Climate Justice Working Group
Draft DAC Criteria Update

June 23, 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. Rosa or Alanah will call on members individually, at which time please unmute.
Welcome and Roll Call
Agenda

• Introductions and Business Items
• DAC Criteria Timeline Update
• Health Indicators
• Indigenous/Tribal Communities
• Review Draft Scenario
• Feedback on Draft Scenario
• Next Steps
Business Items

> Approval of Minutes (May 24 and June 15)
Where we are with DAC criteria

Alex, can you replace this with a better screenshot from Tableau?
Where we are

Identify Need
Observe/Research
Prioritize
Begin downloads
Explore data

TEST

DEVELOP
New Ideas
Troubleshooting
Create combinations
Test Iterate Optimize

APPLY
LEARN
ADJUST
RE-APPLY
We’re here.

Identify data and data wrangle
Create designations and iterate
Agree on criteria

Track
Adjust
Grow

Where we are
Indicator selection is just one of several decisions

**Indicator Selection**  
Ingredient List and Importance

What indicators capture the legislation + stakeholder interest?

What data can support them?

**Scoring Approach**  
How to Make the Cake

How do we combine data, and score communities?

**Designation**  
How to Slice the Cake

Should we score communities statewide or regionally?

What percentage of communities should be DACs?

**Groundtruthing**  
Testing the Cake (as we bake it!)

How well do draft DACs reflect your experience on the ground?

Can we modify indicators or scoring?
Timeline

If our goal is to provide criteria to CAC by end of the year…

We need to publish draft scenarios in early August (still aggressive) and start public comment period…

This means heavier review/discussion of maps/scenarios and documentation through early August (+ voting)

Let’s circle back to the timeline.
Let’s ask DOH to weigh in and review/edit all of these slides
Considerations for Health Indicators

• What state agencies track – Events (births, deaths, ED visits, hospital) rather than disease or chronic conditions (e.g., NYSDOH only “sees” diabetes when it involves hospital visit

• Data available at small geographies – Due to data reliability (esp. less-common events) and confidentiality, many indicators not available below county level

• Association between “negative public health outcomes” and environmental exposures, burdens or climate change risks
Other indicators may capture health determinants

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

Proposed Indicators

• Asthma ED visits
• COPD ED visits
• Heart attack (MI) hospitalization
• Low Birthweight*
• Premature Deaths*
• 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

*NYSDOH is actively working on calculating rates at sub-county level
**NYSDOH and GIS team developing option to capture distance
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Rationale for Exclusion</th>
<th>Included Correlates</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID-19</td>
<td>Data not yet available; cases under active investigation</td>
<td>Sociodemographics, race/ethnicity</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>
<td>High temps, vegetative cover, road density, housing quality</td>
</tr>
<tr>
<td>Cancer</td>
<td>Not available at sub-county level. Some cancers are more vs. less environmentally-driven.</td>
<td>Premature deaths, health insurance, environmental exposures (e.g., air toxics)</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>
<td>Premature deaths, sociodemographic correlates and health insurance</td>
</tr>
<tr>
<td>Pre-term births</td>
<td>Generally captured by low birthweight</td>
<td>Low birthweight births</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</td>
<td></td>
</tr>
<tr>
<td>Childhood Lead Exposure</td>
<td>Exposure data is small/unreliable at sub-county level.</td>
<td>Age of home, renters &amp; rental costs, income</td>
</tr>
</tbody>
</table>
Maps of Available Indicators

Alex will show maps of the health indicators we have + potential correlates
# Rationale for Inclusion

<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. And, 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 cardiovascular 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.</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 affordable healthcare services and 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>
</tbody>
</table>
Indigenous and Tribal Communities
Potential Approach

DEC (David Witt) reached out to Tribal and Indigenous Community leaders to understand if/how they would like to be included in the Disadvantaged Community criteria.

One option may be explicitly including census tracts on large areas of tribal/indigenous land or high Native/Indigenous populations in DAC designation (20-25 tracts?)
Potential Census Tracts to Include

Potential Criteria:

a. Tracts where ≥ 5% of land is Tribal Designated Statistical Areas (US Census), or

b. Tracts containing parcels owned by OIN (David is this what you were thinking? Please revise), or

c. Tracts with ≥ 25% Native/Indigenous Population (US Census)

Potential Results:

20-25 total tracts included

<table>
<thead>
<tr>
<th>County</th>
<th>Potential Tracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madison</td>
<td>9</td>
</tr>
<tr>
<td>Oneida</td>
<td>4</td>
</tr>
<tr>
<td>Cattaraugus</td>
<td>2</td>
</tr>
<tr>
<td>Suffolk</td>
<td>2</td>
</tr>
<tr>
<td>Chautauqua</td>
<td>1</td>
</tr>
<tr>
<td>Niagara</td>
<td>1</td>
</tr>
<tr>
<td>Genesee</td>
<td>1</td>
</tr>
<tr>
<td>Erie</td>
<td>1</td>
</tr>
<tr>
<td>Bronx</td>
<td>1</td>
</tr>
<tr>
<td>Franklin</td>
<td>1</td>
</tr>
</tbody>
</table>

David, could you please weigh in on how you’d define these areas?

David, could you please summarize what tracts might be included based on these criteria?
Next Steps
Description of Today’s Scenario
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
Some decisions move things more than others

**Designation Threshold**
(High-scoring tracts to designate as DACs – e.g., top third?)

[Photo](https://www.clrp.cornell.edu/q-a/272-excavator_certification.html)

**Factor Importance**
(Relative importance of exposures vs. climate, etc.)

[Photo](https://compactequip.com/excavators)

**Indicators**
(With ~40 indicators, changing one doesn’t shift much)

[Photo](https://www.clrp.cornell.edu/q-a/272-excavator_certification.html)

**Indicator Weights**
(With highly-correlated indicators, weights don’t shift results much)

[Photo](https://www.clrp.cornell.edu/q-a/272-excavator_certification.html)

Photo by Andres Siimon on Unsplash

Photo by Anaya Katlego on Unsplash
Designation Threshold

**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: top 25%
- Rest-of-State: top 25%

- Designate communities that score in either top 25% statewide OR regionally
- About 1/3 designated

Future: Include tribal/indigenous land & low-population areas with high burdens
Community Burdens and Potential Risks: Indicators in Current Scenario

### Potential Pollution Exposures
- Vehicle traffic density*
- Particulate Matter (PM2.5)
- Benzene
- Wastewater discharge*

### Land use associated with historical discrimination or disinvestment
- Hazardous Waste treatment/storage/disposal facilities*
- Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)*
- Regulated Management Plan (chemical) sites*
- Industrial/manufacturing/mining land use (zoning)
- Utility/waste land use (zoning)
- Transportation facilities land use (zoning)
- Historical redlining score
- Housing vacancy rate

### Potential Climate Change Risks
- Extreme heat projections (>90° days in 2050)
- Coastal/tidal flooding projections (from sea level rise, storm surge, etc.)
- Inland/riverine flooding projections (from sea level rise, storm surge, etc.)
- Low vegetative cover
- Agricultural land
- Distance to grocery stores

*NOTE: Future data may include modeled Woodsmoke exposure & other water quality metrics. *We may replace EJScreen indicators.

*NOTE: Future data will include several other types of regulated and permitted facilities (e.g., power generation, landfills). *We may replace EJScreen indicators.

*NOTE: Future data may include distance to urgent/emergency care.
# Population Vulnerabilities: Indicators in Current Scenario

<table>
<thead>
<tr>
<th>Sociodemographics</th>
<th>Health Impacts &amp; Burdens</th>
<th>Housing, Mobility, Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Pct &lt;80% Area Median Income</td>
<td>• Asthma ED visits</td>
<td>• Pct Renter-Occupied Homes</td>
</tr>
<tr>
<td>• Pct &lt;100% of Federal Poverty Line</td>
<td>• COPD ED visits</td>
<td>• Housing cost burden (rental costs)</td>
</tr>
<tr>
<td>• Pct without Bachelor’s Degree</td>
<td>• Heart attack (MI) hospitalization</td>
<td>• Energy Poverty / Cost Burden</td>
</tr>
<tr>
<td>• Unemployment rate</td>
<td>• Pct without Health Insurance</td>
<td>• Manufactured homes</td>
</tr>
<tr>
<td>• Pct Single-parent households</td>
<td>• Pct with Disabilities</td>
<td>• Homes built before 1960*</td>
</tr>
<tr>
<td>• Pct Latino/a or Hispanic</td>
<td>• Pct Adults age 65+</td>
<td>• Percent without private vehicle</td>
</tr>
<tr>
<td>• Pct Black or African American</td>
<td></td>
<td>• Pct without Internet (home or cellular)</td>
</tr>
<tr>
<td>• Limited English Proficiency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** State staff are considering designating Tribal Land/Territory as DACs after the quantitative scoring.

**NOTE:** Future data will include Low Birth, eight births, and Premature Deaths.

*Short-term proxy for lead-based paint risk. We are working with DOH on how to represent risk.
Starting point for Factor Importance

Community Burdens and Potential Risks
- Potential Pollution Exposures
- Land use associated with historical discrimination or disinvestment
- Potential Climate Change Risks

Population Vulnerabilities
- Socio-demographics
- Health Impacts & Burdens
- Housing, Mobility, Communications

Note: Since Burdens and Vulnerabilities are multiplied, they have equal weight, regardless of how you weight things within them.
Legislation allows for continuous improvement
Draft DAC
Definition
Scenarios
Early maps to get your reaction to big things

Map tool includes a short form for submitting comments on individual tracts.

When you select one or more tracts in the map, the "Selected Census Tract Details" table will update to show key metrics for those tracts.

Note: Draft maps exclude 138 census tracts (2.8%) with very low population because Vulnerabilities data is missing/unreliable; they can be scored separately on the basis of Burdens alone.
Tables that will help you compare scenarios (when we get there)

<table>
<thead>
<tr>
<th>Region</th>
<th>% of NY Tracts</th>
<th>% of NY DACs</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>44%</td>
<td>58%</td>
</tr>
<tr>
<td>Long Island</td>
<td>12%</td>
<td>5%</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Western NY</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Finger Lakes</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Central NY</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Southern Tier</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>North Country</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

DACs vs Non-DACs - Statewide Averages

<table>
<thead>
<tr>
<th></th>
<th>DAC</th>
<th>Non DAC</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burden Pctl</td>
<td>46</td>
<td>37</td>
<td>40</td>
</tr>
<tr>
<td>Vulnerability Pctl</td>
<td>63</td>
<td>41</td>
<td>48</td>
</tr>
<tr>
<td>Median Income</td>
<td>$48,198</td>
<td>$87,307</td>
<td>$74,317</td>
</tr>
<tr>
<td>% BIPOC</td>
<td>70%</td>
<td>32%</td>
<td>45%</td>
</tr>
<tr>
<td>Redline Score</td>
<td>3.3</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>% PEJA</td>
<td>83%</td>
<td>29%</td>
<td>47%</td>
</tr>
</tbody>
</table>

22% of tracts in the Capital Region are designated DACs

DAC census tracts have a higher vulnerability health score than non-DAC census tracts

Percent of DACs in a region vs the total % of tracts in that region

Long Island has 12% of the state’s tracts but 5% of the DAC tracts
Groundtruthing: Buy One, Get One!

If you want to select a tract you think is wrong…

…First tell us a tract you think is right!
What we’re doing with your input

1. Look at agreement between DAC scenarios + your “groundtruthed” list

2. Understand, through your comments, what indicators are more important to you

3. Check whether our data/indicators capture the types of things you care about
Go to Tableau

Note: Draft maps exclude 138 census tracts (2.8%) with very low population because Vulnerabilities data is missing/unreliable; they can be scored separately on the basis of Burdens alone.
What can we do to help your review?

*What we heard on June 15:*

- More information on considered indicators, esp. health impacts/burdens
- Update Tutorial PDF
- Tutorials/one-on-sessions?
Timeline & Next Steps
Month Ahead – DAC Scenarios

1. Review scenario iterations
2. Small group and one-on-one sessions
3. Voting on three critical parts:
   1. Indicator List
   2. Designation Thresholds (% of state designated as DAC)
   3. Scenario(s) to post to public comment (which will encompass other decisions like factor & indicator importance)
Related Review

1. Draft documentation
2. Plan/outline for public meetings & comment period (DEC will provide proposal)
### DAC Scenario Timeline

<table>
<thead>
<tr>
<th>June 14</th>
<th>June 21</th>
<th>June 28</th>
<th>July 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJWG June 14</td>
<td></td>
<td>CJWG June 23</td>
<td></td>
</tr>
<tr>
<td>• Review maps and send tracts to include/exclude</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• <strong>Small group review(s) or one-on-ones</strong> with Alex &amp; Rosa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Feedback on revised draft scenarios</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Detailed timeline for July/August</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Review indicator list</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Review revised draft scenarios</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• <strong>Small group review(s) or one-on-ones</strong> with Alex &amp; Rosa</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>July 12</th>
<th>July 19</th>
<th>July 26</th>
<th>Aug 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJWG needed</td>
<td></td>
<td>CJWG needed</td>
<td></td>
</tr>
<tr>
<td>• Review revised scenarios</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Receive/review indicator documentation (all considered indicators)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discuss &amp; vote on Designation Threshold (or other components of scenarios)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• DEC provide outline/proposal for public meetings and comment period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Orientation to documentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Review maps/scenarios for voting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Receive/Review draft documentation (pending final scenarios)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discuss &amp; vote for scenarios to post for public comment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discuss public comment outline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discuss draft documentation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aug 9</th>
<th>Aug 16</th>
<th>Aug 23</th>
<th>Sep 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJWG needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Final voting as needed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Discuss documentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Prep for public meetings/comment period</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Post scenarios for public comment**

Start 120-day comment period
Next Steps

Work Ahead:
- Groundtruthing – BOGO!
- Compare several scenarios
- Voting on indicators
- Voting on designation threshold
- Reviewing documentation
- Voting on scenarios

Next Meeting:
- Discussion of health indicators
- Discussion of tribal/indigenous land & communities
- Feedback on first draft scenario
Indicator Considerations
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 key climate, health and environmental variables that require technical and/or GIS analysis
Indicator Update

Community Burdens and Potential Risks

- Potential Pollution Exposures
  - Performing “custom” analysis with DEC data (using EJScreen in interim)

- Land use associated with historical discrimination or disinvestment
  - Performing “custom” analysis with DEC data (using EJScreen in interim)

- Potential Climate Change Risks
  - Tweaking inland/coastal flooding
  - Waiting for distance to hospitals

Population Vulnerabilities

- Socio-demographics
  - Have all census data; assessing correlations

- Health Impacts & Burdens
  - Waiting for Low Birthweight & Premature Deaths

- Housing, Mobility, Communication
  - May improve lead paint risk indicator
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