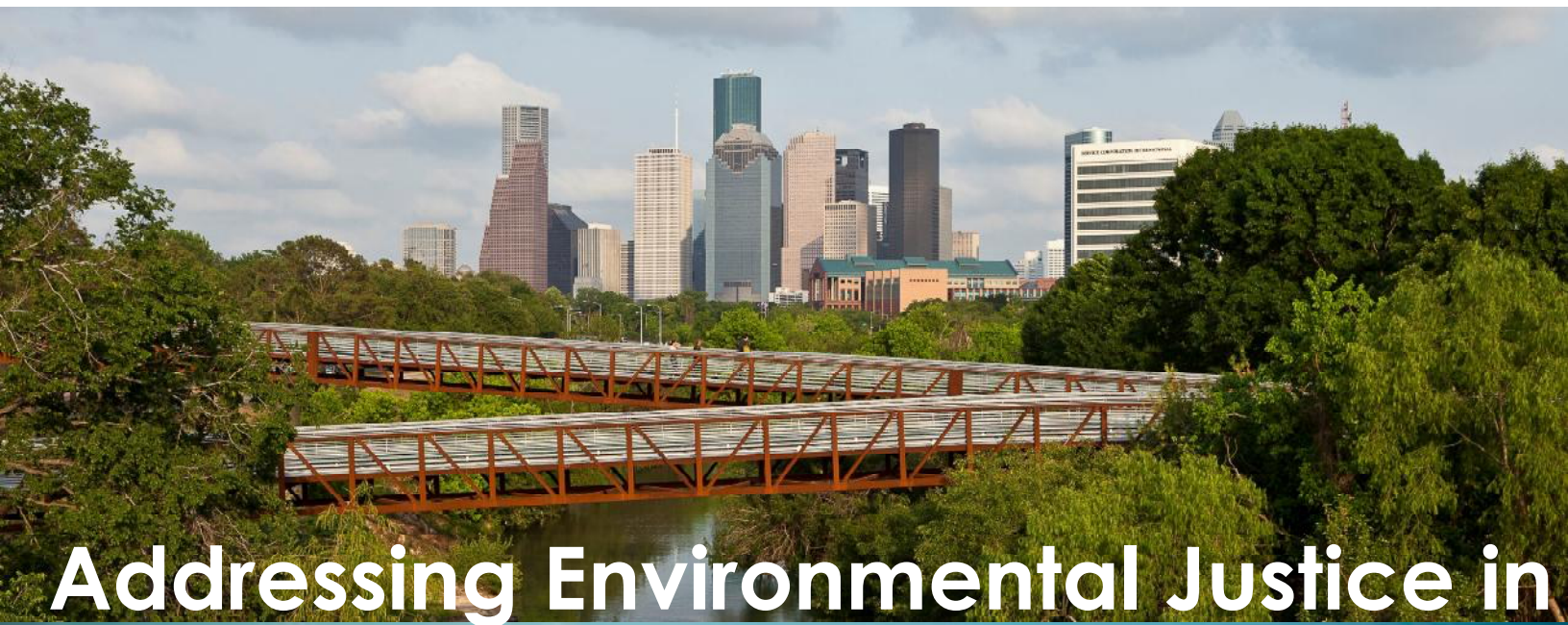




# Understand These Caveats Before Using the Tool

- Demographics and environmental indicators for a single block group may have high uncertainty.
- Environmental indicators are mostly screening-level proxies for actual exposure or risk.
- Some indicators may be outdated – conditions change.
- EJSCREEN does not cover all environmental issues.
- Other local data and concerns may be very important.
- Read the technical documentation for more caveats!





# Addressing Environmental Justice in Houston



STAR Communities  
October 15, 2015



# Community Snapshot **HOUSTON**



- **Population: 2.1 million**
- **Land area: 627 sq. mi**
- **No zoning**
- **Sustainability Highlights**
  - **Certified as a 3-STAR Community**
  - **Largest LED streetlight conversion in the nation being implemented**
  - **Bayou Greenways 2020 adding 150 miles of hike and bike trails and equitable green space across the city**

# Demographics



PLANNING &  
DEVELOPMENT  
DEPARTMENT

Source: 2013 American Community Survey, US Census Bureau  
Date: January 2015



## How We Compare

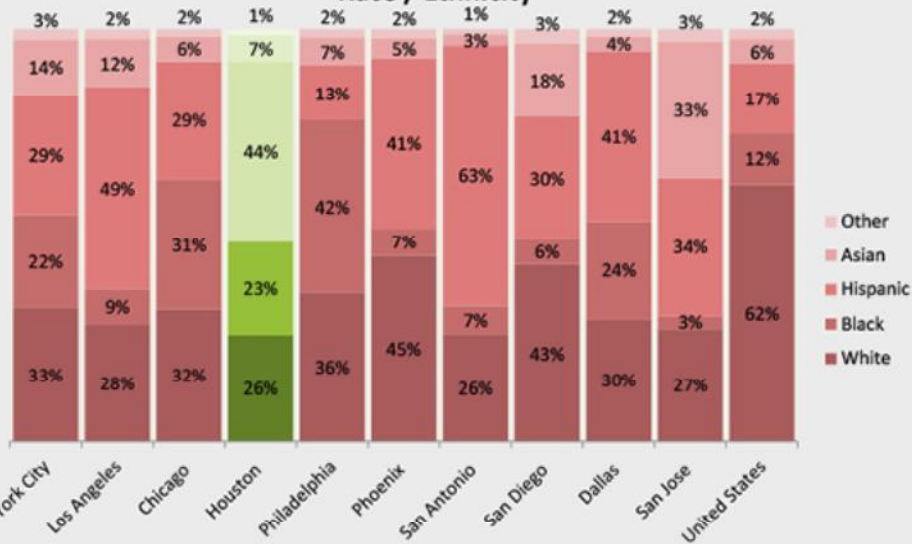
Of the ten most populous cities in the U.S., Houston ranks fourth after New York, Los Angeles and Chicago. According to the U.S. Census Bureau, Houston experienced a 5% increase in population between 2010 and 2013. Houston's economy is strong with its positive economic indicators that include strong job growth, affordable housing, and lower cost of living.

For most of the large cities, economic opportunity is the

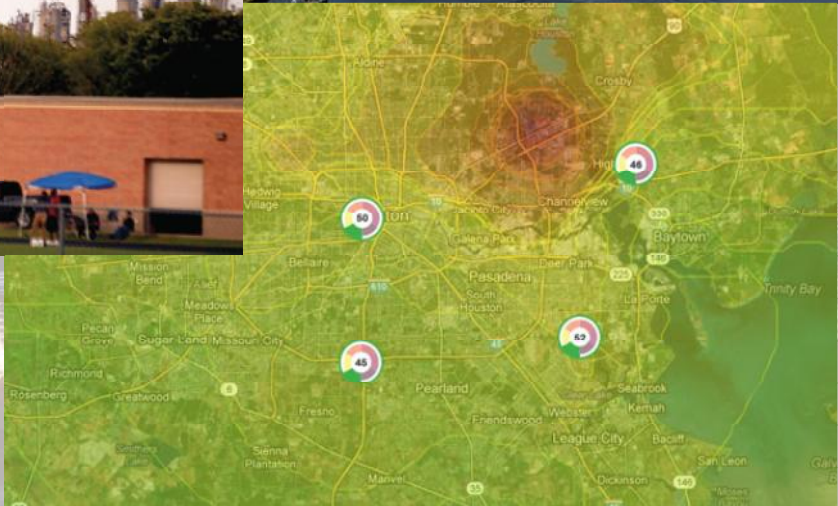
driving force for  
Opportunity  
housing  
growing  
Houston



## Race / Ethnicity









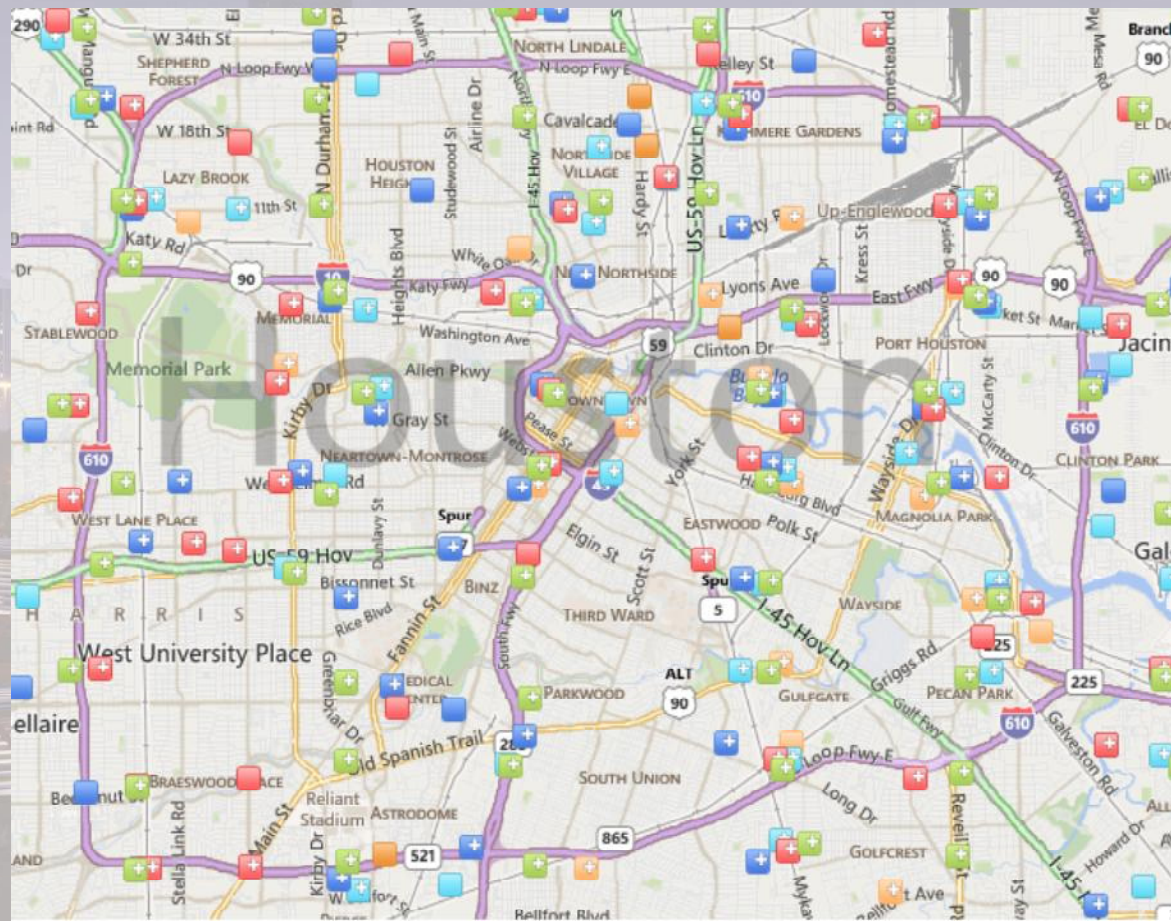
Note: People of Hispanic origin may be of any race. "Asian" includes American Indian, Native Hawaiian and Pacific Islanders categories





# Environmental Justice Sites in Houston

	Hazardous Waste
	Air Emissions
	Water Discharges
	Toxic Releases
	Superfund
	Brownfields




Source: <http://epamap14.epa.gov/ejmap/ejmap.aspx?wherestr=houston%2C%20texas>



# Outreach and Education

[ABOUT US](#) [PROGRAMS & RESOURCES](#) [SUPPORT US](#) [PARTNER WITH US](#) [NEWS & EVENTS](#) [CONTACT US](#)



## Community One Pagers

Each month, we produce environmental quality assessments for certain communities in Houston. A partnership with the City of Houston allows us to bring these community one-pagers to you. Printed copies are available by request.

### Community Health Profiles






The City of Houston has produced Community Health Profiles for three areas in Houston. These detailed profiles of each community are available at the links below:

- [Health Service Delivery Area A: South and South East](#)
- [Health Service Delivery Area B: North and North East](#)
- [Health Service Delivery Area C: Central West and South West](#)

### Community One Pagers


JULY 2015

- [Fifth Ward – July 2015](#)
- [Fifth Ward – July 2015 Spanish](#)
- [Magnolia Park Pinetree – July 2015](#)
- [Magnolia Park Pinetree – July 2015 Spanish](#)



    

## COMMUNITY HEALTH PROFILE

### Health Service Delivery Area A (South and South East) 2014




Houston Department of Health and Human Services


 

# Community One Pagers


## City of Houston Fifth Ward One Pager

July 1<sup>st</sup>, 2015 – July 31<sup>st</sup>, 2015





### 2015 Air Monitoring Dates and Locations in Your Area



HELP & INFO

#### Complaints History

**1** environmental complaints received from the Fifth Ward.


-Complaint in regards to smoke was received

**1** environmental investigations conducted in the Fifth Ward.


-complaint in regards to smoke investigated 07/29/2013

**0** environmental citations or notices of violations issued in the Fifth Ward.

-Smoke complaint was unconfirmed




HOUSTON HEALTH  
DEPARTMENT



**The City of Houston responds to environmental complaints made by phone! File a complaint with 3-1-1 or (713)-837-0311.**

Questions? Contact Air Alliance Houston at 713-528-3779, [info@airalliancehouston.org](mailto:info@airalliancehouston.org).

### Complaints in the Past 12 Months



## City of Houston Fifth Ward One Pager

### Ozone

Number of Days in July 2015

Air Quality Index Values (Exceeds health goals)		Levels of Health Concern
Hazardous	0	Health alert: everyone may experience more serious health effects.
Very Unhealthy	0	Health warnings of emergency conditions. The entire population is more likely to be affected.
Unhealthy	0	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Warning	0	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Moderate	6	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Good	25	Air quality is considered satisfactory, and air pollution poses little or no risk.

[www.airnow.gov](http://www.airnow.gov) data for Houston-Galveston-Brazoria. Go to [www.airnow.gov](http://www.airnow.gov) to look up your current area ozone map. Use this information to help plan ahead to limit exposure when air pollution is occurring. The purpose of the Air Quality Index (AQI) is to help you understand what local air quality means to your health and not a definitive indicator of any violations.


AQI information is representative of the **region** and not just Fifth Ward.


To get real-time ozone data for **your specific location**, go to [houstoncleanairnetwork.com](http://houstoncleanairnetwork.com) and download OzoneMap for your mobile phone.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

# Community One Pagers (Spanish)

## Ciudad de Houston Fifth Ward Informe Mensual Julio 1, 2015 – Julio 31, 2015





**Quejas Del Mes**

7 quejas sobre el medio ambiente han sido recibidas en Fifth Ward.

- Queja sobre humo fue recibida

1 investigaciones sobre el medio ambiente han sido conducidas en Fifth Ward.

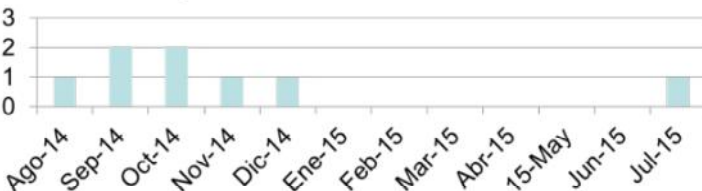
- Queja sobre humo fue investigada 07/29/2015

0 citaciones y violaciones sobre el medio ambiente han sido repartidas en Fifth Ward.

- Queja sobre humo no fue confirmada

**La ciudad de Houston responde a quejas sobre el medio ambiente por teléfono! Reporte su queja a 3-1-1 o (713)-837-0311. ¿Preguntas? Llame a Air Alliance Houston al 713-528-3779, info@airalliancehouston.org.**

**Quejas En Los Ultimos 12 Meses**



*Pruebas Ambientales  
del aire en su zona en el 2015*

**CITY OF HOUSTON  
311  
HELP & INFO**

**HOUSTON HEALTH  
DEPARTMENT**

**air  
ALLIANCE  
HOUSTON**

## Ciudad de Houston Fifth Ward Informe Mensual

### El Ozono

**Numero de días en Julio 2015**

Air Quality Index Values (below parts per billion)	Levels of Health Concern
Hazardous: >135	Health alert: everyone may experience more serious health effects
Very Unhealthy: 116-135	Health warnings of emergency conditions. The entire population is more likely to be affected.
Unhealthy: 96-115	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Warning: 77-95	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Moderate: 61-76	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Good: 0-60	Air quality is considered satisfactory, and air pollution poses little or no risk.

www.airnow.gov data for Houston-Galveston-Brazoria. Go to [www.airnow.gov](http://www.airnow.gov) to look up your current area ozone map. Use this information to help plan ahead to limit exposure when air pollution is occurring. The purpose of the Air Quality Index (AQI) is to help you understand what local air quality means to your health and not a definitive indicator of any violations.

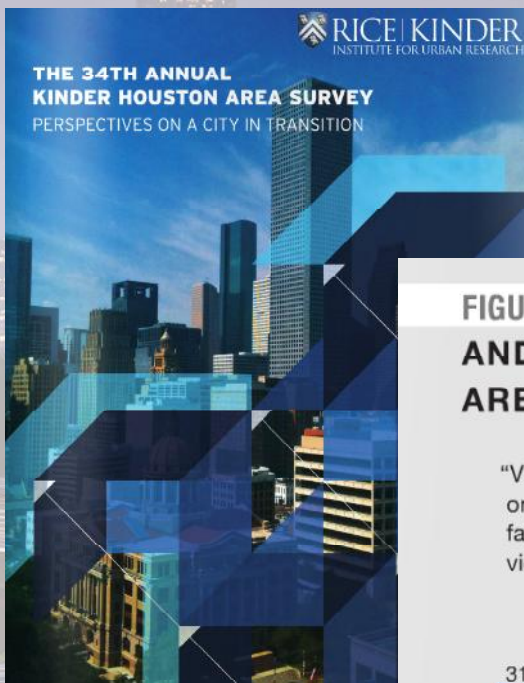
AQI información es representando la región y no nomas Fifth Ward.

Para obtener un mapa de ozono de su área específica en vivo visite la pagina [houstoncleanairnetwork.com](http://houstoncleanairnetwork.com) y descargue OzoneMap en su teléfono.

LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES	SABADO	DOMINGO
			1	2	3	4
						5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



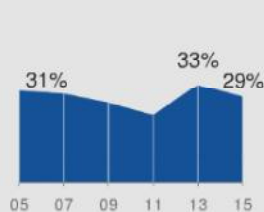
# 34<sup>th</sup> Annual Kinder Houston Area Survey



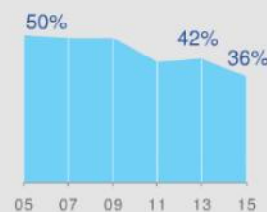
***“More respondents in 2015 (38%) than at any time in the past 10 years assert that living conditions in the Houston area have been improving.”***

**FIGURE 5: ASSESSMENTS OF CRIME, AIR POLLUTION AND OVERALL LIVING CONDITIONS IN THE HOUSTON AREA TODAY (2005–2015)**

“Very worried” that you or a member of your family will become the victim of a crime.



“Very concerned” about the effects of air pollution on your family’s health.



Living conditions in the Houston area have “gotten better.”



Source: Kinder Institute for Urban research



**Lisa Lin, LEED AP BD+C**  
Sustainability Manager, City of Houston

[\*\*lisa.lin@houston.tx.gov\*\*](mailto:lisa.lin@houston.tx.gov)  
[\*\*www.greenhouston.tx.gov\*\*](http://www.greenhouston.tx.gov)

**Houston Health Department**

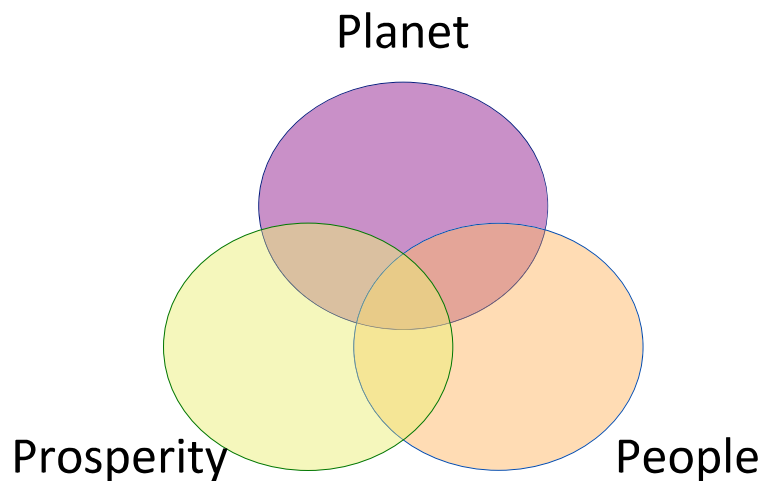
[\*\*www.houston.tx.gov/health/bureau-pollution-control-and-prevention-bpcp\*\*](http://www.houston.tx.gov/health/bureau-pollution-control-and-prevention-bpcp)

**Air Alliance Houston**

[\*\*www.airalliancehouston.org\*\*](http://www.airalliancehouston.org)

# Defining Sustainability

Meeting the environmental, social, and economic needs of Baltimore without compromising the ability of future generations to meet these needs.





# Baltimore Sustainability Program

- Office of Sustainability

Purpose: Coordinate City, non-governmental organizations, and private efforts toward sustainability goals; advise and support the Sustainability Commission's efforts; lead programs of the Office and Commission.

- Sustainability Commission

Purpose: Create and implement a City-wide Sustainability Plan. Develop partnerships with government, NGO's, businesses and citizens to implement City-wide sustainability programs. Advise Mayor and City Council on Sustainability issues. Report progress to City Council annually.



# Office of Sustainability

## Main Functions:

- Work with the Sustainability Commission to develop and implement the Sustainability Plan
- Incorporate sustainable practices into operations of Baltimore City government
- Manages Greenhouse Gas Emissions Inventory and Climate Action Plan
- Identify and understand latest sustainability initiatives, programs, and legislation
- Develop working relationships with other groups performing related work



# Plan Organization



# Sustainability Plan Goals

## Baltimore Sustainability Plan Goals

We envision a sustainable Baltimore community which is clean, healthy, efficient, green, mobile, aware, and invested.



### Cleanliness

- Eliminate litter throughout the City
- Sustain a clean and maintained appearance of public land
- Transform vacant lots from liabilities to assets that provide social and environment benefits



### Pollution Prevention

- Reduce Baltimore's greenhouse gas emissions by 15% by 2015
- Improve Baltimore's air quality and eliminate Code Red days
- Ensure that Baltimore water bodies are fishable and swimmable
- Reduce risks from hazardous materials
- Improve the health of indoor environments



### Resource Conservation

- Reduce Baltimore's energy use by 15% by 2015
- Reduce Baltimore's water use while supporting system maintenance
- Minimize the production of waste
- Maximize reuse and recycling of materials



### Greening

- Double Baltimore's tree canopy by 2037
- Establish Baltimore as a leader in sustainable, local food systems
- Provide safe, well-maintained recreational space within 1/4 mile of all residents
- Protect Baltimore's ecology and biodiversity



### Transportation

- Improve public transit services
- Make Baltimore bicycle and pedestrian friendly
- Facilitate shared-vehicle usage
- Measure and improve the equity of transportation
- Increase transportation funding for sustainable modes of travel



### Education & Awareness

- Turn every school in Baltimore City into a green school
- Ensure all city youth have access to environmental stewardship programs and information
- Raise the environmental awareness of the Baltimore community
- Expand access to informational resources on sustainability



### Green Economy

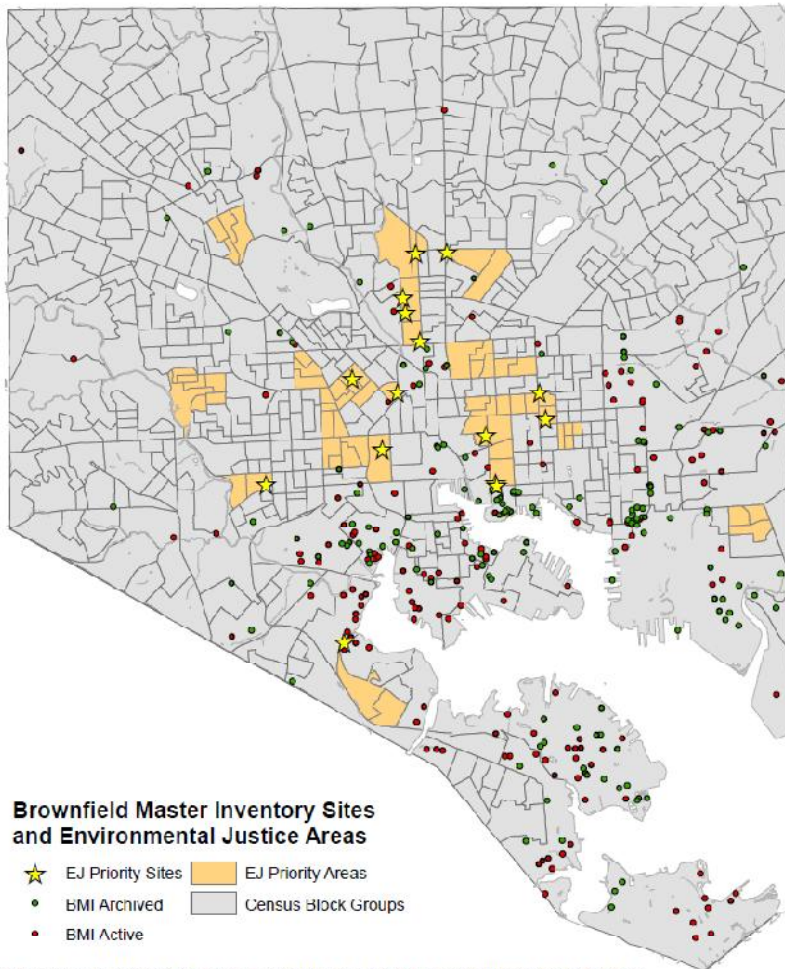
- Create green jobs and prepare City residents for these jobs
- Make Baltimore a center for green business
- Support local Baltimore businesses
- Raise Baltimore's profile as a forward thinking, green city

[www.baltimorecity.gov/sustainability](http://www.baltimorecity.gov/sustainability)



Adopted by  
Ordinance  
March, 2007.  
Complements  
and supports  
Comprehensive  
Master Plan

# Baltimore Brownfield and Environmental Justice Areas



This map shows sites listed on Maryland Department of the Environment's Brownfield Master Inventory list, as they correspond with Baltimore City's Environmental Justice Priority Areas. EJ Priority Areas are defined as census block groups in which more than 40% of residents are minorities, and are located in census tracts in which more than 40% of residents live in poverty. BMI sites are categorized as either "archived", meaning they have been determined to no longer pose a public health risk, or "active", meaning they are still in the process of investigation or remediation. Of these sites, 15 fall in the EJ Priority Areas; 9 have been archived, and 6 remain active.

- FNT Realty Cherry Hill
- Wetzel Brothers
- South Eden Street
- The 2005 Maryland Ave, LLC
- West 25th Street and North Howard Street Properties - East Side
- State Center Parcel I2
- NL Industries Merchants Shot Works
- Charles Village West
- Baltimore Smelting
- 1400 Eastern Avenue
- Lenmar, Inc.
- H.F. Miller & Son Building
- 1001 North Chester Street
- Mr. Nifty Cleaners
- 10 East North Avenue Property

## Baltimore City and Maryland Department of Environment EJ Sites

Indicators:  
site contamination  
poverty levels  
minority groups





# Community Collaboration

## Environmental Justice Partnership

The Mission of the **EJP Community Board** is to address public health problems that impact **East Baltimore** residents by building a partnership of community-based organizations that educate residents, advocate for environmental justice, and represent the East Baltimore community's interests to governmental agencies, academic institutions, and private organizations



## Policy

# Maryland Department of Environment Environmental Benefits District

MDE Environmental Benefits Districts (EBD) identifies areas in Southwest and East Baltimore that are priority Environmental Justice areas in the city. The Water Quality and Drinking Water Capital Programs allow for higher prioritization and additional funding for water quality projects in EBD districts. The EBD have established some targets in the districts for air and water improvements. The Water Quality and Drinking Water Capital Programs help the EBDs achieve goals and targets for water improvements.



## Enforcement

## Environmental Control Board

Environmental Control Board (ECB) is responsible for the enforcement of provisions of the Baltimore City Codes that specifically affect the sanitation, environmental, health, safety, and other quality-of-life issues. ECB acts as the 'court system' for all issues pertaining to environmental enforcement. The board works in collaboration with the Maryland Department of the Environment to monitor air quality, water quality, and brownfields.



# Q & A

Please submit your questions in the Control Panel through the Question functionality.



# CONTACT INFO



TAI LUNG, Program Analyst  
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[lung.tai@epa.gov](mailto:lung.tai@epa.gov)

LISA LIN, Sustainability Manager  
City of Houston, TX  
[lisa.lin@houstontx.gov](mailto:lisa.lin@houstontx.gov)

ALICE KENNEDY, Sustainability Coordinator  
City of Baltimore, MD  
[alice.kennedy@baltimorecity.gov](mailto:alice.kennedy@baltimorecity.gov)

KRISTI WAMSTAD-EVANS, Technical Director  
STAR Communities  
[kristi@starcommunities.org](mailto:kristi@starcommunities.org)



# WANT TO GET INVOLVED IN STAR?

## Local Governments

- ★ **Member Community:** Introductory package with resources and trainings to to prepare community for certification - \$500/year
- ★ **Reporting Community:** Access to online reporting tool and technical assistance for communities ready to certify - \$1500/year
- ★ **Leadership Community:** One-year, full-support program for communities committed to certification in one year - \$7500/year

## Other Organizations

- ★ **STAR Affiliate Program:** For non-profits, businesses, and institutions who want to support our effort to help improve local communities  
Packages start at \$500/year

Please contact Aaron Lande ([aaron@starcommunities.org](mailto:aaron@starcommunities.org)) for more information about any of these options

