



Environmental Justice and Environmental Sustainability

A Look Into The Environmental Justice Movement and Beyond....

What is Environmental Justice.....

- **EJ** is the fair treatment and involvement of all people in the development, implementation, and enforcement of environmental laws, regulation, and policies.
- **EJ** is a social movement to address **Environmental Injustice**, which is the exposure of poor, marginalized, and usually people of color communities to harm from hazardous waste, resource extraction, and other land uses from which they do not receive benefits.

Meaning of Environmental Justice

- **All people**, regardless of income, race, color, national origin, Tribal affiliation, or disability, **should be involved** in agency decision-making and other Federal activities that affect human health and the environment so that people are protected from:
 1. Disproportionate and adverse human health and environmental risk and hazards including pollution.
 2. Legacy of structural and or systemic racism barriers.
 3. Climate change effects.

All people have the right to equitable access to a healthy, sustainable, and resilient environment to live, play, work, and conduct business.

Environmental Racism

- It's a form of systemic racism.
- Implemented through policies and practices that have historically and presently favored the health, well-being, and consumer choices of white communities over those of non-white, low-income communities.



Justice Equality and Equity

- Environmental
- Climate
- Social
- Racial
- Transportation
- Housing
- Energy



A Key Moment That Sparked the American Environmental Justice Movement

The EJ movement can be traced back to the civil rights era.

Notability The Late 1960's Black sanitation workers strike in Memphis, TN.

In which two workers were crushed by a truck while working.









The First Environmental Justice Lawsuit in 1979

Bean v. Southwestern Waste Management Corp

Challenging Environmental Discrimination Using Civil Rights Laws



- A Texas Lawyer named Linda McKeever Bullard
- Filed a class-action lawsuit to stop a landfill development in a Black community in Houston, TX.
- Dr. Robert D. Bullard (Husband): A Texas Southern University sociology Professor, was asked to help determine the location of other city landfills in Houston.
- Working with Dr. Bullard: His TSU students, colleagues, and grassroots affiliates.



The EJ Movement

Championed primarily by Foundational Black Americans.

The environmental justice movement addresses an important statistical fact: People who live, work, and play in America's most polluted environments are commonly Black people, other POC and low-income people.

These groups are usually targeted to host:

- **Landfills**
 - **Dirty industrial plants**
 - **Truck depots**
-
- **This was no accident, but it was Environmental Racism.**

Fence Line Communities and Toxic Facilities

Fence-line communities have a higher risk for respiratory problems, cancer, and other chronic conditions than other residents who are not in fence-line communities.

Chemical and Industrial Facilities,

Oil and Gas,

Metal Recycler

Landfills

- A large source of U.S. industrial methane and carbon dioxide emitters.
- Methane seeping from landfills can pose a significant threat to human health.
- Methane is the most potent greenhouse gas.



LANDFILL METHANE EMISSIONS

TIME TO TACKLE THIS MAJOR ENVIRONMENTAL
& CLIMATE JUSTICE THREAT

Report Analysis

Dr. Stephen Pinkney

Postdoctoral Fellow

Texas Southern University

The Bullard Center for Environmental and Climate Justice

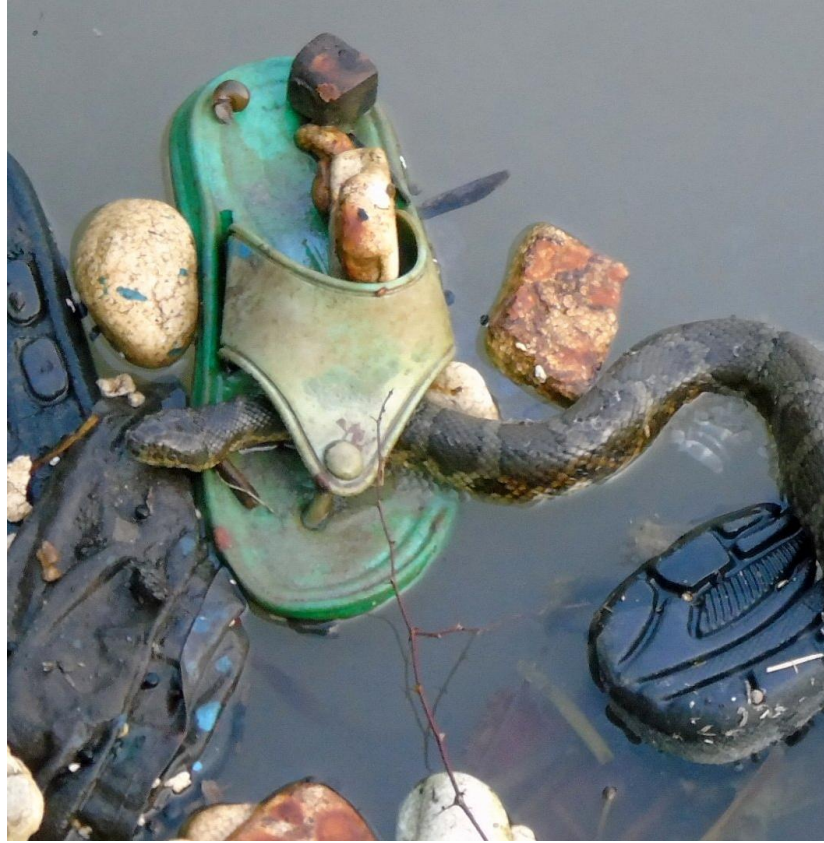


**BULLARD CENTER
FOR ENVIRONMENTAL
& CLIMATE JUSTICE**

TEXAS SOUTHERN UNIVERSITY

Landfills Methane emissions.

1. Landfills are the **single largest** source of U.S. **industrial** methane emitters.
2. Nation's **third-largest** source of climate-destabilizing methane pollution.
3. 3,000 Active Land Fills and 10,000 Inactive.
4. Estimated to be contributing about 25% to warming temperatures from climate change.
5. GIS Mapping highlighting demographics living near landfills in Harris County and surrounding counties. (Blacks, Hispanics, SVI)
6. Policies on Managing Landfills and Toxic Waste facilities.



Illegal Dumping

- Pest (Rats, Roaches, Snakes, etc.)
- Water Contamination
- Disease
- Eye soars
- Bad Smells
- Fires (From Chemicals Mixing)

A 2017 report from the N.A.A.C.P. and the Clean Air Task Force provided more evidence.



Showed that African-Americans are 75 percent more likely than other Americans to live in so-called fence-line communities, defined as areas situated near facilities that produce hazardous waste.

A child plays in front of a public housing project which borders an oil refinery in West Port Arthur, Texas. **LM Otero/AP**

<https://www.motherjones.com/environment/2017/11/study-black-people-are-75-percent-more-likely-to-live-near-toxic-oil-and-gas-facilities/>

Notable Environmental Injustices.....

Communities/Areas

- Whispering Pines Houston, TX
- Pleasantville, TX
- Louisiana Cancer Alley
- Nice Town, Chester, and the Grays Ferry neighborhood in Philadelphia, PA
- West Harlem and the North River Sewage Treatment Plant

Pleasantville, Houston, TX

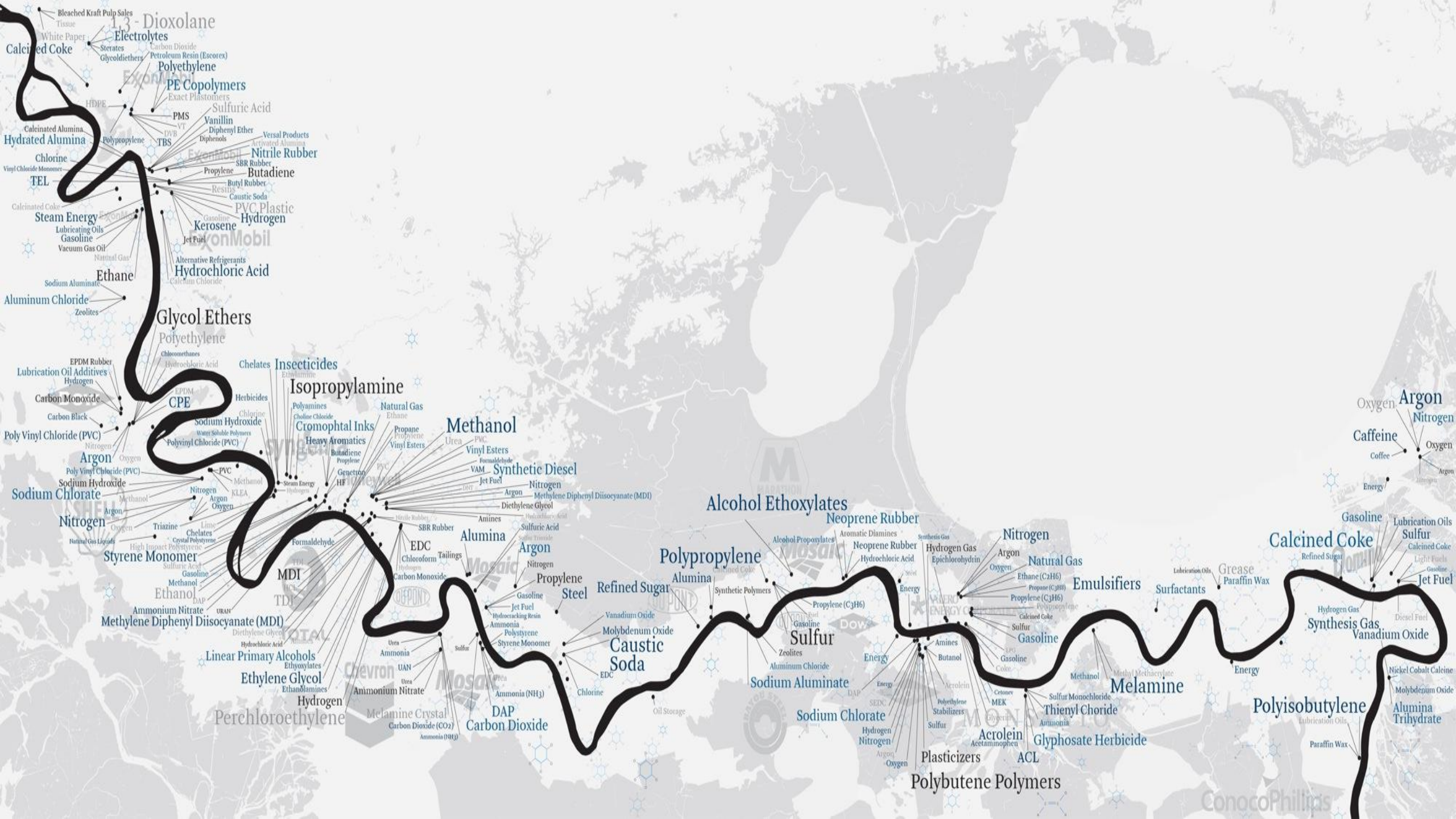
- Located near Houston Ship Channel
- Air, Water, Soil, and Noise Pollution
- Food Desert, Flooding, lack of medical services.
- Consist of around 3,100 residents of which 56% (75% in 2021) are African American and 43% are Latino.
- Sits on the corner of HWY 610 and I-10
Chemical and industrial plants, metal recycle plants, and truck depots.
- Toxic emissions are causing high percentages of heart attacks, strokes, asthma, and bronchitis, as well as premature death from heart ailments, lung disease, and cancer. (Chronic Diseases)



Louisiana Cancer Alley Convent St. James Parish

- Convent, La located between Baton, Rouge and New Orleans in the middle of the industrial corridor.
- 1996 Covent, LA population was 2,052. Black males made up 81% of 3,895 residents within a 4-mile radius of proposed site
- 1996 a Japanese (Shintech) company was proposed to pump 3.6 million gallons of waste-water per day in the Mississippi. Proposal was denied.
- 13 Plants in St. James and majority near Convent.
- James Parish, located in one of the country's largest hotspots for toxic air, nicknamed Cancer Alley. There are 150 chemical plants, concentrated along an 85-mile stretch of the Mississippi River between New Orleans and Baton Rouge.





Children: Our Most Vulnerable Population Placed at Risk



Over 35 million American children live within 30 miles of a power plant, of which an estimated two million are asthmatic.



Affects of Air Pollution

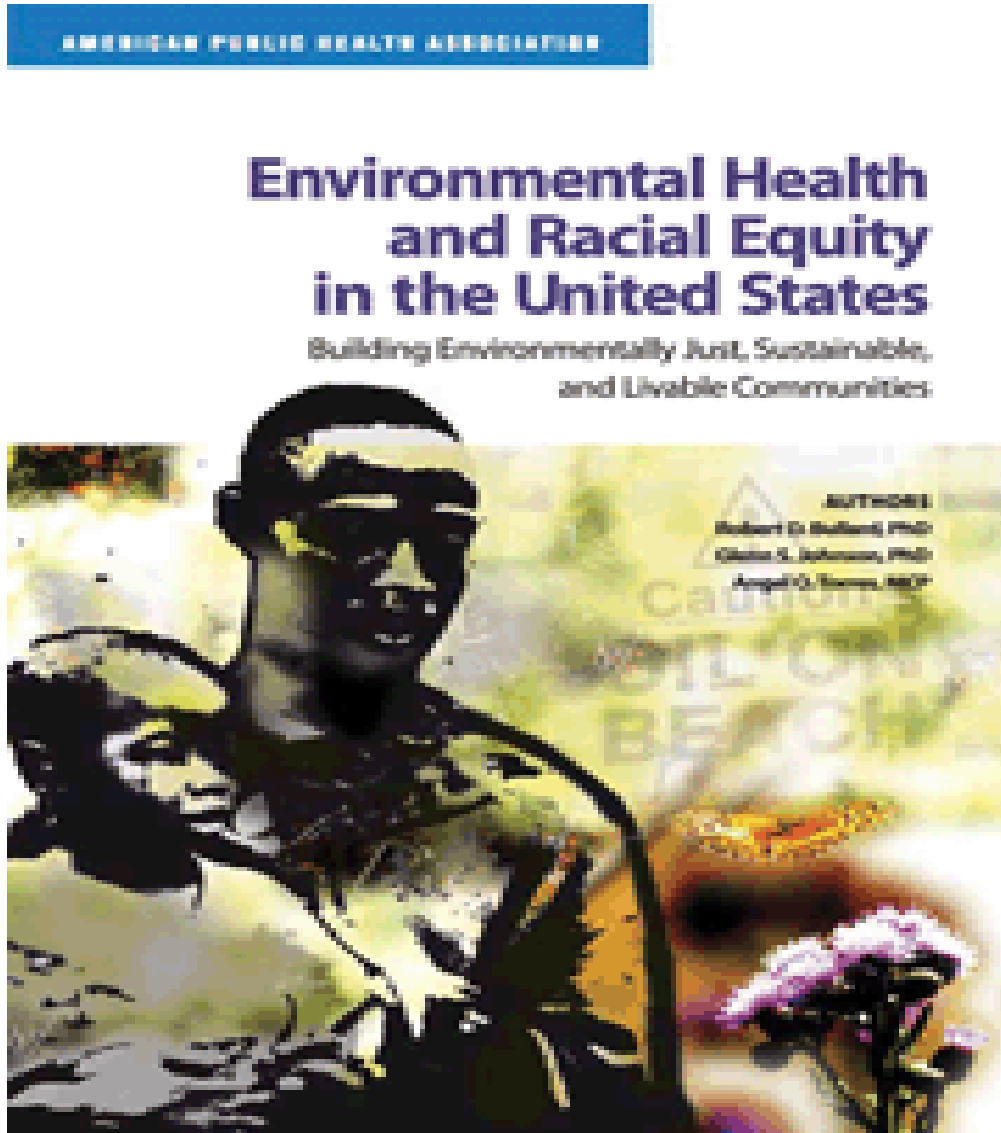
- Black, Hispanic, and low-income students are suffering from multiple brain-related problems that are the result to air pollution. (*Chalabi, 2019*)
- Student's lungs are affected.
- Influences student's behavior in such cases as ADHD, mental health, autism and emotional development. (*Rice, 2019*)

People of Color and Asthma

- Black Americans and Puerto Ricans are 3 times more likely to die from asthma-related causes than Whites.
- Black Americans and Latinos are hospitalized at a rate of 3-4 times more than Whites.
- Black American asthma rate is 35% higher than Whites.
- Black Americans only account for 13% of the U.S. population but encounter 26% of asthma deaths.

(National Library of Medicine, 2022)

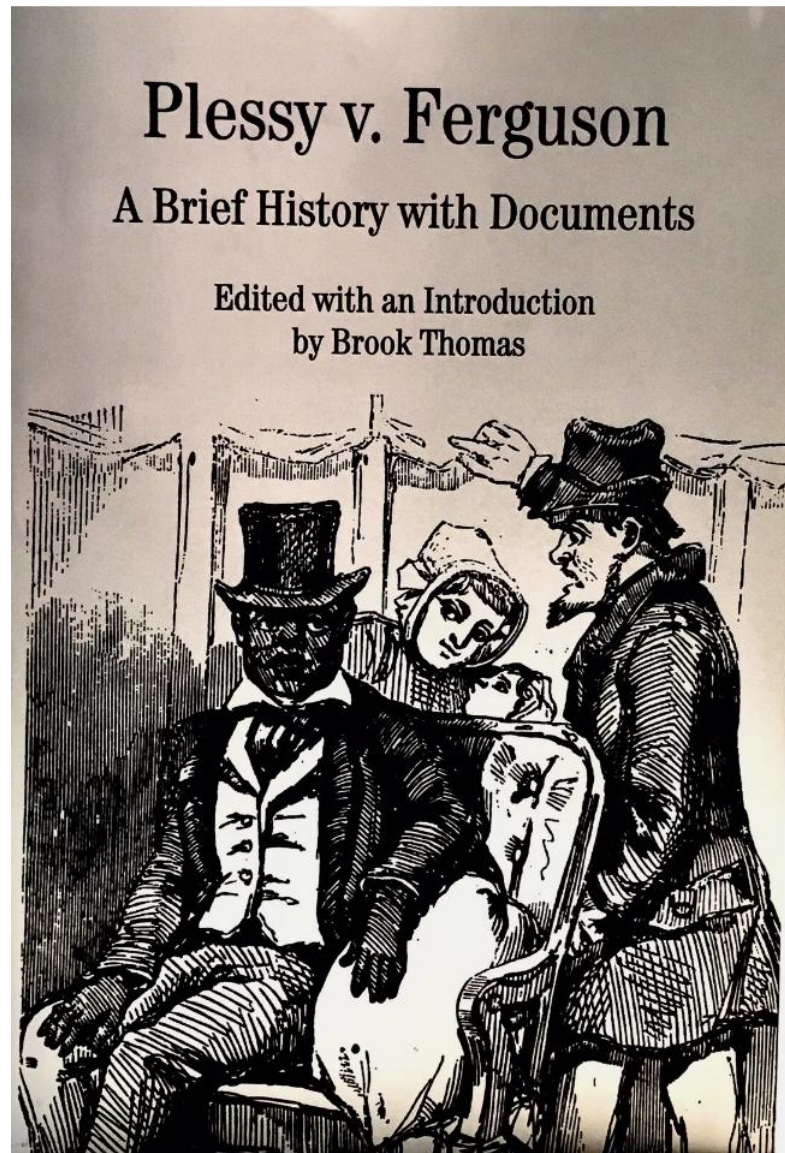
Your Zip Code Matters



- Where you live can affect your health and your quality of life
- **Zip Code** is the most powerful predictor of health and well-being
- Wealth and health are correlated
- The poorest people within the U.S. have the worst health and the most degraded physical environments.

(Bullard, Johnson, & Torres, 2011)

Transportation Justice



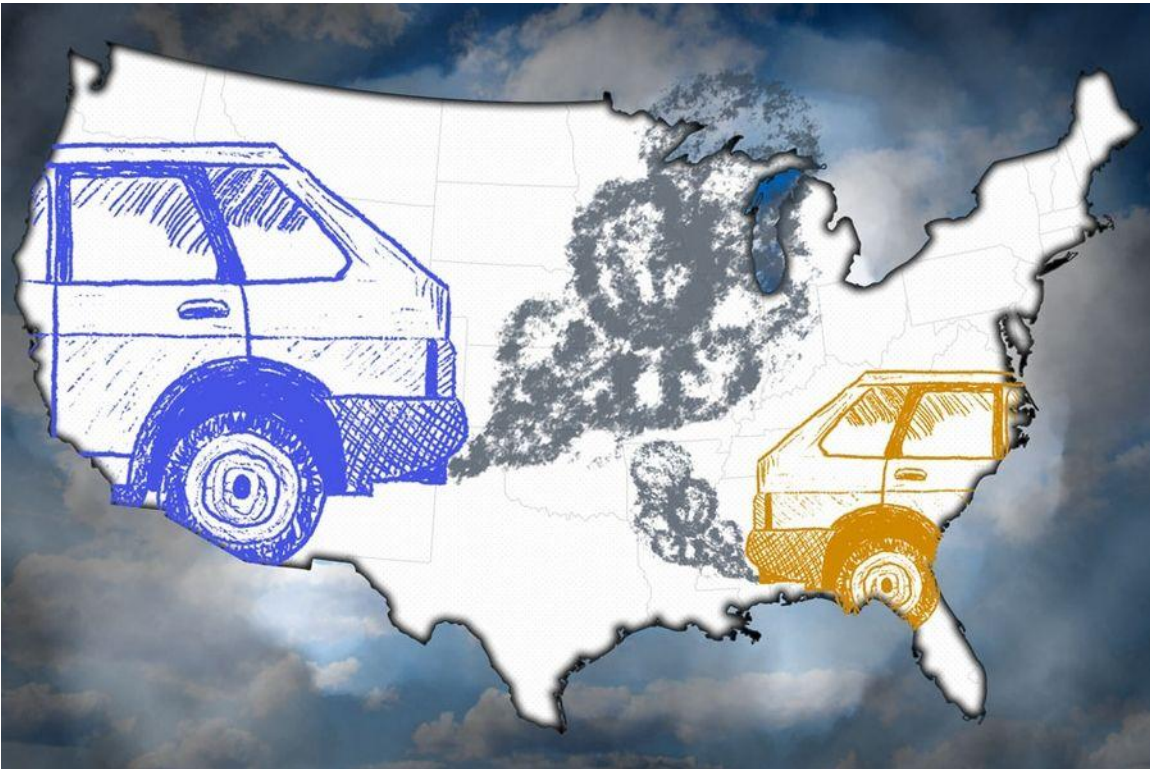
- Transportation and Civil Rights have been linked for more than a century.
- The 1896 U.S. Supreme Court Plessy v. Ferguson decision codified “Jim Crow” segregation.
- Homer Plessy violated Louisiana’s [Separate Car Act of 1890](#).
- The resulting "[separate but equal](#)". Until Brown v. Board of Education May 17, 1954.

Transportation Disparities

- People of color overall are least likely to have access to a car.
- Distance between poor people and jobs.
- Only 4.6% of Whites live in homes with no car, compared to 19% of Blacks and 13.7% of Latinos.
- Food Deserts
- Banking Deserts
- Access to Medical



Transportation Pollution and Health



- Nearly half of the nation's population – 150 million people breathed polluted air, including particulate matter, ozone and other smog-forming emissions
- Air pollution in the U.S. is responsible for over 30,000 premature deaths each year and reduced life expectancy

Source: American Lung Association (2020)

Transportation and Climate Change

- Transportation accounts for the largest portion (28%) of greenhouse gas emissions in the U.S.
- The majority of transportation greenhouse gas emissions are from light-duty vehicles.
- The health and economic impacts of transportation pollution fall disproportionately on low income and people of color households.

Source: U.S. EPA (2020)



Air Pollution Emitted

BLACK

HISPANIC

WHITE

Air Pollution Inhaled



Our Smaller Carbon Footprint

The average African American household emits 20 percent fewer greenhouse gases than its white counterparts.

Yet, African Americans are being forced, to bear a disproportionate burden in hosting “dirty” energy plants.

- Blacks and Hispanics generate less pollution because, on average, they have less wealth, and Whites spend more on pollution-intensive goods and services because they have more wealth to spend.
- non-Hispanic Whites tends to have an advantage in not experiencing air pollution as much as other races—they experience 17% less exposure to air pollution than is caused by their consumption.
- To be specific, Blacks experience around 56% more pollution than is caused by their consumption on average.
- The numbers are slightly higher for the Hispanic population at 63%.

Housing Disparities

- There are just 35 rental units, both affordable and available in the United States for every 100 households that are renters who are in the extremely low-income category.
- There is **not one state in the U.S. where a worker making the prevailing state or federal minimum wage earnings can afford a two-bedroom apartment** without paying above 30% of their monthly income.
- To be exact, **a minimum wage worker** must clock nearly **127 hours per week**, more than three full-time jobs, **to afford a two-bedroom rental**, or **103 hours per week**, more than **2.5 full-time jobs**, to afford a one-bedroom.
- Housing Discrimination
- Redlining
- African Americans are more likely to live in pollution regardless of income
- Deteriorating Homes and Cost-Burdened Homes

Housing Disparities....

- **Over 68% of African Americans live within 30 miles of a power plant—the distance within which the maximum effects of the smokestack plumes are expected to occur, compared with 56% of whites and 39% of Latinos.**
- During a 2007 study, [sociologist Dr. Robert Bullard found](#) that race was a more accurate indicator of proximity to pollution than socioeconomic status.
- **Dr. Bullard found that Black middle-class household making \$50,000 to \$60,000 live in neighborhoods more polluted than Whites who make \$10,000.**
- Study by researchers at the EPA-funded Center for Air, Climate, and Energy Solutions in 2021 found that Black Americans are subject to higher levels of air pollution than White Americans — regardless of their income level.

Energy Apartheid

- Being without basic energy services.
- Not able to afford basic energy services.



Climate Justice

- Is a type of environmental justice that acknowledges the unequal impacts the climate change on vulnerable and marginalized populations and seeks to fairly distribute the burdens and benefits in efforts to mitigate climate change.
- Climate justice frames the environmental crisis as an economic, racial, and political issue, rather than one that is purely environmental or physical in nature.
- People of color and poor families will feel the effects of the climate crisis more than others disproportionate. These people are less resilient.

Climate Justice

- **Carbon dioxide**
 1. Result of burning fossil fuels like coal, oil, gas and other organic materials like wood. It is also the natural process of humans and animals inhaling oxygen and exhaling CO₂.
 - a. Dependency on the exploitation of fossil fuels, deeply embedded structural racism, and other social inequalities are root causes.**
- **Methane Gas**
 1. Landfills



Climate Change is a destabilizing force that affects the planet and many aspects of human life, including:

Financial sector

- Climate change is destabilizing the insurance industry, causing insurers to raise premiums and pull out of markets. This can lead to fewer choices and less protection for homeowners and can endanger entire communities.

Home values

- Climate disasters can quickly undermine the value of people's homes.

Migration

- Rising temperatures and more frequent extreme weather events can threaten millions with drought, hunger, and displacement. This can lead to mass migration, which can leave families vulnerable to exploitation and radicalization.

Extinction risk

- Climate change is increasing the extinction risk for small mammals, such as mouse lemurs. These effects are likely to be more dramatic for similar but more specialized mammals in tropical forests.

Arctic ice melt

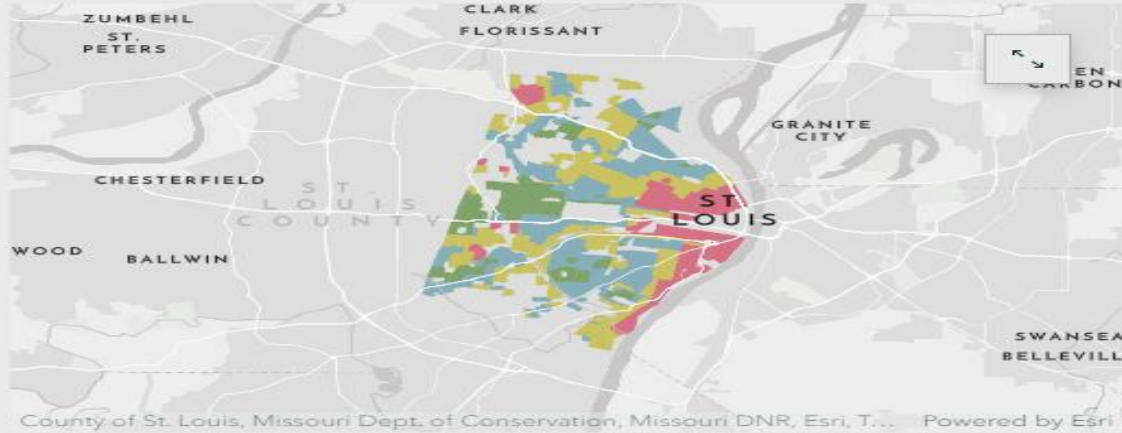
- As the Arctic ice melts, competition for resources and influence in the region is increasing.

Greenhouse effect

- The human expansion of the greenhouse effect is the cause of the global warming trend observed since the mid-20th century.

Urban Heat Island\St. Louis, Missouri

Urban heat islands | St. Louis, Missouri



Redlining Basemap

Located on the western bank of the Mississippi River, St. Louis became a destination for many Black Americans who, during the early years of the Great Migration, were leaving the South in search of better economic conditions and opportunities in the North.



Aerial view of St. Louis riverfront and downtown St. Louis in the 1920s.

Using satellite data, Esri cartographers analyzed temperatures across neighborhoods in the city. When comparing the average temperatures of the HOLC-designated neighborhoods, the analysis shows that the grade "A" neighborhoods had cooler averages than the neighborhoods with B, C, and D grades.

Extreme Heat and Health: Chronic Conditions and Fatalities

- Respiratory Disease
- Cardiovascular Disease
- Cerebrovascular Disease
- Dehydration
- Heatstroke
- Hypothermia

Studies show that neighborhoods with mostly White Residents today have 33% more tree coverage compared to community of color.

(Ramirez, 2023)



Air Pollution & Increasing Allergens

Asthma, cardiovascular disease,
respiratory allergies

Extreme Heat

Heat-related illness and death,
cardiovascular failure

Severe Weather

Injuries, fatalities, loss of homes,
mental health impacts

Environmental Degradation

Forced migration, civil conflict, mental
health impacts, loss of jobs and income

Degraded Living Conditions & Social Inequities

Exacerbation of existing social and health
inequities and vulnerabilities

Changes In Vector Ecology

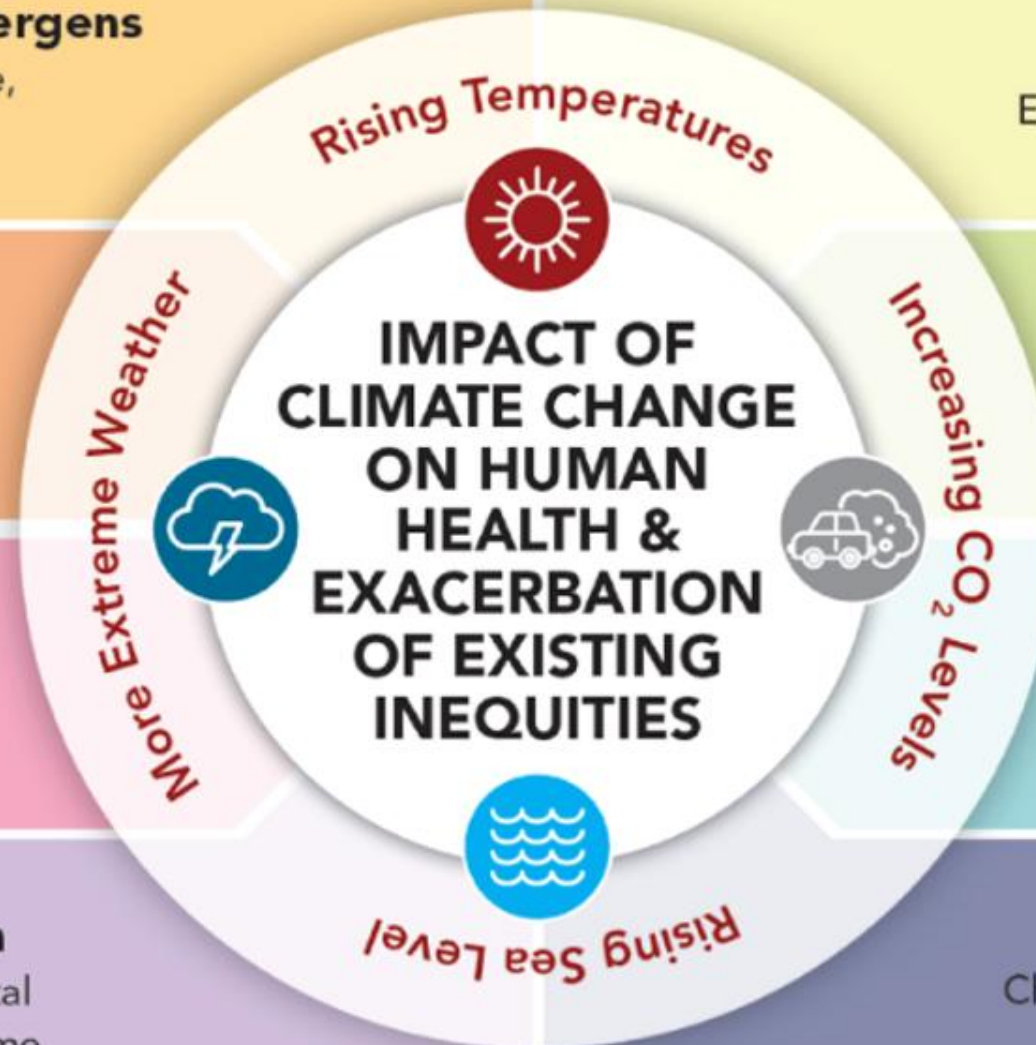
Malaria, dengue, encephalitis,
hantavirus, Rift Valley fever, Lyme
disease, chikungunya, West Nile virus

Water & Food Supply Impacts

Malnutrition, diarrheal disease

Water Quality Impacts

Cholera, cryptosporidiosis, Campylobacter,
leptospirosis, harmful algal blooms



Adapted from CDC, J. Patz

Climate Change Will Widen the Racial Income and Wealth Gap



- Researchers from Rice University and the University of Pittsburgh found, in counties badly hit by natural disasters (areas with at least \$10 billion in damages) white communities gained an average **\$126,000** in wealth following the damage and recovery efforts.
- Communities of color lose up to **\$29,000** on average in personal wealth following events like hurricanes and wildfires.

Source: Howell and Elliott (2018)

Sustainability (Environmental)

Environmental sustainability refers to the responsible management of natural resources to fulfill current needs without compromising the ability of future generations to meet theirs.

Mission: To provide clean air to breathe, fresh water to drink, and places to live that are **free of toxic substances and hazards.**



The Sustainable City

Eco-city, or Green City

Is a city designed with consideration for **better social, economic, environmental impact** (commonly referred to as the triple bottom line), and resilient habitat for existing populations, without compromising the ability of future generations to experience the same.

(United Nations, 2023)



Time to Grow Smarter and a More Just Society

- Planning approach that prioritizes compact, built environments to benefit the economy and environment. Reduce Sprawl.
- Smart Growth is economically sound, environmentally friendly, and supportive of community livability.
- Smart growth enhances health and well-being and quality of life.
- Smart growth is sustainable and addresses environmental, climate and racial justice.

The book cover features a green-tinted aerial photograph of a city skyline at the top, transitioning into a blue-tinted aerial photograph of a suburban or rural landscape with houses and trees at the bottom. The title 'Growing Smarter' is prominently displayed in blue text on the green background. Below it, the subtitle 'Achieving Livable Communities, Environmental Justice, and Regional Equity' is written in white on a dark blue horizontal band. The editor's name, 'edited by Robert D. Bullard', and the foreword author, 'foreword by Carl Anthony', are listed in white text below the subtitle band.

Growing Smarter

Achieving Livable Communities,
Environmental Justice, and Regional Equity

edited by Robert D. Bullard
foreword by Carl Anthony

Green Design

- Green design is a term that is reserved for those aspects of design that consciously strive to make the **end product as sustainable and as ecologically friendly as possible.**
- **Green design should be an option for all people and not just for folks that can afford to live in.**
- Green design is possible in numerous areas such as, for **example, in car and aircraft design to achieve better aerodynamics and save fuel. Planning and building walkable communities.**
- **Green Design within a Smart Growth development is key.**

(Bullard, Johnson and Torres, 2000)



Smart Growth + Green Design =

Smart growth with green design is a development approach that combines compact building techniques with environmentally conscious practices. The goal is to reduce environmental impact while improving quality of life for residents.

(Bullard, Johnson and Torres, 2000)





Walkable Communities

In urban planning, walkability is the accessibility of amenities by foot. **Access by foot.**

Walkability refers to the ability to safely walk to services and amenities within a reasonable distance, usually defined as a walk of 30 minutes or less. Or 15 Minute Cities/Communities.

Define by a Walk Score, a walkable neighborhood has a center, high population density, mixed income and mixed-use development, parks and public space, pedestrian design, schools and workplaces within walking distance, and complete streets that encourage multimodal transportation.



Kirkland, Washington, a suburb
east of Seattle Ex-Strip Mall

(Lascano, 2022)

Sometimes called the **15-minute city**, the design goal for these **neighborhoods** is to have all the necessities a person could need — from **groceries to medical attention** — within a **15-minute walk or bike ride from their home.**

**Air Quality Research
FIFA World Cup 2026
Committee for Sustainability
Houston, TX**

**Dr. Stephen Pinkney
Bullard Center for Environmental and
Climate Justice
Texas Southern University**





Create Policy for Change.....

- August 3, 1993: Executive Order 12856 President Clinton issued an executive order requiring federal agencies to reduce pollution as much as possible and to report to the community any toxic chemicals that are released into the environment. (Executive Order 12856)
- January 2021: Executive Order 14008 or Justice 40 Initiative President Biden made it a goal that 40 percent of the overall benefits of certain Federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution.
 - Climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing.
 - Training and workforce development.
 - Remediation and reduction of legacy pollution.
 - Development of critical clean water and wastewater infrastructure.

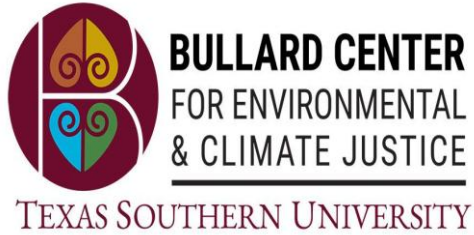
Justice 40 Initiative

Tackling the Climate Crisis at Home and Abroad

Inflation Reduction Act

- Reduce Pollution
- Improve Clean Transit
- Make Clean Energy More Affordable and Accessible
- Strengthen Resilience to Climate Change

The [Inflation Reduction Act](#) (IRA) is needed by low-income, people of color and environmental justice communities—such as incentives for clean energy technologies, electric vehicles, school buses and transit.



Inflation Reduction Act



The Bullard Center for Environmental and Climate Justice at Texas Southern University and Achieving Community Tasks Successfully (ACTS) co-lead the Thriving Communities Grantmaking Award Project for the Environmental Protection Agency's (EPA) Region 6.

The Bullard Center was awarded \$50 million dollars to provide subawards to eligible community-focused entities working to address environmental, resilience and public health issues affecting communities in Texas, Louisiana, New Mexico, Oklahoma, and Arkansas. The grantmaking project is titled "Transformative Environmental Awards for Members of Underserved Populations (TEAM UP)."

Inflation Reduction Act

Texas Southern University's Bullard Center for Environmental & Climate Justice received a \$156 million grant from the EPA's "Solar for All" program, one of the largest of its kind, to support community solar and energy resiliency infrastructure in low-income communities.

- The grant, through the EPA Greenhouse Gas Reduction Fund's "Solar for All" program, is a joint initiative between the Bullard Center and the Clean Energy Fund of Texas.
- The funding will be used to develop residential-serving community solar projects in low-income and disadvantaged communities in southern and southeastern states.
- The initiative aims to address energy policy and grid vulnerability challenges and provide community solar and energy resiliency infrastructure.

Potential Focus of Projects

...And other environmental, resilience, and public health impacts affecting communities.

- Air quality & asthma
- Water quality sampling
- Lead and asbestos exposure/remediation
- Pesticides and other toxic substances
- Illegal dumping
- Education, outreach and community engagement
- Workforce development/job training
- Food security
- Stormwater Infrastructure, green or nature based solutions
- Healthy homes
- Disaster preparedness and resiliency
- Intergenerational/Youth Training



Major Players

The Environmental and Climate Justice Movement And Just Sustainability

Products and/or professors of our HBCUs.



Dr. Robert D. Bullard

- **Founding director of the Bullard Center for Environmental and Climate Justice and distinguished professor of urban planning and environmental policy at Texas Southern University.**
 - **“Father of Environmental Justice”**
 - **Member of the White House Environmental Justice Advisory Council.**
 - **Co-Founder of HBCU Climate Change Consortium**
 - **Has written 18 books.**
- HBCU Connection**
- **B.S. Alabama A&M University (Government, 1968)**
 - **M.A. Atlanta University (Sociology, 1972)**
 - **Professor: Clark Atlanta University & Texas Southern University**





Dr. Beverly Wright

- **The Deep South Center for Environmental Justice (DSCEJ) was founded by Dr. Beverly Wright in 1992 in collaboration with community environmental groups and other universities within the Southern region to advance environmental justice.**
- **Members of the White House Environmental Justice Advisory Council**
- **Co-Founder of HBCU Climate Change Consortium**
- **Race, Place, and Environmental Justice after Hurricane Katrina**
- **The Wrong Complexion for Protection: How the government responds to disasters endangers African American communities**

HBCU Connection

- **B.A. Sociology at Grambling College (NOW GSU)**
- **Founded DSCEJ at Dillard University**



Dr. Glenn S. Johnson

- **Professor of Urban Planning and Environmental Policy at Texas Southern University.**
- **Former Associate Dean for Research and Graduate Studies at Texas Southern University**
- **Just Transportation: Dismantling Race and Class Barriers to Mobility**
- **Highway Robbery: Transportation Racism and New Routes to Equity**
- **Sprawl City: Race, Politics, and Planning in Atlanta.**
- **Environmental Justice Resource Center (EJRC) at Clark Atlanta University**

HBCU Connection

- **Professor: Clark Atlanta University and Texas Southern University**

Dr. Stephen Pinkney

- A Case Study in Systemic African-American Poverty in Caddo and Bossier Parish, LA
- MSWLF and Methane Gas - Report Analysis

Grants

- 2024 Texas Southern University HBCU Environmental Conservation Organization e-Mobility Grant
- 2025 Texas Southern University Student e-Mobility Grant - In Process
- 2025 Third Ward Houston Community e-Mobility Grant - In Process

HBCU Connection

- **Ph.D. from Texas Southern University**
- **Southern University-Shreveport, Summer Courses.**





Dr. Stephen Pinkney
Bullard Center for Environmental and Climate Justice
Texas Southern University
Houston, TX 77004
E-Mail: Stephen.Pinkney@tsu.edu

Thank you TACDC Conference

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