



Department of
Environmental
Conservation

Climate Justice Working Group Meeting

September 10, 2024

Meeting Procedures

- Meeting rooms will be muted to reduce noise
- Working Group members should raise their hand to indicate they would like to speak
- Please state your name before speaking for recording purposes
- Remote participants should be on video with name visible per Open Meetings Law

Agenda



Agenda

1. Roll Call
2. Approve minutes from previous meetings
3. Recap of last meeting
4. Update on public input
5. Landfill indicator update
6. DAC Review
7. Next Steps



Roll Call



Approval of Minutes



Annual Review

Disadvantaged Communities Criteria Review

This meeting we'll talk about

- Public feedback received on DAC criteria
- Updated landfill methodology
- Urban/rural differences and methodology
- Deliberation on additional indicators recommended
- Accessibility of maps

Summary of Public Feedback

Snapshot of public feedback

Responses discussed:

- Data Transparency
- Map Use/Access
- Proximity to DACs
- Race
- Infrastructure Siting
- Land Use
- Immigration
- Community Engagement
- Rural Issues
- Low Income Communities
- Low Population Communities
- Proximity to Resources
- Food Deserts
- Broadband Access
- Landfills
- Proximity to Hazardous Sites
- Air Quality
- Match Considerations for Grant Opportunities
- Connectivity
- Remoteness
- Inconsistencies with lived experiences
- Impaired Water Quality
- Representation on the CJWG
- Coastal Flooding
- Climate Vulnerabilities
- Gentrification
- Population Change



Major themes

- Urban/Rural Dichotomy
 - Several commenters stated that the current DAC criteria fails to capture lived experiences in rural communities
- Transparency and Accountability
 - Issues accessing and using DAC maps
 - Issues understanding how the DAC maps are developed
- Indicators and Burden Attribution
 - Several comments question the relevancy or application of certain indicators, suggested the addition or modification of indicators, or proposed different methods to describe burdens to communities

Suggested Indicators

Financial burdens

- Eviction rates
- Payday loans
- Predatory financial institutions

Community resources/services

- Frequency/health of social institutions such as public libraries
- *Lack of community resources (grocery stores, community centers, childcare center, etc.)*
- *Lack of public transportation*

Water

- *Access to water quality testing*
- *List of Impaired/TMDL Water*
- Percent septic systems

Migration

- *Gentrification*
- *Net loss of people*
- *Net migration*

Land/property

- Acceleration of property buying/sale
- Land banks/trusts

Other

- Amish/Mennonite populations
- Program opportunity notice (PONs) investments
- Urban sprawl/green infrastructure

Italicized text = considered previously by the CJWG

Suggested Method Changes

- Urban/rural dichotomy
 - Rural communities should be considered differently than urban communities because they experience different issues related to the environment/climate change
- Various suggestions on considering adjacent-to-DAC communities as DACs
- Census veracity, e.g., tract boundaries not reflective of lived experience

Public Feedback: Questions

Any Questions?

*CJWG members are also invited to reach out with additional questions

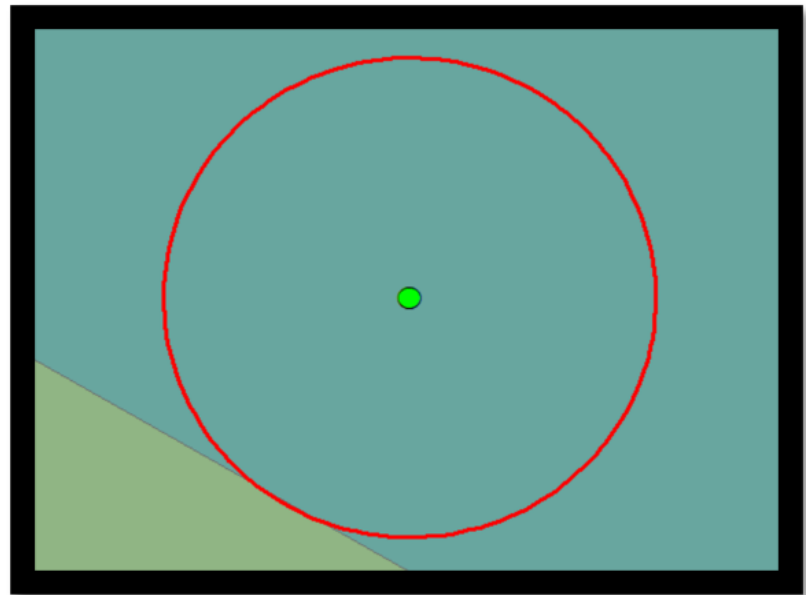


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Reviewing the Landfill Indicator

Landfills Version 1

- The DAC Map v.1 mapped landfills as a single point and calculated a 500m proximity area around that point.
- This method does not fully capture the size or impact of landfills on surrounding communities.



Landfills Version 2

- DEC used satellite imagery and tax parcel data to map all 50 landfills in the state and the amount of each landfill's proximity area that occurs in the 2020 census tracts
- The map can be provided to CJWG members for review upon request



Landfills: Questions

Any Questions?

*CJWG members are also invited to reach out with additional questions

It's been a minute

Recap of DAC Criteria and Annual Review Process

Goals for this meeting

- Understanding of changes to census tracts and data
- Understanding of scenarios with new indicators (diabetes, airport proximity, or others)
- Discussion on what to research for new indicators or data sources
- Plan for working group priorities for following meetings

- BUT first we recap!

1 Indicators: Framework

The Geographic DAC scoring approach uses data from national and state sources to create 45 indicators in the following categories. For each indicator the percentile-rank of each census tract is used in scoring.

Environmental Burdens and Climate Change Risks

Potential
Pollution
Exposures

Land use assoc.
with historical
discrimination or
disinvestment

Potential
Climate
Change Risks

20 Indicators in this component

Population Characteristics and Health Vulnerabilities

Income,
Education,
Employment

Race,
Ethnicity,
Language

Health
Impacts &
Burdens

Housing,
Energy,
Communica-
tions

25 Indicators in this component



1

Environmental Burdens and Climate Change Risks: Indicators (20)

Potential Pollution Exposures

- Vehicle traffic density
- Diesel truck and bus traffic
- Particulate Matter (PM2.5)
- Benzene concentration
- Wastewater discharge

Land use and facilities associated with historical discrimination or disinvestment

- Remediation sites (e.g., NPL Superfund or State Superfund/Class II sites)
- Regulated Management Plan (chemical) sites
- Major oil storage facilities (incl. airports)
- Power generation facilities
- Active landfills
- Municipal waste combustors
- Scrap metal processors
- Industrial/manufacturing/mining land use (zoning)
- Housing vacancy rate

Potential Climate Change Risks

- Extreme heat projections (>90° days in 2050)
- Flooding in coastal and tidally influenced areas (projected)
- Flooding in inland areas (projected)
- Low vegetative cover
- Agricultural land
- Driving time to hospitals or urgent/critical care

This factor has 2x weight



1

Population Characteristics and Health Vulnerabilities: Indicators (25)

Income, Education & Employment

- Pct <80% Area Median Income
- Pct <100% of Federal Poverty Line
- Pct without bachelor's degree
- Unemployment rate
- Pct single-parent households

Within this factor, both income metrics have 2x weight

Race, Ethnicity & Language

- Pct Latino/a or Hispanic
- Pct Black or African American
- Pct Asian
- Pct Native American or Indigenous
- Limited English proficiency
- Historical redlining score

Within this factor, Pct Latino/a and Pct Black have 2x weight

Health Impacts & Sensitivities

- Asthma ED visits
- COPD ED visits
- Heart attack (MI) hospitalization
- Premature deaths
- Low birthweight
- Pct without health insurance
- Pct with disabilities
- Pct adults age 65+

Housing, Energy, Communications

- Pct renter-occupied homes
- Housing cost burden (rental costs)
- Energy poverty / cost burden
- Manufactured homes
- Homes built before 1960
- Pct without internet (home or cellular)



2

Scoring Approach: Overview

Score census tracts **relative to each other**:

- (a) Percentile ranks of all indicators (e.g., relative index from 0-100)
- (b) Multi-step scoring approach (weighted averages of (1) indicators within factors, then (2) factors within components)
- (c) Add Environmental/Climate component by Population/Health component to get overall score

This results in an overall score that serves as a *relative ranking*

The overall score can be used to determine each tract's relative score statewide or regionally.



2 Scoring Approach: Multi-Step Process

Estimate factor scores as weighted averages of indicator percentile ranks (step 1), then estimate component scores as weighted average of percentile scores.



Factor scores are weighted and added before adding:



Climate Risks are given double weight within Component to equalize the combined weights of Environmental factors (Pollution Exposures + Land Use) with Climate.

2 Scoring Approach: Combining Data

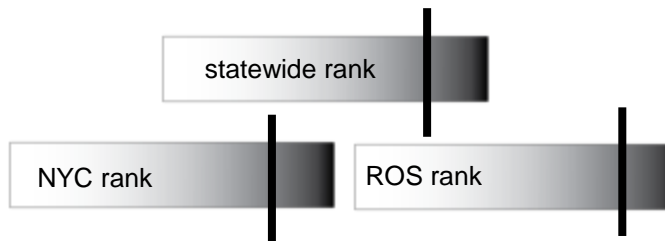
Group Indicators into **Factors** (factor scores are weighted average of indicator percentiles)



Combine Factors into **Component Scores** (also weighted averages)



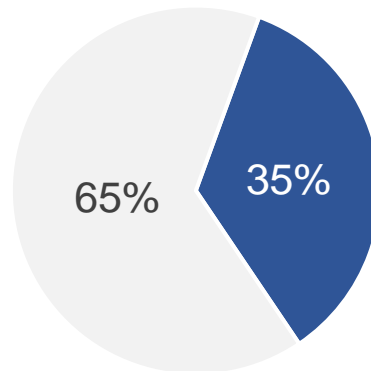
Add components to generate an **overall score** (used to calculate a relative ranking statewide and regionally)



3 Designation: Include 35% of Tracts

CJWG considered including
35% of census tracts
in New York as Geographic
Disadvantaged Communities

1,736 of New York's 4,918 census
tracts identified as Geographic DACs.



3

Designation: Overview of Approach

Bubbles are not
sized to scale.

Scored based on combined score
Included if top-scoring in region
(NYC, rest-of-state) or statewide

Automatically
included

Scored based on
Environmental/Climate alone
if population >100 people
(53 of 138 eligible for scoring)

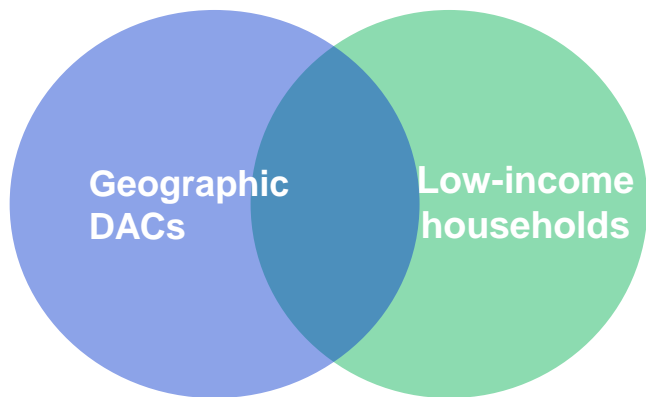
4,780 tracts with
sufficient census data
to score Env/Climate
and population/health

19
Indigenous
Tribal
Areas

138 tracts
with
insufficient
population/
health data



4 Individual Criteria



Include low-income households located anywhere in the State in the Disadvantaged Communities criteria **for the purpose of** investing or directing clean energy programs, projects or investments (i.e., only for purposes of ECL 75-0117).

5 Individual Criteria

Poverty: Annual household income at or below 100% of Federal Poverty Level

Low income: Annual household income at or below 60% State Median Income (SMI), or categorical eligibility with other low-income programs

Selected to (a) align with publicly-administered programs, (b) minimize additional income documentation and screening (SNAP, SSI, Temporary Assistance), (c) and start at low-income threshold, which can be reassessed after 1 year

Moderate income: Annual household income above 60% of SMI, but lower than 80% of Area Median Income (and sometimes 80% state median income)



Moving to 2020 census tracts

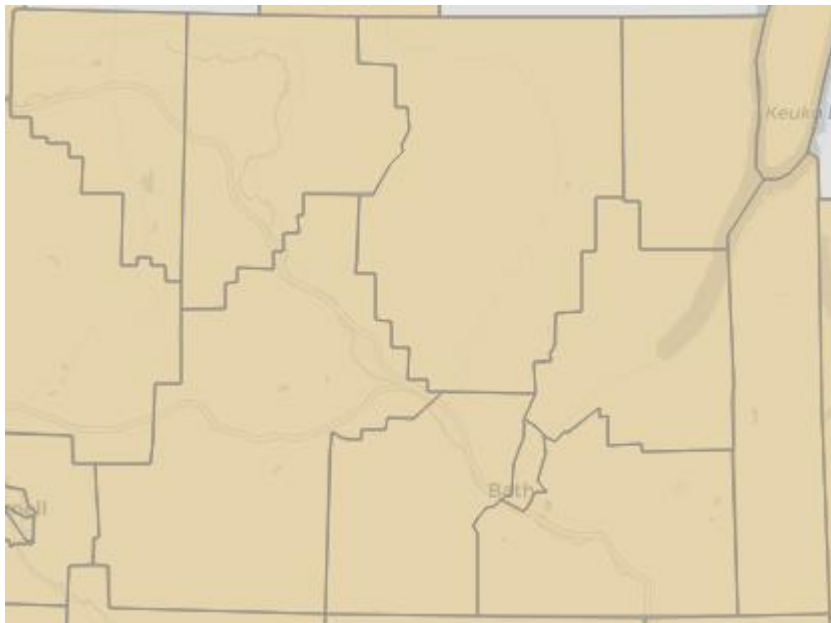
Data Updates – Census Tract Transition

Region	2010 Tracts*	2020 Tracts	Net	%
Capital Region	282	326	44	16%
Central NY	218	244	26	12%
Finger Lakes	308	358	50	16%
Long Island	607	671	64	11%
Mid-Hudson	536	600	64	12%
Mohawk Valley	149	158	9	6%
New York City	2,167	2,327	160	7%
North Country	111	134	23	21%
Southern Tier	171	189	18	11%
Western NY	369	404	35	9%
TOTAL TRACTS	4,918	5,411	493	10%

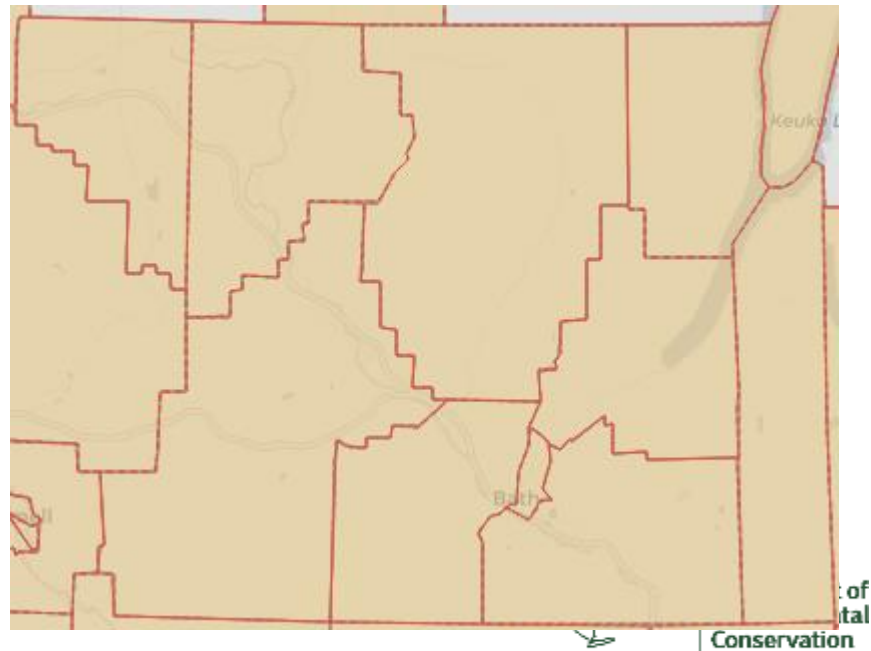
*Counts are based on 2019 data using the 2010 tracts as a foundation

Same Tracts (Most Cases)

2010 tracts

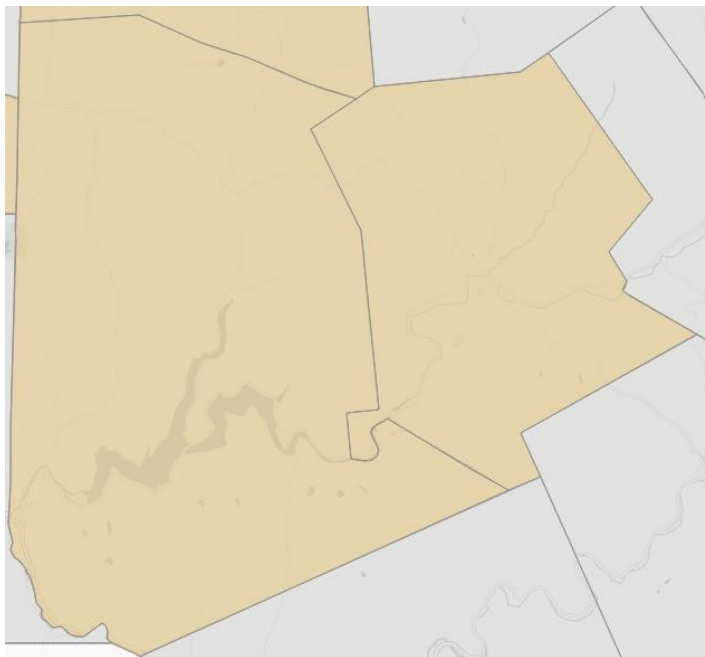


2020 tracts

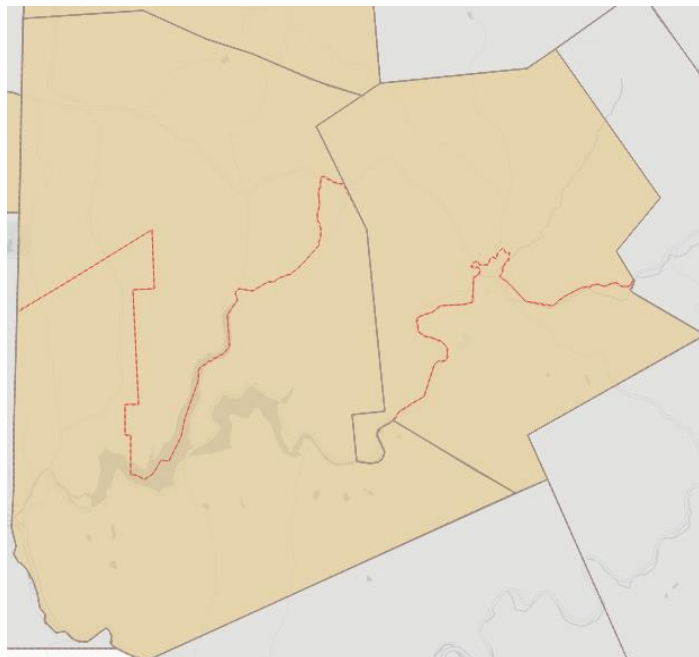


New Tracts (Lots of Cases)

2010 tracts



2020 tracts



Combined Tracts (Few Cases)

2010 tracts

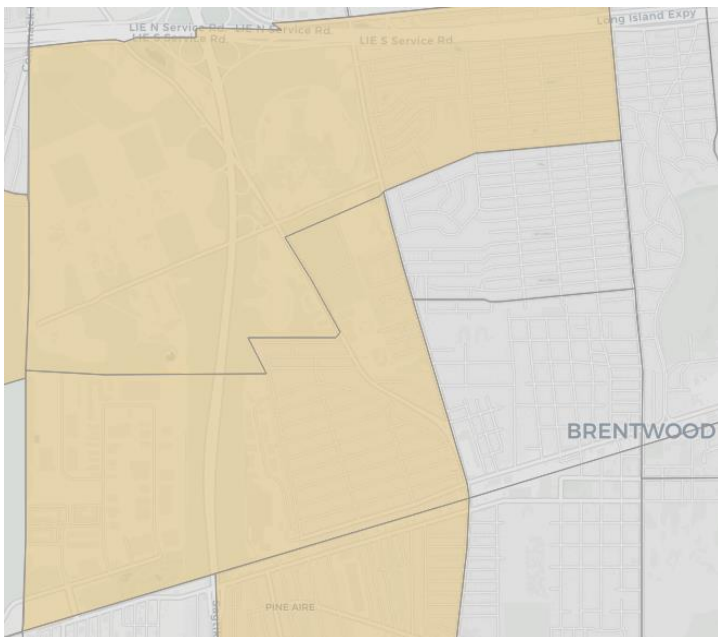


2020 tracts

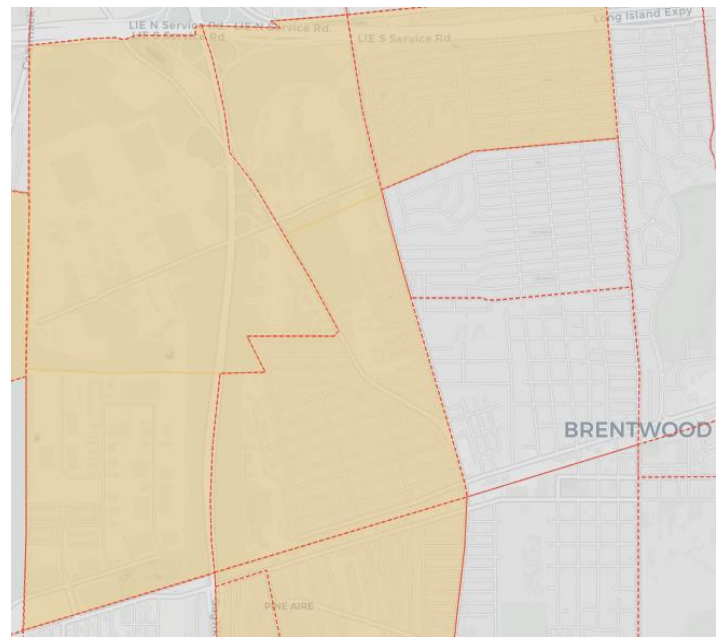


Other Shapes (Exceptions)

2010 tracts



2020 tracts

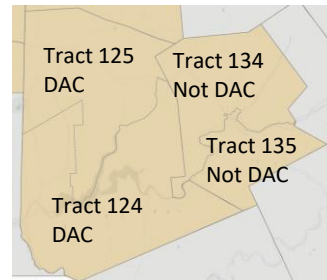
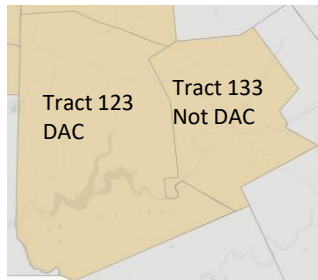


New baseline for comparison of DACs

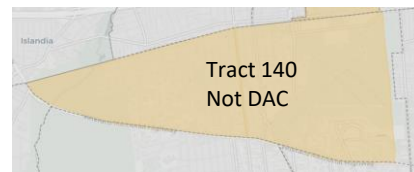
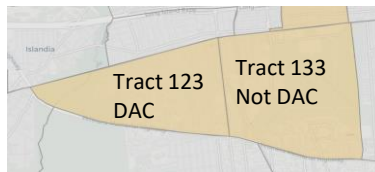
Most tracts and their DAC designations stay the same.

For tracts that changed, we translated the DAC designations onto the new 2020 tracts by using an average weighted on the area of overlap with the 2010 tracts.

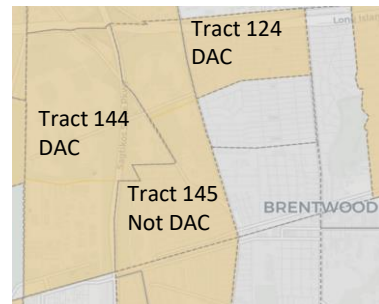
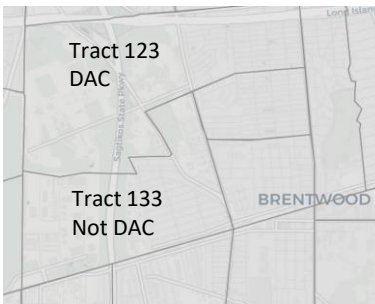
New tracts (lots of cases)



Combined tracts (few cases)



Exceptions



Data Updates – Census Tract Transition

There were 1,736 designated DAC tracts using the old tract shapes.

On the new tract shapes, the same areas equate to 1,908 tracts.

	2010 Census Boundaries	2020 Census Boundaries	% increase
Total tracts	4,918	5,411	10%
Total DACs	1,736	1,908	10%
Percent of DACs	35%	35%	-

Updating the data to 2020 tracts

Most indicators have refreshed data

We refreshed almost all the data from various sources that are already using 2020 tracts

But we're waiting on refreshed data for 6 indicators, and using placeholders for now

Use of Draft Data

- 6 DOH indicators are using draft DOH data
 - We expect 5 to be updated this month (asthma, heart attacks, COPD, premature deaths, and diabetes)
 - 1 is still TBD (low birthweight)

Until we get the updated data, we're using a crosswalk, using the old data but overlaid onto 2020 tracts



Using Cross-walked Data

- Benzene air concentration – we obtained refreshed data, but it was still on the 2010 tracts
- Projected days above 90F – we are continuing to use the same data, but transferred onto 2020 tracts
- DOH placeholder data

Other Changes

- We are now using the DOE LEAD tool for AMI data instead of HUD. The underlying data from both sources comes from census data
- Landfills, as discussed, using a shapefile instead of point data

Potential Indicators to Add

Diabetes, airport
proximity, pesticide use



Potential indicators for CJWG review

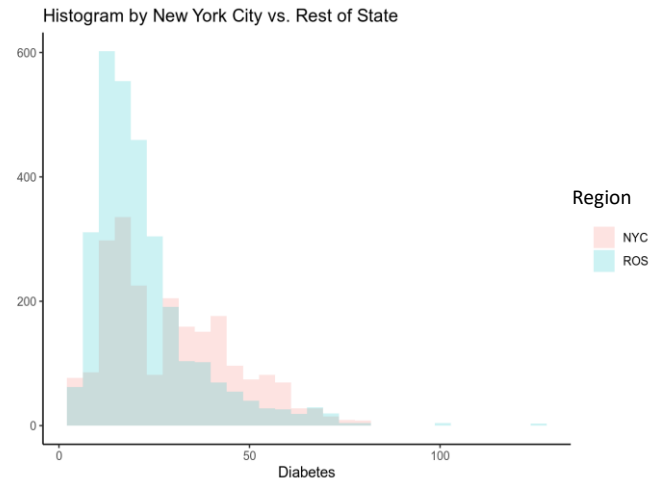
1. Diabetes
2. Noise pollution / proximity to airports
3. Pesticide use

Update on Diabetes Data

- Data on diabetes now available
- Diabetes is correlated with
 - asthma
 - low birthweight
 - % black population
 - premature deaths
 - 80% AMI
 - single-parent households

Updated Health Factor

Asthma rate
 COPD rate
 Households with disabilities
 Premature death rate
 Heart attack rate
 Population without health insurance
 Population over age 65
 Low birthweight rate
 Diabetes rate

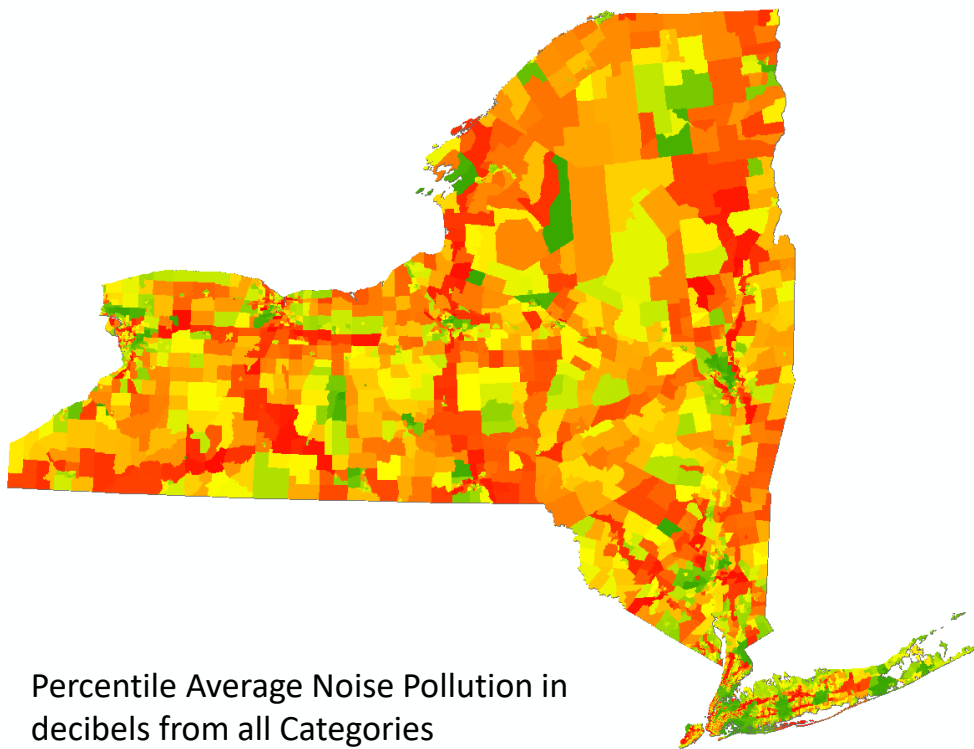


Noise Pollution

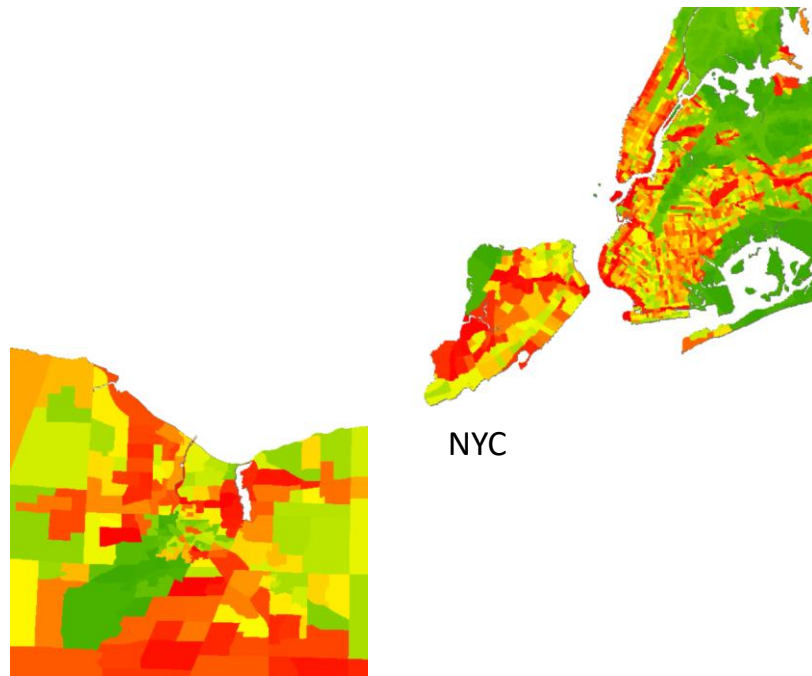
- Indicator originally considered by CJWG, not pursued due to lack of data
- NYC EJ Report recommends including noise pollution
- Data now exists via USDOT
- Data is modeled - based on decibel modeling on a 30m grid
- Data is broken out by category: Aviation, Rail, Road
- Data has been spatially joined to 2020 Census Map



Noise Pollution



Percentile Average Noise Pollution in decibels from all Categories



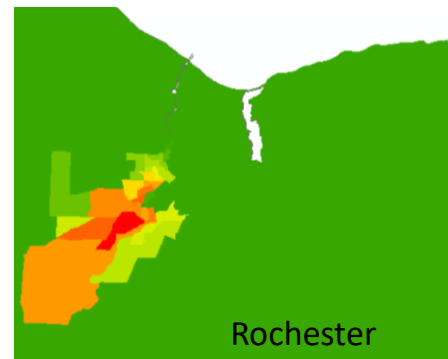
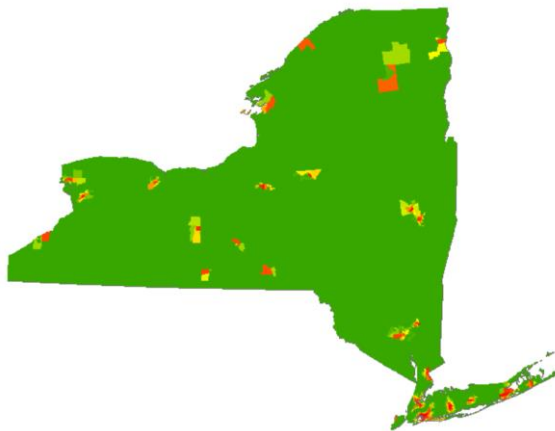
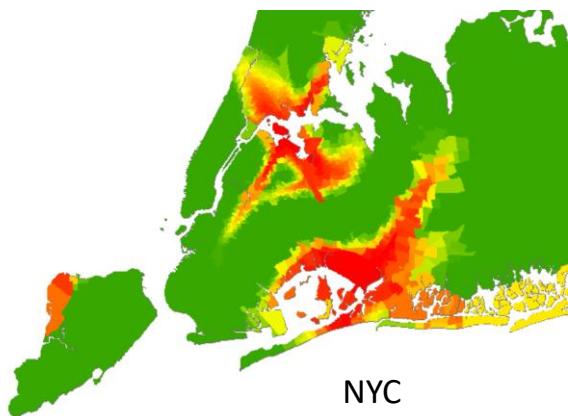
Rochester



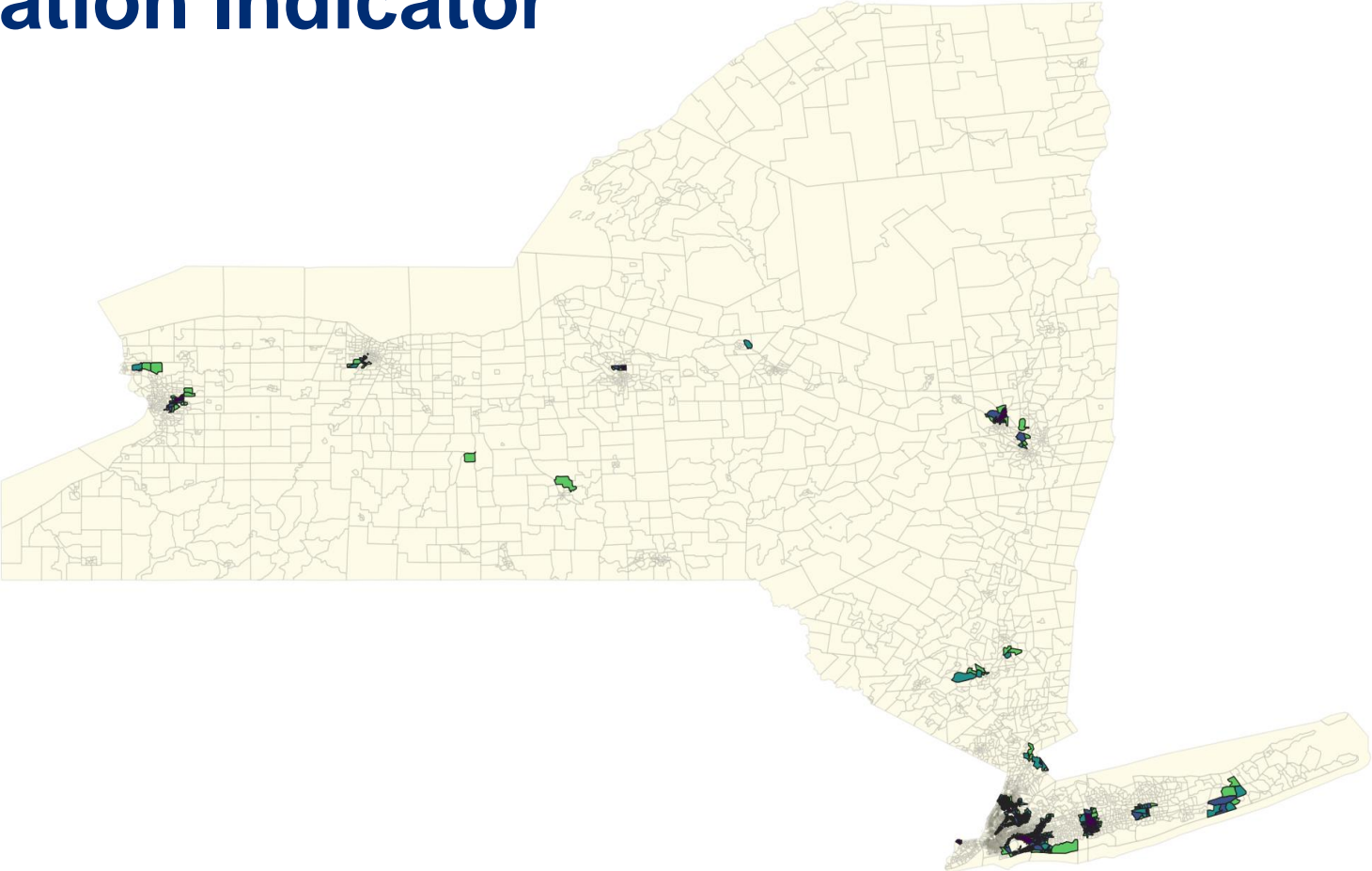
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Proximity to Airports

- The NYC EJ Report recommended including proximity to airports as an indicator.
- If we use the noise pollution data ONLY for **aircraft** we get an accurate indicator for proximity to airports.



Aviation Indicator



Correlations

Noise from all transportation modes

Indicator	Correlation
Traffic (number of vehicles)	0.71
Benzene	0.70
% Land developed	0.68
PM 2.5	0.64
Agricultural land use	-0.60
Driving time to healthcare facilities	-0.57

Airport noise only

Indicator	Correlation
Benzene	0.29
Latino population	0.27
Agricultural land use	-0.21
Housing vacancy rates	-0.19

Pesticide use

Steps taken

- Contacted *NYS Department of Agriculture and Markets Division of Land and Water Resources + Pesticide Reporting & Certification Section of DEC*
- Led to a data warehouse at the *Cornell Cooperative Extension* for the Pesticide Sales and Use Reporting Program
- Reviewed data – best granularity currently available is at the zip code level, but there's a possibility to aggregate to census tracts

Next steps

- Think through implications of self-report
- Weigh whether CJWG should add it, given all other indicators
- Would need to determine which chemical products to include

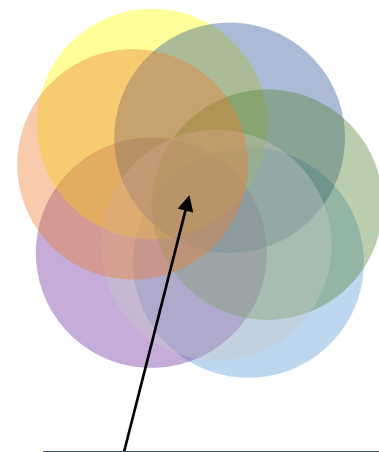


Quick aside about number of indicators

We all want to create the best and most accurate criteria to identify disadvantaged communities...

But adding more indicators may not always be the answer.

Every time we add an indicator, it dilutes the influence of all the other indicators.



Too many colors just
leads to a murky
beige

Let's review the factors with

- Diabetes
- Proximity to airports



1 Indicators: Framework

The Geographic DAC scoring approach uses data from national and state sources to create 47 indicators in the following categories. For each indicator the percentile-rank of each census tract is used in scoring.

Environmental Burdens and Climate Change Risks

Potential
Pollution
Exposures

Land use assoc.
with historical
discrimination or
disinvestment

Potential
Climate
Change Risks

20 Indicators in this component
+ Noise pollution
= 21

Population Characteristics and Health Vulnerabilities

Income,
Education,
Employment

Race,
Ethnicity,
Language

Health
Impacts &
Burdens

Housing,
Energy,
Communica-
tions

25 Indicators in this component
+ Diabetes
= 26

Now at
47
indicators



1

Environmental Burdens and Climate Change Risks: Indicators (21 total indicators)

Potential Pollution Exposures

- Vehicle traffic density
- Diesel truck and bus traffic
- Particulate Matter (PM2.5)
- Benzene concentration
- Wastewater discharge
- **+ Airport noise pollution**

Land use and facilities associated with historical discrimination or disinvestment

- Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)
- Regulated Management Plan (chemical) sites
- Major oil storage facilities (incl. airports)
- Power generation facilities
- Active landfills
- Municipal waste combustors
- Scrap metal processors
- Industrial/manufacturing/mining land use (zoning)
- Housing vacancy rate

Potential Climate Change Risks

- Extreme heat projections (>90° days in 2050)
- Flooding in coastal and tidally influenced areas (projected)
- Flooding in inland areas (projected)
- Low vegetative cover
- Agricultural land
- Driving time to hospitals or urgent/critical care

This factor has 2x weight



1

Population Characteristics and Health Vulnerabilities: Indicators (26 total indicators)

Income, Education & Employment

- Pct <80% Area Median Income
- Pct <100% of Federal Poverty Line
- Pct without Bachelor's Degree
- Unemployment rate
- Pct Single-parent households

Within this factor, both income metrics have 2x weight

Race, Ethnicity & Language

- Pct Latino/a or Hispanic
- Pct Black or African American
- Pct Asian
- Pct Native American or Indigenous
- Limited English Proficiency
- Historical redlining score

Within this factor, Pct Latino/a and Pct Black have 2x weight

Health Impacts & Sensitivities

- Asthma ED visits
- COPD ED visits
- Heart attack (MI) hospitalization
- Premature Deaths
- Low Birthweight
- **+ Diabetes**
- Pct without Health Insurance
- Pct with Disabilities
- Pct Adults age 65+

Housing, Energy, Communications

- Pct Renter-Occupied Homes
- Housing cost burden (rental costs)
- Energy Poverty / Cost Burden
- Manufactured homes
- Homes built before 1960
- Pct without Internet (home or cellular)



3 Scenarios and Results

Old vs. New data (as of September 2024)

- Version 1: Original DAC indicators with old data on 2020 census tracts
- Version 2: Original indicators with refreshed data

Region	#Tracts	V1		Added	Dropped	# Diff	V1		V2	
		DACs	V2 DACs				%DAC	%DAC	% Diff	
Capital Region	326	66	66	7	7	0	20%	20%	0.00	
Central NY	244	80	72	8	16	-8	33%	30%	-0.03	
Finger Lakes	358	117	98	6	25	-19	33%	27%	-0.05	
Long Island	671	104	95	19	28	-9	16%	14%	-0.01	
Mid-Hudson	600	259	267	40	32	8	43%	45%	0.01	
Mohawk Valley	158	38	29	0	9	-9	24%	18%	-0.05	
New York City	2,327	1,051	1,084	173	140	33	45%	47%	0.01	
North Country	134	16	16	4	4	0	12%	12%	0.00	
Southern Tier	189	40	32	4	12	-8	21%	17%	-0.04	
Western NY	404	137	142	18	13	5	34%	35%	0.01	
Grand Total	5,411	1,908	1,901	279	286	-7	35%	35%	-0.00	

These do NOT include diabetes or proximity to airports

Draft results as of September 2024

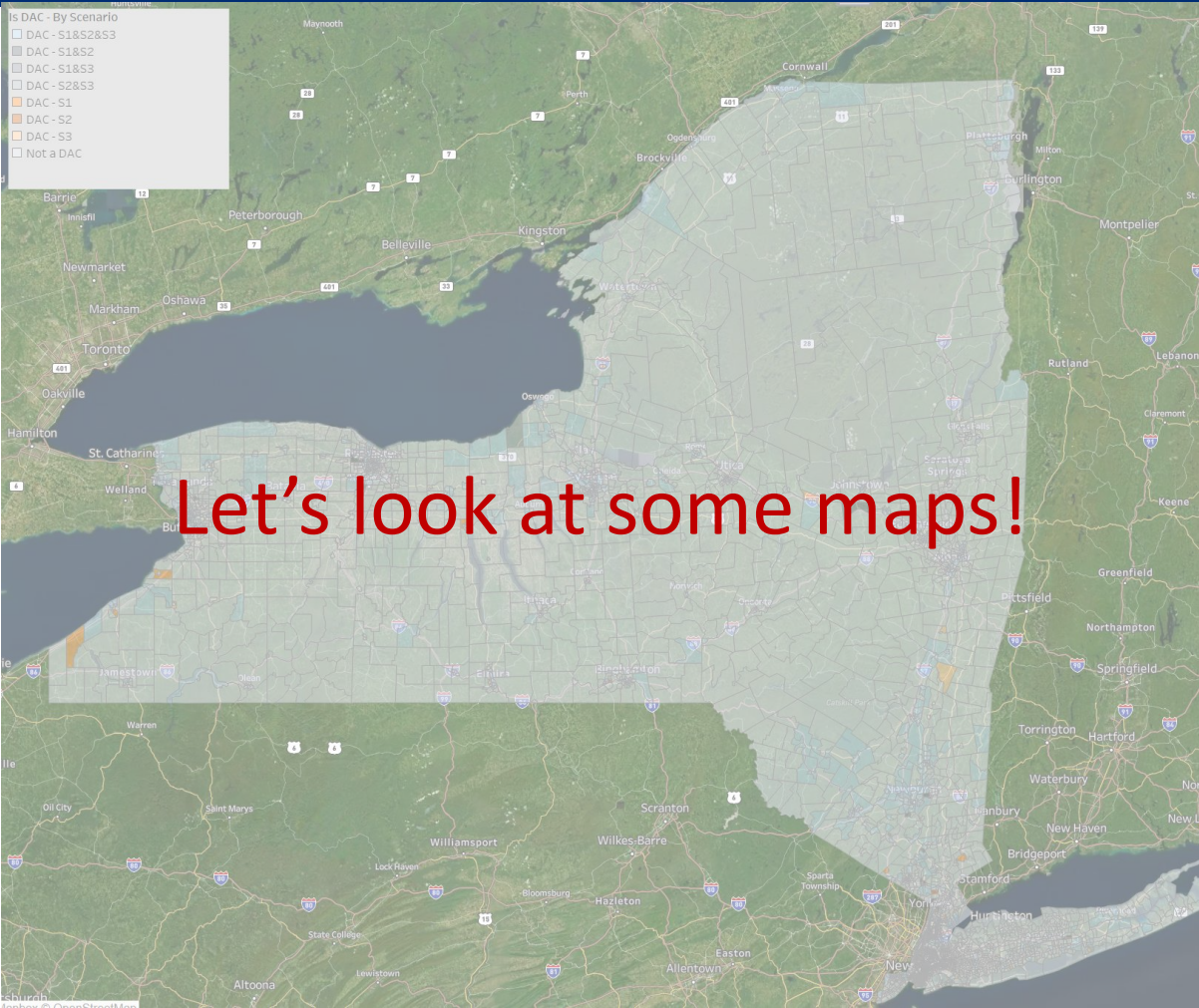
- Scenario 1: Original indicators with refreshed data
- Scenario 2: Scenario 1 + **diabetes**
- Scenario 3: Scenario 2 + **diabetes + airport proximity**

Region	Total Tracts	S1 DACs	S2 DACs	S3 DACs
Capital Region	326	66	67	68
Central NY	244	72	71	73
Finger Lakes	358	98	98	97
Long Island	671	95	99	108
Mid-Hudson	600	267	265	257
Mohawk Valley	158	29	29	29
New York City	2,327	1,084	1,085	1,067
North Country	134	16	16	16
Southern Tier	189	32	34	34
Western NY	404	142	139	135
Grand Total	5,411	1,901	1,903	1,884

Results show small changes

- There are small differences between the scenarios – with shifting of a minority of census tracts
- Any one indicator (current or new) will have small potential to move the needle on DAC designations

- Is DAC - By Scenario
- DAC - S1&S2&S3
 - DAC - S1&S2
 - DAC - S1&S3
 - DAC - S2&S3
 - DAC - S1
 - DAC - S2
 - DAC - S3
 - Not a DAC



Let's look at some maps!



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Understanding differences in DACs that are rural vs urban



Describe a DAC in...

Rural areas

Urban areas

Urban and rural tracts

- Some indicators have higher scores in urban census tracts while others have higher scores in rural tracts
- 32 indicators have higher scores in urban tracts
- 15 indicators have higher scores in rural tracts
- Go to excel...

Indicator	Rural	Urban	Difference
Overall DAC Score	67.9	90.1	22.2
Benzene	27.3	71.8	44.5
Developed land	27.3	71.5	44.2
Traffic (all vehicles)	27.7	71.4	43.7
Landfills	50.1	91.8	41.7
Rentership	31.3	68.2	36.9
Limited English	21.5	58.2	36.7
Wastewater	29.1	63.2	34.1
PM2.5	32.7	66.7	34
Asthma	33.9	66	32.1
Low income - 80% AMI	34.3	65.4	31.1
Days >90F	40.4	68.2	27.8
Latino pop.	36.3	62	25.7
Old/Lead homes	37.4	62.3	24.9
Black pop.	35.8	60.6	24.8
Asian pop.	33.8	58.5	24.7
Redlining	34.8	59	24.2
Low birthweight	39	60.9	21.9
Truck traffic	39	60.7	21.7
Low income - 100% FPL	39	60.6	21.6
Premature deaths	39.4	60.6	21.2
Diabetes	39.4	60.6	21.2
Health insurance	40	58.4	18.4
Unemployment	40.2	58.3	18.1
Single parents	40.9	52.8	11.9
Airport noise	4.2	15.5	11.3
Rent burden	43.4	54.6	11.2
Home internet	44.2	53.3	9.1
Native/Indigenous pop.	35.4	42.6	7.2
Power generation facilities	2.1	7.1	5
Pop. w/o college ed.	48.5	51.6	3.1
Housing vacancies	47.2	48.7	1.5
Coastal flooding	10.3	11.4	1.1
Oil storage facilities	2.8	2.4	-0.4
Municipal waste facilities	0.5	0	-0.5
Energy burden	63.9	62.4	-1.5
RMP sites	25.5	22.3	-3.2
Heart attacks	52.5	47.8	-4.7
Disabled pop.	52.4	47.6	-4.8
COPD	53.2	47.2	-6
Scrap metal facilities	8.7	1.7	-7
Remediation sites	24	14.9	-9.1
Industrial land use	32	22.2	-9.8
Inland flooding	23	6.8	-16.2
Age 65+	59.1	40.9	-18.2
Mobile homes	27.3	3.6	-23.7
Driving time to healthcare	62.6	38	-24.6
Agricultural land	39	2	-37

Indicators that score higher – rural vs urban

Rural areas

Agricultural land
 Driving time to healthcare
 Mobile homes
 Age 65+
 Inland flooding
 Industrial land use
 Remediation sites
 Scrap metal facilities
 COPD
 Disabled pop.
 Heart attacks
 RMP sites
 Energy burden
 Municipal waste facilities

Urban areas

Benzene
 Developed land
 Traffic (all vehicles)
 Landfills
 Rentership
 Limited English
 Wastewater
 PM2.5
 Asthma
 Low income - 80% AMI
 Days >90F
 Latino pop.
 Old/Lead homes
 Black pop.
 Asian pop.
 Redlining
 Low birthweight
 Truck traffic
 Low income - 100% FPL
 Premature deaths
 Diabetes
 Health insurance
 Unemployment
 Single parents
 Airport noise
 Rent burden
 Home internet
 Native/Indigenous pop.
 Power generation facilities
 Pop. w/o college ed.
 Housing vacancies
 Coastal flooding

How we have balanced this...

- Regional scoring – we use relative ranking statewide and regionally)
- Individual criteria – We use the individual criteria (for clean energy and energy efficiency investment purposes only) to try and cover more rural households.

Indicator	Rural	Urban	Difference
Overall DAC Score	67.9	90.1	22.2

Thoughts about this analysis

Deliberation:
**Is there anything you want
to discuss?**



CJWG Suggestions



Next Steps

Next steps

- Update scenarios with data we are waiting on
- Compile all data into a complete report
- Bring CJWG back to deliberate on report



Thank you