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
Welcome and Roll Call
Agenda for November 17

1. Barriers & Opportunities Study input (30 minutes)
2. DAC Criteria Legislative Review
3. DAC Criteria:
   - Progress from October 19 meeting
   - Developing rules for DAC definition
     – 10 minute break –
4. DAC Criteria: Preparing to Vote
   - What would you like to see/review before a vote?
   - Schedule
Barriers Study Update
§ 6. Report on barriers to, and opportunities for, community ownership of services and commodities in disadvantaged communities.

1. On or before two years of the effective date of this act, the department of environmental conservation, in cooperation with the New York state energy research and development authority and the New York power authority, with input from relevant state agencies, the environmental justice advisory group, the climate justice working group and Climate Action Council shall prepare a report on **barriers to, and opportunities for, access to or community ownership of** the following services and commodities in disadvantaged communities as identified in article 75 of the environmental conservation law….

- Distributed renewable energy generation
- Energy efficiency and weatherization investments
- Zero-emission and low-emission transportation option
- Adaptation measures to improve the resilience of homes and infrastructure
- Services and infrastructure to reduce health risks from climate-related hazards
The “how” for the Draft Scoping Plan

Goal of report: Recommendations for Agencies and other organizations to implement strategies in the scoping plan to improve access to or community ownership of services & commodities among DACs.

This is about the “how” of implementing the strategies in the scoping plan (while your input on the Advisory Panel Recs was about the “what”).
THANK YOU for help with focus groups and public input!

✓ 8 focus groups with 65 participants (from 326 sign-ups)
✓ 2 public hearings with 97 attendees and 21 speakers
✓ Written public comments
✓ Reviewed existing reports, plans, proceedings
✓ Agency workshops

We are in the middle of analysis/synthesis of everyone’s ideas
Two areas we’d like your help

1. Provide 1-3 top principles or recs for **how to increase community (or community member) access, use or ownership of programs, services or commodities**

   The “how” of implementation rather than the “what”

2. Scan the Barriers Framework (memo will become part of report)

   Does it generally capture the most significant barriers to community access, use or ownership?

Optionally, please provide ideas or feedback before Thanksgiving (Nov 23)
# Draft Barriers Framework

<table>
<thead>
<tr>
<th>Category</th>
<th>Barrier to Access or Community Ownership</th>
</tr>
</thead>
</table>
| **Physical and Economic Structures and Conditions** | • Building stock: Age and disrepair  
• Multifamily/Rental structure (split incentive)  
• Product/service availability  
• Physical infrastructure limitations  
• Data / IT limitations |
| **Financial and Knowledge Resources and Capacity Barriers** | • Lack of access to capital or financing  
• Lack of time or planning capacity  
• Staff resources  
• Lack of (or lack of access to) personal, professional or information networks  
• Community programmatic and information capacity limitations  
• Workforce constraints |
| **Perceptions and Information Barriers** | • Unaware or uncertain risk or needs  
• Lack of trust in program/service provider  
• Perceptions of limited benefits/value  
• Information not provided in best channel, source, language, format |
| **Programmatic Design and Implementation Barriers.** | • Lack of baseline/ benchmarking and impact assessment data  
• Program not designed for DAC members  
• Program eligibility constraints  
• Insufficient/ inconsistent program resources  
• Lack of program coordination  
• Insufficient outreach |

Barriers include barriers for:

1. Individuals and households  
2. Small/local businesses  
3. Organizations (municipal and/or CBO)
Draft Principles & Opportunities Framework

<table>
<thead>
<tr>
<th>Category</th>
<th>High-Level Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include People More / Include More People</td>
<td>• Co-design programs or projects with and for DACs                                                                                  • Provide Meaningful Opportunities for Public Input in Government Processes/Proceedings  • Address Needs Holistically Through Cross-Cutting Collaboration</td>
</tr>
<tr>
<td>Make Everything Easier to Navigate and Access</td>
<td>• Transition to program models that require zero to little effort to participate and benefit (e.g., automatic)  • People-centered policies, programs, and funding across local, state, and federal governments  • Find and support resource-constrained communities, from end-to-end</td>
</tr>
<tr>
<td>Emerging Issues</td>
<td>• Mobilize and facilitate citizen participation and action  • Face housing issues head-on to address the energy climate crisis</td>
</tr>
</tbody>
</table>

Within each Principle, there are 3-6 sub-recommendations (not shown), and tangible examples

Recommendations are designed to serve:
1. Individuals and households
2. Small/local businesses
3. Organizations (municipal and/or CBO)
DAC Criteria
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.
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 available for the remaining ~60% of funds.
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.”

§ 75-0111 (1) (c)

“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.”
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.
DAC Criteria
Progress and Options
## Review of Critical Decisions

### Progress Made

- ✓ 44 indicators in approach that balances three “pillars” of legislation
- ✓ Designate ~35-40% of state (leaning toward smaller list to start)
- ✓ Adding low-income households could fill gaps that geographic definition can’t reach
- ✓ Iterative approach – Evaluate each year
- ✓ Revisited “framing principles”

### Critical Decisions to Make

- ? Discuss/confirm decision to add low-income households
- ? If added: How to define low-income households?
- ? Designation thresholds for geographic definition: 35% or 40% depending on low-income households?
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

Population Characteristics and Health Vulnerabilities
- Income
- Race/Ethnicity
- Health Impacts & Burdens
- Housing, Mobility, Communications

Equalize sum of environmental burdens with climate change

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.
Framing Principles (from 9/29 meeting)

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

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

Initial investments should go to the hardest-hit communities first

Consider who is least able to participate in transition to clean energy and clean energy economy

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

Potential Approaches:

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

Tiered approach – DAC plus LMI communities or households?

Iterative approach – Evaluate each year
Designate ≤ 40% of state as DACs

Designate less than 40%

**Pros:** May encourage proportionally *more* money to go to DACs

**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

On 10/19 several people expressed interest for designating less than 40% to drive greater-than-proportional benefits
Not all LMI households can be covered by a geographic definition

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.

<table>
<thead>
<tr>
<th>35% DAC Scenario</th>
<th>Number of Households (Estimate)*</th>
<th>Percentage of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not in DAC</td>
<td>In DAC</td>
</tr>
<tr>
<td>Households in New York</td>
<td>4,792,000</td>
<td>2,551,000</td>
</tr>
<tr>
<td>Households with income &lt;80% Area Median Income</td>
<td>1,671,000</td>
<td>1,562,000</td>
</tr>
<tr>
<td>Households with income below Federal Poverty Line</td>
<td>441,000</td>
<td>579,000</td>
</tr>
</tbody>
</table>

* 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: 48% of low-to-moderate income households, and 57% of households reporting incomes below federal poverty line.

However: There are still over 441,000 households in poverty not in DACs (43%).
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

^ this may be mitigated with “individual” definition like household income

On October 19, several CJWG members preferred this option, as long as geographic definition could be coupled with lower-income households
What do we mean by “individual” criteria?

By “individual criteria” we’re talking about the characteristics of the people in the household, not the building location.

For example, low-income households are people with household incomes below a certain threshold.
How to define “low income” or “low-to-moderate-income” households?

• Align with program eligibility?
  • **Low income**: Less than 60% State Median Income (SMI) or 150% of FPL (whatever is higher) (LIHEAP, utility bill assistance, and others)
  • **Moderate income**: Less than 80% of Area Median Income (and sometimes 80% state median income) (Energy programs, housing and rent relief, and others)

• Affects portion of state included in 40% benefits accounting ➔
What portion of the state would be included if we add lower-income households?

35% of households in geographic DACs

<table>
<thead>
<tr>
<th>Income Threshold</th>
<th>Additional HHs outside of DACs adds</th>
<th>Total % of State (geographic + individual DAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adding &lt;100% FPL</td>
<td>+6%</td>
<td>41%</td>
</tr>
<tr>
<td>Adding &lt;200% FPL (~60% State Median)</td>
<td>+14%</td>
<td>49%</td>
</tr>
<tr>
<td>Adding &lt;80% Area Median Income (AMI)</td>
<td>+23%</td>
<td>58%</td>
</tr>
</tbody>
</table>

*200% Federal Poverty Line is similar to 60% of State Median Income, which is LIHEAP criteria
**Example income for two-person household**

<table>
<thead>
<tr>
<th>Location (Examples)</th>
<th>2-person Household:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100% of Federal Poverty Line*</td>
</tr>
<tr>
<td>Albany-Schenectady-Troy, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>New York, NY HUD Metro FMR Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Buffalo-Cheektowaga-Niagara Falls, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>Nassau-Suffolk, NY HUD Metro FMR Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Lewis County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Clinton County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Poughkeepsie-Newburgh-Middletown, Metro</td>
<td>$17,420</td>
</tr>
</tbody>
</table>

All income levels are 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.


2021-2022 HEAP income limits (60% state median income): [https://otda.ny.gov/programs/heap/](https://otda.ny.gov/programs/heap/)


Recap of Key Questions

How to define “lower income” for individual definition?

If there are other layers – What percentage of state should be designated a geographic DAC?
Updated Maps for 35% Scenario (Nov 17)
Massena (North Country)
Buffalo

Model
- DAC

CJWG Response
- DAC
- Non-DAC

35% Scenario
Hudson River area (higher flood risk)

Model
- DAC

CJWG Response
- DAC
- Non-DAC

35% Scenario
Preparing to Vote
Voting starts public process + annual review

Opportunity to adjust further following public comments
Opportunity for annual review/updates
Thoughts on critical decisions?

Individual definition and criteria?

What percentage of state should be designated a geographic DAC?
Live summary of critical questions

Agency To Do: What are the programs that leverage the different income tiers?

- 100% FPL
- 60% AMI
- 60% SMI
- 80% AMI

Geographic Designation 35%

Geographic Designation 35%

Indiv Criteria (HH Income)
## Draft timeline before DAC vote

<table>
<thead>
<tr>
<th>DAC Work</th>
<th>Proposed Dates</th>
<th>CAC Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Investments &amp; Benefits (90 min)</td>
<td>Oct 13 (2-4pm)</td>
<td>Oct 14 — Preview of Draft Scoping Plan. Attend/listen:</td>
</tr>
<tr>
<td>Implications for DAC designation (30 min)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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)</td>
<td>Oct 19 (12-3pm)</td>
<td></td>
</tr>
<tr>
<td>Revisit critical questions: Percent of state to designate as DAC; individual LMI definition</td>
<td>Nov 17 (12-3pm)</td>
<td>Nov 16 – CAC meeting</td>
</tr>
<tr>
<td>Review draft definition and maps Ask ad hoc questions as needed</td>
<td>Nov 22 to Dec 3</td>
<td></td>
</tr>
<tr>
<td>Pre-Vote Meeting</td>
<td>Week of Nov 29 (morning of Dec 2?)</td>
<td></td>
</tr>
<tr>
<td>Vote on DAC scoring approach + scenario(s) to post for public comments</td>
<td>Week of Dec 13 (if needed, Dec 21/22)</td>
<td></td>
</tr>
</tbody>
</table>
Temperature check before voting

What do you want to see or review before voting?
Updated Scenario Results (Nov 17)
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

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

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
## Population Characteristics and Vulnerabilities: Included Indicators

<table>
<thead>
<tr>
<th>Income</th>
<th>Race &amp; Ethnicity</th>
<th>Health Impacts &amp; Sensitivities</th>
<th>Housing, Mobility, Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Pct &lt;80% Area Median Income</td>
<td>• Pct Latino/a or Hispanic</td>
<td>• Asthma ED visits</td>
<td>• Pct Renter-Occupied Homes</td>
</tr>
<tr>
<td>• Pct &lt;100% of Federal Poverty Line</td>
<td>• Pct Black or African American</td>
<td>• COPD ED visits</td>
<td>• Housing cost burden (rental costs)</td>
</tr>
<tr>
<td>• Pct without Bachelor’s Degree</td>
<td>• Pct Asian</td>
<td>• Heart attack (MI) hospitalization</td>
<td>• Energy Poverty / Cost Burden</td>
</tr>
<tr>
<td>• Unemployment rate</td>
<td>• Pct Native American/ Indigenous</td>
<td>• Premature Deaths</td>
<td>• Manufactured homes</td>
</tr>
<tr>
<td>• Pct Single-parent households</td>
<td>• Limited English Proficiency</td>
<td>• Low Birthweight</td>
<td>• Homes built before 1960</td>
</tr>
<tr>
<td></td>
<td>• Historical redlining score</td>
<td>• Pct without Health Insurance</td>
<td>• Pct without Internet (home or cellular)</td>
</tr>
</tbody>
</table>

*Within this factor, both income metrics have 2x weight*

*Within this factor, Pct Latino/a and Pct Black have 2x weight*
As designed, DACs have far more, but not all, lower-income and BIPOC New Yorkers

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

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average in DACs</th>
<th>Average in Non-DACs</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;80% AMI</td>
<td>62%</td>
<td>36%</td>
</tr>
<tr>
<td>&lt;100% FPL</td>
<td>23%</td>
<td>10%</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>29%</td>
<td>12%</td>
</tr>
<tr>
<td>Latino/Latina</td>
<td>32%</td>
<td>11%</td>
</tr>
<tr>
<td>Asian</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Burden Score</td>
<td>38</td>
<td>30</td>
</tr>
<tr>
<td>Vulnerability Score</td>
<td>61</td>
<td>40</td>
</tr>
</tbody>
</table>
Regional Distribution

<table>
<thead>
<tr>
<th>Region</th>
<th>% Designated DAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>45%</td>
</tr>
<tr>
<td>Long Island</td>
<td>11%</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>44%</td>
</tr>
<tr>
<td>Western NY</td>
<td>31%</td>
</tr>
<tr>
<td>Finger Lakes</td>
<td>36%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>22%</td>
</tr>
<tr>
<td>Central NY</td>
<td>36%</td>
</tr>
<tr>
<td>Southern Tier</td>
<td>18%</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>20%</td>
</tr>
<tr>
<td>North Country</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35%</strong></td>
</tr>
</tbody>
</table>

About 45% of NYC would be designated a DAC.

35% of tracts are designated. This is adjustable.

<table>
<thead>
<tr>
<th>Region</th>
<th>% of NY Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>43%</td>
</tr>
<tr>
<td>Long Island</td>
<td>15%</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>12%</td>
</tr>
<tr>
<td>Western NY</td>
<td>7%</td>
</tr>
<tr>
<td>Finger Lakes</td>
<td>6%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>6%</td>
</tr>
<tr>
<td>Central NY</td>
<td>4%</td>
</tr>
<tr>
<td>Southern Tier</td>
<td>3%</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>2%</td>
</tr>
<tr>
<td>North Country</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Rural Areas

After adjusting the methodology for classifying low population tracts, the proportion of rural areas that are classified as DACs is approximately equivalent to the proportion of rural tracts in the state.

<table>
<thead>
<tr>
<th>Percent of Region Designated</th>
<th>Number of Tracts</th>
<th>Pct DACs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>130</td>
<td>15%</td>
</tr>
<tr>
<td>Suburban</td>
<td>371</td>
<td>25%</td>
</tr>
<tr>
<td>Urban</td>
<td>1,221</td>
<td>48%</td>
</tr>
</tbody>
</table>

The proportion of rural and urban tracts designated as DACs is now very close to the proportion of tracts in the state that are rural and urban.

<table>
<thead>
<tr>
<th>Pct of Statewide Population</th>
<th>Number of Tracts</th>
<th>Pct of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>857</td>
<td>17%</td>
</tr>
<tr>
<td>Suburban</td>
<td>1,479</td>
<td>33%</td>
</tr>
<tr>
<td>Urban</td>
<td>2,570</td>
<td>49%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Overall agreement</th>
<th>% Agreement</th>
<th>63%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJWG &amp; Scenario both agree it’s a DAC</td>
<td>% Agree - DAC</td>
<td>61%</td>
</tr>
<tr>
<td>CJWG &amp; Scenario both think it’s not a DAC</td>
<td>% Agree – Non-DAC</td>
<td>65%</td>
</tr>
</tbody>
</table>
Appendix 1:
Slides from 10/19
A geographic definition will never capture all lower-income 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

Numbers are from 10/19 scenario where 39% of state designated DAC
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

Numbers are from 10/19 scenario where 39% of state designated DAC
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.

In rural areas, about 10% of households have income below federal poverty line (compared with 6% in suburban areas and 18% in urban 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.”

**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.
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

- Ongoing QA on indicators
- Statistical Diagnostics (what’s driving scores)
- Legislative requirements
- Maps and Groundtruthing
- Technical expert input
- Working Group Discussion and Priorities
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.
Environmental Burdens and Climate Change Risks: Included Indicators

<table>
<thead>
<tr>
<th>Potential Pollution Exposures</th>
<th>Land use and facilities associated with historical discrimination or disinvestment</th>
<th>Potential Climate Change Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Vehicle traffic density Diesel truck and bus traffic</td>
<td>• Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)</td>
<td>• Extreme heat projections (&gt;90° days in 2050)</td>
</tr>
<tr>
<td>• Particulate Matter (PM2.5)</td>
<td>• Regulated Management Plan (chemical) sites</td>
<td>• Flooding in coastal and tidally influenced areas (projected)</td>
</tr>
<tr>
<td>• Benzene concentration</td>
<td>• Major oil storage facilities (incl. airports)</td>
<td>• Flooding in inland areas (projected)</td>
</tr>
<tr>
<td>• Wastewater discharge</td>
<td>• Power generation facilities</td>
<td>• Low vegetative cover</td>
</tr>
<tr>
<td></td>
<td>• Active landfills</td>
<td>• Agricultural land</td>
</tr>
<tr>
<td></td>
<td>• Municipal waste combustors</td>
<td>• Driving time to hospitals or urgent/critical care</td>
</tr>
<tr>
<td></td>
<td>• Scrap metal processors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Industrial/manufacturing/mining land use (zoning)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Housing vacancy rate</td>
<td></td>
</tr>
</tbody>
</table>
## Population Characteristics and Vulnerabilities: Included Indicators

<table>
<thead>
<tr>
<th>Income</th>
<th>Race &amp; Ethnicity</th>
<th>Health Impacts &amp; Sensitivities</th>
<th>Housing, Mobility, Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pct &lt;80% Area Median Income</td>
<td>Pct Latino/a or Hispanic</td>
<td>Asthma ED visits</td>
<td>Pct Renter-Occupied Homes</td>
</tr>
<tr>
<td>Pct &lt;100% of Federal Poverty Line</td>
<td>Pct Black or African American</td>
<td>COPD ED visits</td>
<td>Housing cost burden (rental costs)</td>
</tr>
<tr>
<td>Pct without Bachelor’s Degree</td>
<td>Pct Asian</td>
<td>Heart attack (MI) hospitalization</td>
<td>Energy Poverty / Cost Burden</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>Pct Native American or Indigenous</td>
<td>Premature Deaths</td>
<td>Manufactured homes</td>
</tr>
<tr>
<td></td>
<td>Historical redlining score</td>
<td>Pct without Health Insurance</td>
<td>Pct without Internet (home or cellular)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pct with Disabilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pct Adults age 65+</td>
<td></td>
</tr>
</tbody>
</table>

**Within this factor, both income metrics have 2x weight**

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

<table>
<thead>
<tr>
<th>Location (Examples)</th>
<th>2-person household</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100% of Federal Poverty Line*</td>
</tr>
<tr>
<td>Albany-Schenectady-Troy, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>New York, NY HUD Metro FMR Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Buffalo-Cheektowaga-Niagara Falls, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>Nassau-Suffolk, NY HUD Metro FMR Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Lewis County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Clinton County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Poughkeepsie-Newburgh-Middletown, Metro</td>
<td>$17,420</td>
</tr>
</tbody>
</table>


**Review: Combining Data**

- **Group Indicators into Factors**
  - Exposures
  - Climate
  - Discriminatory Land Use
  - Health
  - Socio-demographics
  - Housing & Mobility

- **Combine Factors into Components**

  - Burdens Score
  - Vulnerabilities Score

- **Calculate Statewide & Regional Scores**

- **Designate DACs based on their relative score**
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:

$$\text{Environmental Burdens and Climate Change Risks} \times \text{Population Characteristics and Health Vulnerabilities}$$

$\begin{bmatrix} 1x & + & 1x & + & 2x \end{bmatrix} \times \begin{bmatrix} 1x & + & 1x & + & 1x & + & 1x \end{bmatrix}$

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
Consider Statewide and Regional ranking to designate DACs

**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

- **NYC Scores**
- **Rest-of-State**

Designate communities that score in either top 25% **statewide** OR **regionally**
Automatically including 19 Tribal and Indigenous Areas

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

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)
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 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)
Appendix 3: Health Indicators
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
<table>
<thead>
<tr>
<th>Potential Indicator</th>
<th>Rationale for Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma ED visits</td>
<td>Strong scientific literature associating asthma with environmental exposures. Managing asthma is linked with socioeconomic status and healthcare access.</td>
</tr>
<tr>
<td>COPD ED visits</td>
<td>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.</td>
</tr>
<tr>
<td>Heart attack (MI) hospitalization</td>
<td>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.</td>
</tr>
<tr>
<td>Low Birthweight</td>
<td>Broadly represents maternal health, which is a factor of environmental, social, and structural policies. Data is available at the sub-county level.</td>
</tr>
<tr>
<td>Premature Deaths</td>
<td>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</td>
</tr>
<tr>
<td>Pct with Disabilities</td>
<td>Represents susceptibility to power outages and emergency situations due to extreme weather events</td>
</tr>
<tr>
<td>Pct without Health Insurance</td>
<td>Represents access to screening, ability to manage conditions, affordable care. May indicate structural and socioeconomic disadvantage.</td>
</tr>
<tr>
<td>Pct Adults age 65+</td>
<td>Represents susceptibility to power outages and emergency situations due to extreme weather events.</td>
</tr>
<tr>
<td>Indicator</td>
<td>Rationale for Exclusion</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>COVID-19</td>
<td>Data not yet available; cases under active investigation; testing rates not equivalent across the state and through course of the pandemic</td>
</tr>
<tr>
<td>Heat Stress</td>
<td>ED visits or hospitalization either unavailable or unreliable at sub-county level. Heat deaths too small to report at sub-county level.</td>
</tr>
<tr>
<td>Cancer</td>
<td>Cancers is multifactorial and represent a range of diseases. Some cancers are more vs. less environmentally or spatially-related.</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Hard to capture in NYSDOH datasets that contain ED visits &amp; hospitalization. Clinic/pharmacy data would better capture disease. Also, diabetes may have a weaker environmental component.</td>
</tr>
<tr>
<td>Pre-term births</td>
<td>Generally captured by low birthweight</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Mental health not well-captured in DOH data because they have ED visits &amp; hospitalization; would only see co-occurring ICD-9 codes. Clinic/pharmacy data would better capture disease.</td>
</tr>
</tbody>
</table>
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.