NEW YORK
STATE OF
OPPORTUNITY

Department of
Environmental
Conservation

Climate Justice Working Group
Draft DAC Criteria Update

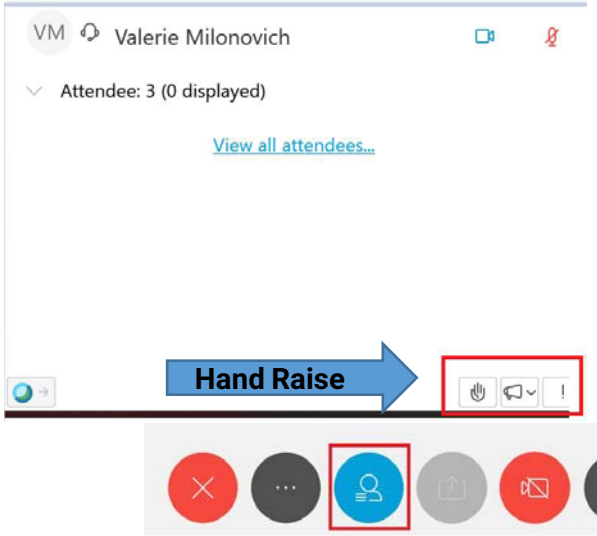
October 19, 2021

Meeting Procedures

Before beginning, a few reminders to ensure a smooth discussion:

- Working Group Members should be on mute if not speaking.
  - If using phone for audio, please tap the phone mute button.
  - If using computer for audio, please click the mute button on the computer screen (1st visual).
- Video is encouraged for Working Group members, particularly when speaking.
- In the event of a question or comment, please use the hand raise function (2nd visual). Click the participant panel button (3rd visual) for the hand raise function. Someone will call on members individually, at which time please unmute
- Please state your name before speaking

You'll see when your microphone is muted



Welcome and Roll Call

Agenda for October 19

1. Updates and announcements
2. Review DAC Scenario
3. Developing rules for DAC definition
    - Individual criteria?
    - Designation threshold (% of state)
4. Summarizing next steps
    - What would you like to see/review before voting?
5. Schedule

Where we are

Honing in after August/September Analysis

Scenario 1: All Indicators

Balanced representation of environmental burdens and climate change risks, and population and health vulnerabilities.

Meets three “pillars” of legislation

Honing in on this scenario which addresses pillars of legislation and includes indicators

Scenario 2: No Environmental or Climate Indicators

Sociodemographics & health only - Excludes environmental burdens & climate risks

Built to see what it would look like to “tilt the scales” and spark discussion

This scenario captures slightly more low-income tracts, but doesn’t meet the legislation

Balanced set of indicators and weighting

Environmental Burdens and Climate Change Risks

Potential Pollution Exposures	Land use assoc. with historical discrimination or disinvestment	Potential Climate Change Risks
1x	1x	2x

Equalize sum of environmental burdens with climate change

×

Population Characteristics and Health Vulnerabilities

Income	Race/Ethnicity	Health Impacts & Burdens	Housing, Mobility, Communica-tions
1x	1x	1x	1x

Income, race & ethnicity hold considerable influence since they each have their own factor, plus are weighted more within

Note: Since Burdens and Vulnerabilities are multiplied, they have equal influence, regardless of the # of factors or how you weight things within them. Therefore, we needed to create scenario #2 completely without them, to show what greater emphasis on Vulnerabilities might look like.

Environmental Burdens and Climate Change Risks: Included Indicators

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

Population Characteristics and Vulnerabilities: Included Indicators

Income	Race & Ethnicity	Health Impacts & Sensitivities	Housing, Mobility, Communications
• Pct <80% Area Median Income • Pct <100% of Federal Poverty Line • Pct without Bachelor's Degree • Unemployment rate • Pct Single-parent households	• Pct Latino/a or Hispanic • Pct Black or African American • Pct Asian • Limited English Proficiency • Historical redlining score	• 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+	• 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)
Within this factor, both income metrics have 2x weight	Within this factor, Pct Latino/a and Pct Black have 2x weight		

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As designed, DACs have far more, but not all, lower-income and BIPOC New Yorkers

	Average Values	
	DAC	Non
<80% AMI	60%	35%
<100% FPL	22%	9%
Black/African American	28%	11%
Latino/Latina	30%	10%
Asian	9%	10%
Burden Score	37	29
Vulnerability Score	60	37

As designed, DAC tracts have far more lower-income, Black/African American and Latino/Latina households.

As designed, DACs have higher burdens and vulnerabilities scores

Voting starts public process + annual review

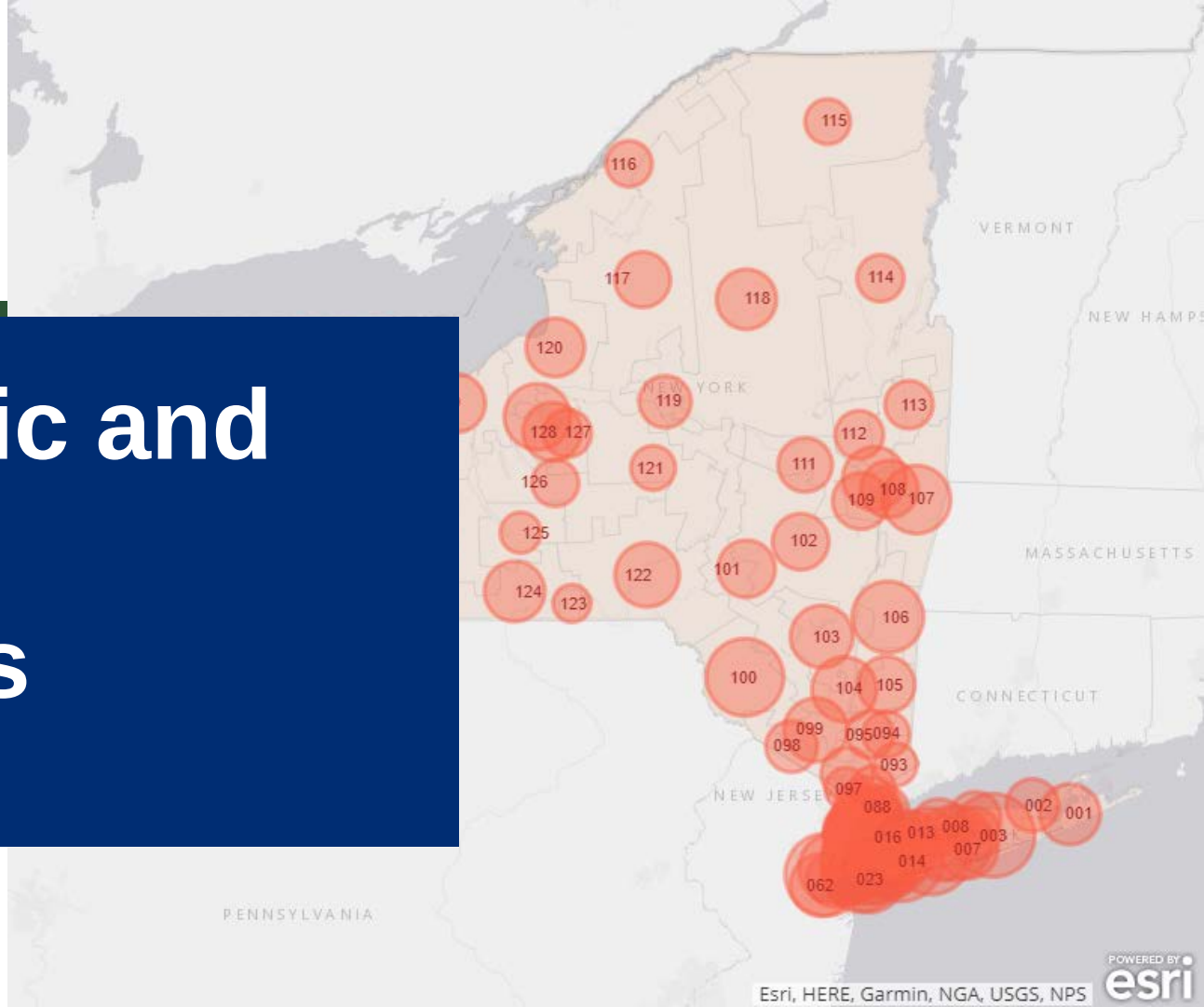
Opportunity to adjust further following public comments

Opportunity for annual review/updates

There are still two critical decisions

1. Do you want to include “individual” criteria? (for households or individuals?)
2. What proportion of census tracts do you want to designate as DACs?

Geographic and Individual Definitions



Investments + Benefits Discussion - Implications for DAC scoring

1. Does last week's Investments/Benefits discussion shift the need for, or use of, a geographic definition?

2. Would investment definitions shift the need/role for individual criteria (e.g., LMI households) in the DAC definition?

3. How do you see a geographic DAC definition shifting how program managers run programs? Would an individual definition help or hinder getting programs/resources to people?

A geographic definition will never fully capture all LMI or individually-vulnerable households

1. In combined scoring (all indicators) we don't capture 100% of lower-income communities.
   - Some (13%) are not included because environmental or climate burdens are relatively low
   - While removing environmental and climate indicators gets us closer, with 24 population & health indicators, even Scenario #2 doesn't capture all lower-income tracts

2. Any geographic-only scenario can't capture all low-income households
   - About ~38% (~387,000) households in poverty aren't in a DAC
   - Because they are dispersed throughout the state, including in higher-income areas, no geographic scenario can reach them all

The majority of lowest-income tracts are included

Most, but not all, lower-income tracts are included.

In combined scoring (Scenario 1) some aren't included **if Environmental or Climate burdens are relatively low**.

In the lowest 20% of income levels (927 tracts):

- **87% of tracts are included as DACs (893 tracts)**
- If environmental & climate indicators were removed, 92% of lowest income tracts would be included

Not all LMI households can be covered by a geographic definition

	Number of Households (Estimate)[a]		Percentage of Households	
	Not in DAC	In DAC	Not in DAC	In DAC
Households in New York	4,679,000	2,664,000	64%	36%
Households with income <80% Area Median Income	1,548,000	1,684,000	48%	52%
Households with income below Federal Poverty Line	389,000	632,000	38%	62%

[a] Household counts are from 5-year ACS data so may appear slightly lower than current Census counts.

Good news:
DACs have **proportionally more** lower-income households: 52% of low-to-moderate income households, and 62% of households reporting incomes below federal poverty line.

However:
There are still over 389,000 households in poverty not in DACs (38%).

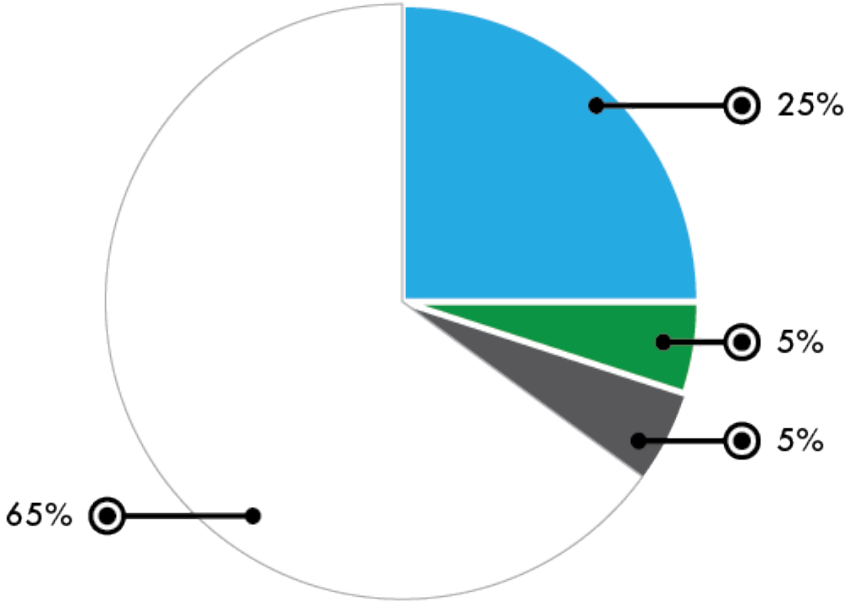
Even if we adjusted the scores to include absolutely all of the lowest-income tracts, we could not close the gap for including all LMI households, because they are dispersed throughout the state, including moderate and high income areas

Individual Criteria

Justice40 and California include individuals in definitions and benefits framework

Justice40 includes individuals in community definition	**Community** – Agencies should define community as "either a group of individuals living in geographic proximity to one another, or a geographically dispersed set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions."[5]
California Climate Investments considers spending for "priority populations"	"Priority populations" are DACs, LMI communities and LMI households Low-income communities and households are those with incomes either at or below 80 percent of the statewide median or below a threshold designated as low-income by the Department of Housing and Community Development

https://www.acwa-us.org/wp-content/uploads/2021/07/epaEJMemo.pdf
http://www.caclimateinvestments.ca.gov/priority-populations



65 percent of funds can be spent anywhere in the state, including in disadvantaged and low-income communities.

A minimum of 25 percent of the proceeds be invested in projects that are located within and benefiting individuals living in disadvantaged communities;

An additional minimum of 5 percent be invested in projects that are located within and benefiting individuals living in low-income communities or benefiting low-income households statewide; and

An additional minimum of 5 percent that are located within and benefiting individuals living in low-income communities, or benefiting low-income households, that are within a ½ mile of a disadvantaged community.

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No DAC Left Behind?

Framing Principles

No DAC left behind

Don't want to leave people most at risk of climate crisis behind – Direct funding to people & groups who are most vulnerable

- Income is important indicator of ability to respond or adapt

Who is least able to participate in transition to clean energy and clean energy economy

Want agencies to design and target efforts geographically – to community-scale (or larger) outreach and investments

Beware unintended consequences – Don't want to create disadvantaged communities (e.g., by re-directing funding too much toward some communities)

All initial investments should go to the hardest-hit communities first

Potential Approaches:

Start with smaller set of DACs and add later (?) (would a large set dilute resources?)

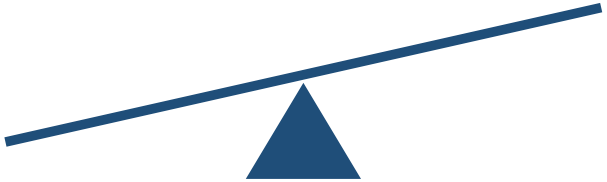
Tiered approach – DAC plus LMI communities or HHs?

Iterative approach – Evaluate each year

Finding a balance

Is it better to ….

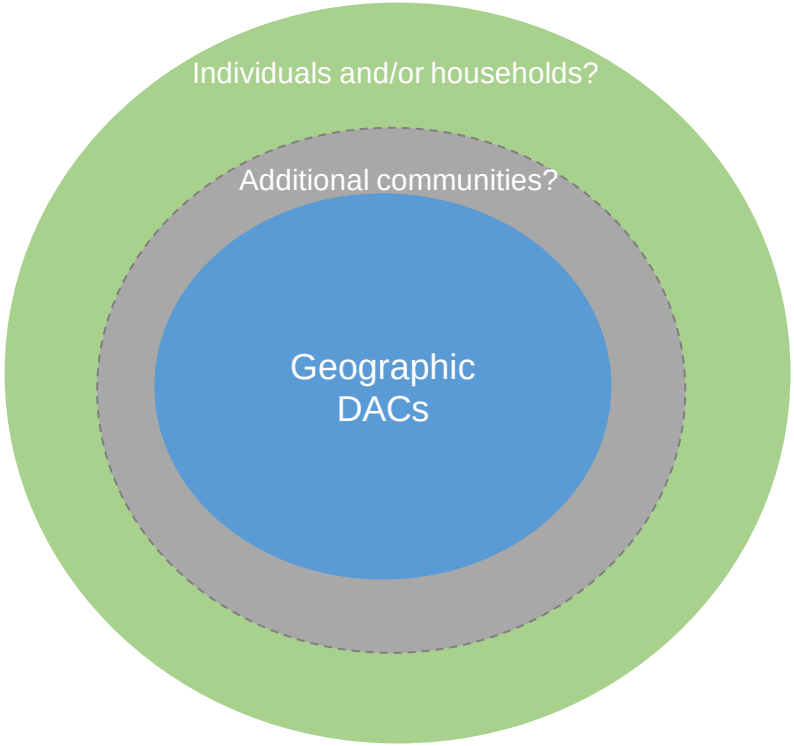
(1) Leave no DAC behind, and have communities that are less economically/socially vulnerable (or don't need as much help?)



(2) Restrict DACs to those most in need, and possibly miss some communities that are vulnerable (but data may not find them easily?)

^ this may be mitigated with "individual" definition like household income

What might option (2) look like?



What additional layers would you like?
-- LMI communities?
-- LMI individuals or households?

If there are other layers - **What percentage of state should be DACs?**

If individuals/households are included - Do you want to require some portion of the 35% to go to geographic DACs?

Designation Threshold

Current scenario designates 39% of tracts as DACs

To capture more communities, including more LMI communities, we increased the regional and statewide designation thresholds to **30% in each.**

Expanding Number of DACs

Designate *less* than 40%

Pros: May encourage proportionally *more* money to go to DACs
Room to expand later
Cons: Leaves out some LMI and socially-vulnerable DACs

Designate about 40%

Pros: Captures more groundtruthed and LMI DACs

Cons: Still may not capture some LMI and socially-vulnerable DACs

Designate *more* than 40%

Pros: Captures more groundtruthed and LMI DACs

Cons: Proportion of DACs is less than the funding goal
Difficult to remove DACs later

Most of the scenarios we have been assessing fall between 35% to 45%

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Considering Individual Definition

If CJWG pursues an individual definition, Agencies could direct and “count” investments/benefits to people or households outside of DACs

…such that the “eligible” population is likely greater than 40% of the state

Should this affect the geographic threshold?

Updated Scenario Results (Oct 19)

Regional Distribution

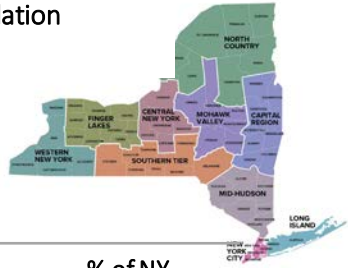
% Region Designated DAC

Region	S1 %DAC
New York City	50%
Long Island	12%
Mid-Hudson	48%
Western NY	37%
Finger Lakes	42%
Capital Region	23%
Central NY	40%
Southern Tier	25%
Mohawk Valley	21%
North Country	18%
Grand Total	39%

About 50% of NYC would be designated a DAC.

39% of tracts are designated. This is adjustable.

Share of NY Population (reference)



Region	% of NY Population
New York City	43%
Long Island	15%
Mid-Hudson	12%
Western NY	7%
Finger Lakes	6%
Capital Region	6%
Central NY	4%
Southern Tier	3%
Mohawk Valley	2%
North Country	2%
Total	**100%**

Income, BIPOC, Burdens and Vulnerabilities

Averages for DAC-designated Tracts vs. Non-designated

	DAC	Non
<80% AMI	60%	35%
<100% FPL	22%	9%
Black/African American	28%	11%
Latino/Latina	30%	10%
Asian	9%	10%
Burden Score	37	29
Vulnerability Score	60	37

As designed, DAC tracts have far more lower-income, Black/African American and Latino/Latina households.

As designed, DACs have higher burdens and vulnerabilities scores

Rural Areas

Even after making numerous adjustments to allow “rural” indicators to have more influence, proportionally fewer rural areas are classified as DACs

Percent of Region Designated

rural	19%
suburban	28%
urban	52%
Total	39%

Over half of urban tracts are designated as DACs, while 19% of rural tracts are designated.

Pct of Statewide Population

	Number of Tracts	Pct of Population
Rural	857	17%
Suburban	1,479	33%
Urban	2,570	49%

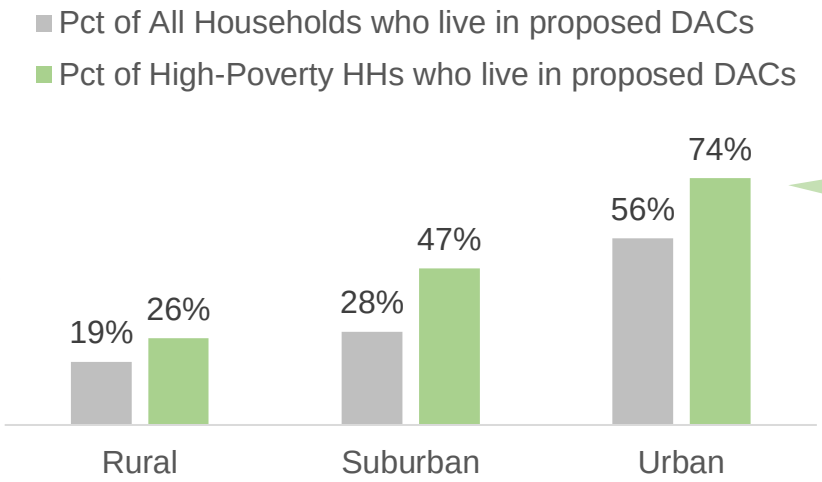
As a reference, about 17% of New York’s population lives in rural census tracts

The NCES locale framework classifies all territory in the U.S. into four types of areas -- City, Suburban, Town, and Rural. Each area is divided into three subtypes based on population size (in the case of City and Suburban assignments) and proximity to urban areas (in the case of Town and Rural assignments). The classifications (350 KB) rely on standard urban and rural designations defined by the U.S. Census Bureau, and each type of locale is either urban or rural in its entirety.

Where are high-poverty households outside of DACs?

In rural areas, 19% of all households are in DACs, and 26% of high-poverty households are in DACs

(74% of high-poverty rural HHs are outside of DACs)



In urban areas, only ~26% of high-poverty households live outside of DACs

Source: 5-year American Community Survey data (2015-2019).
In rural areas, about 10% of households have income below federal poverty line (compared with 6% in suburban areas and 18% in urban areas)

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Comparison with groundtruthing

Groundtruthing is one of multiple ways we assess how well scores fit CJWG interests and legislated criteria – including theory, scientific review and other DAC-like metrics (e.g., PEJA).

Relatively few of New York's 4,918 tracts are groundtruthed. As such, this is not the key driver of our shifts in scenarios, but one of several ways we look at how the scenarios work.

Overall agreement

CJWG & Scenario both agree it's a DAC

CJWG & Scenario both think it's not a DAC

Agreement with Groundtruthing	
% Agreement	66%
% Agree - DAC	67%
% Agree - Non-DAC	60%

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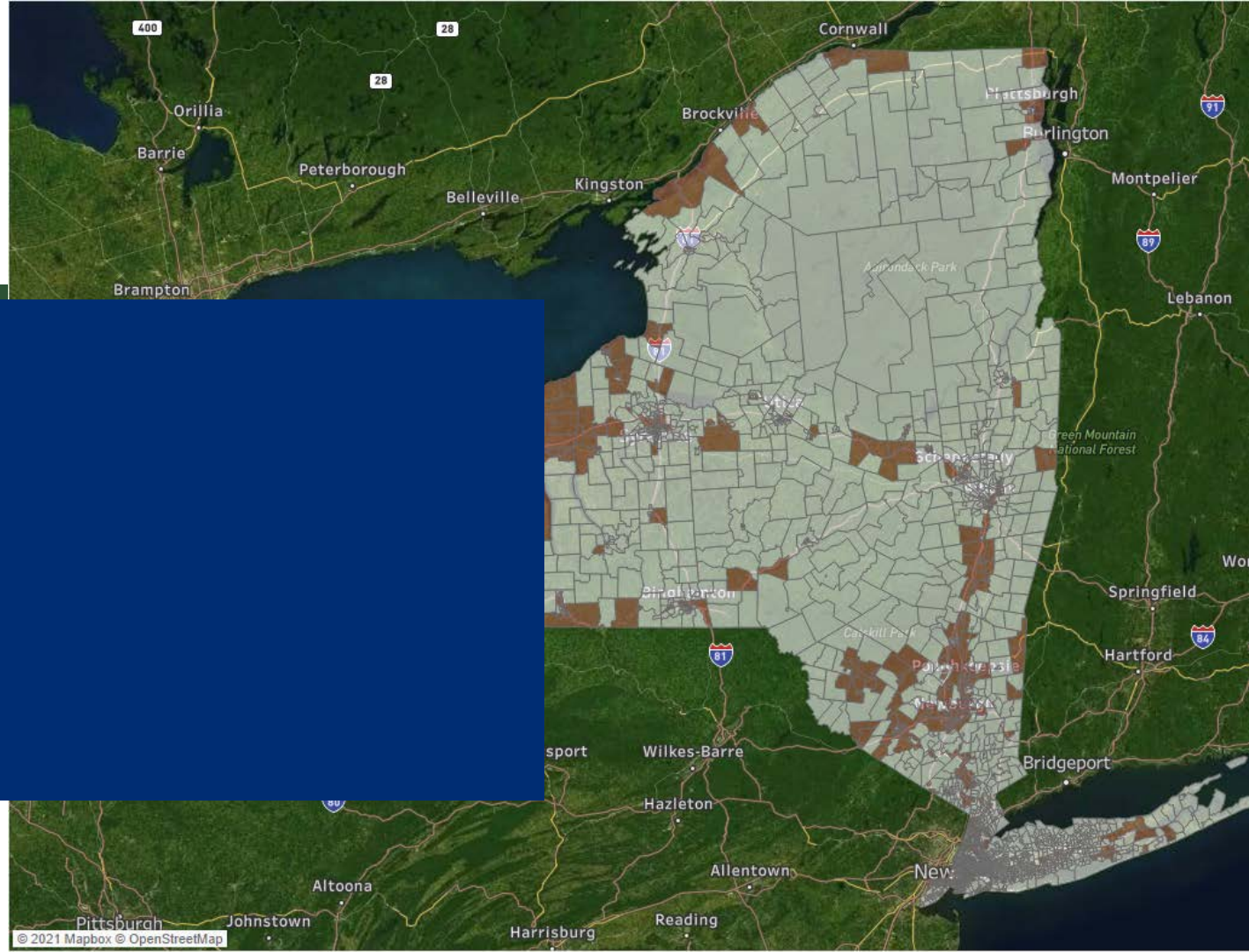
Maps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Orillia
Barrie
Peterborough
Belleville
Kingston
Brockville
Cornwall
Burlington
Montpelier
Lebanon
Springfield
Hartford
Bridgeport
Wilkes-Barre
Hazleton
Allentown
Altoona
Pittsburgh
Johnstown
Harrisburg
Reading
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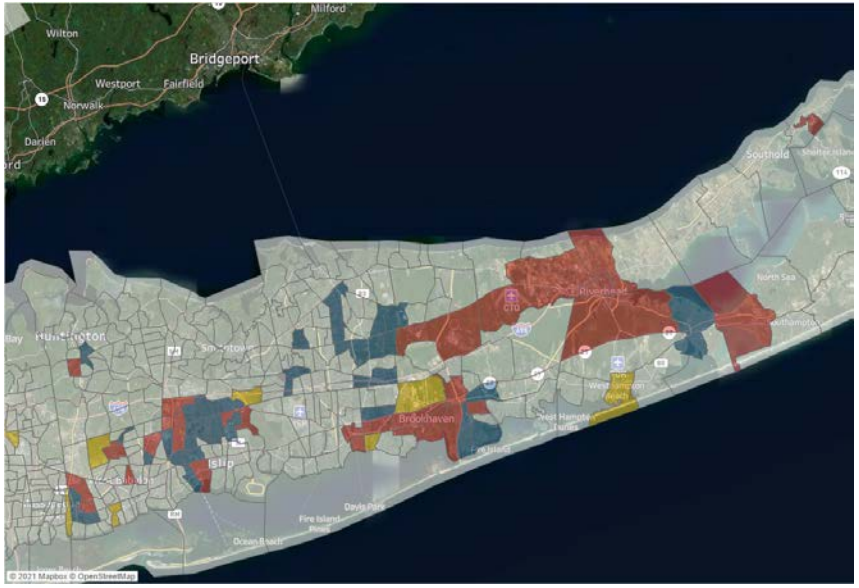
Questions as we look at maps

What proportion of tracts do you want to designate as DACs?

Coastal Long Island



Is DAC - By Scenario

- DAC - S1 & S2
- DAC - S1 All Factors
- DAC - S2 Vuln. Only
- Not a DAC

CJWG response

- DAC
- Non-DAC

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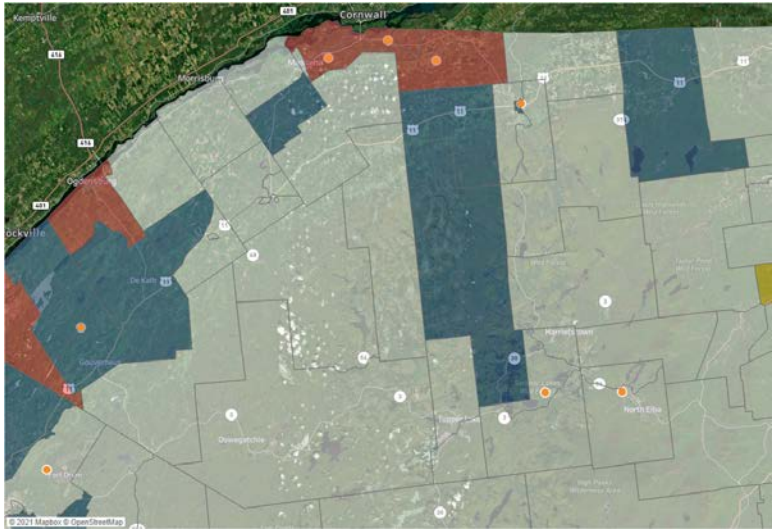
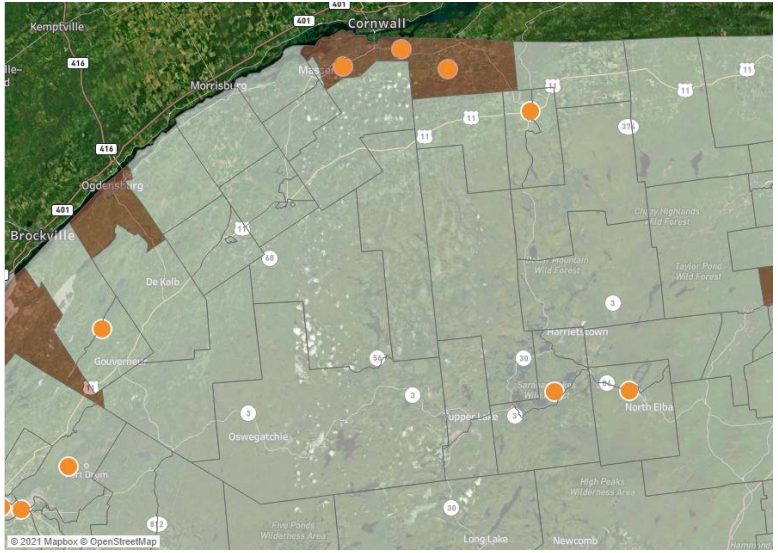
Massena (North Country)





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CJWG response
- DAC
- Non-DAC

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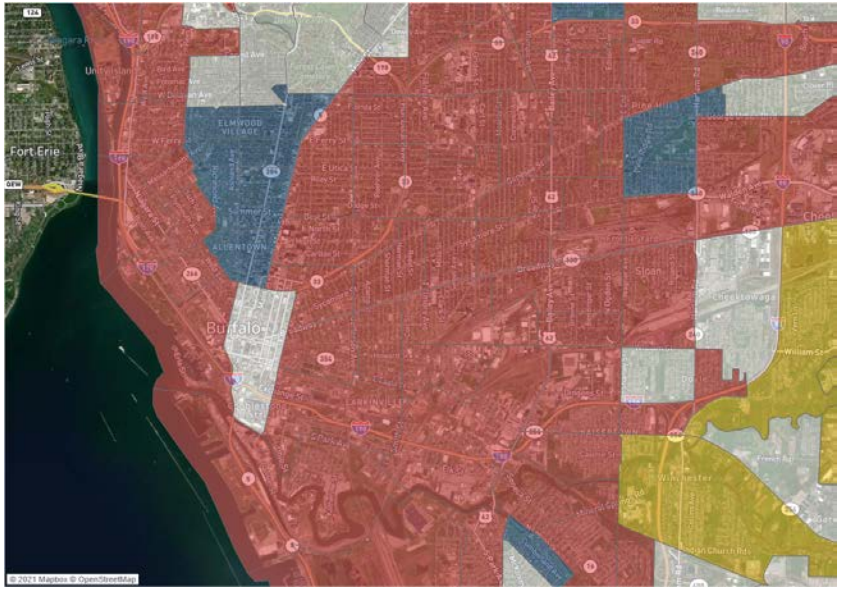
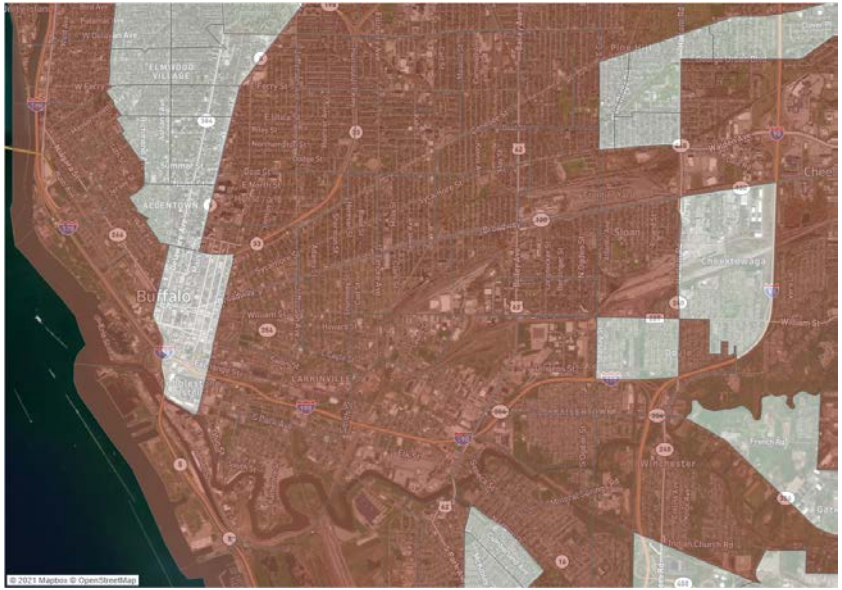
Buffalo





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- Not a DAC

CJWG response
- DAC
- Non-DAC

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Sunset Park

Is DAC - By Scenario
- DAC - S1 & S2
- DAC - S1 All Factors
- DAC - S2 Vuln. Only
- Not a DAC

CJWG response
- DAC
- Non-DAC

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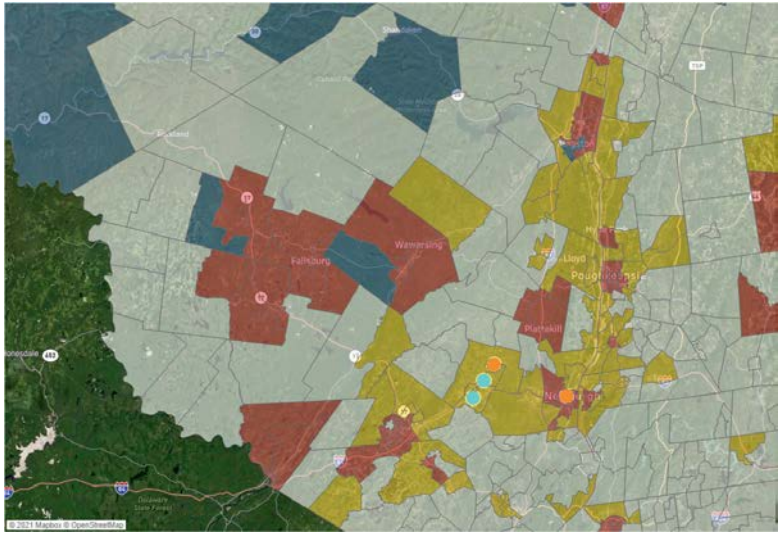
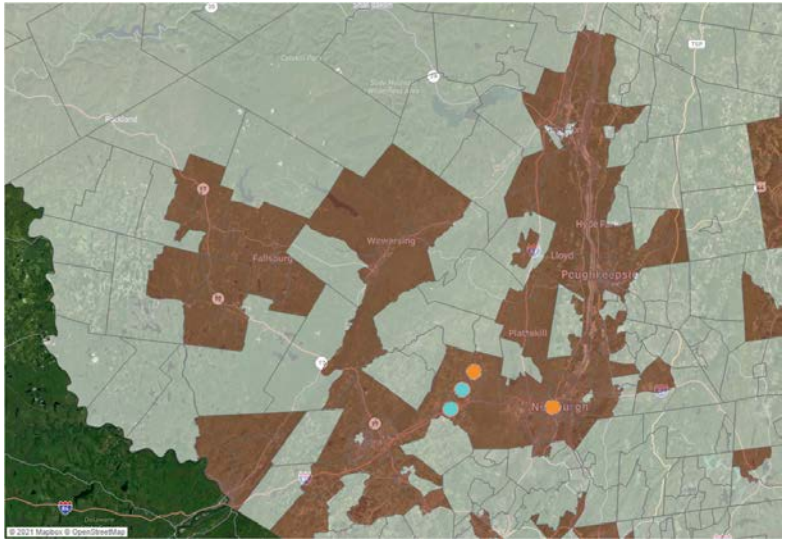
Hudson River area (higher flood risk)





Is DAC - By Scenario
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- DAC - S1 All Factors
- DAC - S2 Vuln. Only
- Not a DAC

CJWG response
- DAC
- Non-DAC

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Preparing to Vote

Thoughts on critical decisions?

1. Do you want to include an individual criteria?
2. What proportion of census tracts do you want to designate as DACs?

Temperature check before voting

What do you want to see or review before voting?

Draft timeline before DAC vote

DAC Work	Proposed Dates	CAC Meetings
Agency Investments & Benefits (90 min) Implications for DAC designation (30 min)	Oct 13 (2-4pm)	Oct 14 – Preview of Draft Scoping Plan. Attend/listen.
Decide how to construct the DAC definition from the scenarios/"building blocks" we have (what "building blocks" to use; what thresholds/rules) Schedule (20 min)	Oct 19 (12-3pm)	
Illume revises & distributes new DAC proposal and maps	*By Oct 29*	
Revisit critical questions: Percent of state to designate as DAC; individual LMI definition	Nov 11 (1-3pm)	
Voting meeting?	Nov 17 (12-3pm)	Nov 16 – CAC meeting
Vote on DAC scenario(s) to post for public comment	After Thanksgiving?	

Barriers Study Update

Barriers & Opportunities Report

Three upcoming public input opportunities:

- Focus groups Oct 18-28 (virtual)
- Public hearings Nov 3 & 4 (virtual)
- Written public comments throughout

State agencies want to hear from people who **live & work** in DACs.

If you'd like to help spread the word, Sameer can send links + info you can share/forward

Higher-income area deep dive

Are there higher-income DACs?

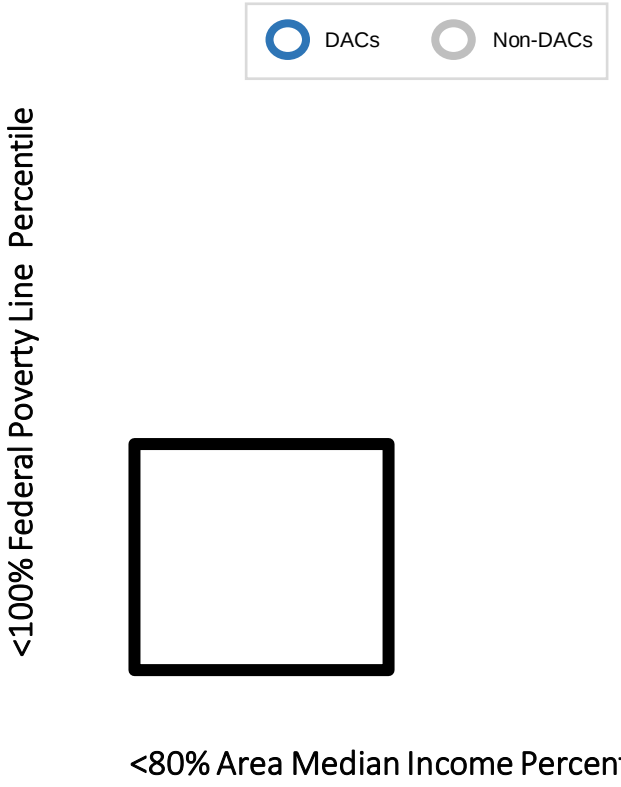
A few months ago, we were concerned about higher-income tracts being included, and whether we should have a rule to exclude high-income tracts

We examined the data and found that:

- Relatively few higher-income tracts are included (by design; income is weighted highly and correlated with many indicators)
- The few higher-income tracts included have high environmental burdens or climate risks and in each case it's possible to explain why they are DACs (← though please take a closer look!)

Next steps: If you'd like to take a closer look at these, we can do that within the next meeting or in a separate call. Otherwise we suggest addressing other aspects of the scoring scenario and lower-income before considering exclusion rules.

Are there any high-income DACs? What would happen if we excluded them?



This quadrant is higher-income tracts.
There are not many higher-income DACs. We started to look at them and in most cases they have higher environmental burdens and/or climate risks and it may be reasonable to leave them.

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Appendix 1: Legislative Review

Purpose of DAC definition

The [climate justice] working group, in consultation with the department, the departments of health and labor, the New York state energy and research development authority, and the environmental justice advisory group, will establish criteria to identify disadvantaged communities **for the purposes of co-pollutant reductions, greenhouse gas emissions reductions, regulatory impact statements, and the allocation of investments** related to this article

Legislated Criteria

"Communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households."

"Disadvantaged communities shall be identified based on geographic, public health, environmental hazard, and socioeconomic criteria, which shall include but are not limited to:

Areas burdened by cumulative environmental pollution and other hazards that can lead to negative public health effects.

Areas with concentrations of people that are of low income, high unemployment, high rent burden, low levels of home ownership, low level of educational attainment, or members of groups that have historically experienced discrimination on the basis of race or ethnicity.

Areas vulnerable to the impacts of climate change such as flooding, storm surges, and urban heat island effect."

40% Benefits Goal

"State agencies, authorities and entities, in consultation with the environmental justice working group and the climate action council, shall, to the extent practicable, invest or direct available and relevant programmatic resources in a manner designed to **achieve a goal for disadvantaged communities to receive forty percent of overall benefits of spending** on clean energy and energy efficiency programs, projects or investments in the areas of housing, workforce development, pollution reduction, low income energy assistance, energy, transportation and economic development, provided however, that disadvantaged communities shall receive **no less than thirty-five percent** of the overall benefits of spending on clean energy and energy efficiency programs, projects or investments and provided further that this section shall not alter funds already contracted or committed as of the effective date of this section."

The CJWG has discussed that the 40% goal should be considered a minimum, and that non-DAC communities are still eligible for the remaining ~60% of funds.

Opportunity for Annual Review

The [climate justice working] group will meet no less than annually to review the criteria and methods used to identify disadvantaged communities and may modify such methods to incorporate new data and scientific findings. The climate justice working group shall review identities of disadvantaged communities and modify such identities as needed

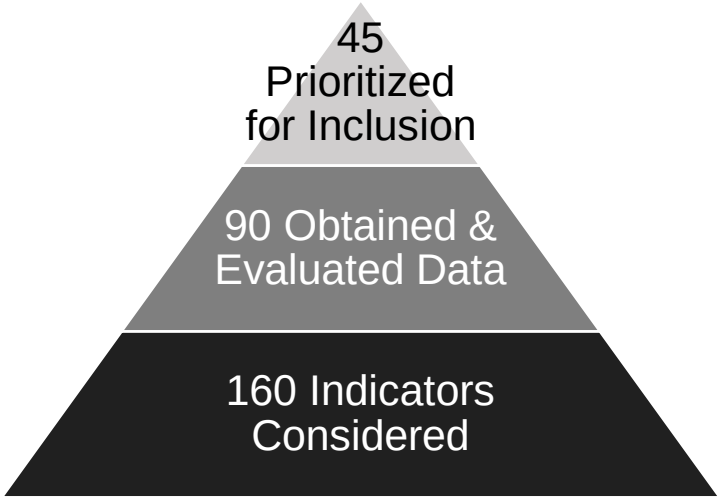
With the opportunity for annual review, these draft scenarios are a starting point

Appendix 2: Review of Approach

Inclusion Considerations

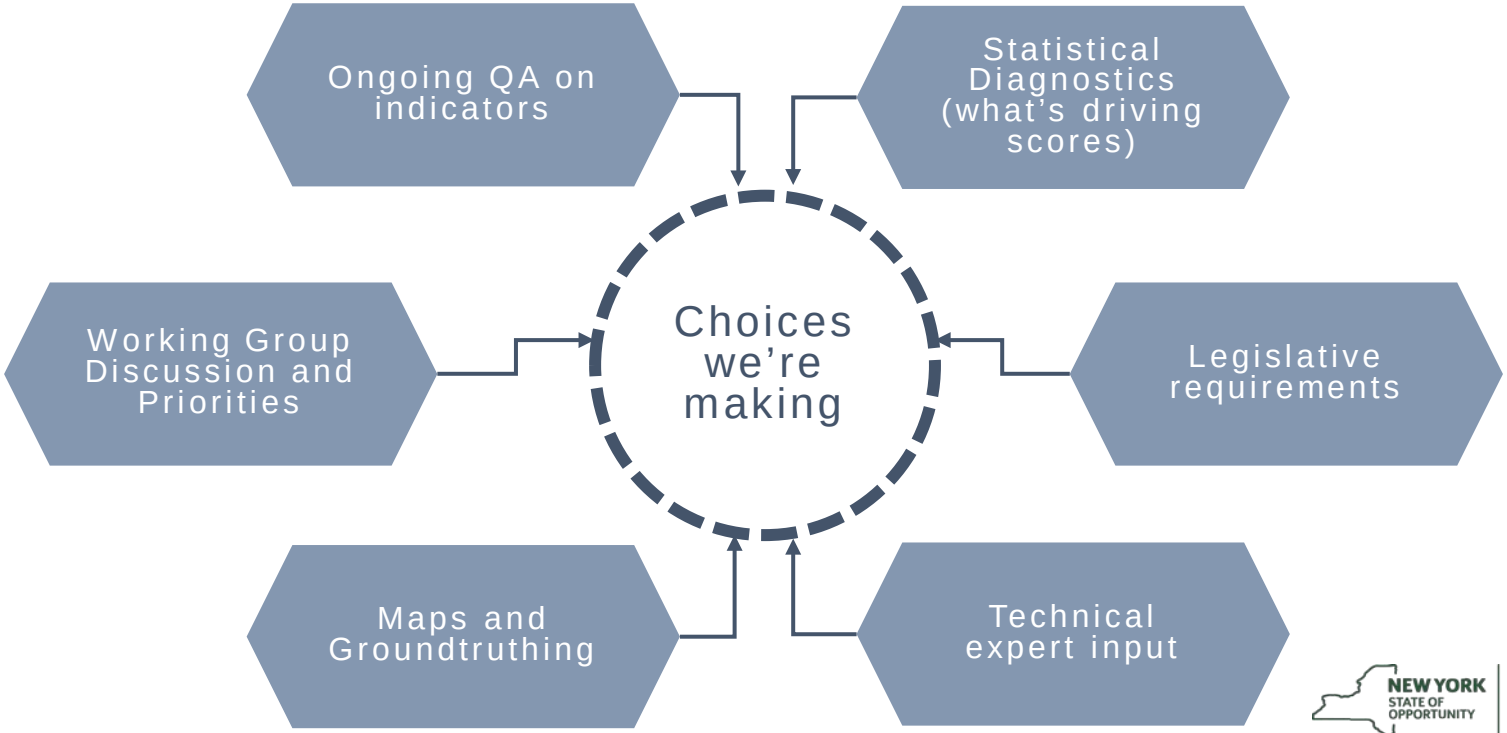
Inclusion decisions consider:

- Data coverage & granularity
- Data quality (e.g., measurement or sampling error)
- Modeled vs. directly-collected or measured data
- Correlations
- Technical guidance (e.g., DEC, DOH, DOS)



So far, we obtained & evaluated data for 90+ indicators (a) on their own, and (b) in combination

Multiple inputs to inform approach



Annual Update Process

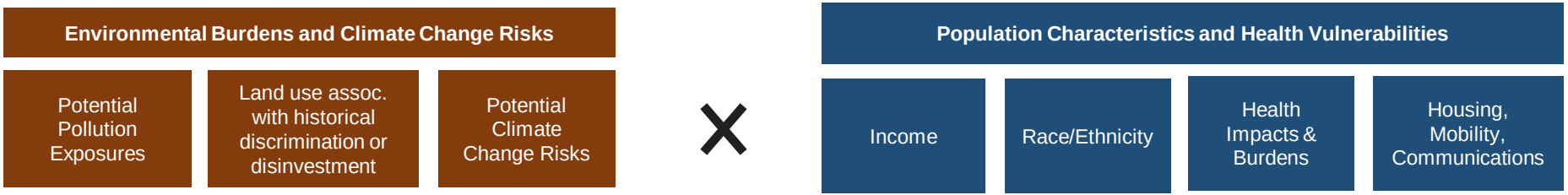
Document what CJWG and staff team want to improve (future data collection or advanced analysis)

Additional data needs may emerge from public comment – Save time/budget to address

CJWG can recommend annual process to review and improve indicators *(← what do you recommend?)*

Revised factors: Split income and race/ethnicity

In August, we split Income indicators (5 indicators) and Race/Ethnicity indicators (5 indicators) into two separate factors to ensure these critical indicators do not get overshadowed by other sociodemographic indicators.



Note: Since Burdens and Vulnerabilities are multiplied, they have equal influence, regardless of the # of factors or how you weight things within them.

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Environmental Burdens and Climate Change Risks: Included Indicators (same as Aug 26)

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

Population Characteristics and Vulnerabilities: Included Indicators (same as Aug 26)

Income	Race & Ethnicity	Health Impacts & Sensitivities	Housing, Mobility, Communications
• Pct <80% Area Median Income • Pct <100% of Federal Poverty Line • Pct without Bachelor's Degree • Unemployment rate • Pct Single-parent households	• Pct Latino/a or Hispanic • Pct Black or African American • Pct Asian • Limited English Proficiency • Historical redlining score	• 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+	• 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)
Within this factor, both income metrics have 2x weight	Within this factor, Pct Latino/a and Pct Black have 2x weight		

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In August we removed two correlated indicators and added one

Discussed in July:

Having extra indicators can muddy or mute effects of indicators that are more important to you. And starting with fewer indicators may leave more room for changes after public comment.

Other considerations:

With the current factor structure, and approach of weighting factors, it is not essential to completely streamline the variable list.

For now we removed just two highly-correlated indicators (utility/waste land area; pct without private vehicle) and can continue to test removing others if needed.

Additional indicators:

Added Percent Asian to Race/Ethnicity

Why Two Income Measures?

Both included income metrics,<100% of Federal Poverty Line and <80% of Area Median Income, are indexed to household size.

Federal Poverty Line: Lower threshold, but the same nationally. Inlcuded to find deeper entrenched poverty.

Area Median Income: Higher threshold, and indexed to metropolitan areas or fair market rent areas. Included to find low-to-moderate income (LMI).

Example Income Thresholds

Both included income metrics,<100% of Federal Poverty Line and <80% of Area Median Income, are indexed to household size. The Federal Poverty Line is lower, but the same nationally. Area Median Income is higher, and indexed to metropolitan areas or fair market rent areas.

Location (Examples)	2-person household	
	100% of Federal Poverty Line*	80% of Area Median Income**
Albany-Schenectady-Troy, NY MSA	$17,420	$61,200
New York, NY HUD Metro FMR Area	$17,420	$76,400
Buffalo-Cheektowaga-Niagara Falls, NY MSA	$17,420	$50,500
Nassau-Suffolk, NY HUD Metro FMR Area	$17,420	$75,950
Lewis County, NY	$17,420	$44,400
Clinton County, NY	$17,420	$46,000
Poughkeepsie-Newburgh-Middletown, Metro	$17,420	$63,950

*2021 Federal Poverty Level. Source: https://www.healthcare.gov/glossary/federal-poverty-level-fpl/
** 2021 AMI. Source: https://www.huduser.gov/portal/datasets/il/il21/Section8-IncomeLimits-FY21.pdf

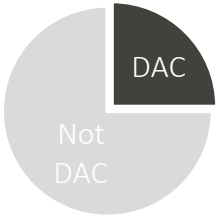
Review: Combining Data

Group Indicators into Factors

Combine Factors into Components

Calculate Statewide & Regional Scores

Designate DACs based on their relative score



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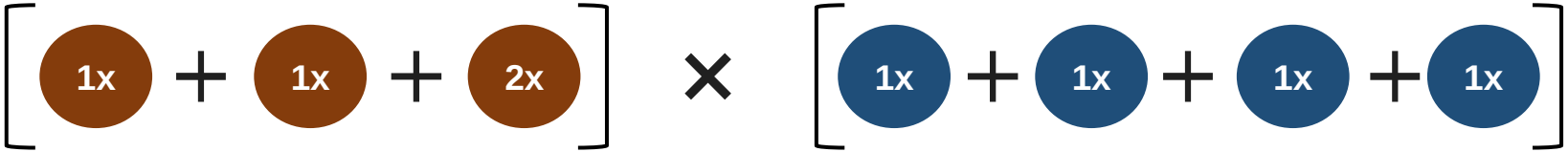
Combining Factor Scores

Similar to California's CalEnviroScreen approach, we multiply Environmental/Climate Burdens by Population/Health to reflect the "effect modifier" relationship wherein sociodemographic characteristics and/or health sensitivities may exacerbate or mitigate place-based burdens/risks:

Factor scores are weighted and added before multiplying:



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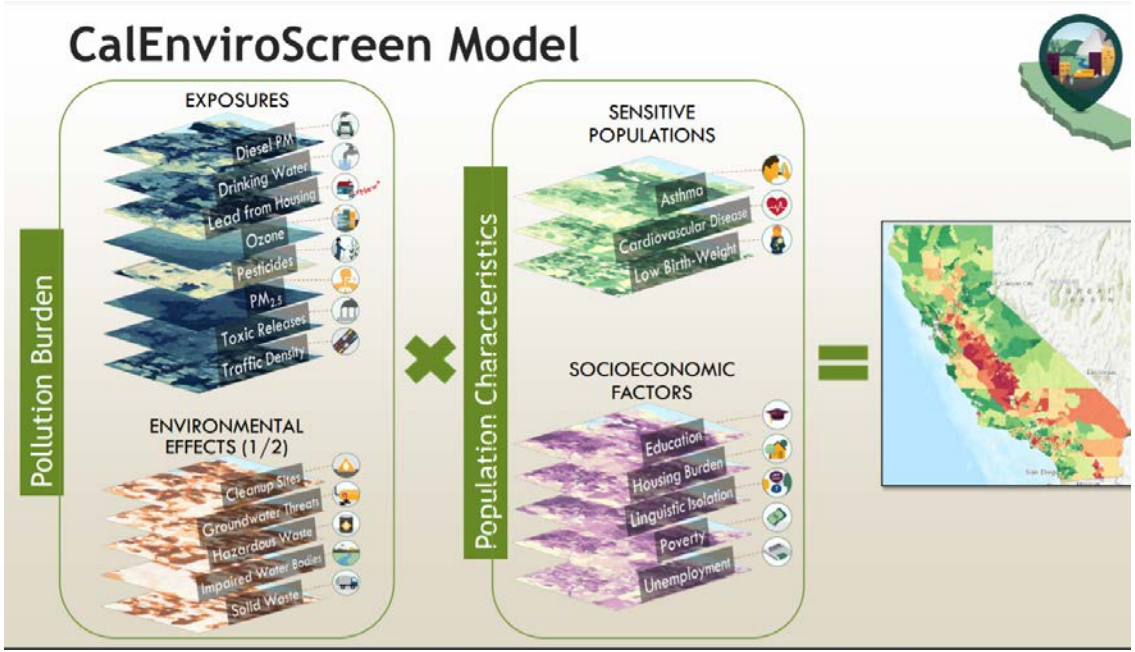
Note: Since Burdens and Vulnerabilities are multiplied, they have equal weight, regardless of how you weight things within them.

Multiply to represent that Vulnerabilities serve as Effect Modifiers to Burdens



https://oehha.ca.gov/media/downloads/calenviroscreen/presentation/calenviroscreen40webinarslidesd12021.pdf

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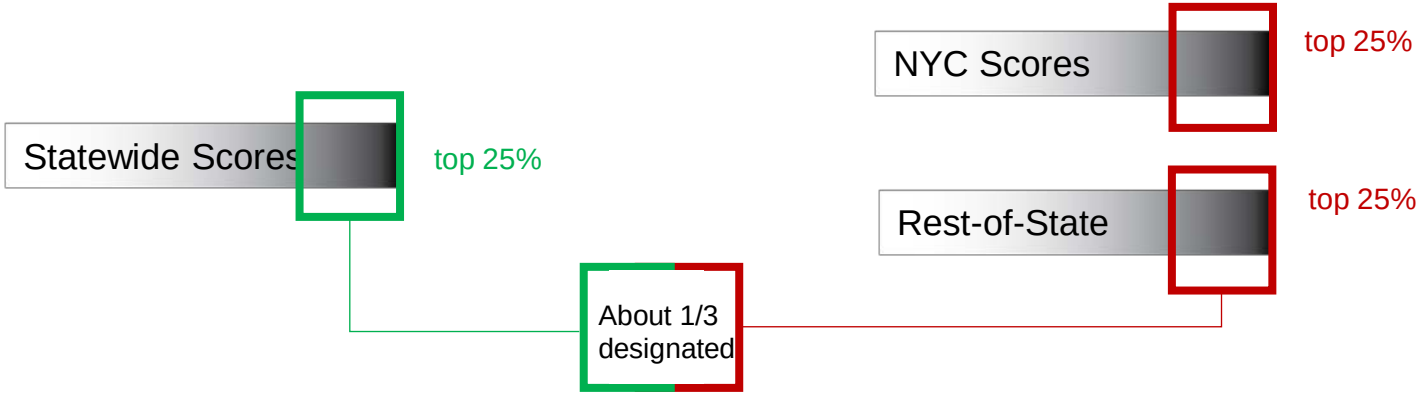
Designate tracts in top ##% of statewide and regional scores

Statewide Score
How each community ranks (on all of the data) within the **entire** state

Regional Scores
How each community ranks (on all of the data) in NYC and Rest-of-State separately



Designate communities that score in either top 25% statewide OR regionally

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Future: Include low-population areas with high burdens

Automatically including 19 Tribal and Indigenous Areas

Census Tract	County	Census Place Name	Nation	Land	Pct of Tract Land Area
36009940200	Cattaraugus		Seneca Nation	Reservation	100%
36029940100	Erie		Tonawanda Seneca	Reservation	100%
36003940200	Allegany		Seneca Nation	Reservation	100%
36033940000	Franklin	Akwesasne CDP	Saint Regis Mohawk Tribe	Reservation	100%
36067940000	Onondaga	Nedrow CDP	Onondaga Nation	Reservation	99%
36037940100	Genesee		Tonawanda Seneca	Reservation	99%
36063940001	Niagara		Tuscarora Nation	Reservation	99%
36009940300	Cattaraugus	Salamanca city	Seneca Nation	Reservation	99%
36009940000	Cattaraugus		Seneca Nation	Reservation	99%
36029940000	Erie		Seneca Nation	Reservation	99%
36063940100	Niagara		Tonawanda Seneca	Reservation	98%
36013037600	Chautauqua	Forestville CDP	Seneca Nation	Reservation	6%
36103159511	Suffolk	Mastic CDP	Unkechaug Nation	Reservation	6%
36103190705	Suffolk	Tuckahoe CDP	Shinnecock Nation	Reservation	6%
36099950300	Seneca	Seneca Falls CDP	Cayuga Nation	Owned	13%
36053030103	Madison	Oneida city	Oneida Nation	Owned	10%
36053030300	Madison	Canastota village	Oneida Nation	Owned	7%
36063021100	Niagara	Niagara Falls city	Seneca Nation	Owned	7%
36053030600	Madison	Munnsville village	Oneida Nation	Owned	6%

Tribal and Indigenous Nation Lands if:

- Tract contains >5% federally-designated reservation territory (Source: Census)
- Tract contain >5% of nation-owned land (Source: NYS parcel ownership data)

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Low Population Areas

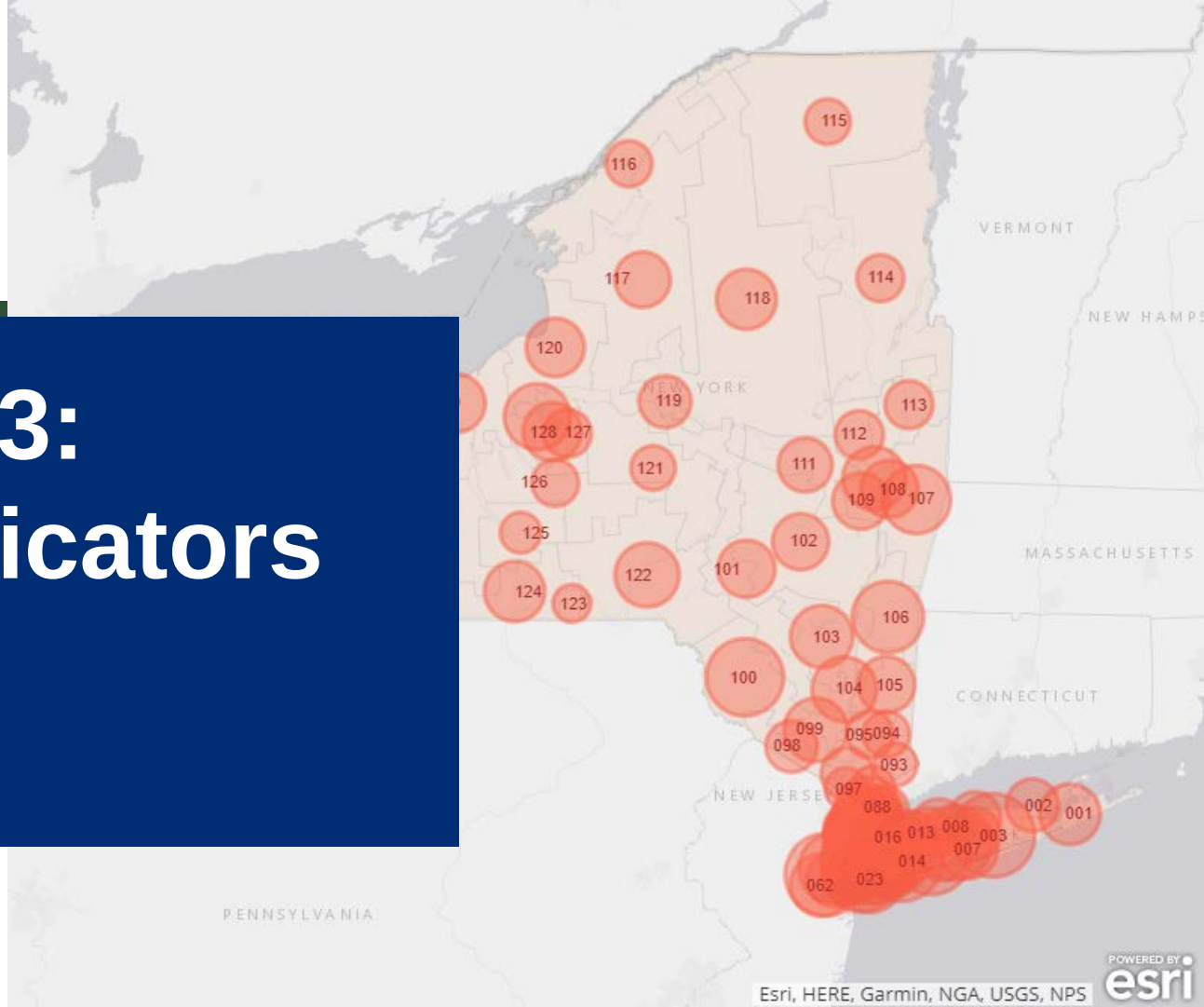
138 of 4,918 tracts (2.8%) have populations that are too low for reliable people & household data (<300 households or <500 people)

This includes sparsely-populated areas as well as group quarters like correctional facilities where there is no “household” data on things like household income

We will **include them on the basis of Environmental/Climate Burdens alone** (if their Burdens score fall in the top ##% statewide or top ##% for NYC or Rest-of-State) (using same designation threshold as overall scoring)

These are not included in maps yet to facilitate easier analysis of scoring approach

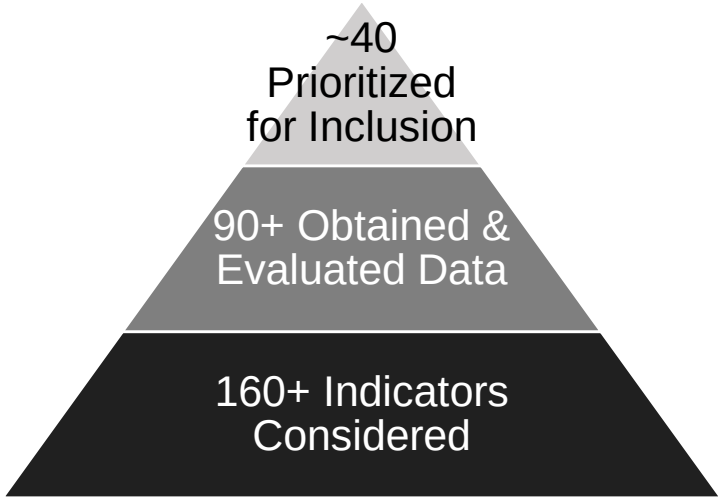
Appendix 3: Health Indicators



Inclusion Considerations

Inclusion decisions consider:

- Data coverage & granularity
- Data quality (e.g., measurement or sampling error)
- Modeled vs. directly-collected or measured data
- Correlations
- Technical guidance (e.g., DEC, DOH, DOS)



So far, we obtained & evaluated data for 90+ indicators (a) on their own, and (b) in combination

Still waiting for several health and environmental indicators that require technical and GIS analysis

Considerations for Health Indicators

Link to Environmental Factors

- Environmental (geographic) component of health outcomes
  - For chronic conditions, exposures may have occurred many years prior and/or in places other than where the health outcome is recorded
  - Environmental factors exacerbate or trigger acute events for some conditions more than others (e.g., asthma, MI)

Data Availability and Granularity

- NYSDOH only “sees” a health outcome when it appears in a dataset - Births, deaths, ED visits, hospitalizations, surveys, registries
- Need higher event frequency for stable/reliable rates and ability to share data (confidentiality)
- Data availability for small geographies in time for Draft DAC Scenarios

Potential Health Indicators

Included Indicators

- 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+
- Distance to ED/critical/urgent care

Considered but Not Included

- COVID-19
- Heat stress
- Cancer
- Diabetes
- Pre-term births
- Mental Health
- Childhood Lead Exposure

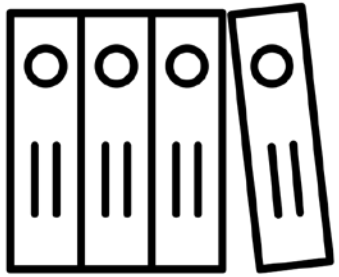
Potential Indicator	Rationale for Inclusion
Asthma ED visits	Strong scientific literature associating asthma with environmental exposures. Managing asthma is linked with socioeconomic status and healthcare access.
COPD ED visits	COPD is considered a sub-set of respiratory disease, associated with air toxics as well as personal behaviors. We considered de-prioritizing though COPD outcomes are influenced by access to healthcare.
Heart attack (MI) hospitalization	Cardiovascular disease in general (not MI hospitalization specifically) increasingly associated with air pollution and criteria pollutants. However, MI hospitalization data is/was readily-available, though less stable at the sub-county level.
Low Birthweight	Broadly represents maternal health, which is a factor of environmental, social, and structural policies. Data is available at the sub-county level.
Premature Deaths	Broadly represents deaths due to cancer, diabetes, heart disease, lung disease, accidents, homicides, etc., to capture systemic disadvantage. Could also be indicator of avoided deaths resulting from environmental/health policy changes
Pct with Disabilities	Represents susceptibility to power outages and emergency situations due to extreme weather events
Pct without Health Insurance	Represents access to screening, ability to manage conditions, affordable car. May indicate structural and socioeconomic disadvantage.
Pct Adults age 65+	Represents susceptibility to power outages and emergency situations due to extreme weather events.

Indicator	Rationale for Exclusion	Potential Correlates (among included indicators)
COVID-19	Data not yet available; cases under active investigation; testing rates not equivalent across the state and through course of the pandemic	Socioeconomic status (SES), race/ethnicity
Heat Stress	ED visits or hospitalization either unavailable or unreliable at sub-county level. Heat deaths too small to report at sub-county level.	High temps, vegetative cover & road density (urban areas), housing quality, health vulnerabilities
Cancer	Cancers is multifactorial and represent a range of diseases. Some cancers are more vs. less environmentally or spatially-related.	Health insurance, SES (for certain types)
Diabetes	Hard to capture in NYSDOH datasets that contain ED visits & hospitalization. Clinic/pharmacy data would better capture disease. Also, diabetes may have a weaker environmental component.	Premature deaths, sociodemographic correlates and health insurance
Pre-term births	Generally captured by low birthweight	Low birthweight births
Mental Health	Mental health not well-captured in DOH data because they have ED visits & hospitalization; would only see co-occurring ICD-9 codes. Clinic/pharmacy data would better capture disease.	
Childhood Lead Exposure	Exposure data is small/unreliable at sub-county level.	Age of home, renters & rental costs, income

Other indicators may capture risk factors for health outcomes

- Environmental exposures
- Potentially (or formerly) hazardous facilities
- Housing conditions
- Socioeconomic indicators
- Health insurance
- Language barriers

Indicator Limitations



Documentation (for public comment) will discuss:

- Indicators/data we **considered** but did not pursue, and why
- Data limitations, including Census (e.g., not specific enough to race/ethnicity), public health data (e.g., limited data @ sub-county level), and more
- Recommendations for future/additional community-level data (e.g., migration)
- Potential for periodic indicator review/updates

Legislation allows for continuous improvement

We are cataloging recommendations for data to gather and consider in the future.