



February 6, 2024

U.S. Environmental Protection Agency
Region 1
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Boston, MA 02109-3912

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Re: Comments on Proposed Approval and Promulgation of Air Quality Implementation Plans; Massachusetts; Regional Haze State Implementation Plan for the Second Implementation Period [EPA Docket No. EPA-R01-OAR-2023-0185]

The National Parks Conservation Association, Sierra Club, Appalachian Mountain Club, and the Coalition to Protect America's National Parks (collectively, the Conservation Groups) submit the following comments on the Environmental Protection Agency's (EPA) proposal to approve Massachusetts' regional haze state implementation plan (SIP) for the second planning period (SIP Revision), 89 Fed. Reg. 1482 (Jan. 10, 2024). The Conservation Groups submitted public comments to the Massachusetts Department of Environmental Protection (MDEP) on the state's draft SIP Revision on May 14, 2021, raising many of the same issues discussed in these comments.¹

To improve air quality in our most treasured landscapes, Congress enacted the Clean Air Act's Regional Haze program, establishing "as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in the mandatory class I Federal areas."² Under this program, states develop SIPs that reduce visibility impairing pollution from in-state sources and EPA determines whether those SIPs comply with the Clean Air Act and the Regional Haze Rule (RHR).³ EPA cannot approve SIPs that fail to comply with the Clean Air Act.⁴ EPA's actions on Regional Haze SIPs, thus, cannot be "arbitrary, capricious, an abuse of

¹ SIP Revision App'x 42, Nat'l Parks Conservation Ass'n & Appalachian Mtn. Club, Comments on State of Massachusetts' Notice of Intent to Revise the State Implementation Plan for Air Quality: Regional Haze Plan for the Second Implementation Period (2018-2028) (May 14, 2021) [hereinafter "NPCA et al. Comments].

² 42 U.S.C. § 7491(a)(1).

³ *Id.* § 7410(c)(1), (k)-(l).

⁴ *North Dakota v. EPA*, 730 F.3d 750, 760-62 (8th Cir. 2013); *Oklahoma v. EPA*, 723 F.3d 1201, 1207-10 (10th Cir. 2013).

discretion, or otherwise not in accordance with law.”⁵ The “arbitrary and capricious” standard that applies to EPA’s actions on SIPs under the Clean Air Act is the same as that under the Administrative Procedure Act.⁶

While the Conservation Groups do not oppose EPA’s proposal to approve Massachusetts’ SIP Revision, we urge EPA to address the issues raised below before finalizing its action here. In its proposed approval, EPA ignores or contravenes the requirements of the Clean Air Act and RHR in a number of ways. Despite its guidance and memoranda explaining the importance of source selection, EPA endorses Massachusetts’ use of an unreasonably high selection threshold. It also validates Massachusetts’ highly flawed source-specific analyses by claiming sources are already controlled under other Clean Air Act programs and state-issued permits. Moreover, EPA completely ignores its commitments to consider the environmental justice impacts of the visibility impairing pollution from Massachusetts’ sources or its action on the State’s SIP Revision.

The Conservation Groups are active nationwide in advocating for strong air quality requirements to protect our National Parks and wilderness areas. They have long participated in Regional Haze SIP comment periods, rulemakings, and litigation across the country to ensure that states and EPA satisfy their obligations under the Clean Air Act and RHR. The Conservation Groups’ members, including NPCA’s 38,000+ members and Sierra Club’s 21,000 members in Massachusetts, use and enjoy Class I areas that are impacted by Massachusetts’ sources of hazing-forming pollution.

I. EPA Endorses Massachusetts’ Reliance on an Inappropriately High Source Selection Threshold.

The RHR requires that states, including Massachusetts, “evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering . . . any potentially affected anthropogenic source of visibility impairment,” including “evaluating major and minor stationary sources or groups of sources.”⁷ To that end, EPA has explained that the source selection process “is a critical step in states’ analytical processes” as it ultimately “determin[es] what constitutes reasonable progress” for the second planning period.⁸ States that rely on a visibility threshold or proxy to select sources, like Massachusetts, “should set the threshold at a level that captures a meaningful portion of the state’s total contribution to visibility impairment” and “a threshold that captures only a small portion of a state’s contribution to visibility impairment in Class I areas is more likely to be unreasonable.”⁹ States must also

⁵ 42 U.S.C. § 7607(d)(9)(A); *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

⁶ *Nat’l Ass’n of Clean Air Agencies v. EPA*, 489 F.3d 1221, 1228 (D.C. Cir. 2007).

⁷ 40 C.F.R. § 50.308(f)(2)(i).

⁸ Memorandum from Peter Tsirigotis, Dir., Env’t Prot. Agency, to Reg’l Air Dirs., Regions 1-10 at 3 (July 8, 2021), <https://www.epa.gov/system/files/documents/2021-07/clarifications-regardingregional-haze-state-implementation-plans-for-the-second-implementation-period.pdf> [hereinafter “2021 Clarification Memo”].

⁹ *Id.* (stating that a source selection method “should be designed and conducted to ensure that [it] results in a set of pollutants and sources the evaluation of which has the potential to meaningfully reduce their contributions to visibility impairment”); *see also* 89 Fed. Reg. at 1493, 1498.

explain what criteria they used to select sources for a Four-Factor Analysis and justify their reliance on a particular threshold.¹⁰

Here, however, the MANE-VU threshold on which Massachusetts relied (3.0 Mm⁻¹) identified only two sources for a Four-Factor Analysis: Brayton Unit 4 and Canal Unit 1.¹¹ Because the Brayton facility closed in 2017, Massachusetts ultimately analyzed only a single source.¹² As explained in comments that the Conservation Groups, and the National Park Service (NPS), submitted to MDEP, Massachusetts failed to select other significant sources, such as numerous municipal waste combustors (MWCs) that emit large amounts of haze-forming pollution.¹³ For example, according to NPCA's source analysis, the Semass Partnership MWC emits 1,352.3 tons per year (tpy) of NO_x, likely impacting 13 Class I areas.¹⁴ Similarly, the Covanta Haverhill Inc. MWC emits 1,019.7 tpy of NO_x and also likely impacts 13 Class I areas.¹⁵ Both of these sources emit significantly more NO_x pollution than Canal Unit 1, yet neither were selected for a Four-Factor Analysis.¹⁶ Indeed, EPA itself explains, Massachusetts' reliance on MANE-VU's threshold is not appropriate because it targeted only the sources contributing the largest percentage of visibility impairment at Class I areas.¹⁷ Additionally, EPA states that the fact that Massachusetts identified only two sources for a Four-Factor Analysis based on that threshold "indicat[es] that [the threshold] may be unreasonably high."¹⁸ Thus, Massachusetts should have used a lower threshold that captured a meaningful portion of in-state sources, such as a Q/d of 5 or lower, or an equivalent threshold.

Yet, EPA still proposes—erroneously—to approve of Massachusetts' selection method because, according to the agency, the State examined its largest operating EGU and ICI sources and has existing SIP-approved NO_x and SO₂ rules to control emissions from the largest emitting sources.¹⁹ However, as noted above, and by EPA throughout its proposed approval, the fact that

¹⁰ 40 C.F.R. § 50.308(f)(2)(i); Memorandum from Peter Tsirigotis, Dir., Env't Prot. Agency, to Reg'l Air Dirs., Regions 1-10 at 19 (Aug. 20, 2019), https://www.epa.gov/sites/default/files/2019-08/documents/8-20-2019_regional_haze_guidance_final_guidance.pdf [hereinafter "2019 Guidance"].

¹¹ 89 Fed. Reg. at 1495.

¹² *Id.*

¹³ NPCA et al. Comments at 8-10, 12-15. EPA notes that Massachusetts addressed NPS's request that the State review additional sources, but makes no mention of the municipal waste combustors that the Conservation Groups or NPS raised in their comments on the State's draft SIP Revision. 89 Fed. Reg. at 1500.

¹⁴ See Nat'l Parks Conservation Ass'n, Sources of Visibility Impairing Pollution, <https://www.arcgis.com/apps/webappviewer/index.html?id=251cc677119d494fade7fa0d068ba87c&> (last visited Feb. 5, 2024) [hereinafter "NPCA Sources of Visibility Pollution"]; NPCA et al. Comments at 9.

¹⁵ NPCA Sources of Visibility Pollution; NPCA et al. Comments at 9.

¹⁶ NPCA et al. Comments at 9 (noting that the NO_x emissions from the Wheelabrator Millbury and North Andover MWCs also exceed the NO_x emissions from Canal Unit 1, but these MWCs similarly were not selected for a Four-Factor Analysis).

¹⁷ 89 Fed. Reg. at 1495, 1498.

¹⁸ *Id.* at 1498; *id.* at 1498-99 ("[W]e do not generally agree that a 3.0 Mm⁻¹ threshold for selecting sources for a four-factor analysis results in a set of sources to evaluate that will result in potential and meaningful reduction of the state's contribution to visibility impairment"); see also NPCA et al. Comments at 6-9 (explaining that, relying on the MANE-VU selection process, Massachusetts improperly looked at only a pre-selected group of sources and used an unduly high source selection threshold).

¹⁹ 89 Fed. Reg. at 1499.

a state selects only its largest haze-polluting sources for review renders that selection method unreasonable. Additionally, as discussed in more detail below, EPA’s reliance on the State’s existing reasonably available control technology (RACT) rules and permit requirements for numerous sources to justify its proposed approval violates the Clean Air Act and RHR, as well as its own haze guidance and memoranda.²⁰ Given the importance of source selection to SIP development, EPA cannot rely on Massachusetts’ limited source review to excuse the State’s failure to conduct a rigorous and meaningful source selection process.

II. Errors in EPA’s Review of Massachusetts’ Source-Specific Analyses

Massachusetts largely relied on existing controls under other Clean Air Act programs and in existing state-issued permits to excuse sources from implementing any new control measures during the second implementation period. In fact, the only new measure that Massachusetts proposed to include in its SIP Revision is a voluntary commitment from Canal to switch to 0.3% sulfur fuel once its existing supply of higher sulfur fuel runs out.²¹

EPA has stated that, “for at least the next planning period or two, the requirement to consider the four statutory factors for a reasonably selected set of sources should result in the adoption of additional control measures.”²² “If [F]our-[F]actor analyses evaluate a reasonable range of potential control options, [EPA] anticipate[s] that in many cases states will find that new (*i.e.*, additional) measures are necessary to make reasonable progress.”²³ EPA, thus, expects states to “undertake rigorous reasonable progress analyses that identify further opportunities to advance the national visibility goal.”²⁴ Yet, EPA commits multiple errors in its review of Massachusetts’ source-specific analyses, contravening the Clean Air Act and RHR, as well as the agency’s own regional haze guidance and memoranda.

A. Massachusetts Improperly Exempts Sources From Complete Four-Factor Analyses and Implementing Additional Controls By Claiming They Are “Effectively Controlled” Under Other Programs.

EPA has repeatedly explained that states cannot simply exclude sources from a rigorous Four-Factor Analysis where the sources have recently installed controls under other Clean Air Act programs.²⁵ In creating the Regional Haze program, Congress determined that “a visibility protection program is needed in addition to the [Clean Air Act]’s National Ambient Air Quality Standards [NAAQS] and Prevention of Significant Deterioration programs, as further emission reductions may be necessary to adequately protect visibility in Class I areas throughout the country.”²⁶ Thus, EPA explains that “[w]hile there exist many opportunities for states to leverage

²⁰ See *infra* Section II.

²¹ See *e.g.*, 89 Fed. Reg. at 1498.

²² 82 Fed. Reg. at 3098.

²³ 2021 Clarification Memo at 8.

²⁴ *Id.* at 2.

²⁵ 2019 Guidance at 22-23; 2021 Clarification Memo at 5. Similarly, EPA recognized in the preamble to the 2017 RHR revision that Best Available Retrofit Sources analyzed in the first planning period may need to be “re-assessed for additional controls in future implementation periods under the [Clean Air Act’s] reasonable progress provisions.” 82 Fed. Reg. at 3083.

²⁶ H.R. Rep. No. 95-294 at 205; see also 89 Fed. Reg. at 1485 & n.12.

both ongoing and upcoming emission reductions under other [Clean Air Act] programs, the Agency expects states to undertake rigorous reasonable progress analyses that identify further opportunities to advance the national visibility goal consistent with the statutory and regulatory requirements.”²⁷

For sources considered in the SIP Revision, Massachusetts reviewed only a limited set of controls in response to the MANE-VU Asks, determining that no additional controls were required for numerous sources because those sources are already subject to controls under other Clean Air Act programs, namely RACT rules under the NAAQS program.²⁸ But, as Congress explained in establishing the Haze program, compliance with these other programs is not sufficient to protect visibility in Class I areas. EPA cannot excuse Massachusetts’ failure to conduct complete, rigorous Four-Factor analyses for sources just because they are subject to controls under the NAAQS program. Additionally, none of these existing measures are included in Massachusetts’ long-term strategy or the SIP Revision’s regulatory requirements, so neither Massachusetts nor EPA can rely on them to demonstrate that the State is making reasonable progress under the Regional Haze program.²⁹

B. Massachusetts Relied on Existing Air Permits to Exempt Sources From Complete Four-Factor Analyses and Adopting Additional Controls.

The Clean Air Act and RHR require that states submit revised haze SIPs that “contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal” of achieving natural visibility conditions at all Class I areas.³⁰ The RHR further provides that states’ reasonable progress goals must be based only on emission control measures that are adopted into and are federally enforceable parts of the SIP.³¹ Recognizing this longstanding requirement, EPA explains in its own guidance that these statutory and regulatory provisions require that all the measures needed to make reasonable progress, including averaging times, monitoring requirements, and record-keeping and reporting requirements, be adopted into state SIPs themselves.³² While the SIP is the basis for

²⁷ 2021 Clarification Memo at 2; *see also* 89 Fed. Reg. at 1485 (quoting the 2021 Clarification Memo).

²⁸ *See, e.g.*, 89 Fed. Reg. at 1497-98 (proposing to approve Massachusetts’ response to Ask 1 because sources are subject to existing RACT rules under the NAAQS program); *id.* at 1499-500 (proposing to approve Massachusetts’ response to Ask 5 because impacted boilers and turbines are subject to RACT rules under the NAAQS program).

²⁹ If the outcome of a Four-Factor Analysis is that no new measures are necessary, then the source’s existing measures are necessary to make reasonable progress and must be included in the long-term strategy. 2019 Guidance at 8; 2021 Clarification Memo at 8-9; *see also* 89 Fed. Reg. at 1494.

³⁰ 42 U.S.C. § 7491(b)(2); 40 C.F.R. § 51.308(d)(3)(v)(F), (f)(2).

³¹ 40 C.F.R. § 51.308(f)(3).

³² 2019 Guidance at 43 (explaining that “[t]he regional haze program is implemented through SIPs, and the second implementation period SIPs must include the emission limits and other measures necessary to assure reasonable progress in order to comply with the applicable statutory and regulatory requirements”); 2021 Clarification Memo at 8-9 (explaining that, if a state (or EPA) relies on a facility’s existing emission control measures, those measures are necessary to make reasonable progress and “[m]easures that are necessary to make reasonable progress must be included in the SIP”); *see also* 89 Fed. Reg. at 1497 (“The emission reduction measures that are necessary to make reasonable progress must be included in the long-term strategy, *i.e.*, in Massachusetts’ SIP.” (citing 40 C.F.R. § 51.308(f)(2)).

demonstrating and ensuring state plans meet their regional haze requirements, state-issued permits must complement SIP requirements and cannot frustrate those requirements.³³ Consequently, neither the Clean Air Act nor the RHR allow states to “off-ramp” sources from a Four-Factor Analysis or reject otherwise cost-effective controls based on emission limits contained in facility air permits. Moreover, if a state determines through a Four-Factor Analysis that no new measures are necessary, then the source’s existing measures are necessary to make reasonable progress and must be included in the long-term strategy.³⁴

Similar to EPA’s reliance on existing controls under other Clean Air Act programs, the agency also improperly relies on existing state-issued permits to endorse Massachusetts’ determination that no new controls are required at multiple sources.³⁵ While the emission limits contained in air permits (i.e., construction or operating permits) may be “federally enforceable” for other purposes under the Clean Air Act, the state-issued permits where those emission limits are found can expire, and so do not meet the SIP requirement for permanence. Moreover, in contrast to amendments to Massachusetts’ Regional Haze SIP, which are subject to public notice and comment at the state and federal levels, as well as EPA review and final action, modifications to the State’s permits may not receive public notice, and EPA does not approve those permits.³⁶ Therefore, EPA cannot rely on control requirements or emission limits in state-issued permits that are not incorporated into the SIP Revision’s long-term strategy or regulatory requirements to justify its proposed approval of Massachusetts’ SIP Revision.

III. EPA Must Consider the Environmental Justice Impacts of Massachusetts’ SIP Revision.

EPA claims that it can entirely ignore the environmental justice implications of Massachusetts’ SIP Revision, stating that “[c]onsideration of [environmental justice] is not required as part of this action.”³⁷ The agency’s failure to consider these impacts contravenes directives from the Biden Administration, as well as EPA’s own commitments and action plans. EPA cannot claim to prioritize environmental justice while simultaneously disavowing any need to consider the disproportionate environmental impacts of haze pollution from Massachusetts’ sources or its own actions on Massachusetts’ SIP Revision. EPA’s refusal to acknowledge or consider these impacts is not only deeply disappointing, but inexcusable.

A. Executive Orders, as well as EPA’s Own Commitments and Action Plans, Direct the Agency to Consider Environmental Justice.

Executive Orders in place since 1994 require EPA to make environmental justice “part of its mission by identifying and addressing . . . disproportionately high and adverse human health

³³ 57 Fed. Reg. 13,498, 13,568 (April 16, 1992).

³⁴ 2019 Guidance at 8; 2021 Clarification Memo at 8-9; *see also* 89 Fed. Reg. at 1494.

³⁵ *See, e.g.*, 89 Fed. Reg. at 1492 (noting that Massachusetts declined to select Solutia Inc. for further review because it’s Title V permit requires it to use natural-gas, rather than coal or oil, as fuel); *id.* at 1499 (determining Massachusetts adequately responded to Ask 4 because, among other things, turbines that switch fuels would become subject to New Source Review permitting).

³⁶ It is not enough that the Title V permits are reviewable by EPA—Title V permits are not part of the SIP and not approved through EPA’s SIP process.

³⁷ 89 Fed. Reg. at 1505.

or environmental effects of its programs, policies, and activities,” including Regional Haze SIP actions, “on minority populations and low-income populations.”³⁸ The Biden Administration has reaffirmed this directive through a series of recent Executive Orders. In 2021, the Biden Administration issued back-to-back Executive Orders directing federal agencies, including EPA, to incorporate environmental justice into all of their actions. With these Orders, the Biden Administration directs agencies to embed equity in their missions, programs, and services,³⁹ providing that “[a]ffirmatively advancing equity, civil rights, racial justice, and equal opportunity is the responsibility of the whole of our Government.”⁴⁰

Again, in 2023, the Biden Administration issued the “Executive Order Revitalizing Our Nation’s Commitment to Environmental Justice for All,” declaring that agencies “must advance environmental justice for all by implementing and enforcing the Nation’s environmental and civil rights laws.”⁴¹ The Order directs agencies to engage in meaningful and robust communication with impacted communities and to “consider adopting or requiring measures to avoid, minimize, or mitigate disproportionate and adverse human health and environmental effects . . . of Federal activities on communities with environmental justice concerns.”⁴²

Recognizing that EPA has a lead role in coordinating environmental justice efforts across the country, EPA Administrator Michael Regan urged all EPA offices to take “affirmative steps to incorporate environmental justice considerations into their work . . . in regulatory development processes and to consider regulatory options to maximize benefits to these communities.”⁴³ To that end, EPA’s Equity Action Plan issued in 2022 makes equity, environmental justice, and civil rights a centerpiece of the agency’s regulatory actions, such as its actions on Regional Haze SIPs.⁴⁴ EPA’s 2019 Regional Haze Guidance further specifies that “[s]tates may also consider any beneficial non-air quality environmental impacts,” such as environmental justice, in developing their haze SIPs.⁴⁵ In its 2021 Clarification Memo, EPA also explains that haze SIPs should incorporate environmental justice and equity into technical analyses, both when

³⁸ Exec. Order No. 12898, § 1-101, 59 Fed. Reg. 7629, 7629 (Feb. 16, 1994), as amended by Exec. Order No. 12948, 60 Fed. Reg. 6,381 (Feb. 1, 1995).

³⁹ Exec. Order No. 14008, § 201, 86 Fed. Reg. 7619, 7622 (Jan. 27, 2021); Exec. Order No. 13985, § 1, 86 Fed. Reg. 7009, 7009 (Jan. 25, 2021).

⁴⁰ Exec. Order No. 13985, § 1, 86 Fed. Reg. at 7009.

⁴¹ Exec. Order No. 14096, § 1, 88 Fed. Reg. 25,251, 25,251 (Apr. 21, 2023).

⁴² *Id.* § 3(vi), 88 Fed. Reg. at 25,254; *see also id.* § 3, 88 Fed. Reg. at 25,253-56 (directing agencies to “identify, analyze, and address” disproportionate impacts resulting from Federal activities).

⁴³ *See* EPA, News Release, EPA Administrator Announces Agency Actions to Advance Environmental Justice, Administrator Regan Directs Agency to Take Steps to Better Serve Historically Marginalized Communities (Apr. 7, 2021), <https://www.epa.gov/newsreleases/epa-administrator-announces-agency-actions-advance-environmental-justice#:~:text=In%20his%20message%2C%20Administrator%20Regan,in%20communities%20overburdened%20by%20pollution>.

⁴⁴ U.S. Env’t Prot. Agency, E.O. 13985 Equity Action Plan at 4-11 (Apr. 2022), https://www.epa.gov/system/files/documents/2022-04/epa_equityactionplan_april2022_508.pdf.

⁴⁵ 2019 Guidance at 42.

determining which sources to select for a Four-Factor Analysis and when determining what reasonable progress measures to require for a source.⁴⁶

B. EPA Ignores the Environmental Justice Impacts of Massachusetts' SIP Revision.

EPA entirely ignores the executive orders, plans, and commitments discussed above in concluding that it is not required to consider the environmental justice impacts of haze-forming pollution from Massachusetts' in-state sources or its action on the State's SIP Revision. Yet, the same pollutants that mar scenic views at national parks and wilderness areas also cause significant public health impacts, particularly for the people living closest to polluting facilities. NO_x, SO₂, and PM are all haze precursors and are all associated with severe respiratory and cardiovascular diseases and can lead to premature death.⁴⁷ Haze-forming pollutants and their resulting adverse health effects disproportionately impact low-income communities and communities of color across the country, including those in Massachusetts.

EPA's failure to consider the potential environmental justice impacts of the haze pollution from Massachusetts' sources that remains uncontrolled in the SIP Revision is inexcusable given the plethora of information at the agency's disposal to analyze these effects. EPA itself administers the EJScreen tool, which uses census tract data to identify the communities that are most vulnerable to, or likely to be exposed to, dangerous pollution.⁴⁸ For example, EJScreen data shows that emissions from a number of the MWCs that both NPS and the Conservation Groups raise in their comments to MDEQ are likely impacting communities characterized by high state percentiles of low income and unemployment rates. For example, the population surrounding the Semass Partnership MWC is in the 67th percentile compared to the rest of the state for the ozone environmental justice index.⁴⁹ Similarly, the population around the Wheelabrator Millbury MWC coincides with high levels of air pollution, being in the 59th and 57th percentiles for particulate matter and ozone environmental justice indexes, respectively, compared to the rest of the state.⁵⁰ Both the Covanta Haverhill and Wheelabrator North Andover MWCs are located in Essex County, MA, and EJScreen data shows that the population in this county falls within the 63rd, 62nd, and 63rd state percentiles for people of color, low income, and unemployment rate socioeconomic indicators, respectively.⁵¹ Populations in Essex County are also in the 53rd state percentile for particulate matter environmental justice index and the 62nd

⁴⁶ 2021 Clarification Memo at 16.

⁴⁷ EPA, Basic Information about NO₂, <https://www.epa.gov/no2-pollution/basic-information-about-no2> (last visited Jan. 4, 2024); EPA, Sulfur Dioxide Basics, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics> (last visited Jan. 4, 2024); EPA, Particulate Matter (PM) Basics, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics> (last visited Jan. 4, 2024); EPA, Health and Environmental Effects of Particulate Matter (PM), <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm> (last visited Jan. 4, 2024).

⁴⁸ EPA, What Is EJScreen?, <https://www.epa.gov/ejscreen/what-ejscreen> (last visited Jan. 4, 2024).

⁴⁹ Env't Prot. Agency, EJScreen Community Report: 20 Miles Ring Centered at 41.802301, -70.787495 (Jan. 16, 2024) (attached as Ex. 1).

⁵⁰ Env't Prot. Agency, EJScreen Community Report: 20 Miles Ring Centered at 42.220700, -71.767298 (Jan. 16, 2024) (attached as Ex. 2).

⁵¹ Env't Prot. Agency, EJScreen Community Report: County: Essex (Jan. 16, 2024) (attached as Ex. 3).

state percentile for the ozone environmental justice index.⁵² Emissions from these sources, particularly NOx, are likely negatively affecting these communities.

EPA can and must make good on its commitment to incorporate environmental justice into its mission and actions by not only holding Massachusetts accountable for its failure to consider the environmental justice impacts of haze pollution from in-state sources, but also by analyzing the potential disparate impacts of its action Massachusetts' SIP Revision itself.

IV. Conclusion

In order to comply with the requirements of the Clean Air Act and RHR, EPA must address and take steps to remedy the errors and flaws throughout its proposed approval of Massachusetts' SIP Revision discussed above. We look forward to further action from EPA to gain needed emission reductions to benefit our treasured national parks and wilderness areas during the second planning period.

Sincerely,

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⁵² *Id.*

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Exhibit 1



EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

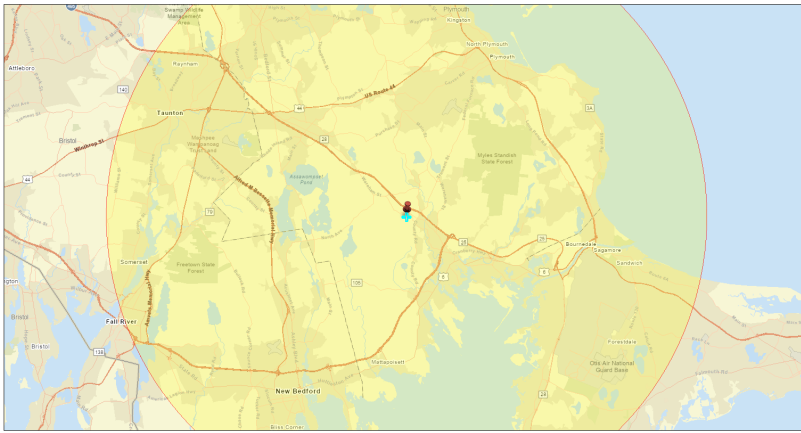
Plymouth County, MA

20 miles Ring Centered at 41.802301,-70.787495

Population: 660,020

Area in square miles: 1256.38

A3 Landscape



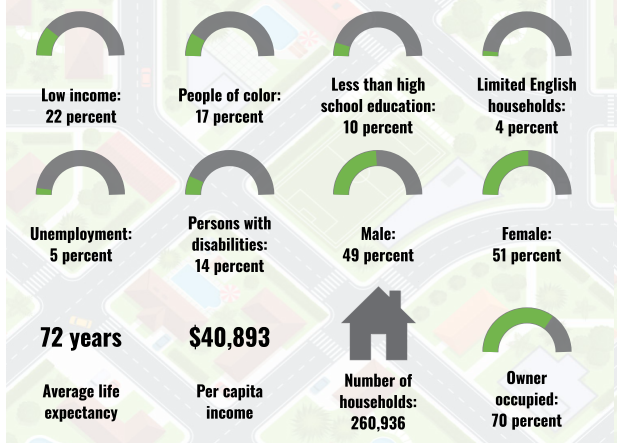
January 16, 2024
SEMMASS
Search Result (point)

1:288,895
0 2.75 5.5 11 mi
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Esp. Sanfran, Gama, Galdames, METRNAS, USGS, EPA, NPS, USDA, USFWS

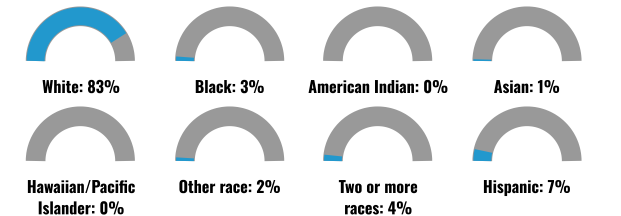
LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	85%
Spanish	4%
French, Haitian, or Cajun	1%
Other Indo-European	8%
Total Non-English	15%

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

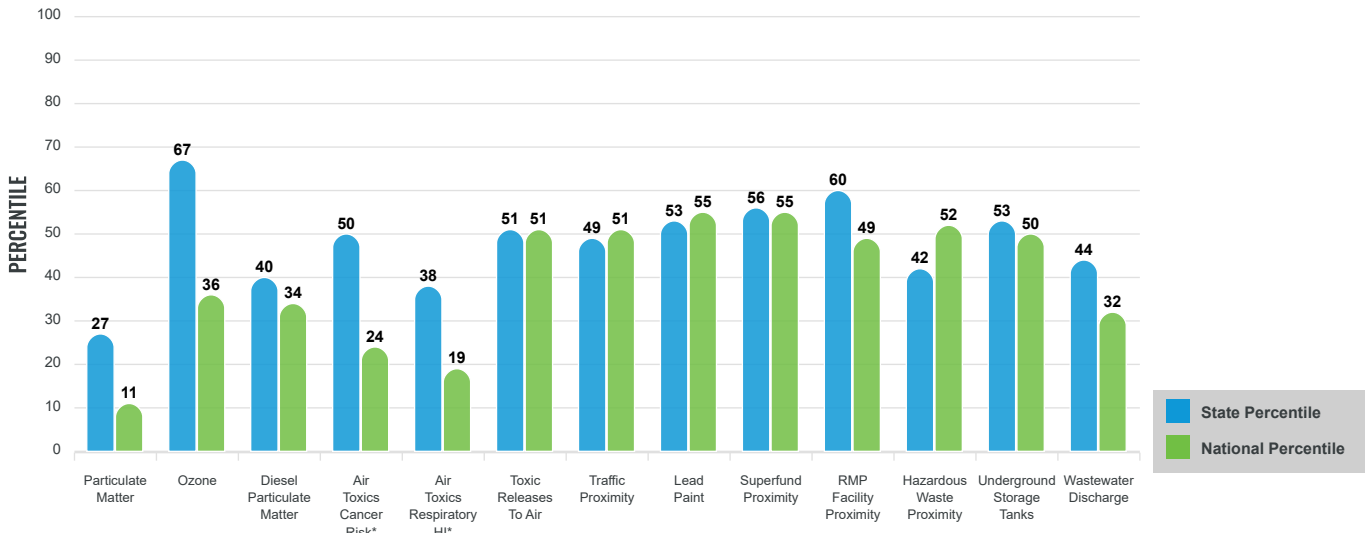
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

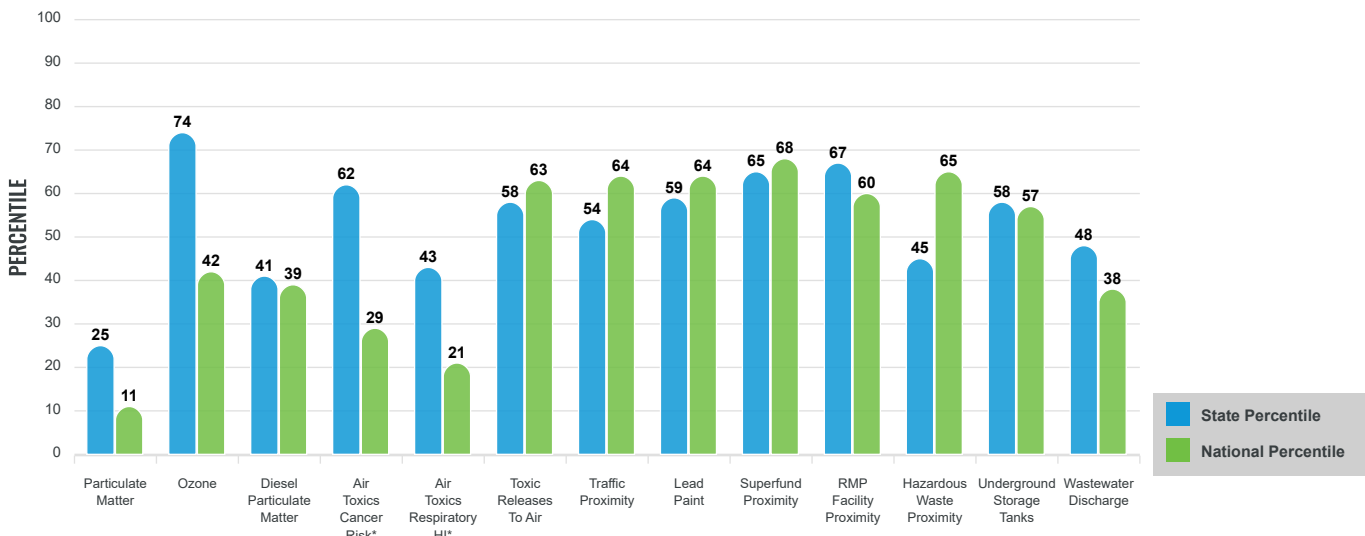
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 20 miles Ring Centered at 41.802301,-70.787495

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	6.04	6.62	16	8.08	8
Ozone (ppb)	59.4	58.3	73	61.6	35
Diesel Particulate Matter (µg/m ³)	0.14	0.253	22	0.261	28
Air Toxics Cancer Risk* (lifetime risk per million)	20	21	0	25	1
Air Toxics Respiratory HI*	0.2	0.26	2	0.31	4
Toxic Releases to Air	1,700	2,800	39	4,600	69
Traffic Proximity (daily traffic count/distance to road)	250	630	47	210	79
Lead Paint (% Pre-1960 Housing)	0.41	0.51	36	0.3	67
Superfund Proximity (site count/km distance)	0.25	0.18	84	0.13	89
RMP Facility Proximity (facility count/km distance)	0.48	0.36	79	0.43	76
Hazardous Waste Proximity (facility count/km distance)	1.5	6.7	29	1.9	68
Underground Storage Tanks (count/km ²)	2.3	3.4	55	3.9	61
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0018	0.2	60	22	53
SOCIOECONOMIC INDICATORS					
Demographic Index	20%	26%	49	35%	31
Supplemental Demographic Index	12%	12%	63	14%	45
People of Color	17%	30%	41	39%	34
Low Income	22%	22%	61	31%	41
Unemployment Rate	5%	5%	60	6%	59
Limited English Speaking Households	4%	6%	62	5%	72
Less Than High School Education	10%	9%	69	12%	59
Under Age 5	5%	5%	56	6%	50
Over Age 64	20%	17%	65	17%	65
Low Life Expectancy	17%	17%	42	20%	25

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	5
Hazardous Waste, Treatment, Storage, and Disposal Facilities	56
Water Dischargers	972
Air Pollution	469
Brownfields	84
Toxic Release Inventory	116

Other community features within defined area:

Schools	168
Hospitals	20
Places of Worship	127

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	Yes
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 20 miles Ring Centered at 41.802301,-70.787495

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	17%	17%	42	20%	25
Heart Disease	6.1	5.4	73	6.1	52
Asthma	11.2	10.8	72	10	82
Cancer	7.2	6.6	64	6.1	74
Persons with Disabilities	13.1%	11.9%	65	13.4%	53

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	8%	12%	48	12%	56
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	12%	10%	66	14%	53
Lack of Health Insurance	3%	3%	60	9%	18
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Footnotes

Report for 20 miles Ring Centered at 41.802301,-70.787495

Exhibit 2



EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

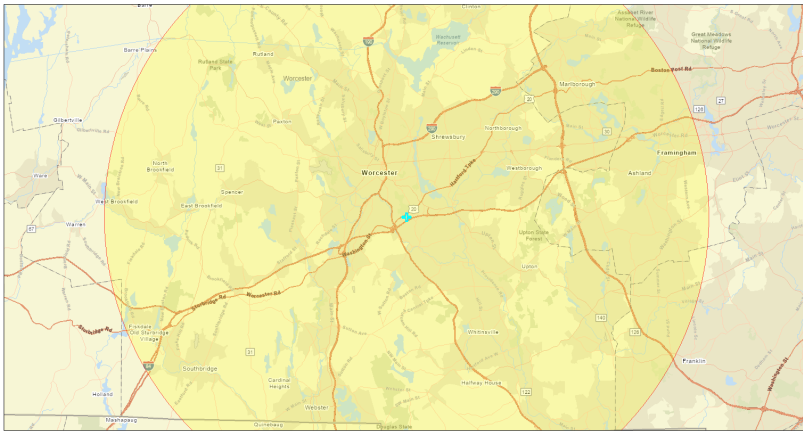
Worcester County, MA

20 miles Ring Centered at 42.220700,-71.767298

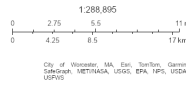
Population: 952,943

Area in square miles: 1256.38

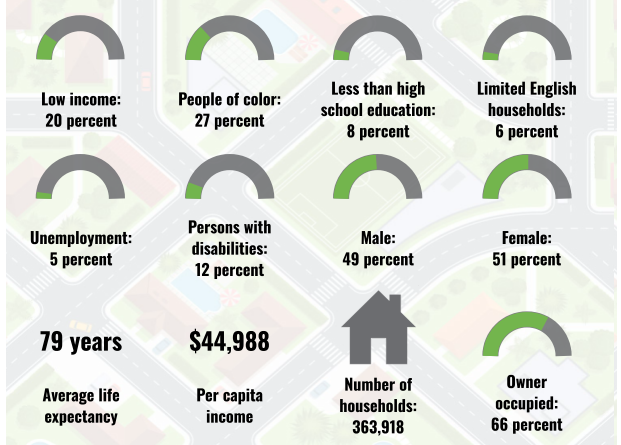
A3 Landscape



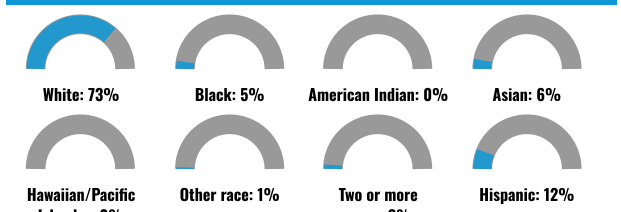
January 16, 2024
 Wheelabrator Milbury Inc



COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	76%
Spanish	9%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	1%
Other Indo-European	7%
Chinese (including Mandarin, Cantonese)	1%
Vietnamese	1%
Other Asian and Pacific Island	1%
Arabic	1%
Other and Unspecified	1%
Total Non-English	24%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

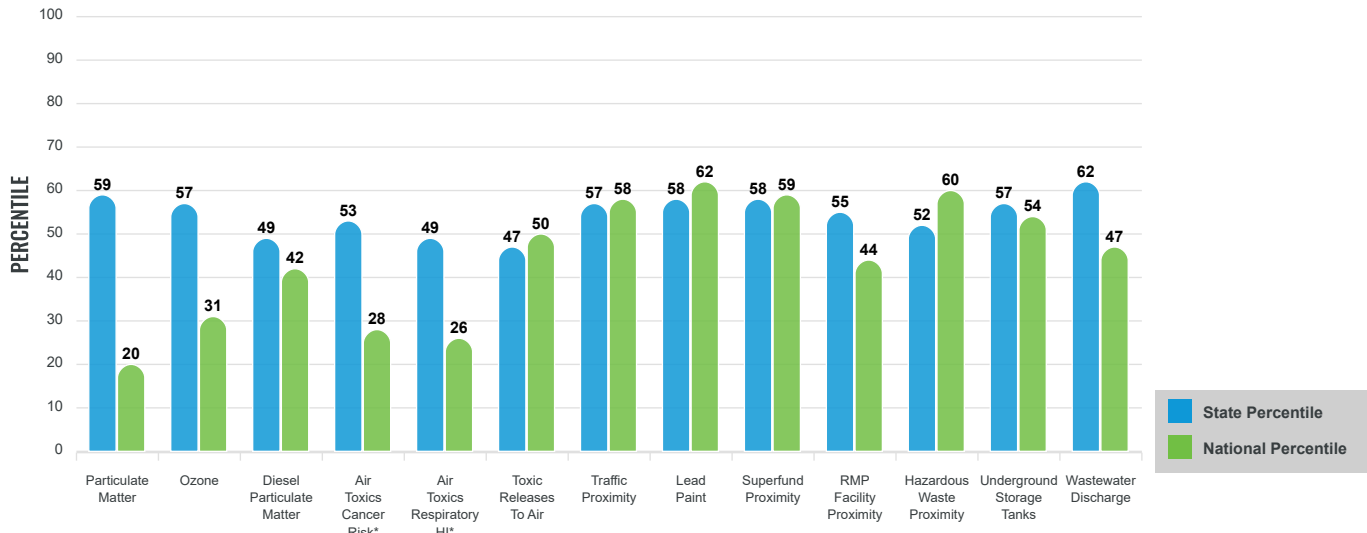
Environmental Justice & Supplemental Indexes

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EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

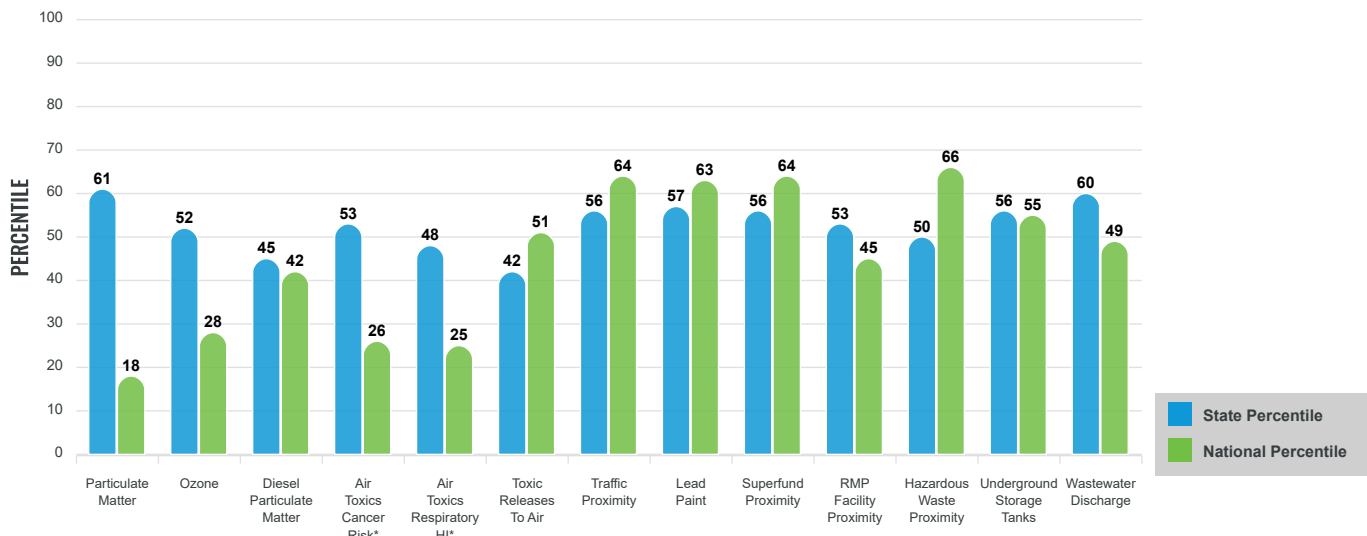
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 20 miles Ring Centered at 42.220700,-71.767298

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	6.65	6.62	43	8.08	14
Ozone (ppb)	58.2	58.3	45	61.6	25
Diesel Particulate Matter (µg/m ³)	0.16	0.253	29	0.261	34
Air Toxics Cancer Risk* (lifetime risk per million)	20	21	3	25	5
Air Toxics Respiratory HI*	0.21	0.26	2	0.31	4
Toxic Releases to Air	1,400	2,800	36	4,600	66
Traffic Proximity (daily traffic count/distance to road)	340	630	56	210	85
Lead Paint (% Pre-1960 Housing)	0.42	0.51	38	0.3	68
Superfund Proximity (site count/km distance)	0.14	0.18	69	0.13	76
RMP Facility Proximity (facility count/km distance)	0.18	0.36	56	0.43	53
Hazardous Waste Proximity (facility count/km distance)	2.1	6.7	37	1.9	74
Underground Storage Tanks (count/km ²)	2.2	3.4	53	3.9	60
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.013	0.2	82	22	70
SOCIOECONOMIC INDICATORS					
Demographic Index	24%	26%	58	35%	40
Supplemental Demographic Index	11%	12%	60	14%	42
People of Color	27%	30%	56	39%	46
Low Income	20%	22%	58	31%	38
Unemployment Rate	5%	5%	60	6%	59
Limited English Speaking Households	6%	6%	68	5%	77
Less Than High School Education	8%	9%	62	12%	51
Under Age 5	5%	5%	61	6%	55
Over Age 64	15%	17%	49	17%	50
Low Life Expectancy	17%	17%	44	20%	26

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	5
Hazardous Waste, Treatment, Storage, and Disposal Facilities	98
Water Dischargers	1784
..	
Air Pollution	762
..	
Brownfields	139
..	
Toxic Release Inventory	295
..	

Other community features within defined area:

Schools	262
Hospitals	36
Places of Worship	330

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 20 miles Ring Centered at 42.220700,-71.767298

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	17%	17%	44	20%	26
Heart Disease	5.3	5.4	49	6.1	35
Asthma	10.6	10.8	52	10	71
Cancer	6.6	6.6	43	6.1	57
Persons with Disabilities	11.6%	11.9%	54	13.4%	43

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	9%	12%	56	12%	64
Wildfire Risk	0%	0%	0	14%	78

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	10%	10%	58	14%	45
Lack of Health Insurance	3%	3%	59	9%	17
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Footnotes

Report for 20 miles Ring Centered at 42.220700,-71.767298

Exhibit 3



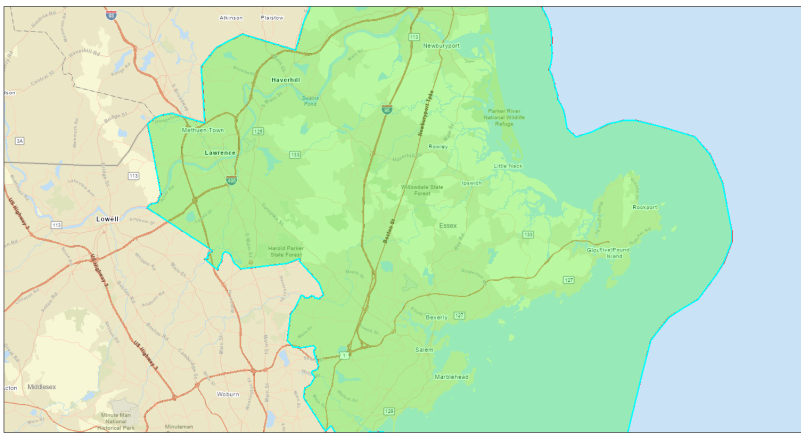
EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Essex County, MA

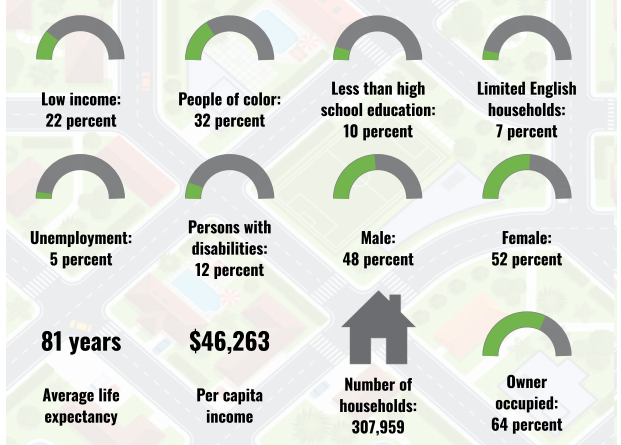
County: Essex
 Population: 804,598
 Area in square miles: 828.49

A3 Landscape

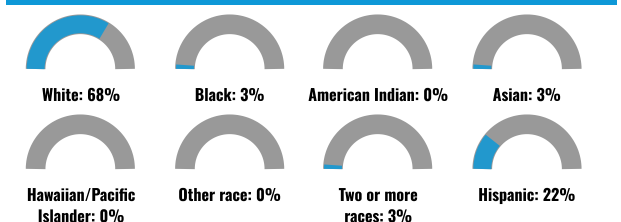


January 16, 2024
 Essex County, MA
 1:288,895
 0 2.5 5 10 mi
 0 4.25 8.5 17 km
Epi, Sanfran, Gama, Gademah, METRNASIA, USGS, EPA, NPS, USDA, USFWS

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	72%
Spanish	18%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	1%
Other Indo-European	4%
Chinese (including Mandarin, Cantonese)	1%
Other Asian and Pacific Island	1%
Arabic	1%
Other and Unspecified	1%
Total Non-English	28%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

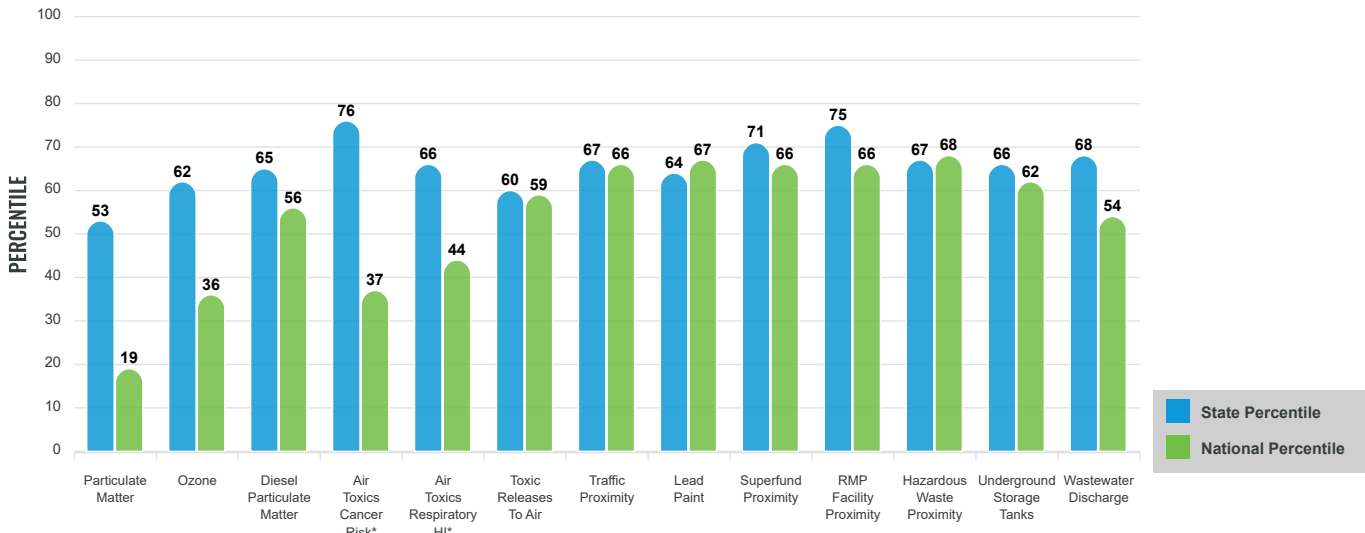
Environmental Justice & Supplemental Indexes

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EJ INDEXES

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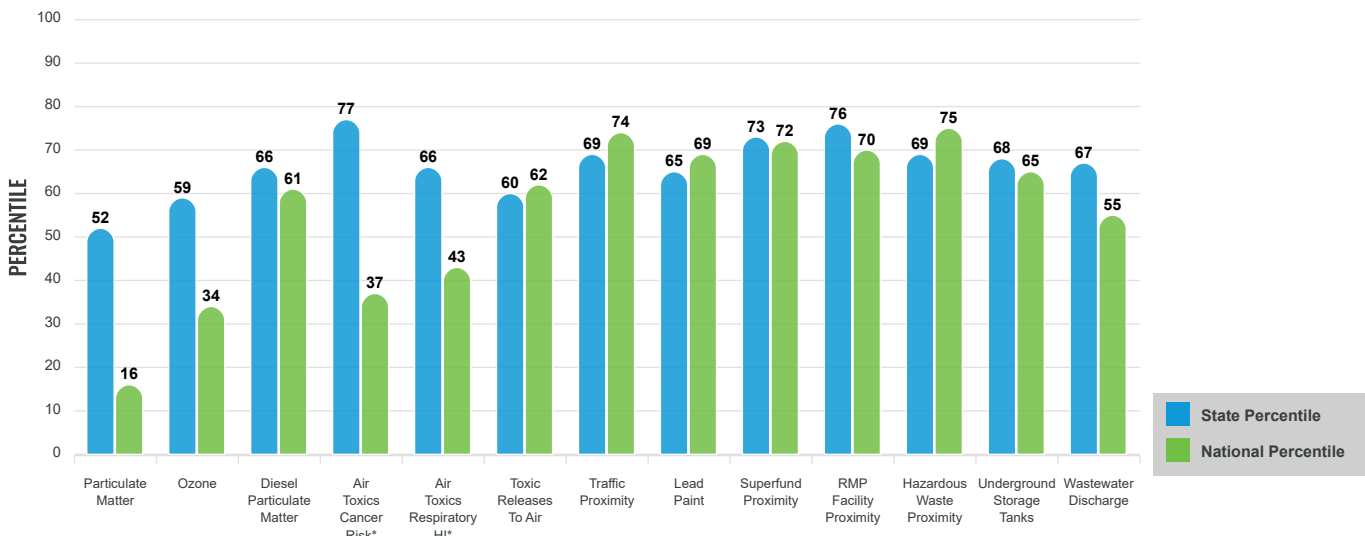
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for County: Essex

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	6.43	6.62	33	8.08	12
Ozone (ppb)	58.2	58.3	46	61.6	26
Diesel Particulate Matter (µg/m ³)	0.229	0.253	55	0.261	53
Air Toxics Cancer Risk* (lifetime risk per million)	20	21	3	25	5
Air Toxics Respiratory HI*	0.26	0.26	2	0.31	4
Toxic Releases to Air	1,700	2,800	39	4,600	69
Traffic Proximity (daily traffic count/distance to road)	550	630	68	210	91
Lead Paint (% Pre-1960 Housing)	0.51	0.51	47	0.3	74
Superfund Proximity (site count/km distance)	0.19	0.18	79	0.13	84
RMP Facility Proximity (facility count/km distance)	0.69	0.36	85	0.43	82
Hazardous Waste Proximity (facility count/km distance)	4.2	6.7	60	1.9	86
Underground Storage Tanks (count/km ²)	3.2	3.4	64	3.9	68
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0073	0.2	77	22	65
SOCIOECONOMIC INDICATORS					
Demographic Index	27%	26%	64	35%	46
Supplemental Demographic Index	13%	12%	66	14%	50
People of Color	32%	30%	63	39%	51
Low Income	22%	22%	62	31%	42
Unemployment Rate	5%	5%	63	6%	61
Limited English Speaking Households	7%	6%	72	5%	80
Less Than High School Education	10%	9%	69	12%	58
Under Age 5	6%	5%	63	6%	56
Over Age 64	17%	17%	56	17%	56
Low Life Expectancy	17%	17%	41	20%	24

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	4
Hazardous Waste, Treatment, Storage, and Disposal Facilities	84
Water Dischargers	1020
..	
Air Pollution	441
.	
Brownfields	170
.	
Toxic Release Inventory	189
.	

Other community features within defined area:

Schools	223
Hospitals	29
Places of Worship	133

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for County: Essex

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	17%	17%	41	20%	24
Heart Disease	5.5	5.4	55	6.1	39
Asthma	11.2	10.8	69	10	81
Cancer	6.7	6.6	49	6.1	62
Persons with Disabilities	11.7%	11.9%	55	13.4%	45

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	15%	12%	76	12%	79
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	11%	10%	64	14%	50
Lack of Health Insurance	3%	3%	64	9%	20
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Footnotes

Report for County: Essex