CENTERING AND INTEGRATING EQUITY INTO ALL ASPECTS OF PLANNING, DESIGN, & ETC.

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NACTO Designing Cities 2020: Virtual Convening #2

Friday, January 14, 2021

1:00 PM – 3:00 PM

@ctbrown1911 **#arrestedmobility**

RECAP: WORKSHOP #1

EQUITY

- Equity involves trying to understand and give **people** what they need to enjoy full, healthy lives.
- Equity is the presence of justice and fairness within the procedures, processes, and distribution of resources by institutions or systems.
- Facing equity issues requires an understanding of the underlying or root causes of inequalities and oppression within our society.

VARIOUS EQUITY DIMENSIONS

1. Ability Equity
2. Compensatory Equity
3. Environmental Equity
4. Gender Equity
5. Generational Equity
6. Geographic Equity
7. Horizontal Equity
8. Income Equity
9. Language Equity
10. Life-Stage Equity
11. Modal Equity
12. Occupancy Equity
13. Opportunity Equity
14. Outcome Equity
15. Participation Equity
16. Payment Equity
17. Process Equity
18. Race/Ethnicity Equity
19. Spatial Equity
20. Vertical Equity

CONSIDERATION OF SOCIAL IDENTITIES

- Which identities do you think about most often?
- Which identities do you think about least often?
- Which of your own identities would like to learn more about?
- Which of your identities have the strongest effect on how you perceive yourself?
- Which of your identities have the greatest effect on how others perceive you?

EQUITY IMPLICATIONS

Race

Place

Health

“HISTORY DOESN’T SAY GOODBYE; HISTORY SAYS SEE YOU LATER.”

TOPIC #1

PURSUIT OF EQUITY: ANALYZING VEHICLE AND PEDESTRIAN CRASHES IN MINORITY COMMUNITIES

RESEARCH QUESTIONS

Research Focus Areas:

1. Communities of Concern (COCs) versus Non-Communities of Concern (Non-COCs)
2. Racially Concentrated Areas of Poverty (RCAPs) versus Non-RCAPs

Research Questions:

1. Do more vehicle-pedestrian crashes take place in these areas than in other areas?
2. Are the physical conditions of pedestrians involved in these crashes more severe?
3. If yes, what can be done to assist these communities?

COMMUNITIES OF CONCERN

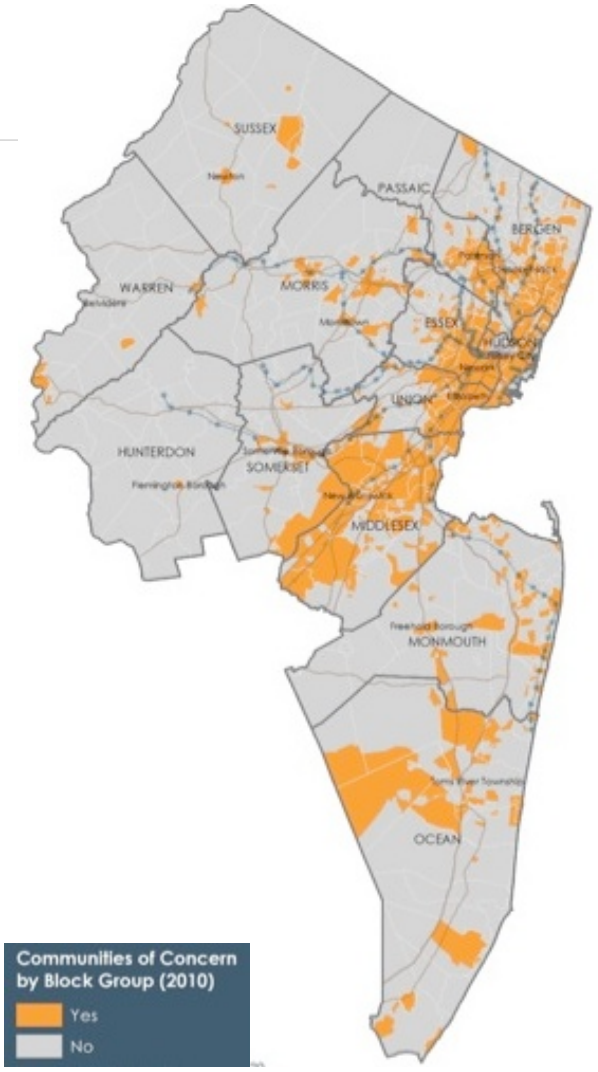
Characteristics of a Community of Concern:

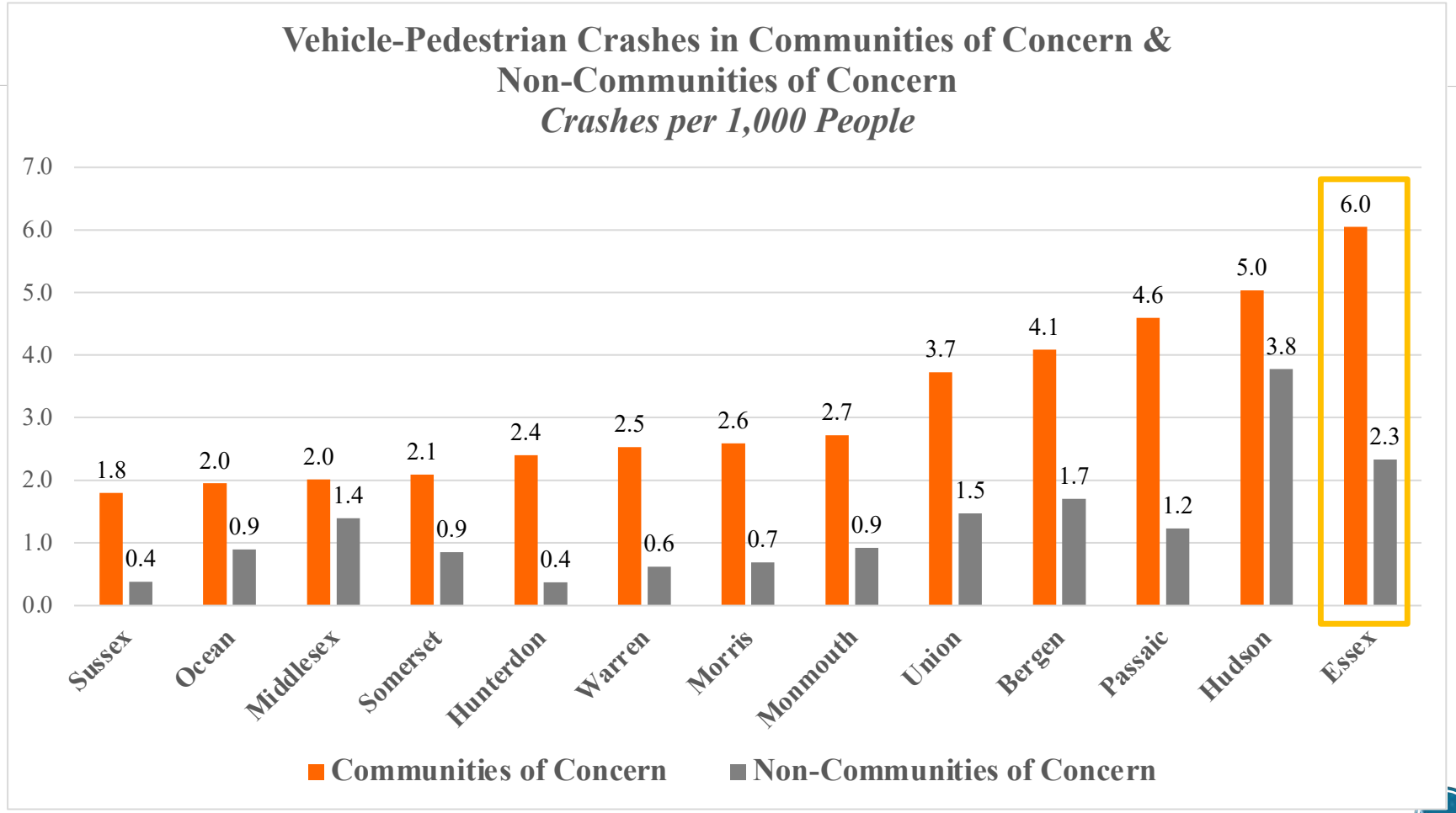
1. **Minority** concentration equal to or exceeding the regional threshold; or,
2. **Low-income** concentration equal to or exceeding the regional threshold; or,
3. **Two or more Non-EJ Disadvantaged populations** equal to or exceeding the regional threshold.
    - Female head of household with children
    - Carless households
    - Persons with limited English proficiency
    - Elderly over 75 years of age

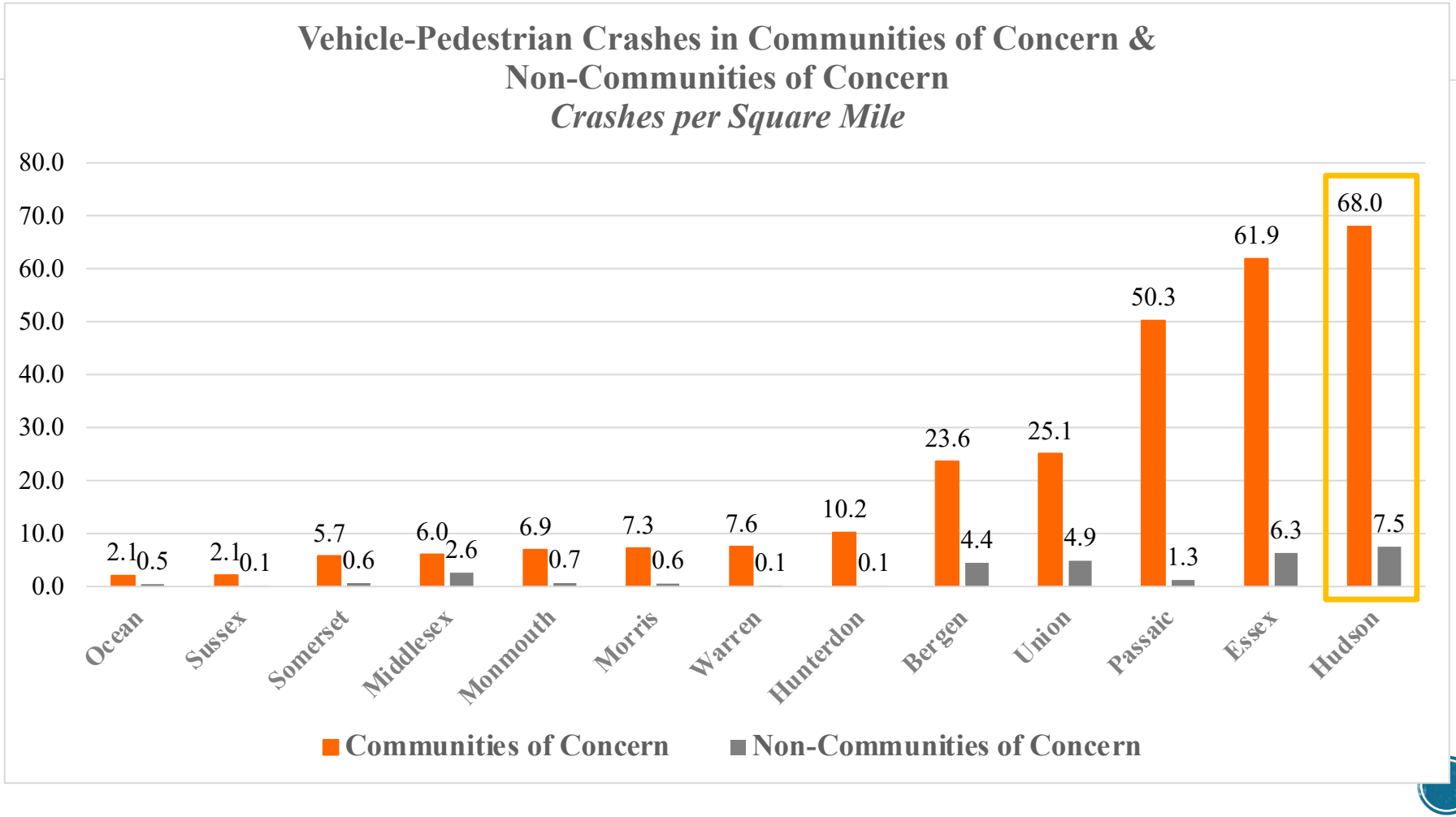
COMMUNITIES OF CONCERN

Data/Methodology:

- Pedestrian-Vehicle Crashes, 2008 – 2013;
- Mapped results for each of the 13 Counties in TNJ Region;
- Crashes per 1,000 people;
- Crashes per square mile; and,
- Communities of Concern versus Non-Communities of Concern



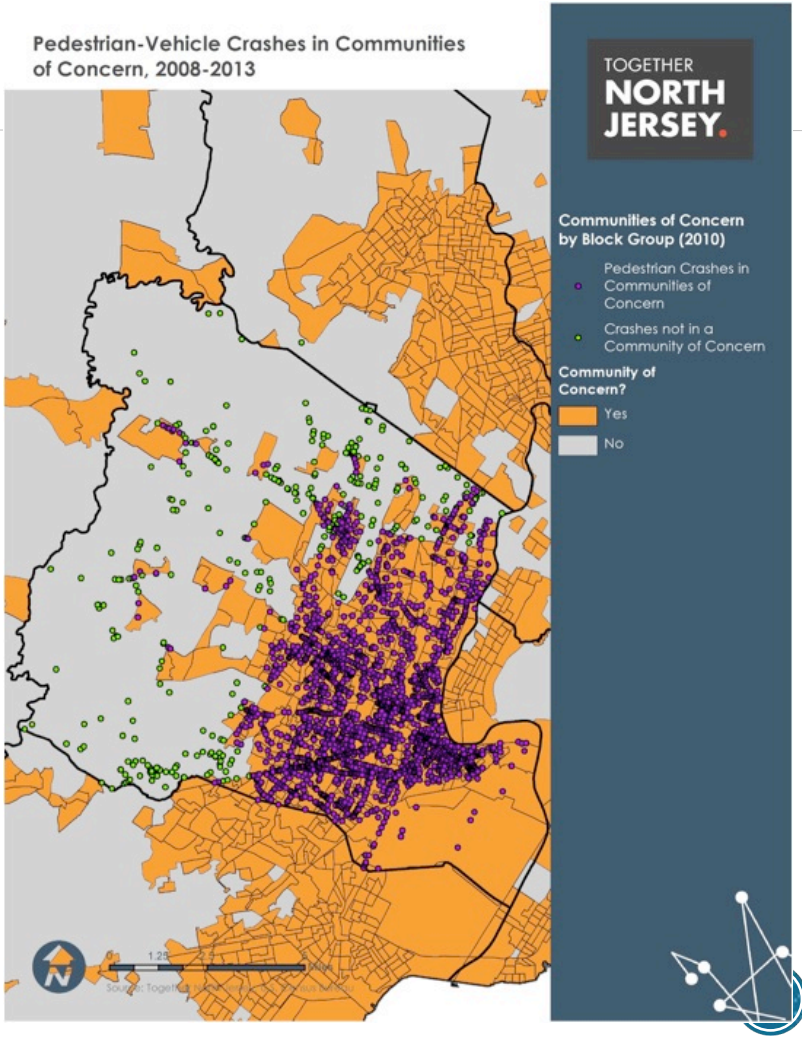

Vehicle-Pedestrian Crashes in Communities of Concern & Non-Communities of Concern
Crashes per 1,000 People
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1.8
0.4
2.0
0.9
2.0
1.4
2.1
0.9
2.4
0.4
2.5
0.6
2.6
0.7
2.7
0.9
3.7
1.5
4.1
1.7
4.6
1.2
5.0
3.8
6.0
2.3
Sussex
Ocean
Middlesex
Somerset
Hunterdon
Warren
Morris
Monmouth
Union
Bergen
Passaic
Hudson
Essex
Communities of Concern
Non-Communities of Concern


Vehicle-Pedestrian Crashes in Communities of Concern & Non-Communities of Concern
Crashes per Square Mile
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
2.1
0.5
2.1
0.1
5.7
0.6
6.0
2.6
6.9
0.7
7.3
0.6
7.6
0.1
10.2
0.1
23.6
4.4
25.1
4.9
50.3
1.3
61.9
6.3
68.0
7.5
Ocean
Sussex
Somerset
Middlesex
Monmouth
Morris
Warren
Hunterdon
Bergen
Union
Passaic
Essex
Hudson
Communities of Concern
Non-Communities of Concern

COMMUNITIES OF CONCERN

# Crashes In Non-Communities of Concern	# Crashes in Communities of Concern
455 (11%)	3,559 (89%)

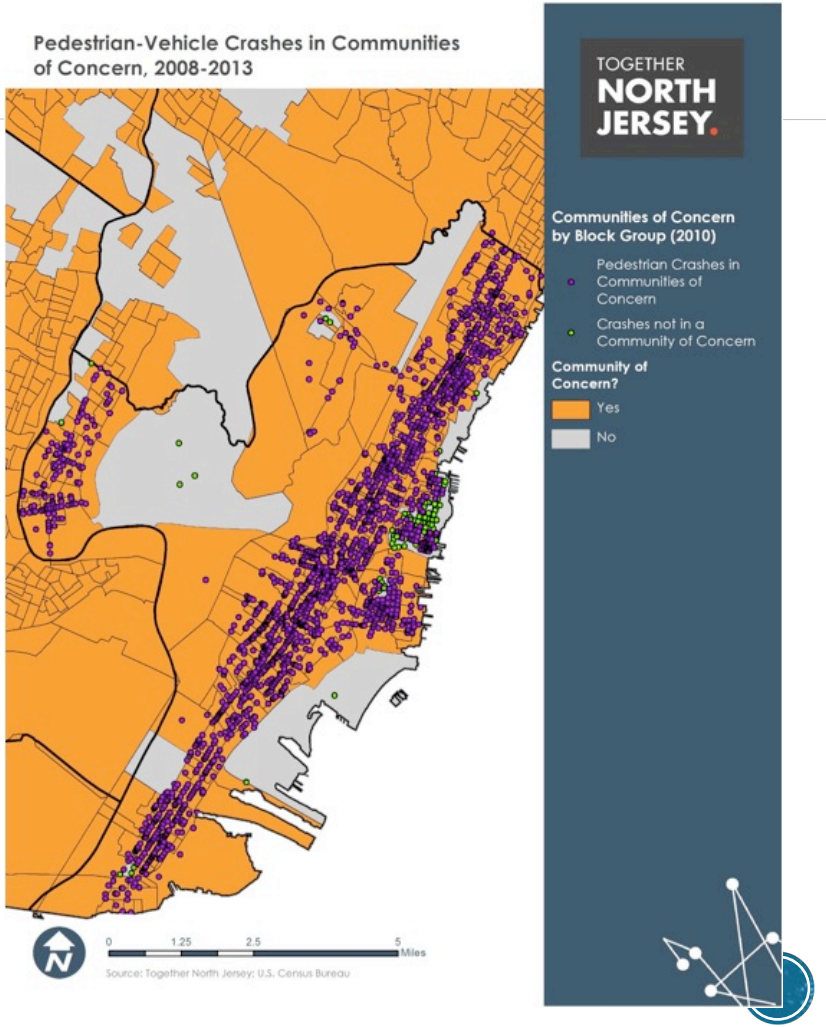
Communities of Concern		Non-Communities of Concern	
Crashes per 1,000 People	Crashes per Square Mile	Crashes per 1,000 People	Crashes per Square Mile
6.0	61.9	2.3	6.3



COMMUNITIES OF CONCERN

# Crashes In Non-Communities of Concern	# Crashes in Communities of Concern
135 (4%)	3,013 (96%)

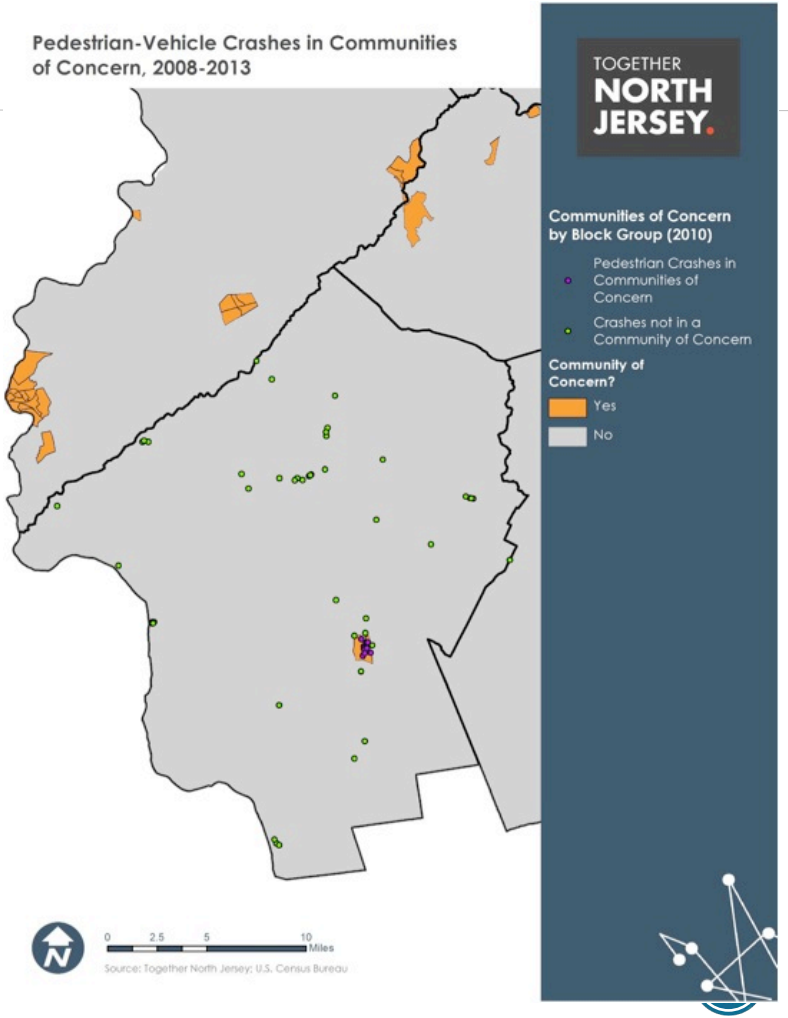
Communities of Concern		Non-Communities of Concern	
Crashes per 1,000 People	Crashes per Square Mile	Crashes per 1,000 People	Crashes per Square Mile
5.0	68.0	3.8	7.5

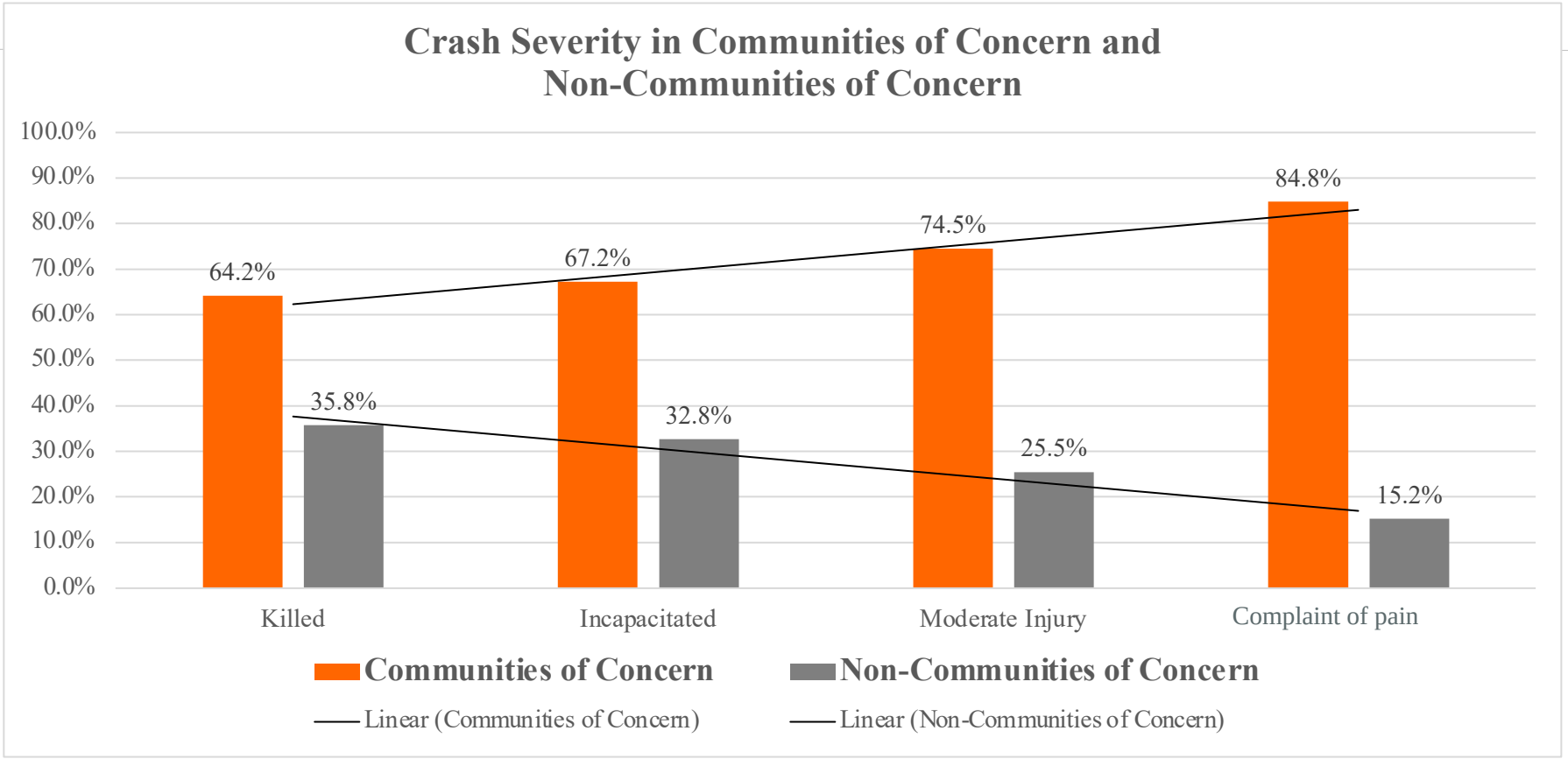


COMMUNITIES OF CONCERN

# Crashes In Non-Communities of Concern	# Crashes in Communities of Concern
57 (84%)	11 (16%)

Communities of Concern		Non-Communities of Concern	
Crashes per 1,000 People	Crashes per Square Mile	Crashes per 1,000 People	Crashes per Square Mile
2.4	10.2	0.4	0.1




Crash Severity in Communities of Concern and Non-Communities of Concern
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
64.2%
35.8%
67.2%
32.8%
74.5%
25.5%
84.8%
15.2%
Killed
Incapacitated
Moderate Injury
Complaint of pain
Communities of Concern
Non-Communities of Concern
Linear (Communities of Concern)
Linear (Non-Communities of Concern)

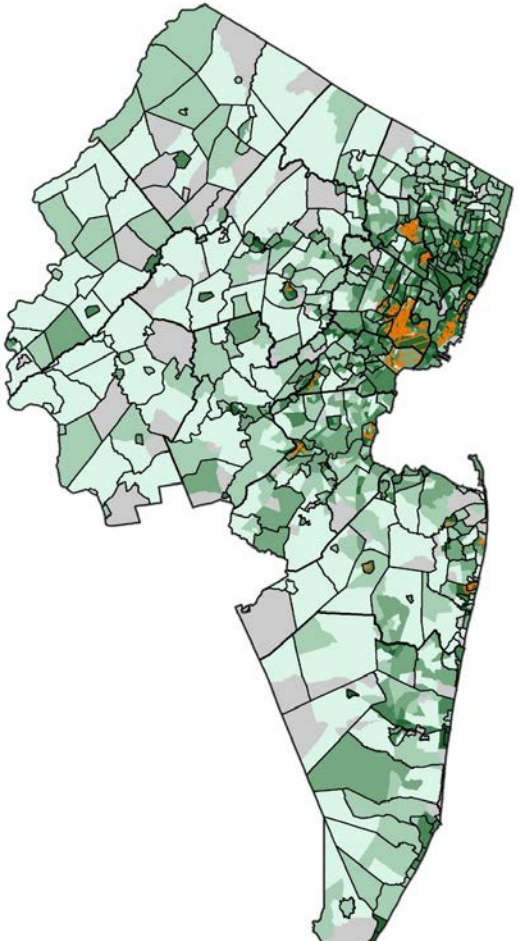
RCAP/ECAP

Racially Concentrated Areas of Poverty/ECAP tracts have:

1. A **family poverty rate** greater than or equal to 300% of the regional average (i.e., 19.8%)
   - *Regional Average = 6.6%*

2. A **majority non-white** population

Pedestrian-Vehicle Crashes in Racially/Ethnically Concentrated Areas of Poverty, 2008-2013



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Pedestrian-Vehicle Crashes in an RCAP in New Jersey

Municiplity

RCAP

Crashes Per 1,000 People

0 - 1

2 - 1

2 - 3

4 - 5

6 - 63

RCAP census tracts are characterized by both:

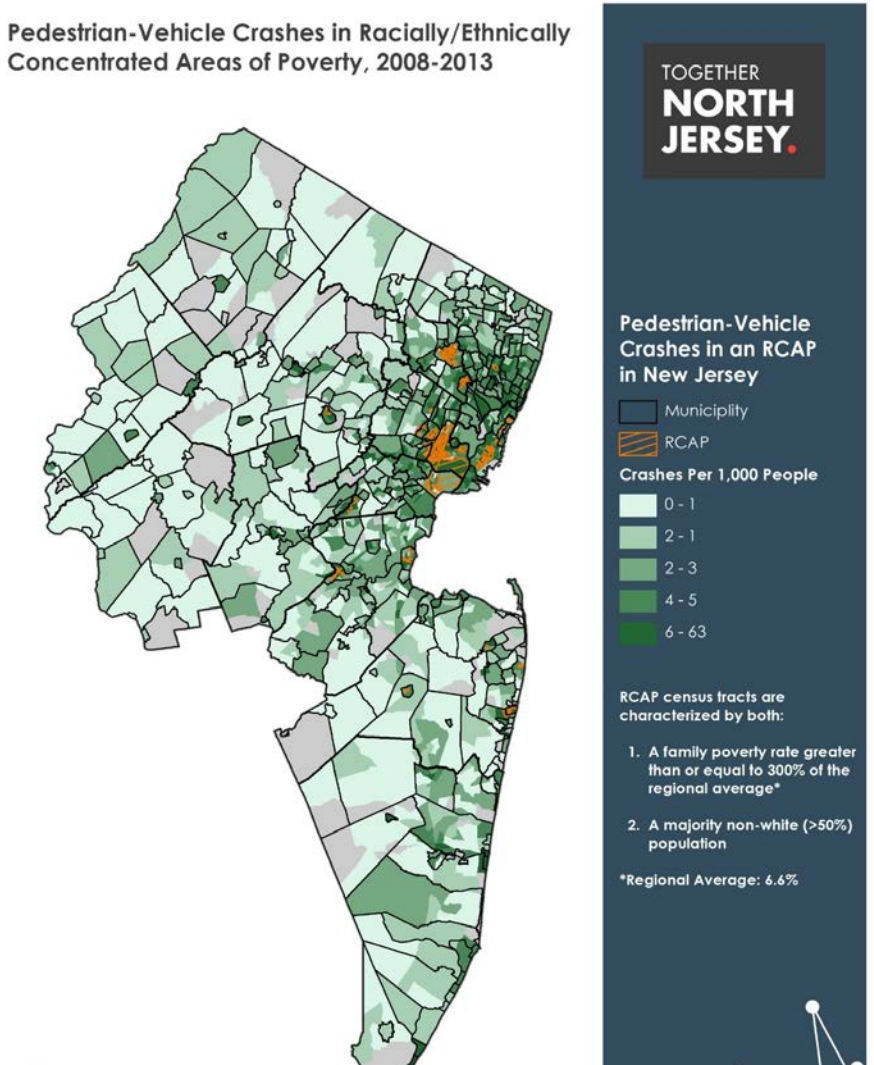
1. A family poverty rate greater than or equal to 300% of the regional average*
2. A majority non-white (>50%) population

*Regional Average: 6.6%

RCAP/ECAP

Data/Methodology:

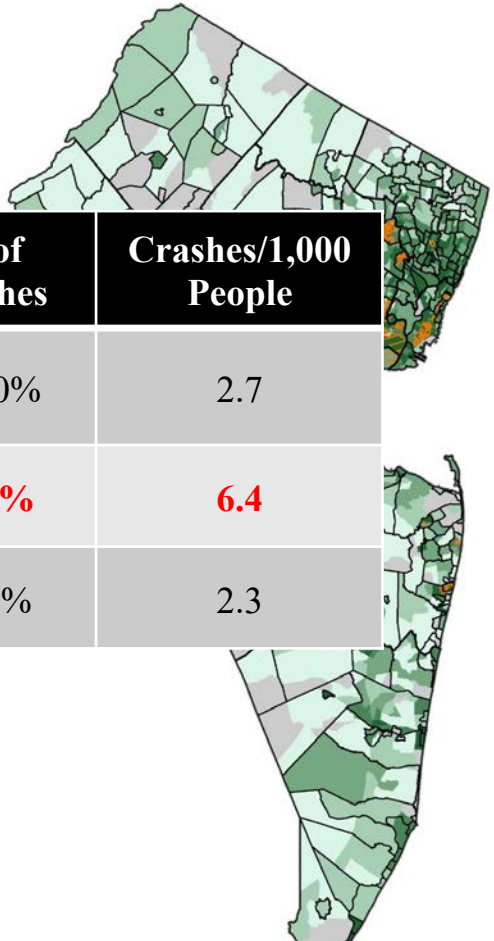
- Pedestrian-Vehicle Crashes, 2008 – 2013;
- Mapped results for each of the 13 Counties in TNJ Region;
- Crashes per 1,000 people; and,
- Crash severity in RCAPs vs. Non-RCAPs



RCAP/ECAP

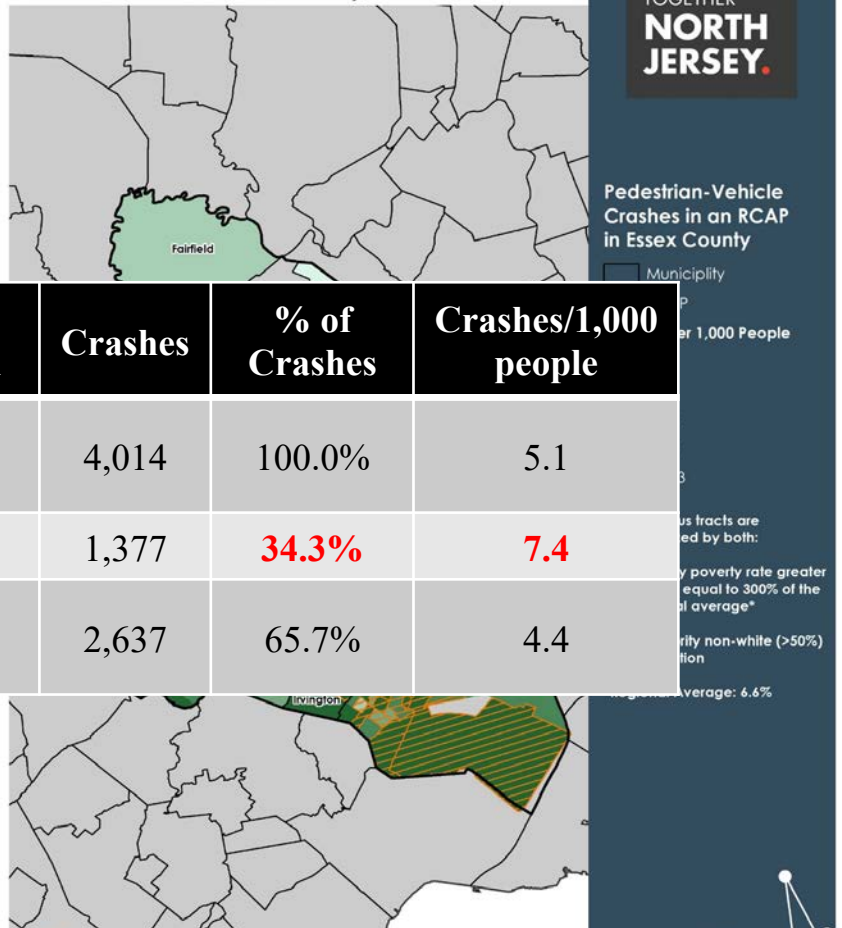
	Population	% of Population	Crashes	% of Crashes	Crashes/1,000 People
Entire Region	6,579,907	100.0%	17,589	100.0%	2.7
RCAPs	564,916	**8.6%**	3,648	**20.7%**	**6.4**
Non-RCAPs	6,014,991	91.4%	13,941	79.3%	2.3

Pedestrian-Vehicle Crashes in Racially/Ethnically Concentrated Areas of Poverty, 2008-2013



RCAP/ECAP

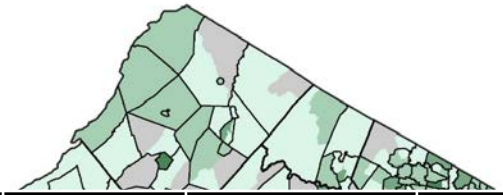
Pedestrian-Vehicle Crashes in Racially Concentrated Areas of Poverty, 2008-2013



	Population	% of Population	Crashes	% of Crashes	Crashes/1,000 people
Essex County	783,969	100.0%	4,014	100.0%	5.1
RCAPs	185,488	**23.7%**	1,377	**34.3%**	**7.4**
Non-RCAPs	598,481	76.3%	2,637	65.7%	4.4

RCAP/ECAP

Pedestrian-Vehicle Crashes in Racially/Ethnically Concentrated Areas of Poverty, 2008-2013



	Fatal	Incapacitated	Moderate Injury	Complaint of Pain	No Injury	Unknown
Entire Region	1.6%	2.6%	20.8%	56.7%	18.1%	0.2%
RCAPs	**2.1%**	1.9%	18.2%	**60.4%**	17.3%	0.1%
Non-RCAPs	1.4%	3.0%	22.1%	54.8%	18.5%	0.2%

TOGETHER NORTH JERSEY.

characterized by both:

1. A family poverty rate greater than or equal to 300% of the regional average*
2. A majority non-white (>50%) population

*Regional Average: 6.6%

ACTIVITY #1: WAKE

- Large Group Discussion

QUESTIONS

- Why is it important to examine vehicle-pedestrian crashes through an equity or racial equity lens?

- What internal changes are needed within your organization to advance research studies and projects such as the one highlighted?

TOPIC #2

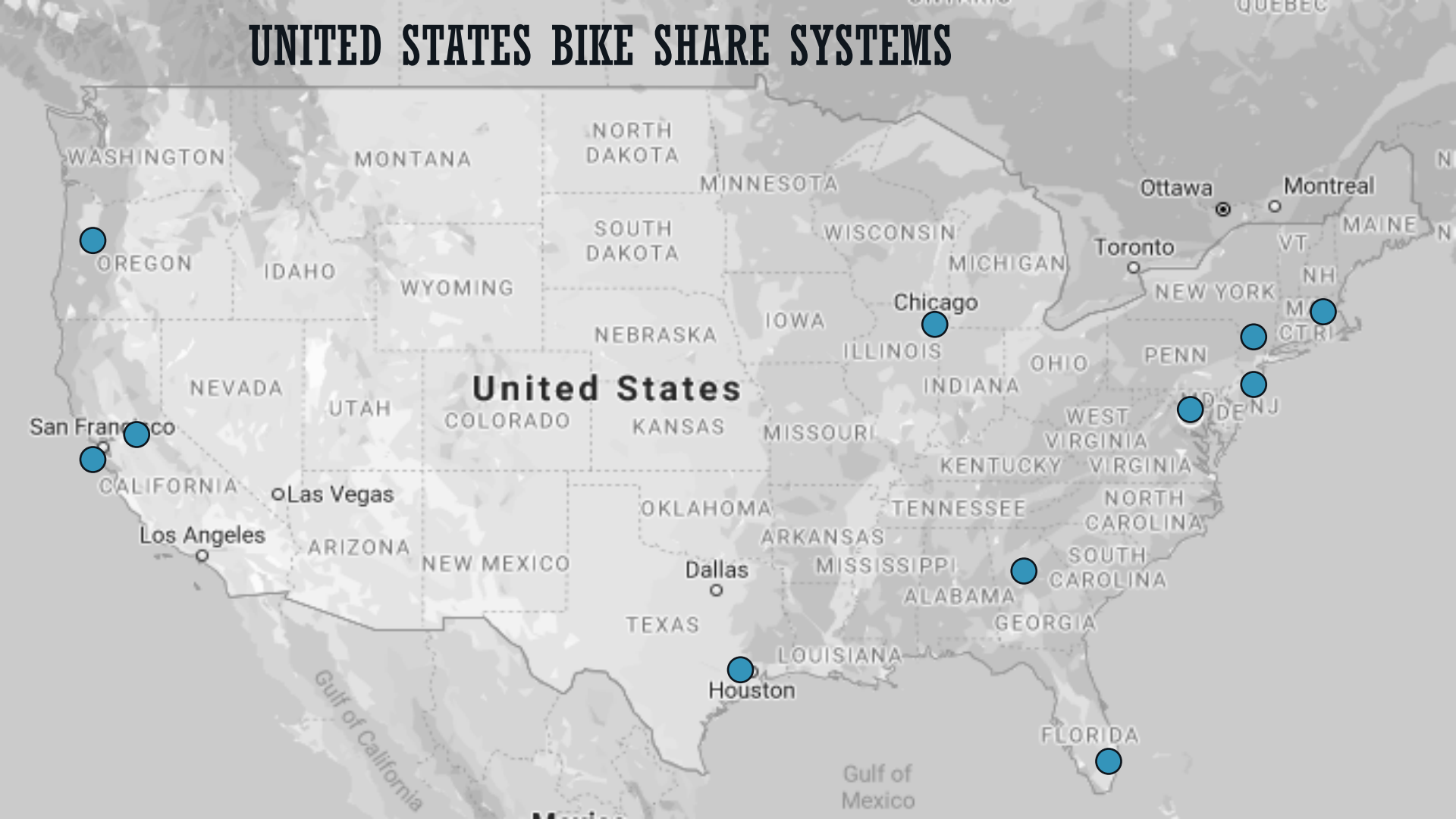
EVALUATING EQUITY IN BIKE SHARE SYSTEMS IN THE UNITED STATES

Bike Share Systems in the US and New Jersey

RESEARCH OBJECTIVES

- Explore inequalities in spatial distribution of bike share stations across different socioeconomic groups.
- Rank the BSS of the 10 cities by their spatial densities in the most-disadvantaged socioeconomic category.
- Serve as a reference model for assessing existing and developing bike share systems in the State of New Jersey.

UNITED STATES BIKE SHARE SYSTEMS



METHODOLOGY

1. Defining the BSS Study Areas
2. Preparing Predictor Variables for the BSS Study Areas
    1. *Four of the 8 variables were taken from the Smith et al. (2015) study.*
3. Computing Socio-economic Hardship Scores at block group level and classifying them into Socio-Economic Hardship Quintiles
4. Computing Station Densities for each block group and Socio-Economic Quintiles
5. ***Social-economic quintiles***: Most Advantaged, Advantaged, Neither Advantaged or Disadvantaged, Disadvantaged, and Most Disadvantaged

PREDICTOR VARIABLES

1. Carless households (CL_HH)
2. More than 30 percent of gross income as rent (MT30INC)
3. Health insurance (NO_HI)
4. Median household income (HINC100000)
5. Education (LT_HS_EDU)
6. Household size by median number of rooms (HHS_MNR)
7. Minority population (MIN_POP)
8. Unemployment (UNEMP)

PREDICTOR VARIABLES

Average Station Density by Population in a block group in a socio-economic category (or the BSS study area)

$$= \frac{\Sigma\left(\frac{NUM_BS \times 1000}{ADULT_POP}\right)}{N}$$

Average Station Density by Area in a block group in a socio-economic category (or the BSS study area)

$$= \frac{\Sigma\left(\frac{NUM_BS}{AR}\right)}{N}$$

Where NUM_BS = Total number of bike stations in the block group

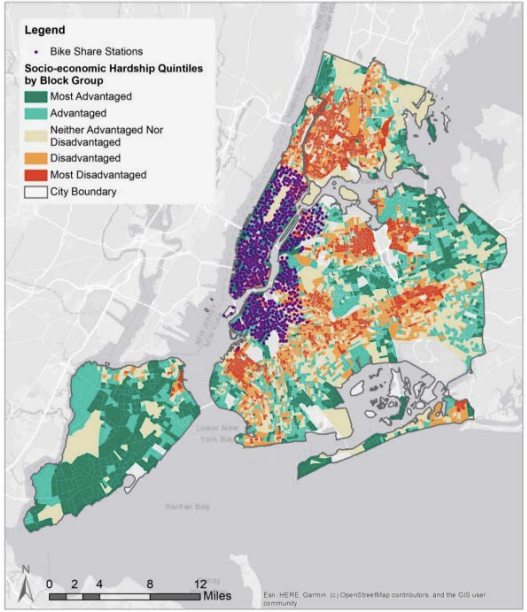
ADULT_POP = Total adult population in the block group

AR = Area of the block group in square miles

N = Total number of block groups in the socio-economic category (or the BSS study area)

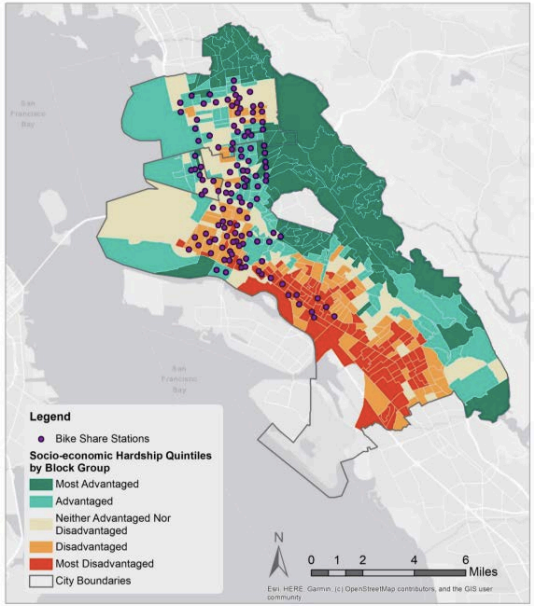
ANALYSIS

New York City, NY



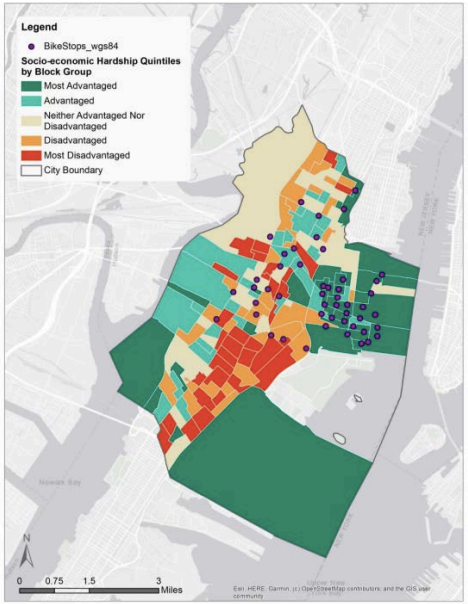
Map 9: Bike share stations and socio-economic categories in New York City, NY

Oakland, CA



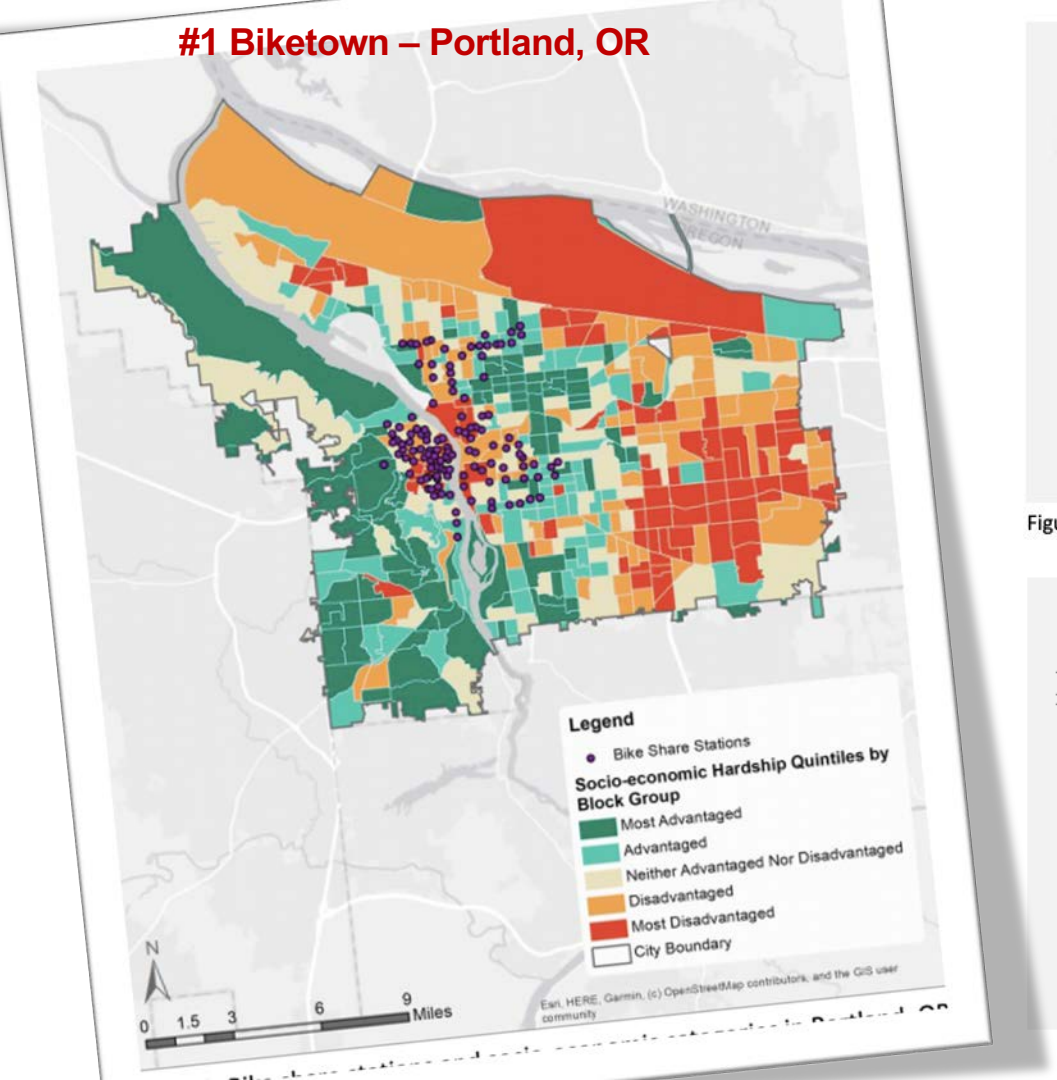
Map 8: Bike share stations and socio-economic categories in Oakland (East Bay), CA

Jersey City, NJ



Map 13: Bike share stations and socio-economic categories in Jersey City, NJ

#1 Biketown – Portland, OR



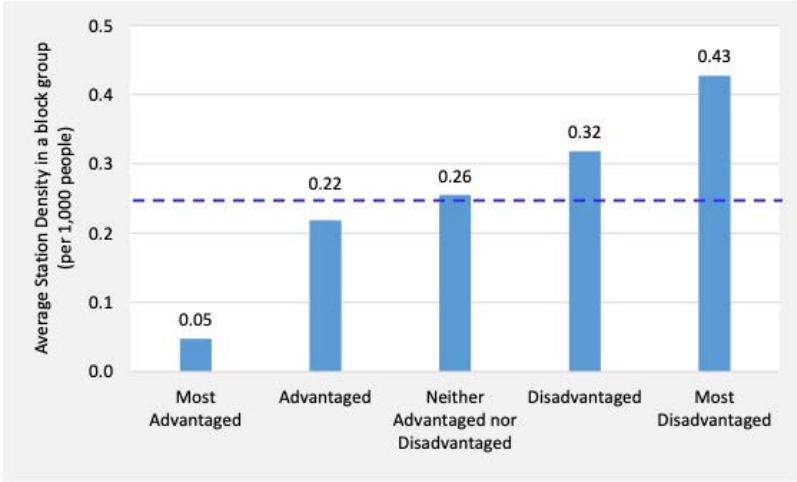


Figure 1a: Spatial densities by population in socio-economic categories – Portland, OR

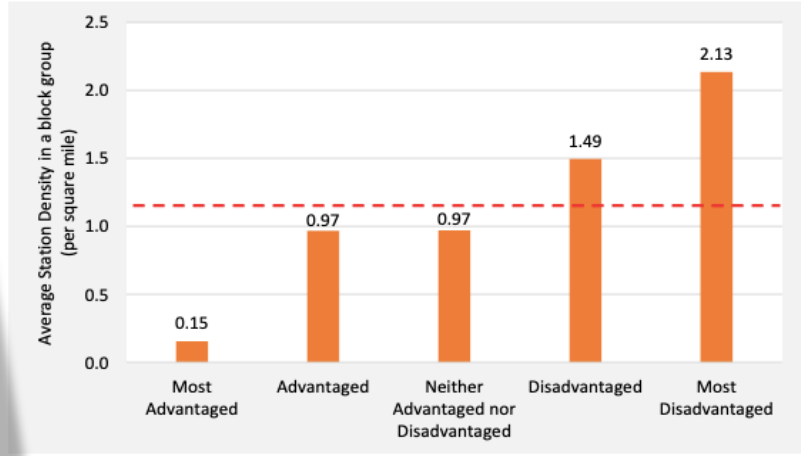
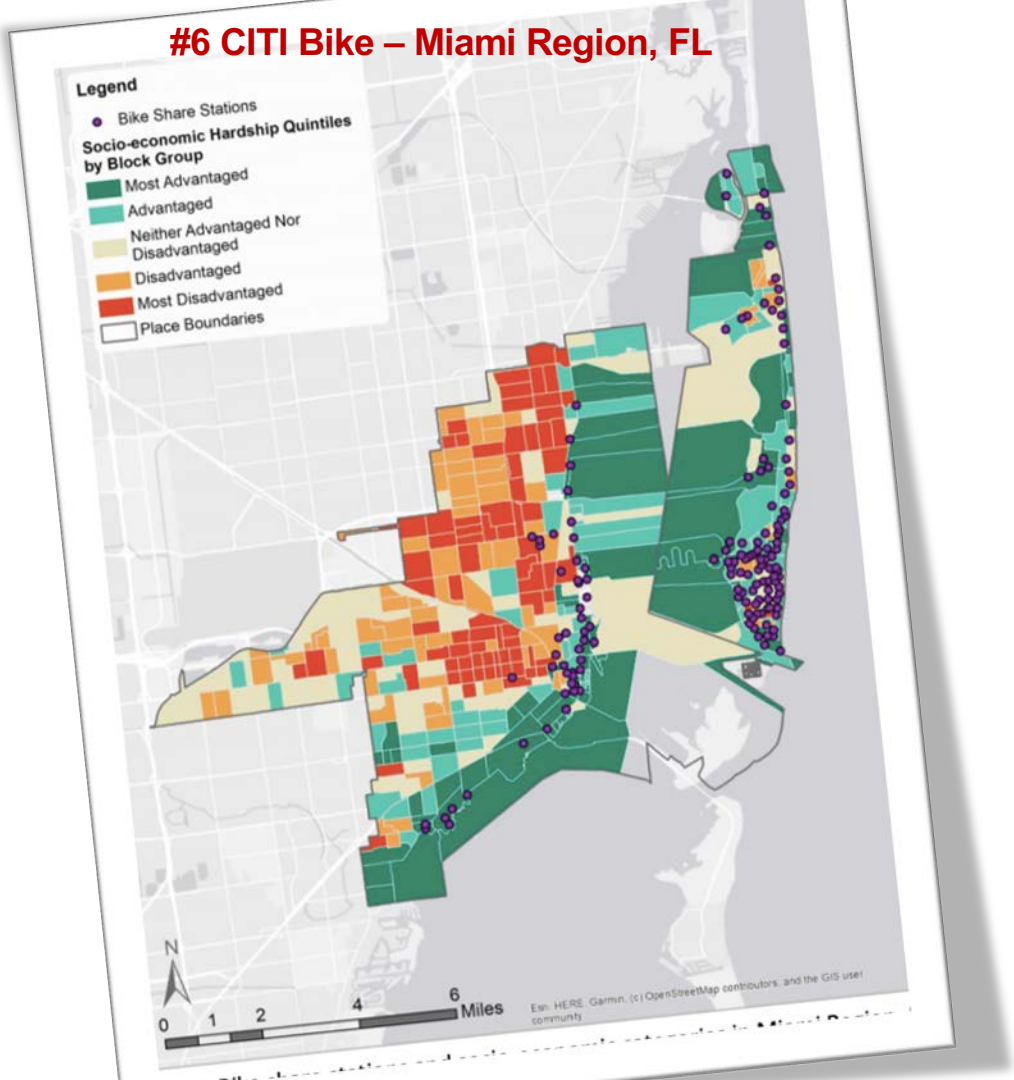


Figure 1b: Spatial densities by area in socio-economic categories – Portland, OR

#6 CITI Bike – Miami Region, FL



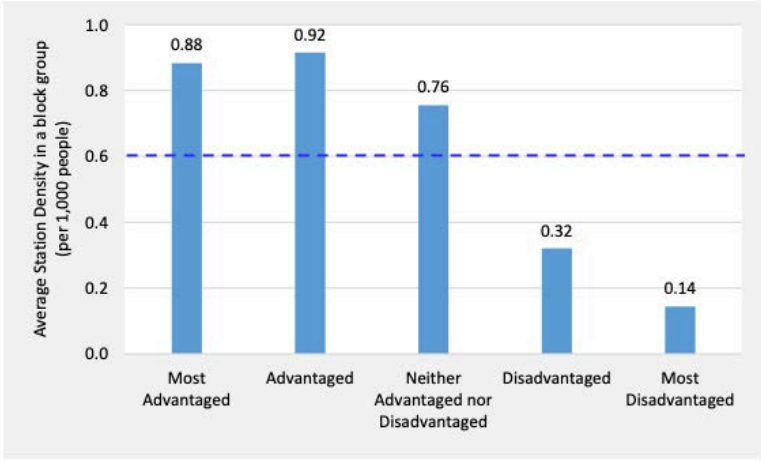


Figure 6a: Spatial densities by population in socio-economic categories – Miami Region, FL

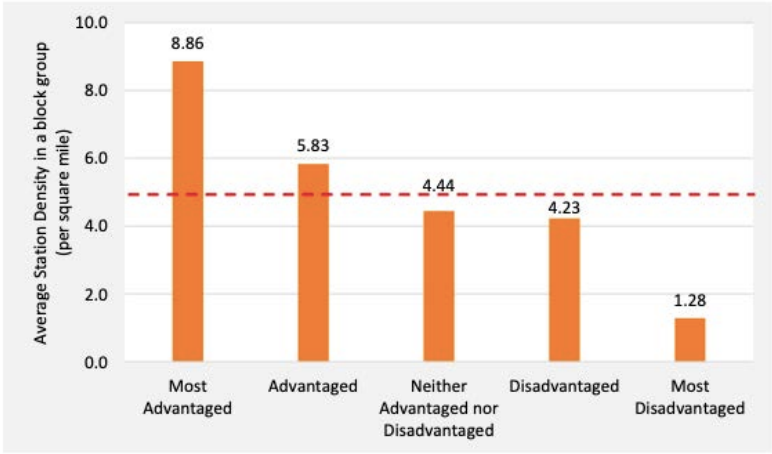
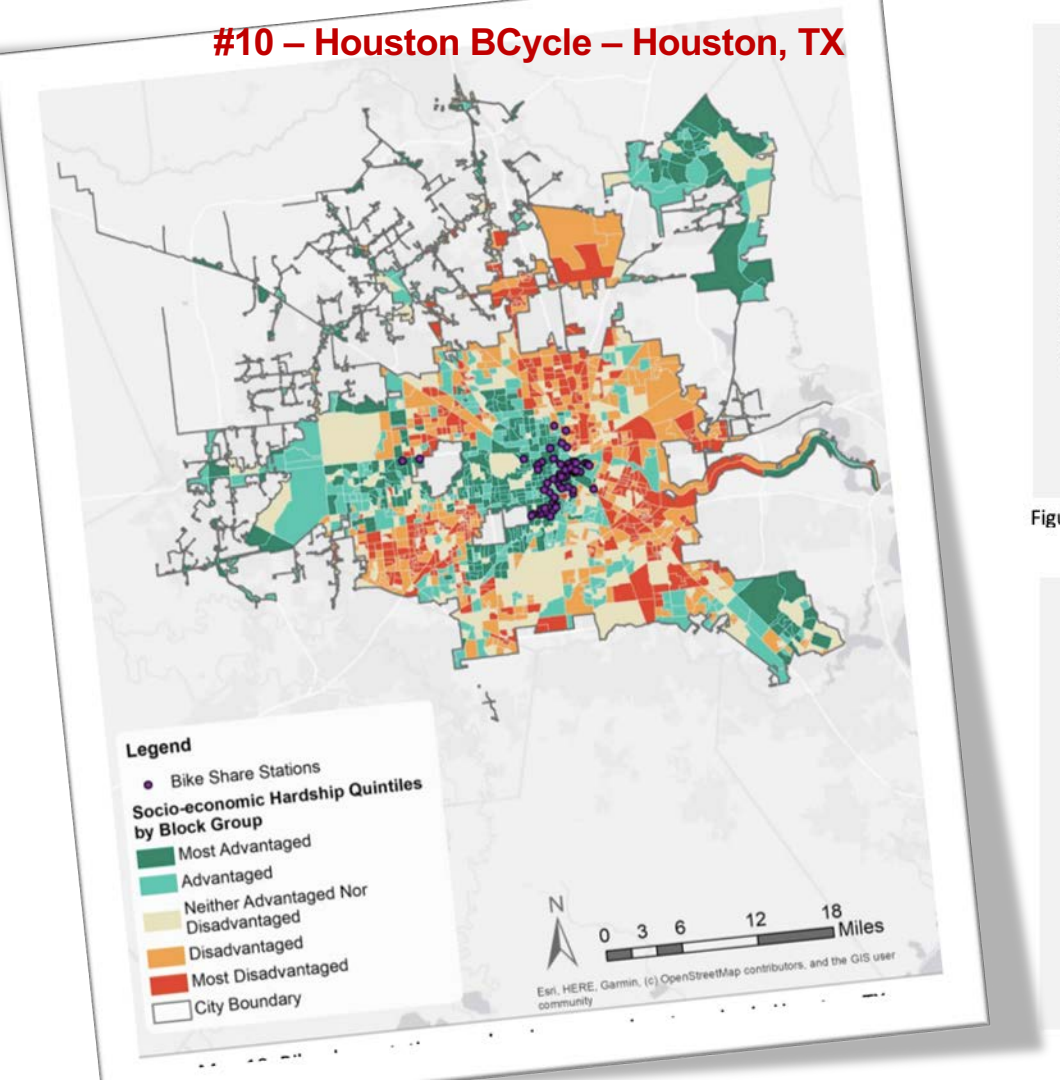


Figure 6b: Spatial densities by area in socio-economic categories – Miami Region, FL

#10 – Houston BCycle – Houston, TX



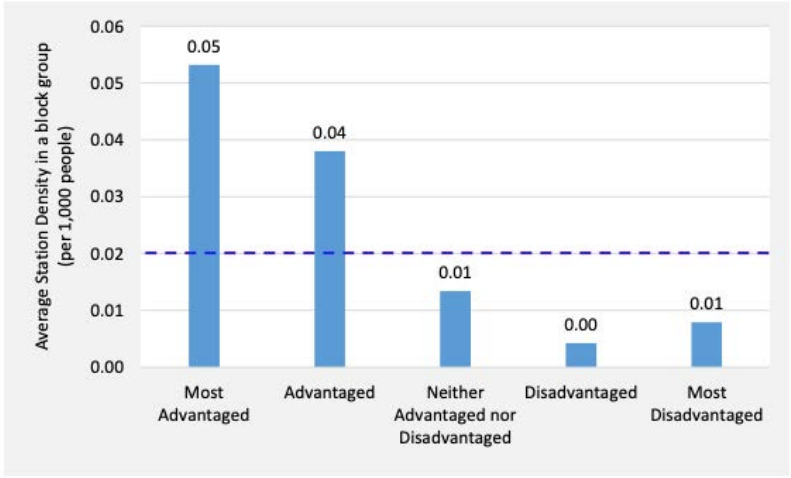


Figure 10a: Spatial densities by population in socio-economic categories – Houston, TX

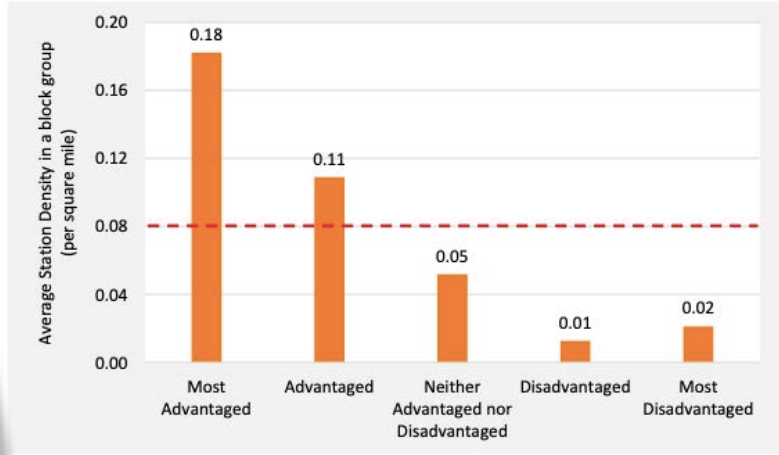
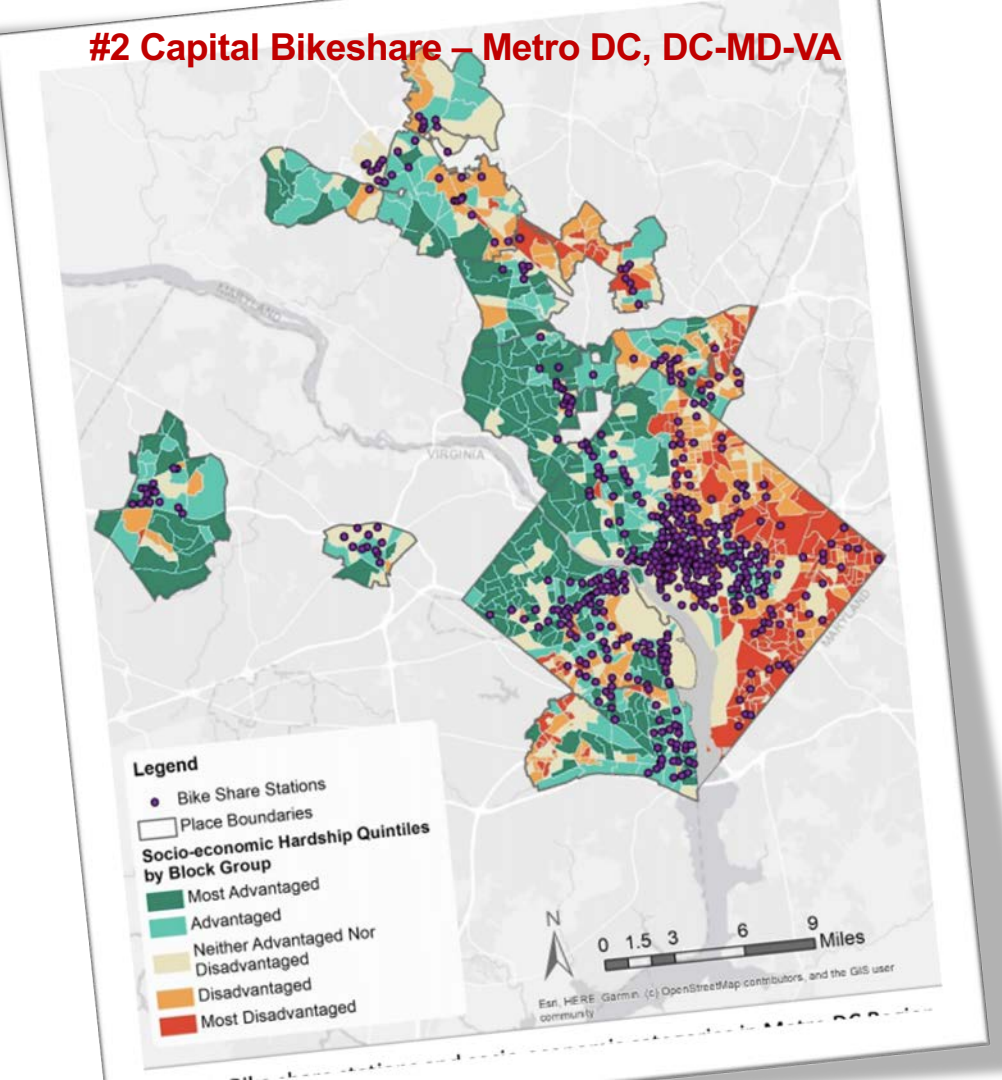


Figure 10b: Spatial densities by area in socio-economic categories – Houston, TX

#2 Capital Bikeshare – Metro DC, DC-MD-VA



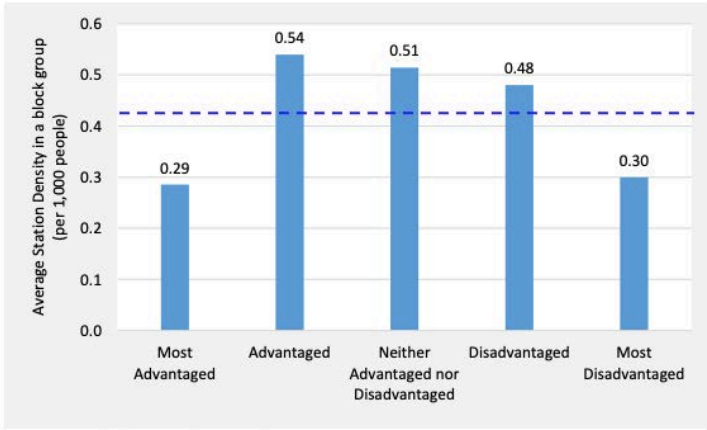


Figure 2a: Spatial densities by population in socio-economic categories – Metro DC, DC-MD-VA

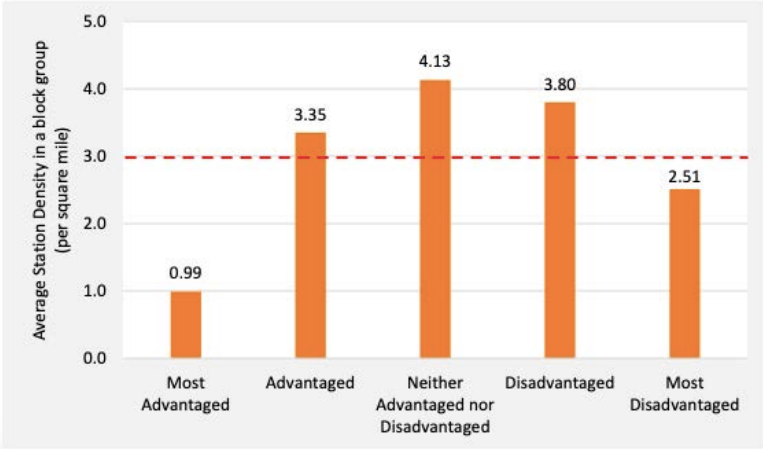


Figure 2b: Spatial densities by area in socio-economic categories – Metro DC, DC-MD-VA

DISCUSSION

	Socio-economic Category					Study Area Average
	Most Advantaged	Advantaged	Neither Advantaged nor Disadvantaged	Disadvantaged	Most Disadvantaged	
Atlanta	**0.38**	0.34	0.28	0.14	**0.12**	0.25
Metro Boston	**0.41**	0.26	0.32	0.29	**0.21**	0.30
Chicago	**0.40**	0.21	0.26	**0.17**	0.30	0.27
Houston	**0.05**	0.04	0.01	**0.00**	0.01	0.02
Miami Region	0.88	**0.92**	0.76	0.32	**0.14**	0.60
New York City	**0.32**	0.16	0.23	0.05	**0.04**	0.16
Oakland	0.13	**0.46**	0.41	0.26	**0.12**	0.28
Portland	**0.05**	0.22	0.26	0.32	**0.43**	0.25
San Francisco	**0.20**	**0.15**	**0.15**	**0.20**	0.16	0.17
Metro DC	**0.29**	**0.54**	0.51	0.48	0.30	0.42

Table 1a: Average spatial densities by population in a block group, by Socio-economic Category

	Socio-economic Category					Study Area Average
	Most Advantaged	Advantaged	Neither Advantaged nor Disadvantaged	Disadvantaged	Most Disadvantaged	
Atlanta	**1.69**	**1.69**	1.42	**0.39**	0.41	1.12
Metro Boston	2.42	2.82	2.09	**3.14**	**2.07**	2.51
Chicago	**4.15**	2.20	1.45	**1.03**	1.52	2.07
Houston	**0.18**	0.11	0.05	**0.01**	0.02	0.08
Miami Region	**8.86**	5.83	4.44	4.23	**1.28**	4.91
New York City	**7.96**	3.21	3.02	1.44	**1.19**	3.36
Oakland	**0.74**	2.44	**3.26**	2.42	1.06	1.98
Portland	**0.15**	0.97	0.97	1.49	**2.13**	1.14
San Francisco	2.26	**1.71**	1.99	2.81	**3.49**	2.45
Metro DC	**0.99**	3.35	**4.12**	3.80	2.51	2.96

Table 1b: Average spatial densities by area in a block group, by Socio-economic Category

DISCUSSION

By Population

- 2 cities – Portland and San Francisco – have their highest average station density by population in one of the two disadvantaged socio-economic categories.
- 3 systems – Portland, San Francisco and Metro DC – have their lowest spatial densities by population in either of the advantaged categories.

By Area

- 3 systems – Portland, San Francisco and Boston – have their highest average station density by population in one of the two disadvantaged socio-economic categories

CONCLUSION

Station Density by Population Rankings
1. Portland
2. Chicago
3. Metro DC
4. Metro Boston
5. San Francisco
6. Miami Region
7. Atlanta
8. Oakland (East Bay)
9. New York City
10. Houston

Station Density by Area Rankings
1. San Francisco
2. Metro DC
3. Portland
4. Metro Boston
5. Chicago
6. Miami Region
7. New York City
8. Oakland (East Bay)
9. Atlanta
10. Houston

POTENTIAL NEXT STEPS

- Analyze spatial equity across socio-economic characteristics of jobs (workers).
- Future research to incorporate additional factors such as street network density, availability of bikes and presence of bicycle infrastructure in the analysis.

ACTIVITY #2: WOKE

- Breakout Room Discussions

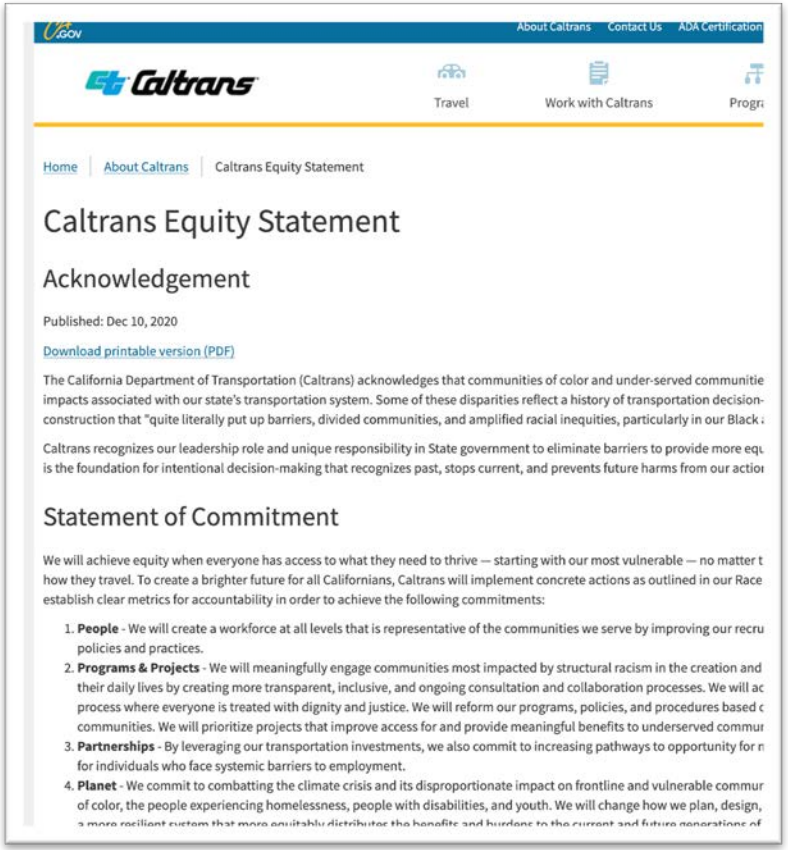
QUESTION(S)

- What would you have done differently and why?

- Which equity variables might have you added or eliminated?

TOPIC #3

DEVELOPING RACIAL EQUITY ACTION PLANS AND STATEMENT



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Caltrans Equity Statement

Acknowledgement

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The California Department of Transportation (Caltrans) acknowledges that communities of color and under-served communitie impacts associated with our state's transportation system. Some of these disparities reflect a history of transportation decision- construction that "quite literally put up barriers, divided communities, and amplified racial inequities, particularly in our Black

Caltrans recognizes our leadership role and unique responsibility in State government to eliminate barriers to provide more equ is the foundation for intentional decision-making that recognizes past, stops current, and prevents future harms from our actio

Statement of Commitment

We will achieve equity when everyone has access to what they need to thrive — starting with our most vulnerable — no matter t how they travel. To create a brighter future for all Californians, Caltrans will implement concrete actions as outlined in our Race establish clear metrics for accountability in order to achieve the following commitments:

1. **People** - We will create a workforce at all levels that is representative of the communities we serve by improving our recru policies and practices.
2. **Programs & Projects** - We will meaningfully engage communities most impacted by structural racism in the creation and their daily lives by creating more transparent, inclusive, and ongoing consultation and collaboration processes. We will ac process where everyone is treated with dignity and justice. We will reform our programs, policies, and procedures based communities. We will prioritize projects that improve access for and provide meaningful benefits to underserved commu
3. **Partnerships** - By leveraging our transportation investments, we also commit to increasing pathways to opportunity for n for individuals who face systemic barriers to employment.
4. **Planet** - We commit to combatting the climate crisis and its disproportionate impact on frontline and vulnerable commur of color, the people experiencing homelessness, people with disabilities, and youth. We will change how we plan, design, a more resilient system that more equitably distributes the benefits and burdens to the current and future generations of

ACTIVITY #3: WORK

- Breakout Room Discussions

QUESTION(S)

- If you were to develop your own Equity Statement or Racial Equity Action Plan, which guiding principles, values, or themes must be included?

THANK YOU

CONTACT INFORMATION

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