

BERDO REVIEW BOARD PUBLIC MEETING

February 12, 2024



BERDO Review Board



Rashida Boyd

Board Member



Stephen Ellis

Board Member



Lovette Jacobs

Board Member



Gail Latimore

Board Member



Lee Matsueda

Board Member



Jack Nelson

Board Member



Matt O'Malley

Board Member

City of Boston Staff



**Diana
Vasquez**

*BERDO Review
Board Manager*



**Dima
Moujahed**

*Carbon Neutrality
Project Manager*



**Darius
Zgripcea Bailey**

BERDO Assistant



**Claudia
Diezmartinez**

*BERDO Policy
Fellow*



**Hannah
Payne**

*Director, Carbon
Neutrality*

Agenda

Today's Meeting



- 1. Approval of Meeting Minutes**
- 2. Overview of New Tools**
 - a. Emissions Calculator*
 - b. Environmental Justice Map Tool*
- 3. Discussion on Equitable Emissions Investment Fund**
 - a. Draft evaluation form*
- 4. Administrative Updates**
- 5. Meeting Adjournment**

Approval of Meeting Minutes

Board votes on approving previous meeting's minutes



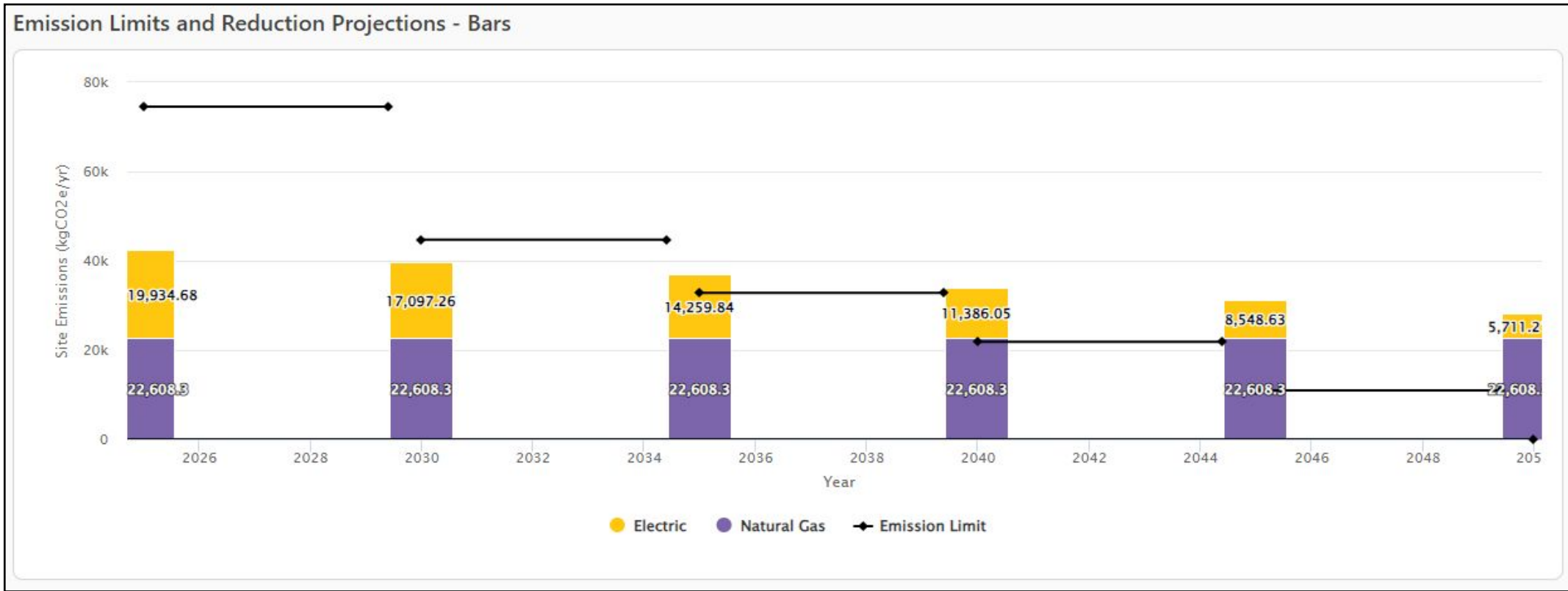
Overview of New Tools

Emissions Calculator and EJ Map Tool

BERDO Emissions Calculator



[BERDO Emissions Calculator](#) is designed to assist building owners in evaluating and understanding their projected emissions and compliance. Check out the accompanying [guidance document](#) for explanations and examples.




berdocalculator.touchstoneiq.com

Environmental Justice Map Tool How-to-Guide



[Link to How-to-Guide](#)

**BERDO HOW-TO-GUIDE:
ENVIRONMENTAL JUSTICE
MAP TOOL**



A guide to use and interpret
BERDO Environmental Justice
Map Tool

Last updated February 2024

BERDO Building Emissions Reduction and Disclosure Ordinance

Table 1. Description of layers in BERDO Environmental Justice Map

Layer	Metric description	Data source
BERDO Buildings	Buildings covered by BERDO. This data is mapped at the parcel level according to the City of Boston's Assessing Department.	City of Boston Assessing Department
Massachusetts Environmental Justice Populations 2020	Neighborhoods of the City of Boston that meet one or more of the definition criteria for "Environmental Justice Populations." This data is mapped at the census tract level. According to the Commonwealth of Massachusetts, an "Environmental Justice Population" is a neighborhood who one or more of the following criteria are true: <ul style="list-style-type: none">Income criterion: the annual median household income is 60% or less of the statewide annual median household income.Minority criterion: minorities make up 40% or more of the population; or minorities make up 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 50% of the statewide annual median household income.Language isolation criterion: 25% or more of household identify as speaking English less than "very well."	U.S. Census Bureau
Asthma Prevalence	Asthma prevalence among adults aged 18 or older. This data is mapped at the census tract level. Asthma prevalence represents the proportion of a population who have experienced asthma in a given time period. It provides a 'snapshot' of a population.	U.S. Census Bureau
Urban Heat Island Intensity (UHII) Index	Urban Heat Island Index (UHII) across the City of Boston. The UHII shows the difference in temperatures experienced during a modeled heat wave. It compares each point of land to the coolest points in the city.	City of Boston
Respiratory Hazard	Air Toxics Respiratory Hazard Index (RH) across the City of Boston. The Hazard Index represents the potential adverse health effects caused by a combination of air pollutants. This data is mapped at the census tract level. A HI of 1 or lower means air toxics are unlikely to cause adverse health effects over a lifetime of exposure. How an HI greater than 1 does not necessarily mean adverse effects are likely. All hazard index values in the City of Boston are 1, but there are different levels of HI across the city.	City of Boston

BERDO Building Emissions Reduction and Disclosure Ordinance

HOW TO INTERPRET EACH MAP LAYER?

The following section includes tips on how to interpret each map layer. We use the neighborhoods of Allston-Brighton to demonstrate how each layer looks in the mapping tool.

LAYER 1: BERDO BUILDINGS






Fig. 2. BERDO Buildings layer.

- Tax parcels containing BERDO Buildings are shown as polygons filled with dashed lines (i.e., , ).
- Areas of Boston without these polygons do not contain BERDO buildings.
- This layer is transparent so it can be overlapped with other map layers.

CITY OF BOSTON

4

Content:

- Describes “layers” or metrics included in the map tool
- Guides users on how to interpret each layer
- Guides users on how to produce the maps required for some Building Portfolio applications and Emissions standard compliance plans

Who can use the map tool?

This tool may be used by building owners, Boston residents, and the general public to identify BERDO buildings located in Environmental Justice communities and exposed to different environmental stressors. Using this tool is required for some Building Portfolios.

Any Building Portfolio containing any of the following ...

- ❑ On-site Campus District Energy Systems or on-site Combined Heat and Power plants that use non-renewable or CO₂e emitting fuels located in Environmental Justice Populations.
- ❑ Industrial or manufacturing buildings located in Environmental Justice Populations.
- ❑ Energy/power station Buildings located in Environmental Justice Populations.
- ❑ A combination of Residential Buildings located in both Environmental Justice Populations and non Environmental Justice Populations.
- ❑ A combination of Deed-Restricted Residential Buildings and other Residential Buildings, regardless of location.

... will be required to produce a Building Portfolio map at three key milestones:

- ❑ When submitting an application to request the approval of the Building Portfolio.
- ❑ When submitting your Building Portfolio's first Emissions standard compliance plan.
- ❑ When submitting any subsequent update of your Building Portfolio's Emissions standard compliance plan.

What metrics are included in the map tool?

- The BERDO Environmental Justice Map includes five “layers”.
- A *layer* is a slice of the map that contains information from a specific metric or collection of data. When you turn on a layer, the map will show a visual representation of a specific metric.
- For example, the “BERDO buildings” layer maps the location of all tax parcels that contain buildings covered by BERDO (example on the right).



What metrics are included in the map tool?



BERDO Buildings



Layer name

BERDO Buildings

Metric description

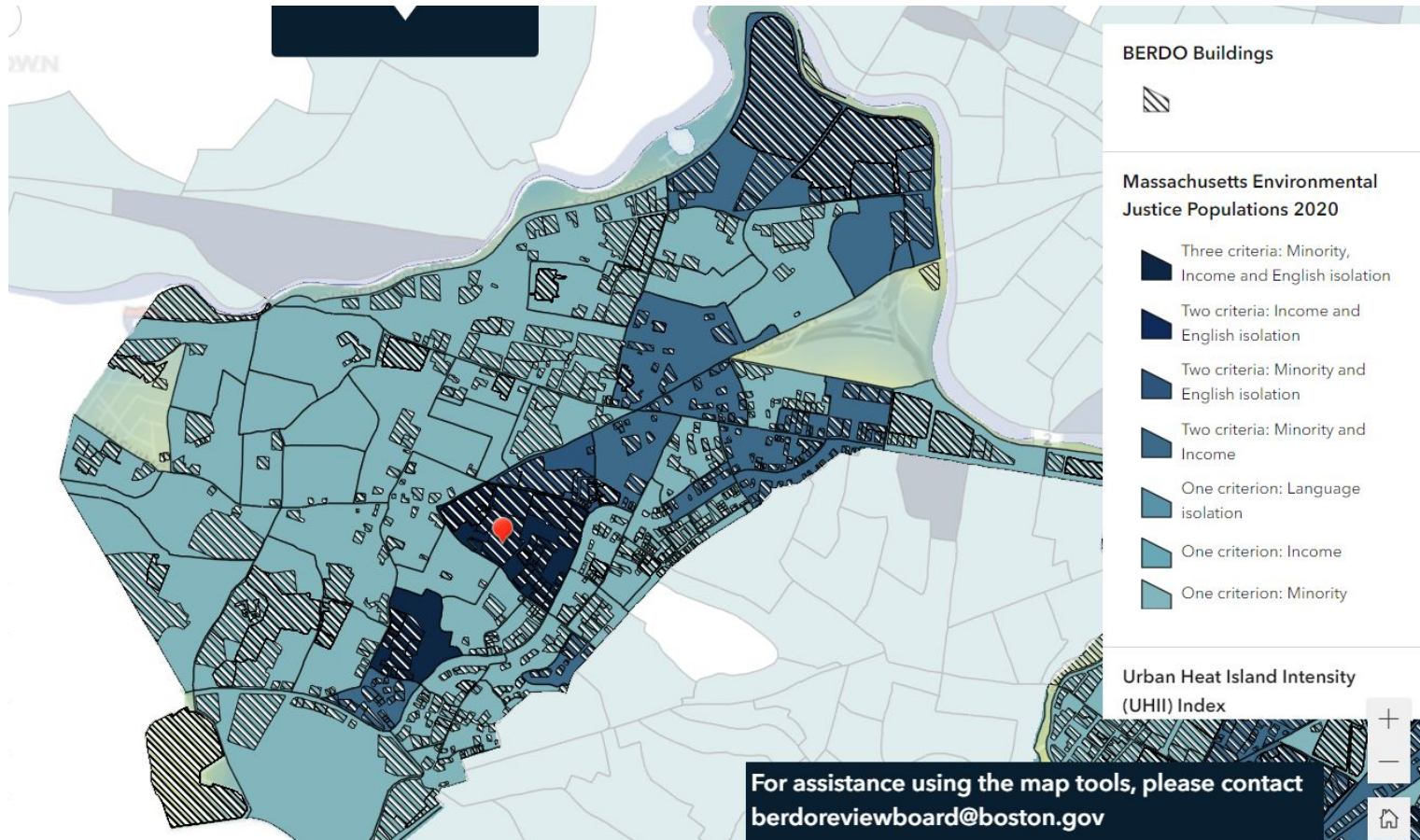
Buildings covered by BERDO. This data is mapped at the tax parcel level according to the City of Boston's Assessing Records.

Data source

City of Boston, BERDO Covered Buildings List

What metrics are included in the map tool?

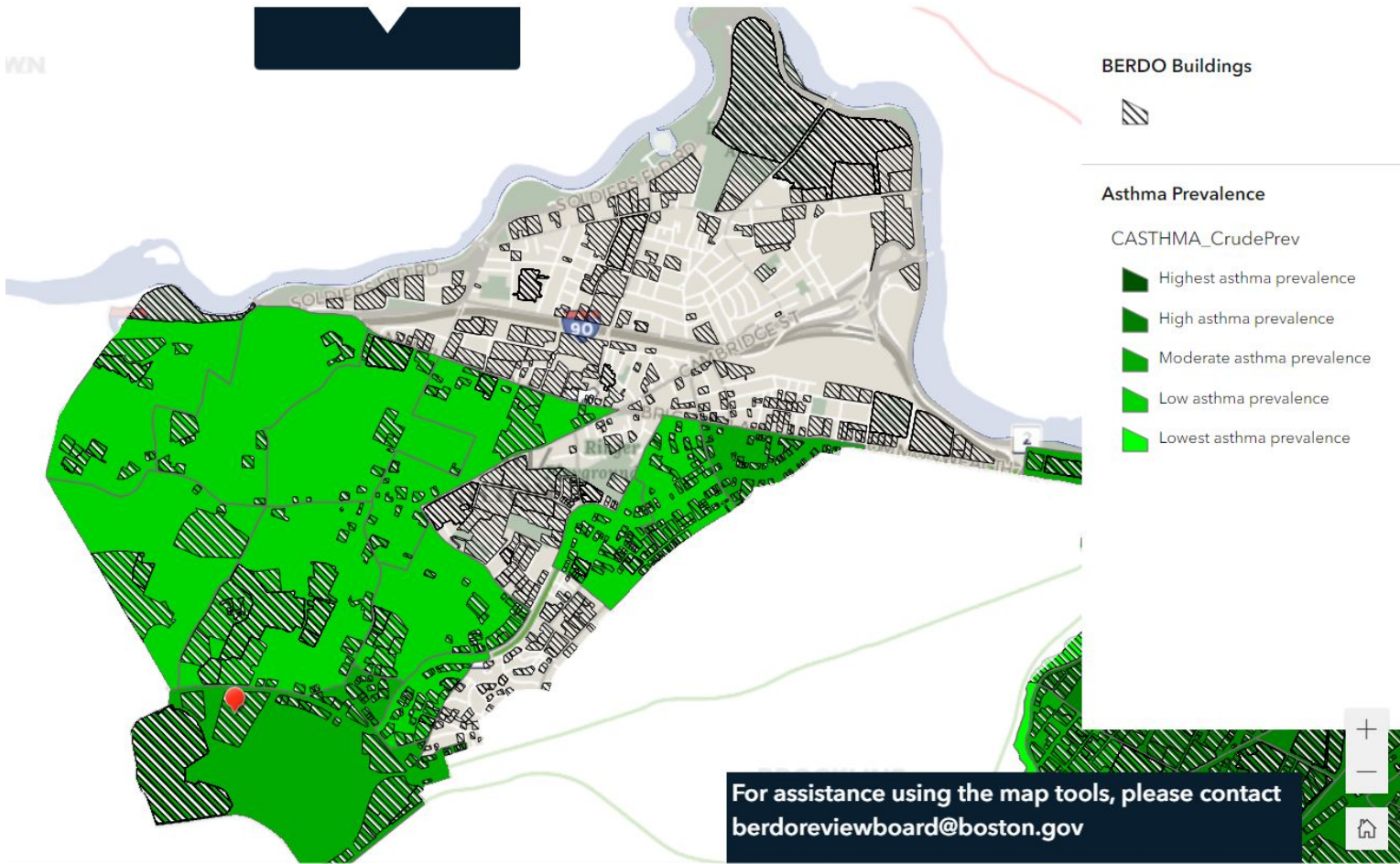
Massachusetts Environmental Justice Populations 2020



Layer name
Massachusetts Environmental Justice Populations 2020
Metric description
Neighborhoods of the City of Boston that meet one or more of the definition criteria for “Environmental Justice Populations”. This data is mapped at the census tract level.
Definition criteria include income, minority populations, and language isolation.
Data source
Massachusetts Executive Office of Energy and Environmental Affairs

What metrics are included in the map tool?

Asthma Prevalence



Layer name
Asthma Prevalence
Metric description
Asthma prevalence among adults aged 18 or older. This data is mapped at the census tract level.
Asthma prevalence represents the proportion of a population who have experienced asthma in a given time period. It provides a 'snapshot' of a population.
Data source
Centers for Disease Control and Prevention, U.S. EPA Environmental Justice Screening and Mapping Tool

What metrics are included in the map tool?

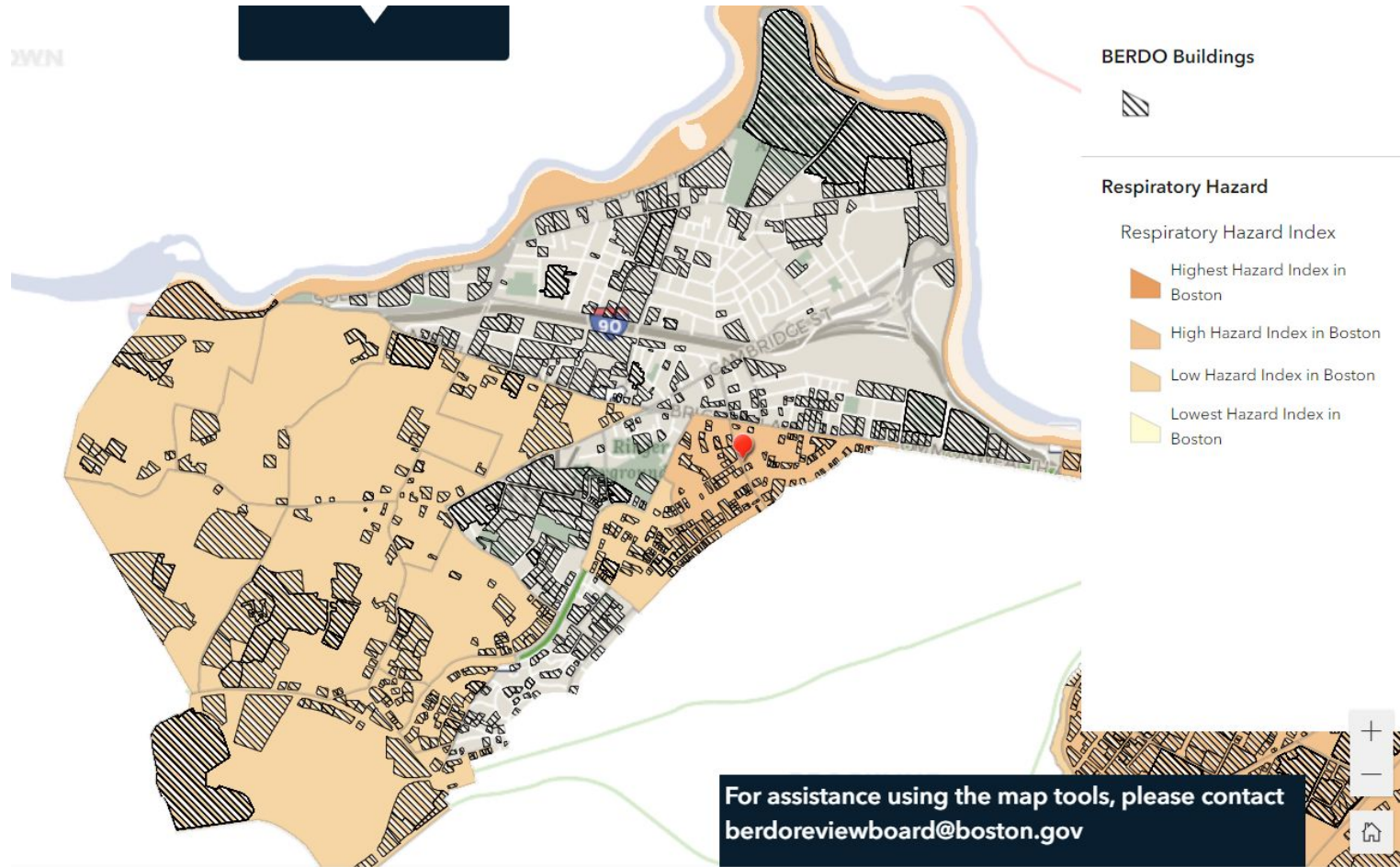
Urban Heat Island Intensity (UHII) Index



Layer name
Urban Heat Island Intensity (UHII) Index
Metric description
Urban Heat Island Index (UHII) across the City of Boston. The UHII shows the difference in temperatures experienced across Boston during a modeled heat wave. It compares each point of Boston to the coolest points in the city.
Data source
City of Boston, Climate Ready Boston Map Explorer

What metrics are included in the map tool?

Respiratory Hazard



Layer name
Respiratory Hazard
Metric description
Air Toxics Respiratory Hazard Index (HI) across the City of Boston. The HI represents the potential adverse health effects caused by a combination of air pollutants. This data is mapped at the census tract level.
A $HI \leq 1$ means air toxics are unlikely to cause adverse noncancer health effects over a lifetime of exposure. All HI values in Boston are below 1, but there are different levels of HI across the city.
Data source
Centers for Disease Control and Prevention, U.S. EPA Environmental Justice Screening and Mapping Tool

Environmental Justice Mapping Tool Demo



CITY of BOSTON BERDO ENVIRONMENTAL JUSTICE MAP TOOL

BERDO ID or Address

mask_boston

Massachusetts Environmental Justice Populations 2020

- Three criteria: Minority, Income and English isolation
- Two criteria: Income and English isolation
- Two criteria: Minority and English isolation
- Two criteria: Minority and Income
- One criterion: Language isolation
- One criterion: Income
- One criterion: Minority

mask_boston

BERDO Buildings

Massachusetts Environmental Justice Populations 2020

Asthma Prevalence

Urban Heat Island Intensity (UHII) Index

Respiratory Hazard

BERDO Buildings

Massachusetts Environmental Justice Populations 2020

Asthma Prevalence

Urban Heat Island Intensity (UHII) Index

Respiratory Hazard

The background of the slide is a dark blue wireframe illustration of a city skyline, viewed from an elevated perspective. The buildings are represented by white and light blue lines, creating a complex, geometric pattern. A semi-transparent dark blue horizontal band runs across the middle of the image, serving as a backdrop for the text.

Board Q&A

Board Members may discuss and ask staff questions

The background of the slide is a dark blue aerial wireframe illustration of a city, showing various building footprints, streets, and a central circular plaza. The lines are white and light blue, creating a technical, architectural feel.

Equitable Emissions Investment Fund

Evaluation form and discussion

Equitable Emissions Investment Fund

From [BERDO Ordinance](#)

Purpose

“Money in the Fund shall be expended for the support, implementation, and administration **of local building carbon abatement projects** that benefit the City of Boston’s emissions reduction goals. Fund expenditures shall **prioritize projects that benefit Environmental Justice Populations** and populations disproportionately affected by air pollution, including by improving or promoting:

- Low-income affordable housing and housing where tenants are at risk of displacement and in need of rent stabilization
- Local air quality improvement;
- Indoor environmental quality and health for building tenants
- Economic inclusion, training, and technical assistance for Minority, Women, and Disadvantaged Business Enterprises (MWDBE) and cooperative contractors
- Equitable workforce development training programs for residents who have been disproportionately impacted by the effects of climate change
- Projects with community ownership of housing and renewable energy infrastructure
- Reduced energy burdens
- Any further environmental initiatives.”

Equitable Emissions Investment Fund



- Seeded with \$3.5 million
- Alternative Compliance Payments (ACPs) will go directly into the Fund
- The BERDO Review Board will review project proposals, make recommendations for expenditures, and set conditions for expenditures.



BERDO buildings with emissions over their limits pay ACPs and/or penalties to comply with BERDO



Equitable Emissions Investment Fund collects money



ACPs and penalties are invested in local building carbon reduction projects approved by the Review Board

Equitable Emissions Investment Fund

From [BERDO Regulations](#)



Eligibility

“Any Building Owner or resident located in the City of Boston, or entity acting on behalf of Boston buildings, is eligible to receive funding from the Fund to evaluate, design, implement, support and/or administer projects that produce direct Emissions reductions from Energy use in buildings located in the City of Boston.”

Funding Decisions

*“The Review Board shall develop, and may periodically update, a project review form that incorporates the criteria in Section XVII.c.ii. **The Review Board will present the project review form for comment at a public hearing.** The Review Board shall use the project review form to inform funding decisions.”*

Description of Each Criteria



Criteria	Description
Emissions reductions	The expected timeline and scale of direct Emissions reductions produced by the proposed project. Review Board members may consider metrics such as expected absolute Emissions reductions or expected Emissions reductions achieved per dollar spent.
Benefits to affordable housing	The expected timeline and scale of direct benefits provided to low-income residents or residents of affordable housing, including, but not limited to, whether projects will support the development or protection of low-income or affordable housing.
Benefits to tenants	The expected timeline and scale of direct benefits provided to low-income residents or residents of affordable housing, including, but not limited to, whether projects include anti-displacement measures, such as rent stabilization, rent assistance, and/or relocation assistance.
Benefits to labor and workforce development	The expected timeline and scale of benefits to local labor and workforce development, including equitable employment and contracting standards, living wage standards, and the hiring of local contractors, cooperative contractors, Minority, Women, and Disadvantaged Business Enterprises, and/or trainees or recent graduates from local workforce development programs.
Benefits to outdoor air quality	The expected timeline and scale of direct emissions reductions of criteria air pollutants, including carbon monoxide, lead, ground-level ozone, nitrogen dioxide, particulate matter, and sulfur dioxide.
Benefits to indoor air quality and quality of life	The expected timeline and scale of improvements related to indoor air quality, thermal comfort, and/or reduced energy bills for building occupants produced by the proposed project.
Climate resilience benefits	The expected timeline and scale of climate resilience benefits produced by the project, including heat resilience, energy resilience, and coastal and stormwater flood management.
Energy justice benefits	The expected timeline and scale of benefits related to reducing Energy bills for building occupants and/or contributing to community ownership or control over Energy infrastructure.
Other benefits	Other benefits presented by the applicant and evaluated at the discretion of the Review Board. This may include the proposed project's replicability, scalability, uniqueness, urgency and timeliness.

Draft Evaluation Form

Criteria	Highly Advantageous	Advantageous	Not Advantageous	Not Present
Emissions reductions	<i>Building emissions reductions are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Building Emissions reductions are mentioned, but timeline and scale are unclear or results are moderate emissions reductions.</i>	<i>Building emissions reductions are limited.</i>	<i>Building emissions reductions are not mentioned.</i>
Benefits to affordable housing	<i>Affordable housing benefits are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Affordable housing benefits are mentioned, but timeline and scale are unclear or are not a main focus.</i>	<i>Affordable housing benefits are limited.</i>	<i>Affordable housing benefits are not mentioned.</i>
Benefits to tenants	<i>Tenant protections are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Tenant protections are mentioned, but timeline and scale are unclear or are not a main focus.</i>	<i>Tenant protections are limited.</i>	<i>Tenant protections are not mentioned.</i>
Benefits to labor and workforce development	<i>Labor benefits and workforce development benefits are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Labor benefits and workforce development benefits are mentioned, but timeline and scale are unclear or not a main focus.</i>	<i>Labor benefits and workforce development are limited.</i>	<i>Labor benefits and workforce development are not mentioned.</i>
Benefits to outdoor air quality	<i>Outdoor air quality benefits are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Outdoor air quality benefits are mentioned, but timeline and scale are unclear or not a main focus.</i>	<i>Outdoor air quality benefits are limited.</i>	<i>Outdoor air quality benefits are not mentioned.</i>
Benefits to indoor air quality and quality of life	<i>Benefits to indoor air quality and quality of life are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Benefits to indoor air quality and quality of life are mentioned, but timeline and scale are unclear or not a main focus.</i>	<i>Benefits to indoor air quality and quality of life are limited.</i>	<i>Benefits to indoor air quality and quality of life are not mentioned.</i>
Climate resilience benefits	<i>Climate resilience benefits are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Climate resilience benefits are mentioned, but timeline and scale are unclear or not a main focus.</i>	<i>Climate resilience benefits are limited.</i>	<i>Climate resilience benefits are not mentioned.</i>
Energy justice benefits	<i>Energy justice benefits are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Energy justice benefits are mentioned, but timeline and scale are unclear or not a main focus.</i>	<i>Energy justice benefits are limited.</i>	<i>Energy justice benefits are not mentioned.</i>
Other benefits	<i>Other benefits included in the proposal are clearly defined, expected timeline and scale are clearly outlined, and are realistic.</i>	<i>Other benefits are included in the proposal, but timeline and scale are unclear or not a main focus.</i>	<i>Other benefits included in the proposal are limited.</i>	<i>Other benefits are not mentioned.</i>

EEIF Project Evaluation Form

Draft



Draft Evaluation Form			
Highly Advantageous	Advantageous	Not Advantageous	Not Present

Qualitative Approach:

- *Allows for contextualization of information provided by applicants. A quantitative metric does not necessarily capture “why” and “how” of a proposed project.*
- *Better at capturing intangible aspects that may be difficult to quantify, i.e. community impact, social value, etc.*
- *Flexible and adaptable to new information that could be presented.*

Proposed Process

Evaluating EEIF Submissions



After submission period closes

- Each Board Member will receive an individual packet including
 - *Summary and full applications submitted*
 - *Personal spreadsheet with corresponding evaluation criteria and column for personal notes*
- At a subsequent meeting, Board Members will discuss each project based on personal notes
 - *Vote on funding decisions*

Next Steps

If Board agrees, we will move forward with:

- Publicly sharing the project evaluation form for public input and Board feedback.
- Present revised updates at an upcoming meeting in March.

The background of the slide is a dark blue wireframe illustration of a city skyline, viewed from an elevated perspective. The buildings are represented by white and light blue lines, creating a complex geometric pattern. A semi-transparent dark blue horizontal band runs across the middle of the image, serving as a backdrop for the text.

Board Q&A

Board Members may discuss and ask staff questions

The background of the slide is a dark blue aerial view of a city, rendered as a white wireframe or line-art style. The buildings are represented by simple rectangular outlines, creating a dense urban grid. The perspective is from a high angle, looking down on the city.

Public Comment Period

Members of the public may provide public comment

The background of the slide is a dark blue wireframe illustration of a city skyline, viewed from an elevated perspective. The buildings are represented by white and light blue outlines, creating a complex geometric pattern. A semi-transparent dark blue horizontal band runs across the middle of the image, serving as a backdrop for the text.

Additional Administrative Updates

Staff presents administrative updates

Key Dates

For building owners



Key BERDO Deadlines for Building Owners

May 15	Reporting deadline for 2023 energy and water usage.
July 1*	Long-term Hardship Compliance Plan application deadline.
September 1	Building Portfolio application deadline.
	Individual Compliance Schedule application deadline.
October 1**	Short-term Hardship Compliance Plan application deadline.

*After 2024, long-term Hardship Compliance Plans are due **9 months before** the first year the HCP would be used.
Short-term Hardship Compliance Plans are due **3 months before the first year the HCP would be used.

Update on Events

Completed

- Webinars on **Emissions Compliance** (January 3), **Building Portfolios** (January 17), and **Individual Compliance Schedules** (January 31)
 - Slides and recording available at boston.gov/berdo
- Green Ribbon Commission's **Cultural Institutions Group Workshop** on January 19
- Final **Community Advisory Group** meeting on January 25
- **Commercial Real Estate Working Group** Kick Off on January 31
 - [Minutes and Slide Deck available online](#)
- Session with **A Better City members** on February 5

Upcoming

- **Webinar Series - held on Wednesdays from 3-4:30 pm**
 - Hardship Compliance Plans on February 14: [Registration live](#).
 - Renewable Energy on February 28: [Registration live](#).
- **Community Conversation Follow Up** on February 15
- **Healthcare Institutions Working Group** Kick Off on February 21

BERDO Resources



Emissions Planning Tool

- [BERDO Emissions Calculator](#)

Free Assistance in Completing BERDO Reporting and Third-Party Verification

- *Extra assistance to complete their BERDO reporting. Funding is limited and will only be provided to building owners who are self-managed residential buildings, small non-profit owners, or commercial buildings with small business tenants.*
- [Application Form](#) - Second round due March 15!

One-on-one BERDO Building Consultation

- *A member of the BERDO team will help you understand your current emissions and compliance options.*
- [Sign-up Form](#)

Weekly BERDO Emissions Planning Office Hours

- *Weekly office hours on Fridays at 10:00 am via Zoom. Members of the BERDO team will be available to answer questions about BERDO emissions estimates and potential compliance strategies.*
- [Sign-up Form](#)

Review Board Members

Update and open position

New Chair of the Environmental Justice, Resiliency, and Parks City Council Committee is **Councilor Gabriela “Gigi” Coletta**. A seat is reserved for this Chair or their designee.



City Councilor,
District 1

Open position on the Review Board **must be nominated by a qualified community-based organization.**



[Nomination form open now](#)



Community Based Organizations

Have received notification that [nomination form](#) is open



- Action 4 Equity
- Alternatives for Community & Environment
- Allston Brighton CDC
- Allston Brighton Health Collaborative
- Boston Climate Action Network
- Chinese Progressive Association
- Codman Square NDC
- Community Labor United
- Dominican Development Center
- Fenway CDC
- GreenRoots
- Jamaica Plain NDC
- New England United 4 Justice
- Neighborhood Association of the Back Bay
- Piers Park Sailing Center
- Reclaim Roxbury

Adjourn

Thank you for your participation!

