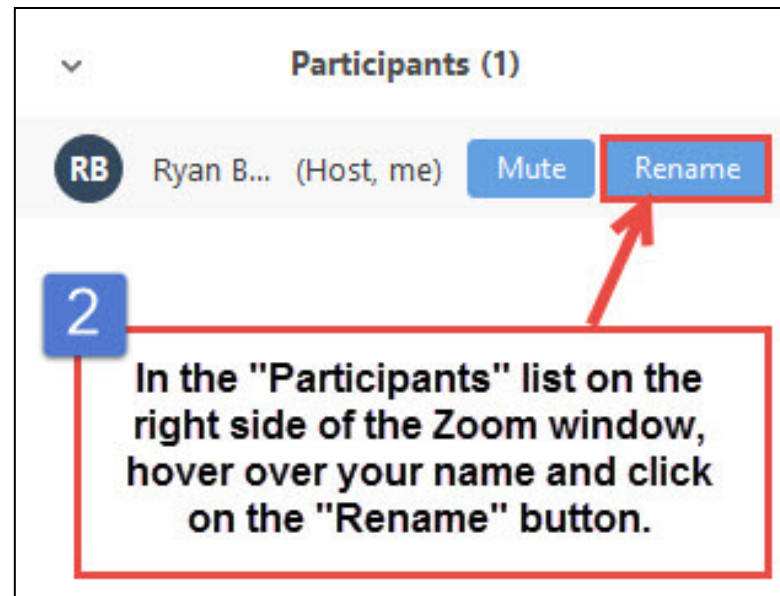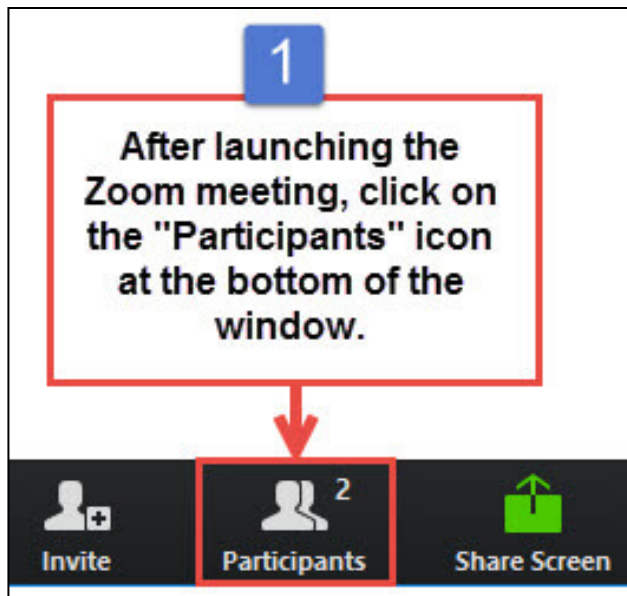# Zoom Meeting Logistics

- This meeting is being recorded.

- All attendees are muted to minimize background noise.

- Please enter your full name in the "Participants" panel.

- Audio is available via your computer's speakers or by phone.

Have a Question?

- Raise your virtual hand.

- During the question-and-answer session, we will:

1. Announce your name.

2. Allow you to unmute.

- Technical issues? Contact "Technical Support" via the chat.
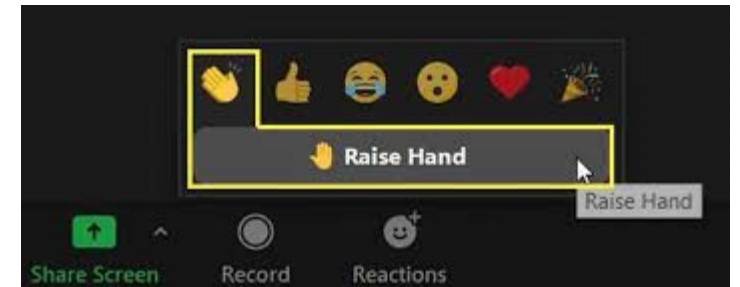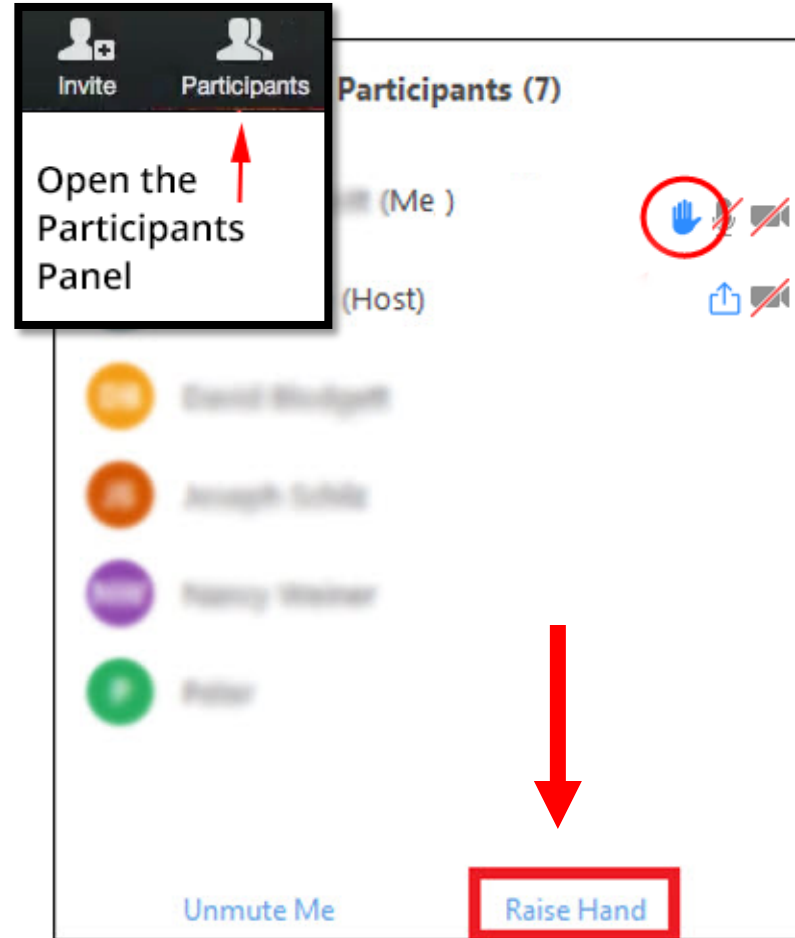
CUMULATIVE IMPACT ANALYSIS

Stakeholder Meetings
January 25/26, 2022

MassDEP

Welcome
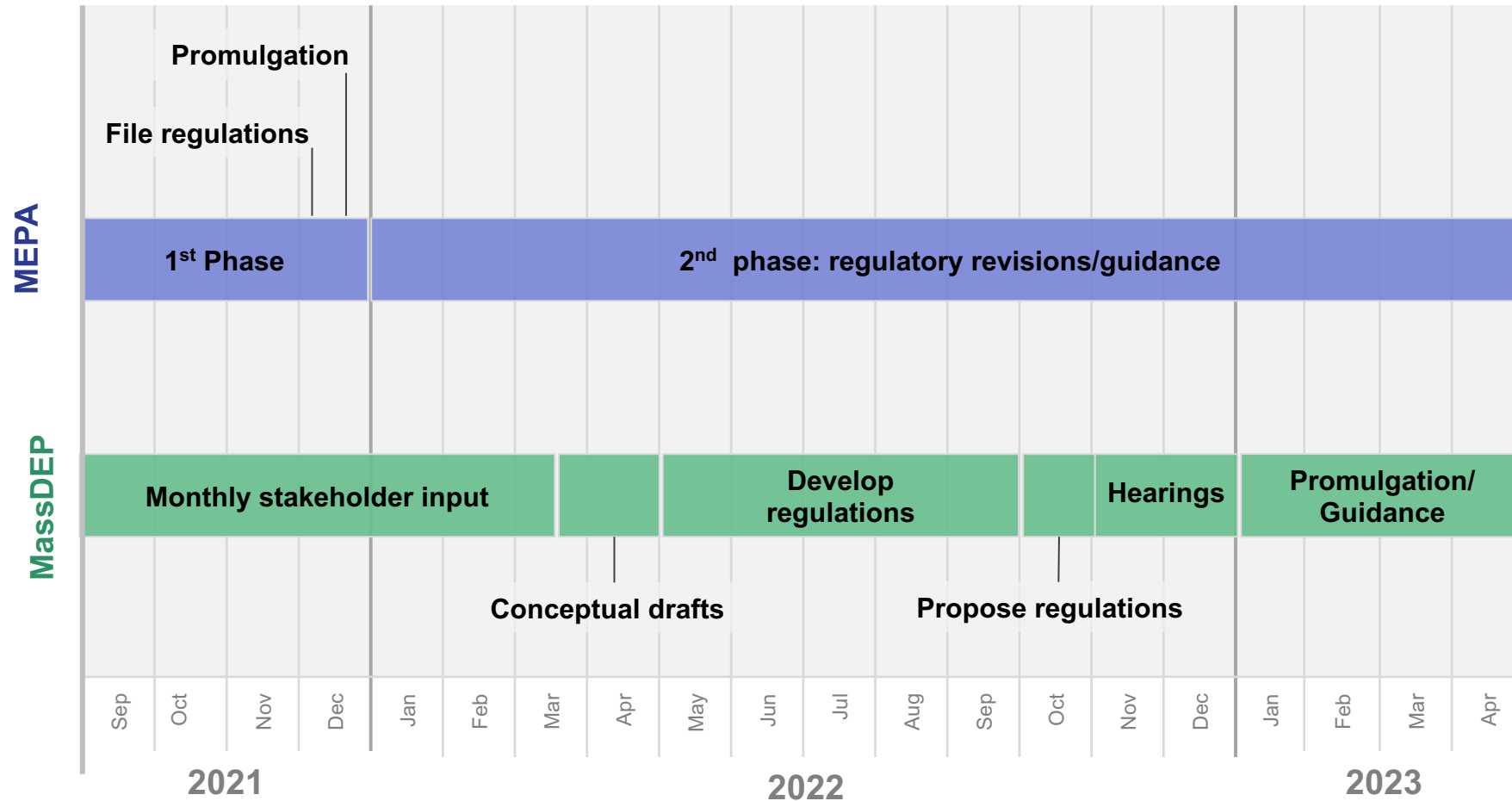
Assistant
Commissioner
Christine Kirby

MassDEP

Agenda

Goal: Present Information on the Cumulative Impact Analysis Process

- Massachusetts Climate Law

- Cumulative Impact Analysis Process

- Evaluation of Indicators

- Next Steps

Where we are

Why we are here….

An Act Creating a Next Generation Roadmap for MA Climate Policy

Signed into law by Governor Baker on March 26, 2021 and effective on June 26, 2021

- **Directs MassDEP** to evaluate and seek public comment on incorporating cumulative impact analyses into certain permits, and to propose regulations within 18 months requiring cumulative impact analysis in certain air permits.

- **Directs MEPA** to require an environmental impact report for any project located near environmental justice (EJ) populations to assess whether there is an existing unfair or inequitable environmental burden and related public health consequences, and how the proposed project might result in a disproportionate adverse effect on the EJ population.

CIA Process

Cumulative Impact Analysis Steps

Pre-application community notice/ engagement

Assess baseline community conditions (environmental, health, socioeconomic indicators)

Analyze cumulative impacts of existing and added air pollution

File permit application with CIA report/public notice with informal comment

MassDEP review and proposed permit decision

Public comment period

MassDEP permit determination
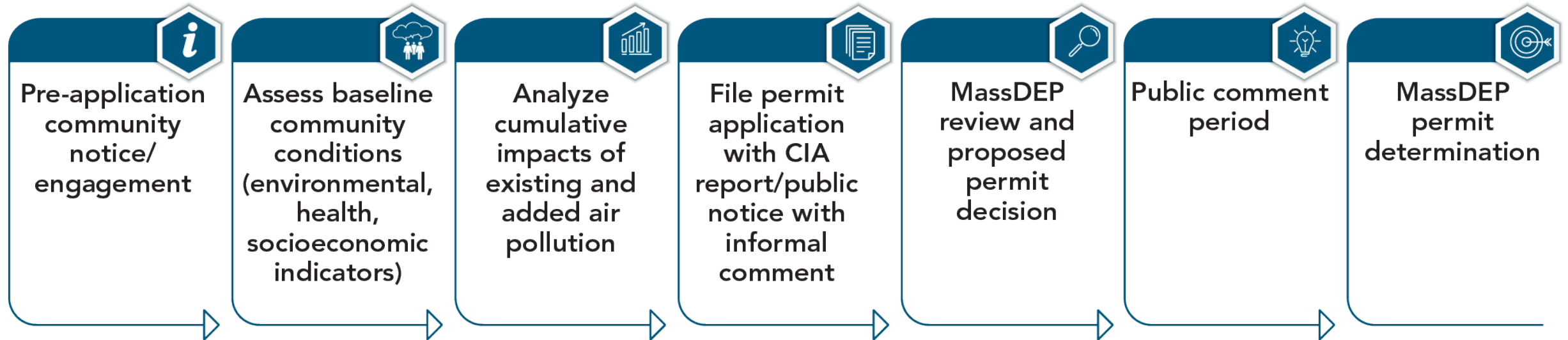
MassDEP

Pre-Application Community Notice / Engagement

- Prior to submitting a permit application, applicant would notify MassDEP and affected community about proposed project

- Applicant would meet with MassDEP about proposed project, need to conduct CIA, and community engagement plans

- Applicant would seek input from affected community and identify community concerns about the proposed project

Assess Baseline Community Conditions

- Applicants would collect data on environmental, health, and socioeconomic indicators to characterize the affected community and create a baseline of current conditions

- The baseline establishes the "starting point" in an assessment of project impacts, and identifies existing burdens and vulnerabilities

- Indicators include existing levels of pollution, health vulnerabilities, and other stressors

- Community input would inform the baseline assessment

Analyze Cumulative Air Quality Impacts

- Applicant would analyze cumulative impacts of existing and added air pollution, focusing on air quality indicators that are closely related to air pollution impacts, including:
  - Existing air quality and air quality-related health risks in affected community
  - Presence of other sources of air pollution
  - Populations sensitive to air pollution
  - Health vulnerabilities of affected community

- Non-air quality indicators also will be considered

Permit Application with CIA Report

- After conducting the CIA, the Applicant would file the air permit application, including CIA, with MassDEP

- MassDEP would notify the affected community of the availability of the application and begin its review
  - Community can submit comments for MassDEP to consider during its review

- After its review, MassDEP would issue a proposed permit decision for formal public comment

- After the public comment period, MassDEP would issue a final permit decision – approve, approve with conditions, or deny

Questions

Indicators

Process for Evaluating Indicators

All indicators that were presented at the November Stakeholder meeting and others that we learned about during the meeting or through comments were evaluated to determine if they could be integrated into a CIA for air permitting.

Over 80 indicators were evaluated

MassDEP

Indicators

- We originally organized indicators into three general categories
- Added a fourth category – Climate

Environmental Indicators

Health Indicators

Socioeconomic and Demographic Indicators

MassDEP

Process for Evaluating Indicators

Evaluation Criteria	Data Availability	Appropriate Geographic Scale	Appropriate Timeframe	Redundancy	Quantitative and Qualitative

Evaluation criteria for each indicator were used to determine if and how/when it could be included in a CIA:

- Data availability

- Appropriate geographic scale

- Appropriate timeframe

- Redundancy

- Quantitative or qualitative

MassDEP

Evaluating Indicators

- The list of over 80 indicators were evaluated using the evaluation criteria

- 44 indicators remained after initial evaluation, which have been grouped into two categories
  - *Indicators that **describe baseline community conditions** surrounding the air permit facility – air quality indicators and other indicators to describe the demographic, socioeconomic, environmental, and health characteristics of the community.*
  - ***Supplemental indicators** – indicators that could be considered if community concerns or information warrant an evaluation of these indicators*

- The indicators are still in the process of being reviewed and refined

MassDEP

Indicators to Assess Baseline Community Conditions

Demographic and Social Indicators
- Provide social, economic and statistical information describing the population living in a community

Health Indicators
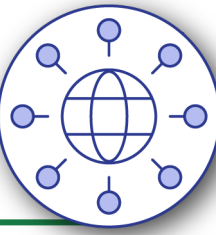- Assess existing health of the community

Environmental Indicators
- Assess existing sources and amounts of pollution

Climate Indicators
- Assess the potential for climate-related stressors

MassDEP

Baseline Community Conditions - Socioeconomic Demographic Indicators

- Indicators used to identify EJ communities (per 2021 EJ Policy)
  - Low income
  - Minority/people of color
  - English language isolation

- Sensitive receptor sites
  - Schools
  - Long-term care residences
  - Daycare facilities and preschools
  - Public and subsidized housing

- Unemployment

- Education

- Social Vulnerability Index

Baseline Community Conditions - Environmental Indicators

- Air Quality
  - Criteria air pollutants (ground-level ozone, nitrogen dioxide, particulate matter, sulfur dioxide)
  - Diesel particulate matter (NATA)
  - Air toxics cancer risk (NATA)
  - Air toxics respiratory hazard index (NATA)
  - MassDEP major facilities with air operating permits
  - Traffic proximity and volume
  - Proximity to other sources of mobile air pollution (e.g., airports, ports, bus/train stations, distribution centers, etc.)

- Water Quality
  - Groundwater discharge permits
  - Drinking water quality

Baseline Community Conditions - Environmental Indicators

Proximity to emitting facilities / areas of environmental degradation

- – Hazardous waste management facilities
- – Contaminated sites/cleanup sites
- – Solid waste facilities (e.g., landfills)
- – Other emitting facilities (e.g., TRI reporters, other facilities near the site)
- – Combined sewer overflows
- – Wastewater treatment plants
- – Underground storage tanks
- – Large fuel depots
- – Energy generation and supply

Baseline Community Conditions - Health Indicators

- Indicators in 2021 EJ Policy used to assess vulnerable health EJ populations
  - Asthma
  - Blood lead
  - Heart disease/heart attack
  - Low birth weight

- Other health indicators
  - Chronic obstructive pulmonary disease (COPD)
  - Lung and bronchus cancer
  - Premature mortality rate
  - COVID-19

# Baseline Community Conditions - Climate Indicators

- Heat islands / surface temperatures

- Green space and parks

Supplemental Indicators

- Communities may raise additional issues/concerns reflected by these indicators

- Publicly available information may warrant evaluation of these indicators

MassDEP

Supplemental Indicators - Socioeconomic and Demographic
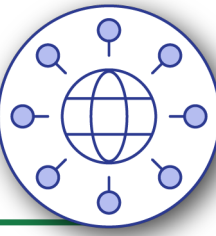
- Age
- Immigrant populations
- Disabled
- Crime rates
- Access to healthcare
- Access to quality food ("food insecurity")
- Housing fuel use

Supplemental Indicators – Environmental, Health, and Climate

Environmental

- Non-cancer risks – neurological hazard index (NATA)

Health

- Mental health

Climate

- Flooding threats (e.g., sea level rise, urban and riverine flooding)
- Land cover (e.g., developed, forested, vegetation, etc.)

MassDEP

Questions

Comparison of Indicators

Comparison of Indicators

Socioeconomic/Demographic/Indicator	CalEnviroScreen	EJSCREEN	MassDEP Air Permitting
Limited English proficiency	●	●	●
Poverty/Low income	●	●	●
Minority		●	●
Unemployment	●	●	●
Educational attainment	●	●	●
Age		●	●*
Disabled Populations			●*
Immigrant populations		●	●*
Social Vulnerability Index			●
Crime rates			●*
Housing cost burden	●		
Housing fuel usage		●	●*
Other variables (gender, pop. density, marital status, place of birth, housing, etc.)		●	

*Supplemental indicator for MassDEP baseline community conditions.

Comparison of Indicators
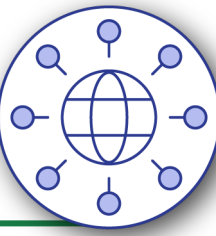
Socioeconomic/Demographic Indicator	CalEnviroScreen	EJSCREEN	MassDEP Air Permitting
Sensitive receptors			
Schools		●	●
Retirement/Long-term Care Residences		●	●
Daycares/Preschools			●
Public and subsidized housing		●	●
Access to resources/health			
Food insecurity		●**	●*
Access to healthcare/Medically underserved		●**	●*
Health insurance		●**	●*
Open space and parks		●	●

*Supplemental indicator for MassDEP baseline community conditions.
**EJSCREEN indicator proposed to be included in future updates to the tool.

Comparison of Indicators

Environmental Indicator	CalEnviroScreen	EJSCREEN	MassDEP Air Permitting
Ozone	●	●	●
PM$_{2.5}$	●	●	●
Diesel PM emissions	●	●	●
Nitrogen dioxide			●
Sulfur dioxide			●
Air toxics/toxic health risks	●	●	●
Permitted air sites		●	●
Traffic volume	●	●	●
Proximity to other sources of mobile air pollution (e.g., airports, bus/train stations, distribution centers)			●

Comparison of Indicators

Environmental Indicator	CalEnviroScreen	EJSCREEN	MassDEP Air Permitting
Hazardous waste facilities (TSDF)	●	●	●
Contaminated sites/cleanup sites	●	●	●
Solid waste facilities (e.g., landfills)	●		●
Pesticide use	●		
Drinking water contamination	●		●
Surface water pollution	●	●	●
Combined sewer overflows			●
Underground Storage tanks	●		●
Large fuel depots			●
Wastewater treatment plants			●
Energy generation and and supply			●

Comparison of Indicators

Health Indicator	CalEnviroScreen	EJSCREEN	MassDEP Air Permitting
Asthma	●	●**	●
Cardiovascular disease/Heart attack	●	●**	●
Low birth weight	●		●
Blood lead rates/risk	●	●	●
Life expectancy /Premature mortality rate		●**	●
COPD			●
Lung and Bronchus Cancer Rates			●
COVID-19			●
Mental health			●*

*Supplemental indicator for MassDEP baseline community conditions.
**EJSCREEN indicator proposed to be included in future updates to the tool.

Comparison of Indicators

Climate/Land Use Indicator	CalEnviroScreen	EJSCREEN	MassDEP Air Permitting
Heat islands/Surface temperatures			●
Land cover (developed, forested, vegetation)			●*
Flooding		●	●*
Wildfire hazard potential		●**	
Drought		●**	

*Supplemental indicator for MassDEP baseline community conditions.
**EJSCREEN indicator proposed to be included in future updates to the tool.

Questions

Next Steps

- Next meeting March 22/23

- Future Topics

  - Which Permits Require CIA

  - How to Assess Indicators

  - How to Analyze Project Impacts

  - Permit decisions

Opportunity for Further Input

- Link below provides an opportunity for further input in a survey format after the stakeholder meetings.

  - https://www.surveymonkey.com/r/QH8XD3J

- Will be posted on Air Quality website: https://www.mass.gov/info-details/cumulative-impact-analysis-in-air-quality-permitting

Further Information

	MassDEP CIA	MEPA Regulation Changes
Comments/ input	massdep.impact@mass.gov	Attend a meeting of MEPA Advisory Committee https://www.mass.gov/info-details/mepa-advisory-committee
Distribution list	Please enter your information at this link: https://massgov.formstack.com/forms/subscribe_cia	Send blank email to subscribe-mepa_reg_review@listserv.state.ma.us to receive ongoing alerts
Website	https://www.mass.gov/info-details/cumulative-impact-analysis-in-air-quality-permitting	http://mass.gov/service-details/information-about-upcoming-regulatory-updates
Survey	https://www.surveymonkey.com/r/QH8XD3J	

Please Take A Few Minutes After the Meeting...

- When you exit the meeting, Zoom will automatically direct you to a short evaluation.

- The evaluation contains 4 questions about the stakeholder meeting.

- All responses are anonymous unless you choose to provide your contact information.

- We look forward to receiving your feedback!