



Climate Change, Environmental Justice & Public Health

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Massachusetts Health Officers Association Seminar
March 5, 6 & 17, 2026
Virtual & In-Person



Today's Discussion

- MassDEP Mission Statement
- Climate Change Drivers and Public Health Impacts
- MassDEP Environmental Justice Requirements
- Definition of Environmental Justice
- Environmental Justice Populations
 - List of Massachusetts Municipalities with EJ Block Groups
- EEA EJ Viewer Mapping Tool
- The Importance of Language Access
 - Languages Spoken Mapping Tool
- Community Engagement & Public Involvement
 - MassDEP EJ Staff (Amy Sullivan)
- Environmental Justice & Climate Change

MassDEP Mission Statement [2021]



MassDEP's mission is to protect and enhance the Commonwealth's natural resources - **air**, **water**, and **land** - to provide for the **health, safety**, and **welfare of all people**, and to ensure a **clean** and **safe** environment for future generations.

In carrying out this mission MassDEP commits to address and **advance environmental** justice and **equity** for all people of the Commonwealth, to provide **meaningful, inclusive** opportunities for people to **participate** in agency decisions that affect their lives; and to ensure a diverse workforce that reflects the communities we serve.

Fuel Combustion Drives Climate Change



Statewide Gross Greenhouse Gas (GHG) Emissions in 2022:
68.8 million metric tons of CO₂ equivalent (MMTCO₂e)



Progress To-Date:
26% reduction in statewide gross emissions since 1990

Additional 2022 Emission Data
Natural & working lands: 7.0 MMTCO₂e *net removal*
Biogenic combustion emissions: 5.2 MMTCO₂e

Buildings includes residential, commercial, and industrial fuel combustion
Non-Energy includes natural gas systems, industrial processes, agriculture, and waste

Mount Sugarloaf State Reservation

*2022 is the most recent full dataset of MassDEP GHG inventory, data will be updated as it is made available

Fossil Fuels & Health Impacts

• Direct Health Impacts From Fuel Combustion

- Poor Air Quality (Outdoor & Indoor): NO_x, VOCs, N₂O, SO₂, Particulate Matter, Soot
 - Cardiovascular Disease
 - Respiratory Illness
 - Neurological Impacts
 - Cancer
 - Eye, Nose, Throat, and Skin Irritation
 - Premature Death
- Toxics: Benzene, Formaldehyde, Mercaptan
- Carbon Monoxide Poisoning
- Health & Safety risks from fires and explosions

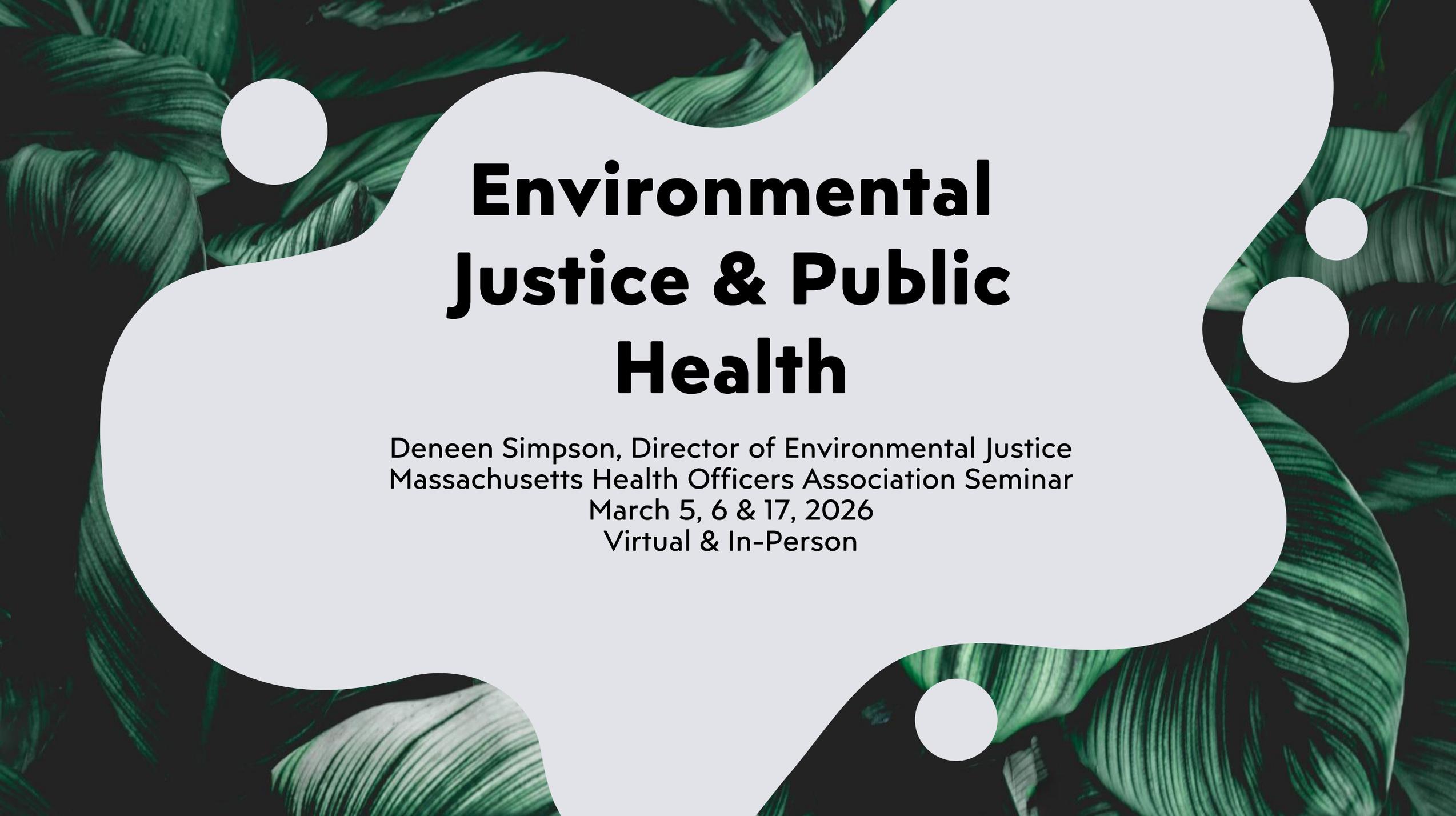


Photo by Taunton Fire Department

Climate Change & Health Impacts

- More extreme heat waves, cold snaps, and storms; exposure risks for outdoor workers, most vulnerable populations, those with underlying medical conditions
- Tick and Mosquito-Borne Illnesses:
 - Lyme, Anaplasmosis, Babesiosis, Ehrlichiosis, Powassan, Rocky Mountain Spotted Fever, EEE
- Dramatic swings between flooding and drought conditions
 - Health concerns from water contamination
 - Exacerbating agricultural production & food insecurity
- Wildfires—now appearing regularly in New England too!

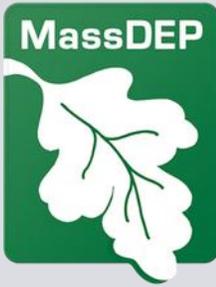




Environmental Justice & Public Health

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Environmental Justice Requirements



Federal

- Title VI - The Civil Rights Act of 1964

State

- S.9 - An Act Creating A Next Generation Roadmap for the Massachusetts Climate Policy Act [2021]

Policy

- Executive Office of Energy & Environmental Affairs EJ Policy [2021]

Executive Orders

- Promoting Access to Gov't Services and Information by Identifying and Minimizing Language Access Barriers - Executive Order #615 [2023]
- Environmental Justice Executive Order #552 [2014]
- A&F Bulletin #16 - Language Access Policy and Guidelines [2012]



Definition of Environmental Justice

Environmental justice is based on the principle that all people have a right to be protected from environmental hazards and to live in and enjoy a clean and healthful environment regardless of race, color, national origin, income or English language proficiency.

Environmental justice is the equal protection and meaningful involvement of all people and communities with respect to the development, implementation, and enforcement of energy, climate change, and environmental laws, regulations, and policies and the equitable distribution of energy and environmental benefits and burdens.

Environmental Justice Population Definition

- Minorities comprise 40% or more of the population.
- 25% or more of households lack English proficiency.
- The annual median household income is not more than 65% of the statewide annual median household income. [2024 American Communities Survey - Massachusetts median annual income approx., \$104,828].
- Minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income.

Secretary's designation - for neighborhood that does not meet the above criteria, but a geographic portion of that neighborhood meets at least 1 criterion, the secretary may designate that geographic portion as an environmental justice population of at least 10 residents of the geographic portion of that neighborhood meeting any such criteria.



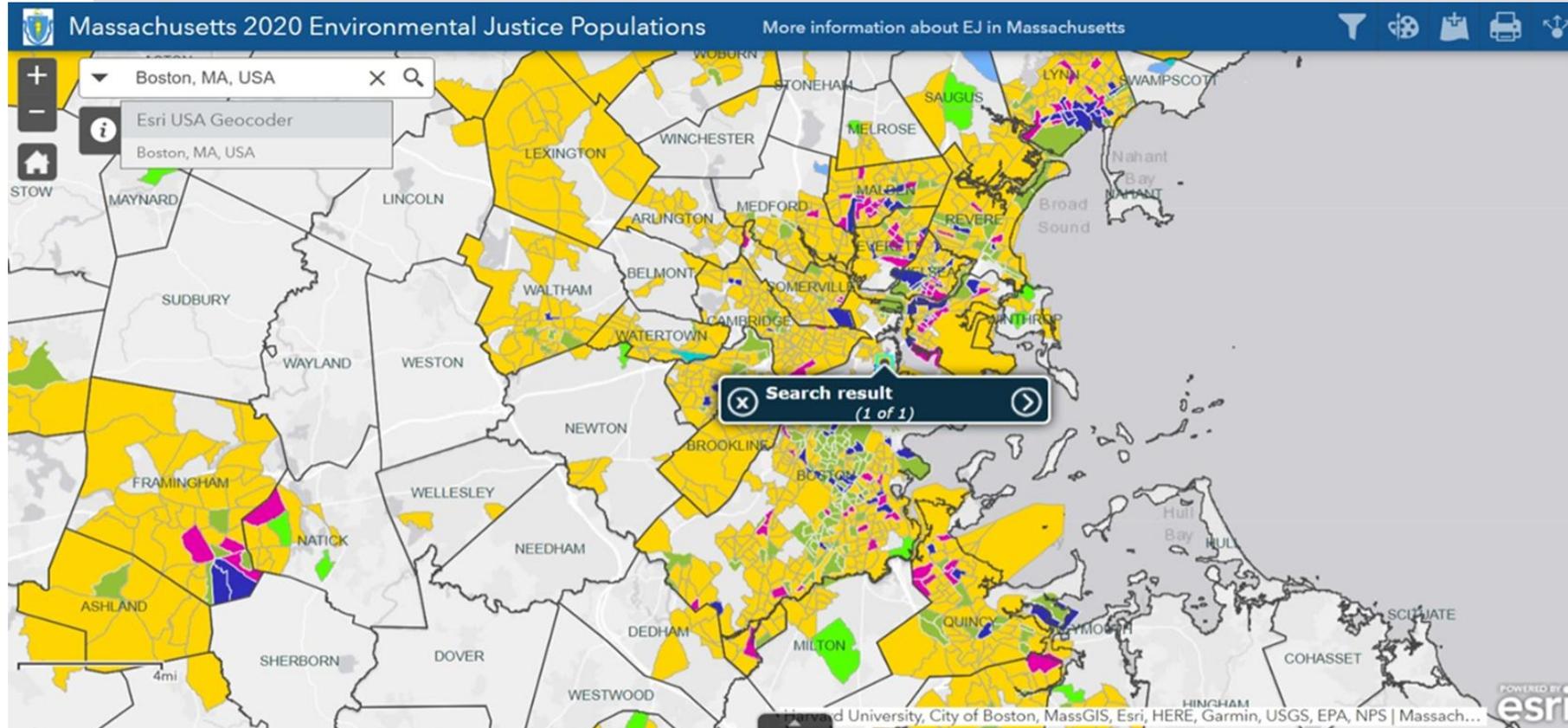
List of 2020 Massachusetts Municipalities with EJ Block Groups [Updated Nov. 2022]

2020 Environmental Justice Populations

Updated Nov. 2022

Municipality	EJ criteria	Number of EJ block groups	Total number of block groups	Percent of EJ block groups	Population in EJ block groups	Total population	Percent of population in EJ RGs
Acton	M	3	16	18.8	5621	24021	23.4
Acushnet	I	1	6	16.7	1166	10559	11.0
Adams	I	6	8	75.0	6761	8166	82.8
Agawam	I	2	17	11.8	2484	28692	8.7
Amesbury	I	2	14	14.3	2701	17366	15.6
Amherst	MI	19	22	86.4	35670	39263	90.8
Andover	M	1	22	4.5	2013	36569	5.5
Aquinnah	M	1	1	100.0	439	439	100.0
Arlington	M	17	45	37.8	19823	46308	42.8
Ashland	MI	9	9	100.0	18832	18832	100.0
Athol	I	3	8	37.5	4460	11945	37.3
Attleboro	MI	12	30	40.0	17292	46461	37.2
Auburn	I	1	14	7.1	948	16889	5.6
Avon	M	4	4	100.0	4777	4777	100.0
Ayer	MI	4	7	57.1	3806	8479	44.9
Barnstable	MIE	12	38	31.6	15825	48916	32.4
Becket	I	1	2	50.0	1199	1931	62.1
Bedford	M	1	11	9.1	103	14383	0.7
Bellingham	MI	2	10	20.0	3002	16945	17.7
Belmont	M	3	25	12.0	4470	27295	16.4
Beverly	MI	10	31	32.3	12385	42670	29.0
Billerica	M	8	29	27.6	11917	42119	28.3
Blackstone	I	1	5	20.0	1166	9208	12.7
Boston	MIE	462	581	79.5	571192	676453	84.4
Bourne	MI	3	16	18.8	2106	20460	10.3
Boxborough	M	3	3	100.0	5506	5506	100.0
Braintree	MIE	22	27	81.5	31552	39143	80.6
Brewster	I	1	9	11.1	503	10318	4.9
Bridgewater	MI	3	14	21.4	6710	28633	23.4
Brockton	MIE	73	73	100.0	105643	105643	100.0
Brookfield	I	1	3	33.3	865	3439	25.2
Brookline	MIE	42	43	97.7	61557	62414	98.6
Buckland	I	1	2	50.0	892	1816	49.1
Burlington	M	9	17	52.9	14469	26377	54.9
Cambridge	MIE	80	87	92.0	112028	118403	94.6
Canton	M	7	13	53.8	11662	22430	52.0
Carver	I	2	8	25.0	3137	11645	26.9
Charlton	I	2	2	100.0	2080	2080	100.0

Executive Office of Energy & Environmental Affairs EJ Viewer Mapping Tool



[Environmental Justice Populations in Massachusetts](#)

EJ Viewer Mapping Tool Legend

-  Minority: the block group minority population is $\geq 40\%$, or the block group minority population is $\geq 25\%$ and the median household income of the municipality is $\leq 150\%$ of the Massachusetts median household income
-  Income: at least 25% of households have a median household income 65% or less than the state median household income
-  Language isolation: 25% or more of households do not include anyone older than 14 who speaks English very well
-  Minority and Income
-  Minority and English isolation
-  Income and English isolation
-  Minority, Income and English isolation

Language Access

The Purpose & Goal of Language Access:

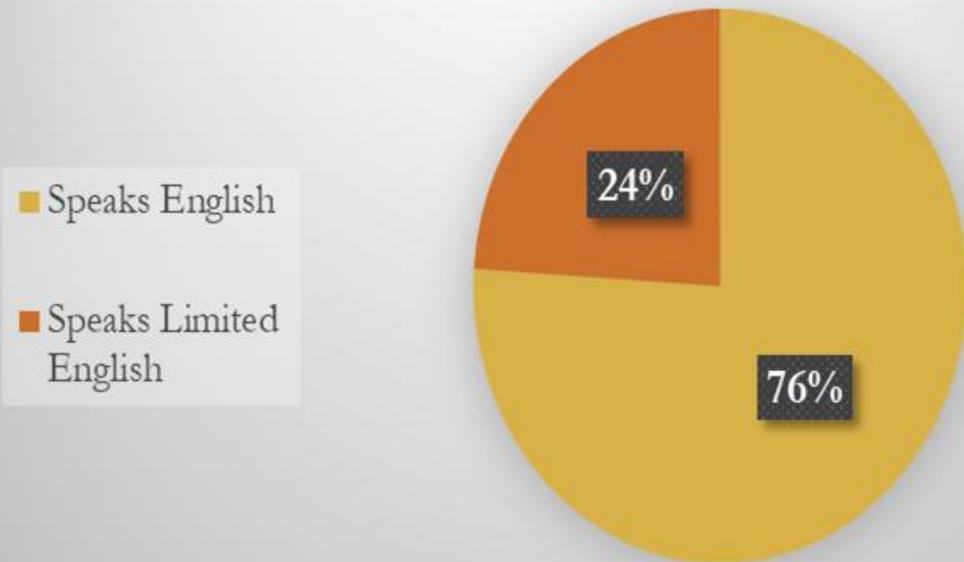
“Providing language access—whether written or spoken—removes barriers that prevent people with limited English proficiency from receiving important information they otherwise wouldn’t understand without an interpreter or translation.”

LANGUAGE BARRIER



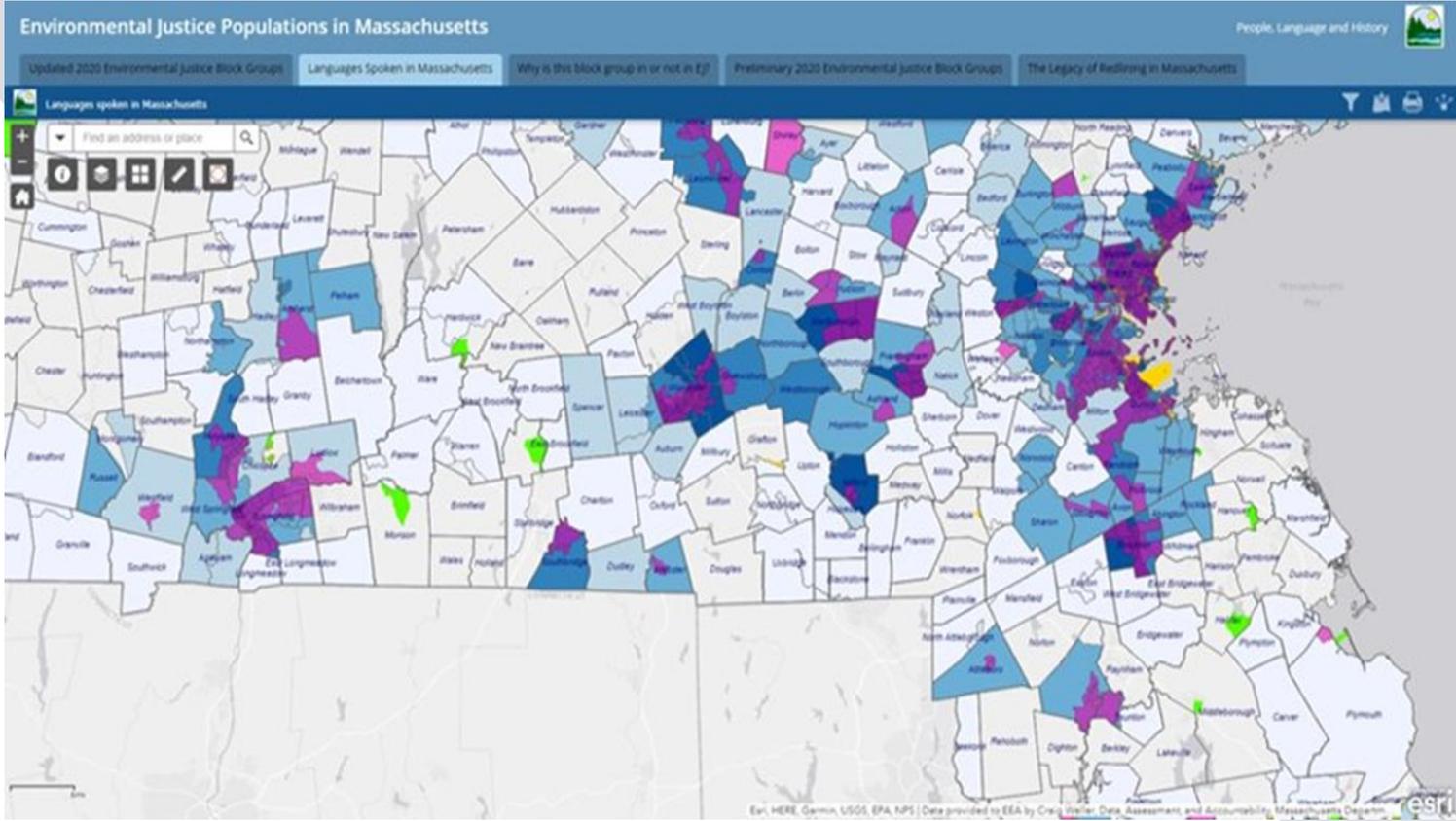
Why is Language Access Important

Household Language Spoken in MA



- Language Access is a service that provides the ability for individuals with limited English proficiency to effectively communicate and access information, services, and opportunities in their preferred language.
- Language access is important in both written and spoken communication.
- **More than 20% of households throughout Massachusetts primary language is a language other than English.**

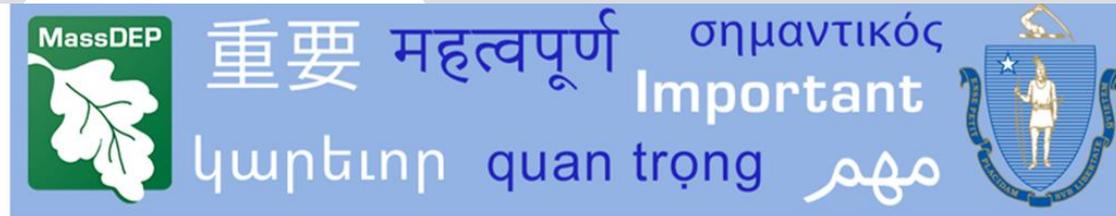
Languages Spoken Map Application



[Languages spoken in Massachusetts](#)



Communication Document



Massachusetts Department of Environmental Protection | 100 Cambridge Street 9th Floor, Boston, MA 02114

Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el [Director](#) de Justicia Ambiental de [MassDEP](#) ([MassDEP's Director of Environmental Justice](#)) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmanal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះអាស្រ័យសំខាន់



Language Access Tips

- If unsure of languages spoken in a community - check the school department website - what languages are documents proactively translated into and available online.
- Libraries and librarians are a great resource - library patrons - libraries often offer ESL classes.
- Use the languages spoken map application - good starting point.
- Connect with community-based organizations, leaders, faith-based leaders,
- Look at the different businesses in your community, and
- MassDEP is always a resource.

Community Engagement & Public Involvement Tips

- Listen to the community about matters that may impact them.
- Seek input from community members to share their lived experiences.
- Ensure ample time for community to participate and/or attend matters in the community.
- Ask for input from community about locations they frequent where notices/announcements can be placed.
 - In-Person meetings - should be scheduled with input from community - due to the current state of the country.
- Build relationships and become familiar with organizations, advocacy groups in the community that can support or assist with outreach.
- Be proactive with engagement/outreach specifically when drafting information, ensure it is written in plain language and if language access is present or suspected - translate document(s).



Climate Change Impacts on EJ Populations

• **Low income, limited English Proficiency (LEP), and minority communities are more likely to live in proximity to polluting facilities with limited or no access to green space.**

- Pollution emitting facilities
- Solid waste transfer stations,
- Diesel truck emissions,
- Concerns of poor air quality.

• **Climate Change**

- Vulnerability to flooding, need to be prepared for and become resilient.
- Lack of Tree Canopy.
- Lack of Green space.
- Impervious Surfaces resulting in Heat Islands
 - Pavement
 - Asphalt

Climate Change Impacts on EJ Populations (cont'd)

- **Rising temperatures in communities already experiencing extreme heat days.**
 - Extreme Weather Events.
 - Sea level rise.
 - Drought.
 - Flooding.
- **Most defined EJ Populations are historically overburdened and underserved.**
 - **Health disparities - Vulnerable Health EJ Populations as written in the 2021 EEA EJ Policy.**
 - High rates of childhood asthma.
 - Low Birth Weight.
 - Elevated childhood blood lead levels.
 - Hospitalizations for heart issues.

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Final Thoughts / Closing Remarks

- Know your community – i.e., demographics, non-English languages spoken, community leaders and advocacy groups.
 - Practice authentic public involvement.
 - Listen & Learn from communities.
 - Communicate / engage with advocacy groups and community leaders.
 - They can provide support with outreach and engagement activities.
 - Contact your EJ regional staff for guidance / assistance.
 - When sharing information – plain language is helpful.
 - Summarize information in a digestible format and easily understood terms.
 - Use images – they are universal.
 - Know your audience – layperson, subject matter experts, community members, etc.
 - Meet People and Communities Where They Are!!!!



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Thank You For Your Time,
Your Interest and...

A top-down view of a desk setup. In the center is a white spiral-bound notebook with the text "THANK YOU FOR YOUR ATTENTION" printed on it. The words "THANK YOU" and "FOR YOUR" are in black, and "ATTENTION" is in red. To the left of the notebook are a pair of gold-rimmed glasses. To the right is a silver and black pen. In the bottom left corner is a small white pot containing a green succulent plant. The desk surface is light-colored wood grain.

**THANK YOU
FOR YOUR
ATTENTION**