UMASS BOSTON + MAPC +UHI

Climate Change Projections for Greater Boston Communities

MAPC SUB-REGIONAL MEETING
MARCH 21, 2019
Agenda

Introduction
Brainstorm Session
Next Steps

Be sure to sign the sign-in sheet!
HOW

WHAT

WHY

WHO
Greater Boston Research Advisory Group (G-BRAG)

Managed by the School for the Environment at UMass Boston (E. Douglas and P. Kirshen, Joint Principal Investigators), with collaboration from the Urban Harbors Institute and the MAPC, and oversight by a Steering Committee made of a variety of local stakeholders. The project is funded by the Barr Foundation.
Provide Greater Boston Area stakeholders with projections to protect and prepare for climate change-related impacts.
2016 Boston Climate Ready Report

- Extreme Precipitation
- Extreme Temperatures
- Sea Level Rise
- Coastal Storms
2016 Boston Climate Ready Report

The graph illustrates the expected increase in the number of days above 90°F in the future. The likely range of days above 90°F in future years is shown, with data from 1990 as a baseline.

- Days above 100°F
- Days above 90°F

- **20 to 40 days**
- **25 to 90 days** including up to 33 days above 100°F

*Baseline represents historical average from 1971-2000. Upper values from high emissions scenario. Lower values from low emissions scenario.*

Data source: Rossi et al. 2015
Figure 1: Greenhouse Gas Emissions Reductions Impact Future Sea Levels in Boston

Legend:
- Upper bound/max value of analysis
- May be exceeded with probability of 0.1% (most likely)
- Possible range (98% probability)

Data Source: BRAG Report

* Relative sea level rise is the change in sea level resulting from a combination of increases in ocean height and decreases in land surface elevation ("subsidence").
Listen to communities about what worries them and what information they need to build resilient communities. This will be accomplished by meetings and a survey.

Collaborate with scientists to examine peer-reviewed pertinent information to update climate change projections.

Publish the final project report and special interest reports.
Project Schedule

January, 2019: Project Begins
February – April, 2019: Community Outreach
May, 2019: Engage Scientists
Summer, 2019 – 2020: Develop Special Report 1
Mid-2020: Complete Assessment of Updated Climate Change Parameters
Summer, 2020 – 2021: Develop Special Report 2
December, 2021 - 2022: Complete Final Report
Agenda

Introduction

Brainstorm Session

Next Steps
1. **Think**

You will have 4 minutes to write down your answers to the questions! All papers will be collected at the end.

2. **Pair**

You have 12 minutes to share your thoughts with a small group (no more than 5). Prepare to share topics with the rest of the room!

3. **Share**

Each group will share ideas!
# GBRAG Worksheet

**Name (Not Required):** ________________________________  **Email Address (Not Required):** ________________________________

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>Climate Change Impact 1</th>
<th>Needed Information</th>
<th>Climate Change Impact 2</th>
<th>Needed Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EX: Transportation</strong></td>
<td>Flooded Streets</td>
<td>Extreme Precipitation</td>
<td>Road Rutting</td>
<td>Groundwater and Sea Level Elevations</td>
</tr>
</tbody>
</table>


What concerns you about how climate change may impact communities in the Massachusetts where you work and live?

What climate change information and projections would help you address these impacts?

Questions:

- Transportation
- Housing
- Public health
- The economy/business
- Governance
- Environmental resources
- Social justice and equity
- Other

Think
You will have 4 minutes to write down your answers to the questions! All papers will be collected at the end. We appreciate if you write your name on the paper but it is not required.

Pair
You have 12 minutes to share your thoughts with a small group (no more than 5). Prepare to share topics with the rest of the room!

Share
Each group will share ideas!
What concerns you about how climate change may impact communities where you work and live?

What climate change information and projections would help you address these impacts?

Questions:

• Transportation
• Housing
• Public health
• The economy/business
• Governance
• Environmental resources
• Social justice and equity
• Other

Think
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Pair
You have 12 minutes to share your thoughts with a small group (no more than 5). Prepare to share topics with the rest of the room!

Share
Each group will share ideas!

1

2

3
What concerns you about how climate change may impact in the Massachusetts communities where you work and live?

What climate change information and projections would help you address these impacts?

Questions:

• Transportation
• Housing
• Public health
• The economy/business
• Governance
• Environmental resources
• Social justice and equity
• Other

1. Think
   You will have 4 minutes to write down your answers to the questions! All papers will be collected at the end. We appreciate if you write your name on the paper but it is not required.

2. Pair
   You have 12 minutes to share your thoughts with a small group (no more than 5). Prepare to share one topic with the rest of the room!

3. Share
   Each group will share ideas!
Where will climate change impacts affect the communities?

Use the color sticky notes to write anticipated climate change impacts and place it on the map in the locations that will be most affected.

<table>
<thead>
<tr>
<th>Color</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Transportation</td>
</tr>
<tr>
<td>Yellow</td>
<td>Housing</td>
</tr>
<tr>
<td>Pink</td>
<td>Public health/Social justice and equity</td>
</tr>
<tr>
<td>Orange</td>
<td>The economy/Business</td>
</tr>
<tr>
<td>Green</td>
<td>Environmental resources</td>
</tr>
<tr>
<td>Purple</td>
<td>Governance/Other</td>
</tr>
</tbody>
</table>

For example, a climate change impact for TRANSPORTATION could be “road flooding”.

UPCOMING EVENTS

Metro Mayors March 27th (Boston)

MAGIC April 4th (Concord)

North Shore Task Force April 18th (Danvers)
CONTACT US

Website
www.umb.edu/gbrag

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Greater Boston Research Advisory Board

Email
Kimberly.Starbuck@umb.edu
and visit our website to take the survey