



New Bedford, Massachusetts
Environmental Justice in the Twenty-First Century



August 2016

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Executive Summary

The sixth largest city in Massachusetts, New Bedford has a storied and proud history. It was one of the world's most important whaling ports in the 19th century, and, through the mid-20th century, the city was a thriving center for the textile industry, which at one time employed more than 30,000 people. Electronics manufacturing soon followed, but, by the late 20th century the whaling industry was long gone, and the textile and electronics industries were in steep decline.

Today, New Bedford residents are faced with a sluggish economy and unemployment rates that outpace statewide averages. New Bedford also has extensive environmental degradation, coupled with significant numbers of low-income residents, new immigrants, and people of color, many of whom live with the legacy of those early industrial years – lead, polychlorinated biphenyls, and other contamination in their neighborhoods. The New Bedford Harbor Superfund site is among the worst contamination in the region, and local residents and advocacy groups have been fighting for a fair and effective cleanup of that site for decades.

However, New Bedford is making progress. The city ranks first in the continental U.S. in installed solar energy per capita, and, if Mayor Jon Mitchell has his way, New Bedford will one day source two-thirds of its electricity from renewable energy.¹ Further, New Bedford continues to chisel away at pollution stemming from former industrial sites, and it is making strides to reconnect its communities with their waterfront.²

The environmental justice assessment that follows is based on more than a year of research. This report aims to provide a comprehensive view of the environmental and public health challenges New Bedford faces and create a tool that residents, community groups, and city, state, and local officials can use to develop programs and policies that further environmental justice.

This report takes guidance from the Massachusetts environmental justice policy (EJ Policy), which was created with places like New Bedford exactly in mind. Developed in 2002, and currently undergoing revision, the policy is rooted, like

¹ “New Bedford, Mass. Mayor Jon Mitchell Champions Smart Cities,” Government Technology Magazine, October 17, 2014, available at <http://www.govtech.com/local/GT-New-Bedford-Mayor-Jon-Mitchell-Champions-Smart-Cities-.html>, accessed July 2016.

² EPA awarded New Bedford a \$400,000 grant to support community-wide assessment of hazardous substances and petroleum. See e.g., https://cfpub.epa.gov/bf_factsheets/gfs/index.cfm?event=factsheet_display&display_type=PDF&xpg_id=8939. Plans for a riverwalk are an outgrowth of the City's Final District Development Plan: Upper Harbor District, which resulted from a community workshop that drew over 160 participants.

many state programs, laws, and policies, in Article 97 of the state Constitution, which states:

The people shall have the right to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and aesthetic qualities of their environment; and the protection of the people in their right to the conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources is hereby declared to be a public purpose.

Consistent with the state EJ Policy, this report identifies three elements that will play a vital role in New Bedford's environmental future: (1) supporting New Bedford's civil society; (2) building trust; and (3) accessing sufficient financial resources to identify and remediate sources of unaddressed pollution. In addition, we have identified 11 action items that can be undertaken by regulators, community groups, and social justice and advocacy organizations.

1. Develop a new, comprehensive problem-solving model specially tailored to New Bedford;
2. Ask EPA to perform a compliance review using its authority under Title VI of the federal Civil Rights Act of 1964;
3. Undertake a review of the New Bedford High School health consultation prepared by MDPH;
4. Conduct a fish study, and update the New Bedford Harbor fish advisories as necessary;
5. Study the impacts of cumulative exposure to the many toxics in the New Bedford environment;
6. Improve public transportation links between the South Coast region and Greater Boston;
7. Advocate for statewide school siting legislation to prevent schools from being sited on contaminated properties that risk toxic exposure;
8. Advocate for an online system to track properties with lead service pipes and create a systematic plan for lead testing in schools, public housing, and multi-family housing;

9. Advocate for the implementation of Executive Order 552 and develop a local EJ policy or ordinance;
10. Advocate for the elimination of combined sewer overflow; and
11. Train future leaders by partnering with schools and creating curricula around environmental education focused on New Bedford.

I. Introduction

As of the 2010 Census, New Bedford is Massachusetts' sixth largest city. It is well over 200 years old and enjoys a rich history and global affection. During the 19th century when Herman Melville's great American classic *Moby Dick* was published, New Bedford was one of the most important whaling ports in the world, and remains today the number one fishing port in the United States.³

Over the past year and a half, CLF conducted an environmental justice assessment in New Bedford, the findings of which are outlined here. Following a 2003 assessment prepared by graduate students from Tufts University's Department of Urban and Environmental Policy and Planning, this report is intended to serve as a comprehensive source of information on the demographics, environmental contamination, and related public health threats facing New Bedford. We have included maps showing the location of environmental justice populations, as defined by the environmental justice policies (the 2002 Environmental Justice Policy and the unpublished 2015 Draft Revised Environmental Justice Policy) of the Commonwealth's Executive Office of Energy and Environmental Affairs (EEA) juxtaposed against the areas of environmental contamination in the city. The report is based on more than two dozen interviews with a variety of stakeholders, including local residents and businesses and city, state, and federal officials, and the review of numerous documents, reports, and demographic information. Through this investigation, we have found that one of the most ubiquitous contaminants⁴ in New Bedford is polychlorinated biphenyls left over from New Bedford's once-booming electronics manufacturing industry.

"EJ is New Bedford's biggest secret. Like racism, no one wants to talk about it."

- John "Buddy" Andrade

Generally speaking, New Bedford is a city of great opportunity that has seen growth limited over the last 40 years by environmental contamination issues, which have levied emotional and public health impacts on New Bedford residents. Besides being the location of one of the nation's earliest Superfund site designations, New Bedford hosts as many as 572 former (cleaned up) or current "brownfields sites" – properties that are abandoned or underused due to contamination that is less acute than a Superfund site but still present potential

³ See National Atlantic and Atmospheric Administration at https://www.greateratlantic.fisheries.noaa.gov/educational_resources/seafood/ports/new_bedford_ma.html, last accessed July 2016.

⁴ City officials say that the most ubiquitous contaminant is lead. This report discusses lead in Section IV.A.

public health impacts and legal liability. Together, these factors impede the redevelopment of these properties.

One of New Bedford's problematic sites has two public schools built on top of it, and some residents believe students, faculty, and staff are not adequately protected from toxic exposures stemming from the site. Nevertheless, the site has undergone extensive remediation to eliminate toxic exposure, and the schools have gotten a clean bill of health from the state Department of Public Health.

Massachusetts' first environmental justice policy dates back to 2002 and is in the process of being updated.⁵ A community in Massachusetts is determined to be an "Environmental Justice Community" if it meets at least one of three criteria:

- Has one or more Census block groups whose annual median household income is equal to or less than 65 percent of the statewide median (\$62,072 in 2010, which would be \$40,347); or
- Has one or more Census block groups where 25% or more of the residents identify as minority; or
- Has one or more Census block groups where 25% or more of households have no one over the age of 14 who speaks English only or very well (i.e., Limited English Proficiency (LEP)).

Sixty-two of New Bedford's 87 census block groups (71.3 percent) meet the definition of an Environmental Justice Community. That covers 66,180 of New Bedford's total population of 95,072⁶. According to U.S. Census data, 38 percent of New Bedford's residents speak a language other than English at home, compared to a statewide average of 21 percent. Its Native American population is four times the state average, and New Bedford's African American and Latino populations grew by 48 and 66 percent, respectively, between 2000 and 2010.⁷ The median household income is \$36,000, with 23.5 percent of New Bedford's population living below the poverty line.⁸

⁵CLF, along with other stakeholder groups, has participated in EEA's public comment and listening session process for the EJ policy update.

⁶ Massachusetts bases these figures on the 2010 U.S. Census, and the data is available on the mass.gov website at <http://www.mass.gov/eea/agencies/massdep/service/justice/>, accessed in December 2015. Maps showing the location of pollution in Massachusetts are based on 2000 U.S. Census data, indicating that they have not been updated since issuance of the 2002 EJ Policy.

⁷ U.S. Census Bureau, *see*, <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>, accessed July 2016.

⁸ New Bedford Harbor Superfund Site Community Involvement Plan and Institutional Control Plan for Seafood Consumption, page 6, U.S. EPA (2015), available at

New Bedford is one of 26 Gateway Cities in Massachusetts. “Gateway City” is a designation under Massachusetts General Laws, chapter 23A section 3A, which defines it as a municipality with:

- A population greater than 35,000 and less than 250,000;
- The median household income below the state average; and
- The rate of educational attainment of a bachelor’s degree or above that is below the state average.

As aptly captured in the MassInc and Brookings Institution 2007 report, *Reconnecting Massachusetts Gateway Cities: Lessons Learned and an Agenda for Renewal*, cities like New Bedford are called Gateway Cities, “because they are at once gateways to the next era of the state’s economic success and key portals for their diverse, often foreign-born, residents’ ongoing pursuit of the American dream.”⁹ The state Gateway Cities program provides a number of resources that prioritize New Bedford and other Gateway Cities for economic development, including grants, loans, and tax credits.¹⁰

Despite the odds and a number of economic development setbacks in recent years,¹¹ Mayor Jon Mitchell has set the course for New Bedford to be a national leader on energy efficiency and renewable energy,¹² and last year the City secured a \$400,000 federal grant to further assess legacy pollution across New Bedford.¹³

<file:///C:/Users/veady/Downloads/EPA%20Institutional%20Control%20for%20Seafood%20Consumption.pdf>, last accessed July 2015.

⁹ The MassInc/Brookings Institution report is available online at <http://www.newbedford-ma.gov/planning/wp-content/uploads/sites/46/Gateway-Cities-Report.pdf>, accessed in January 2016. See page 11.

¹⁰ See <http://www.mass.gov/hed/docs/dhcd/cd/gateway/stateresourcessupportingrevitalizationofgatewaycities.pdf>, accessed in December 2015.

¹¹ Economic development setbacks include the loss of the proposed Boston 2024 Olympics that would have located the sailing competition in New Bedford and a failed \$650 million casino resort project that would have cleaned up a contaminated waterfront site and provided 2000 jobs. For more information, see Michael Levenson’s “After setbacks, New Bedford eyes smaller projects,” *Boston Globe*, August 3, 2015, available at <https://www.bostonglobe.com/metro/2015/08/03/casinos-olympics-cape-wind-behind-new-bedford-sets-site-less-glamorous-improvements/ztzzEDE5pU2HgGcQRGzOrJ/story.html>, accessed April 2016.

¹² “New Bedford, Mass. Mayor Jon Mitchell Champions Smart Cities,” *Government Technology Magazine*, October 17, 2014, available at <http://www.govtech.com/local/GT-New-Bedford-Mayor-Jon-Mitchell-Champions-Smart-Cities-.html>, accessed July 2016.

¹³ See e.g., https://cfpub.epa.gov/bf_factsheets/gfs/index.cfm?event=factsheet_display&display_type=PDF&pg_id=8939

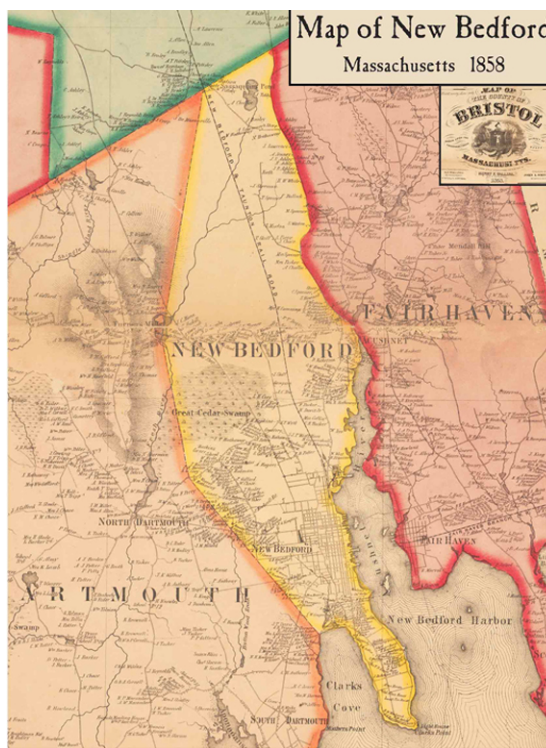
Indeed, New Bedford has a good deal working in its favor – not the least of which are its residents, its civil society, and the institutions that support them. These stakeholders are deeply committed to New Bedford’s future, and with their vision and leadership, New Bedford’s best years may be ahead of it.

II. Brief History

Located on the western shore of New Bedford Harbor across from the towns of Acushnet and Fairhaven, New Bedford was first settled by Europeans in the mid-1600s, joining the robust indigenous community that pre-dated the settlers and continues to be an important part of the local population and rich local culture today. New Bedford was incorporated as a town in 1787, and in 1847 it officially became the City of New Bedford. New Bedford has experienced a series of industries that have fueled its economy.

The first European inhabitants relied on subsistence farming. It wasn’t until the mid-1700s that the economy shifted industries such as whaling and whaling-related industries, such as whale oil processing, soap-making, and ship-building. These early industries likely emitted into the environment oils, arsenic, mercury, cyanide, biological wastes, and polycyclic aromatic hydrocarbons and other caustic substances. When the first sewer lines were laid in New Bedford in the mid-1800s, these chemicals were discharged along with biological wastes directly into sewers and into the waterways.

The whaling industry began to atrophy with the launch of the Pennsylvania oil rush in 1859 with the discovery of oil in Titusville, PA. Meanwhile, the first textile mill opened in New Bedford in 1848 as the textile industry moved north from the southeast U.S. At one point, there were as many as 70 textile mills, and New Bedford’s population expanded in parallel.



By the stock market crash of 1929 and the ensuing Great Depression, the unemployment rolls grew exponentially as with the rest of the nation. It was in 1939 that Aerovox Corporation moved into an abandoned mill and began manufacturing electronic capacitors. Other electronics manufacturing businesses followed and with this industry came a new environmental threat – polychlorinated biphenyls.¹⁴

It's important to note changes to the hydrology of New Bedford Harbor that evolved alongside the growth of industry and population. Besides the filling of wetlands that occurred with the proliferation of the textile industry, there were wharves built along the harbor to support whaling and other industries over the decades. The New Bedford-Fairhaven Bridge that connected the two municipalities to Popes Island and Fish Island was built in 1798. And the 150-foot hurricane barrier across the mouth of the harbor was completed in 1965. All of these modifications to the shoreline altered the flow of water and sediments, contributing to the environmental and water quality issues in the harbor that New Bedford continues to grapple with today.

It's also important to keep in mind how and where people settled juxtaposed against the location of mills and other commercial and industrial activities. People tended to concentrate around the industrial activities that employed them as a matter of convenience in pre-automobile society. By the time the concept of municipal zoning took hold, residences were already located near industrial facilities. This has contributed to the environmental justice landscape, where some industrial sites sit in the middle of residential neighborhoods.

III. Polychlorinated Biphenyls

Commonly known as PCBs, polychlorinated biphenyls are a family of man-made organic chemicals of which there are 209 variations or “congeners”. With their oily, viscous properties, they were used liberally in the manufacture and operation of a variety of electrical equipment ranging from capacitors and



¹⁴ For a fascinating look at the environmental history of New Bedford, see *Imprint of the Past: Ecological History of New Bedford Harbor* by Carol E. Pesch, Richard A. Voyer, and James S. Latimer of the U.S. Environmental Protection Agency, and Jane Copeland, George Morrison, and Douglas McGovern of OAO Corporation.

transformers to switches, and fluorescent light ballasts,¹⁵ among other things. They were also used in caulking, carbonless paper, and oil-based paints and an array of other uses until they were banned by the U.S. Environmental Protection Agency in 1979. They are ubiquitous in New Bedford because of the electronics manufacturing facilities that used them between 1939 up until the time of the formal PCB ban.

PCBs are toxic and “persistent” – they don’t degrade over time. PCBs can attack the nervous system, the reproductive system, and they can lead to cancer.¹⁶ A series of studies on children in Greater New Bedford demonstrated that children exposed prenatally to higher levels of PCBs had higher incidences of attention deficit hyperactivity disorder.¹⁷

PCBs also bioaccumulate, making their way up the food chain from tainted fish. If a fish ingests PCBs through exposure to contaminated food or sediments, the person who ingests that fish will then accumulate those PCBs in her tissues. That’s why New Bedford Harbor was closed to fishing in 1979. As New Bedford grapples with its history of pollution, residents have become citizen scientists, learning more and more about the extent of the contamination and how they can avoid PCB exposure as they focus on addressing the public health threats at the most seriously contaminated sites.

A. New Bedford Harbor Superfund Site

The most extensive PCB contamination is found at the New Bedford Harbor Superfund site, one of the largest in the country.¹⁸ Bordered by New Bedford, Fairhaven, and Acushnet, the harbor earned the moniker “Superfund megasite”

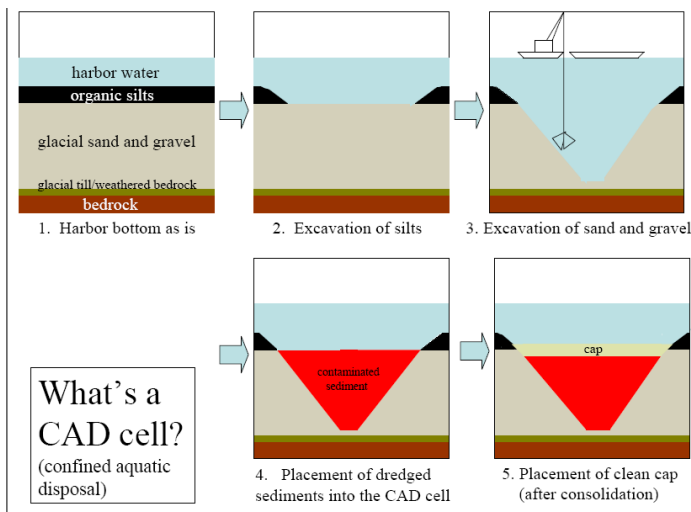
¹⁵ PCBs in light fixtures and ballasts is a dangerous threat that many people may not be aware of. Concluding a campaign that started with one concerned Bronx parent, New York Lawyers for the Public Interest claimed victory in 2013 after a lengthy battle to make New York City public schools PCB-free, requiring the removal of PCB-contaminated caulking and lighting fixtures that were actively leaking PCBs into classrooms. See <http://www.nympi.org/victory-pcb-light-free-schools/>, accessed January 2016.

¹⁶ See Toxicological Profile for Polychlorinated Biphenyls, Agency for Toxic Substances and Disease Registry, November 2000.

¹⁷ Sagiv SK, Thurston SW, Bellinger DC, Altshul LM, Korrick SA, “Neuropsychological Measures of Attention and Impulse Control Among 8 Year-Old Children Exposed Prenatally to Organochlorines,” *Environ Health Perspect.* 2012 Jun;120(6):904-9. doi: 10.1289/ehp.1104372. Epub 2012 Feb 22; see also, Miller, Condon, et al., “Human Exposure to PCBs in Greater New Bedford, Massachusetts: A Prevalence Study,” *Archives of Environmental Contamination and Toxicology*, Vol. 20, pp 410-416 (1991)..

¹⁸ New Bedford had a second Superfund site, Sullivan’s Ledge. Sullivan’s Ledge was a rock quarry that was used as an industrial waste dump site (which included PCBs among other things) between the 1940s and 1970s. The site has been remediated, and now hosts a 10-acre, 1.75 megawatt solar energy facility with 5,000 solar panels.

because of the cost and extent of remediation required.¹⁹ It is one of the largest Superfund sites in the country. New Bedford Harbor was listed on EPA's National Priorities List, the official act of designating a site as a Superfund site, in 1983, just two years after the Superfund law went into effect. PCB contamination in sediments is as high as 100,000 parts per million in some places. Thirty-three years later, after a rash of litigation, expenditure of millions of federal and state dollars, and a \$365 million cost recovery settlement with the responsible party, the 18,000-acre site spanning the 8.6-mile Acushnet River remains far from clean.²⁰ Community advocacy has played a vital role in pressing for an adequate remediation strategy that places the health of area residents at the top of the agenda. Hands Across the River Coalition, Inc. or "HARC", is a member-based advocacy group that was formed in the early 1990s over concerns about contamination of the Acushnet River and New Bedford Harbor. HARC's advocacy prioritized the health and education of residents living on both sides of the harbor. HARC led the fight that caused EPA to abandon its plan to build an onsite PCB incinerator 1995. Hydraulic dredging of the PCB hotspot in the upper harbor began in 2004, and the PCB-laden sediment was dewatered and transported to an out-of-state, licensed PCB landfill. Dredging is ongoing, with the plan to put dredge spoils in a "confined aquatic disposal" structure, known as a CAD cell, in the harbor.



EPA defines a CAD cell as a "man-made, capped underwater containment cell."²¹ It will be constructed to hold 300,000 yards of PCB-contaminated sediments. HARC and others oppose the development of the PCB CAD cell, based in part on their belief that EPA lacks evidence to ensure the CAD cell will safely contain the PCB-contaminated sediments without leaking into the

environment. Although CAD cells exist across the nation, HARC asserts that

¹⁹ The EPA defines a megasite as any hazardous waste site where the total cost of investigation and cleanup, excluding long-term care, equals or exceeds \$50 million. See, e.g., http://www.niehs.nih.gov/news/assets/docs_a_e/epa_and_megasites_508.pdf, accessed March 2016.

²⁰ For comparison, the Housatonic River is a \$619 million PCB cleanup project covering a 10.5-mile stretch of the river, while the Hudson River PCB cleanup will reach \$1 billion for 40 miles of river.

²¹ <http://www3.epa.gov/region1/superfund/sites/newbedford/507202.pdf>

there are no CAD cells containing highly toxic material anywhere else that are located so close to residential communities and that the residents of Greater New Bedford should not be a test case.

The finer details of the Superfund remediation project involve mechanical dredging²² of contaminated sediments, lifting the dredged material by crane onto a barge that will carry it down the harbor, uncovered, to the location of the CAD cell. The barge will drop the dredged material from its bottom into the CAD cell. EPA has concurrently undertaken an air-monitoring project near the harbor, sampling monthly for 24-hour periods in response to experts who have been critical of mechanical dredging because of the potential it poses for airborne PCBs.

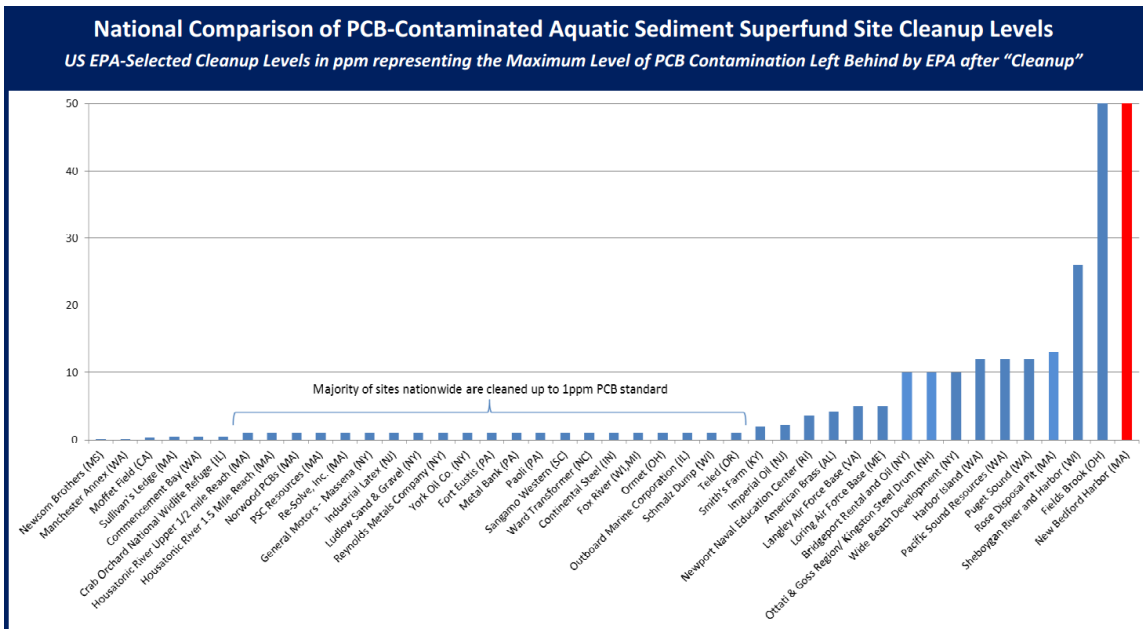
HARC and two partner organizations, Roxbury-based Alternatives for Community and Environment (also known as ACE) and a Boston-based team from Toxics Action Center, joined forces with health researchers at the Boston University Superfund Research Program and the University of Iowa's Iowa Superfund Research Program to evaluate concerns with the proposed remediation project. They placed numerous air monitors in the backyards of HARC members and other volunteers to measure outdoor ambient air concentrations of PCBs to determine whether and how the dredging activities associated with the harbor remediation would contribute to the overall PCB exposure in the community. The BU air monitoring project should produce preliminary results after the final sampling period in the summer of 2016.²³

After 33 years of battling for an effective cleanup of the harbor, local residents are understandably frustrated by the slow progress and remain skeptical of the EPA. EPA does provide an abundance of information on its website and holds periodic meetings with the public to update it on the progress of the cleanup. EPA has partnered with the City of New Bedford and local non-profit economic justice organization Community Economic Development Center to provide education and multi-lingual/multi-media outreach and education since 2015.²⁴

²² Contrast, with hydraulic dredging is accomplished in a wholly contained process without exposure of PCBs to the ambient air. For a two-minute video on hydraulic dredging and dewatering, see <https://www.youtube.com/watch?v=1zYunR4p0H8>, accessed February 2016.

²³ Well beyond questions about the sufficiency of EPA's monitoring, HARC has deep concerns about EPA's handling of the harbor Superfund site, questioning whether EPA's conduct is merely negligence or something far more nefarious. Their May 17, 2015 opinion piece is available online at <http://www.southcoasttoday.com/article/20150517/OPINION/150519453>, accessed January, 2016.

²⁴ Also, in past years EPA awarded a technical assistance grant to the [Buzzard's Bay Coalition](#) (BBC), the New Bedford-based environmental advocacy organization, to assist EPA with community outreach and education. All the same, [BBC's critique of the cleanup is sobering, calling](#) the New Bedford Harbor cleanup "one of the worst of its kind in the nation," leaving in



Data compiled by the Buzzards Bay Coalition from EPA Documents, November 2012

B. New Bedford High School and Keith Middle School



PCB contamination in New Bedford extends well beyond the harbor to a site known as the Parker Street Waste Site, a large²⁵ former

place 50 times more contamination than remediations in similar waterways.²⁴ Fighting for adequate cleanup of the New Bedford Harbor Superfund site is integral to the goal of restoring the health and integrity of the New Bedford Harbor watershed. See <http://www.savebuzzardsbay.org/ProtectBay/CleanWater/EliminateToxicAndSewer/CleanUpNewBedfordHarbor>, accessed March 2016.

²⁵ The exact acreage of the former dump is unclear. EPA's Inspector General indicates that it spans 122 acres. (See footnote 23, below.) City officials believe the site is much smaller, estimating the size at about 60 acres.

city dump that is home to two public schools, sports fields, wetlands, and several residential properties²⁶ and lots, which have been purchased back by the City. Like several other contaminated sites in New Bedford, the Parker Street Waste Site is contaminated with PCBs, along with volatile organic compounds, polycyclic aromatic hydrocarbons, and other toxic pollutants mostly sourced from the same activities as other PCB-contaminated sites in New Bedford – they are a legacy of the bygone electronics manufacturing industry.

New Bedford High School opened its doors in 1972, while the Keith Middle School opened in 2006²⁷. These two schools have been the subject of extensive environmental and public health investigation and monitoring. Prior to constructing the Keith Middle School, the City of New Bedford conducted a human health risk assessment. EPA had no role in the selection process for the site to house the new Keith Middle School, but it publicly acquiesced to the plan and found that no unreasonable risk to human health or the environment would be presented by the proposed use.²⁸ EPA approved the City’s plan to remove PCB-contaminated soil and cap the property. Long-term monitoring would be required to ensure that no dangerous vapors would be released into the school building.

Years later, a petition concerning the anecdotal incidences of cancer and other illnesses among residents, students, and staff, signed by 21 New Bedford High School teachers and 11 neighbors of the high school and Keith Middle School, prompted the Massachusetts Department of Public Health (MDPH) to undertake a health study. The MDPH acquiesced and considered indoor air as an exposure pathway, tested blood serum PCB levels, and evaluated for nine different types of cancers. MDPH concluded in its 2013 final report that there were no significant trends in cancers or PCB levels of the 67 participants they tested.²⁹

²⁶ EPA’s Inspector General (IG) noted that 84 residential properties were tested, and 44 required “time-critical removal action”, meaning that a critical and substantial endangerment existed. It found that EPA Region 1 had supplied documentation supporting its conclusion that the public health threats on those properties had been adequately addressed. See U.S. Environmental Protection Agency, Office of the Inspector General, “EPA is Documenting How It Addresses Time-Critical Public Health Risks Under Its Superfund Authority,” Report No. 16-P-0059, December 9, 2015. However, the IG’s conclusions give no comfort to local residents, who point to anecdotal evidence of illnesses and cancers among school staff and faculty.

²⁷ In 2015, state Representative Denise Provost introduced a bill intended to prevent schools from being sited on unsuitable contaminated sites. H. 738, *An Act protecting school children from environmental toxins*, also known as the “Schools Protection Act.” The act would loop the state DEP into the school siting process, and it would create a public right to enforce the act. It was not passed, but if reintroduced and passed in the next legislative session, this bill could prove very helpful for any future school siting decisions in New Bedford and elsewhere in the state.

²⁸ See <http://www3.epa.gov/region1/parkerstreet/>, accessed January 2016.

²⁹ The final reports are available at <http://www.mass.gov/eohhs/docs/dph/environmental/investigations/new-bedford/2013/nbhs->

Nevertheless, residents associated with both HARC and another local advocacy group known as CLEAN – Citizens Leading Environmental Action Network – spoke of classrooms being closed off because of toxicity. HARC’s leader, Karen Vilandry, recalls that some New Bedford High School staff wrote a letter to the headmaster reporting students and staff complaining of respiratory issues, coughing, choking, sore throats and headaches associated with 10 to 15 classrooms. Ultimately, seven classrooms were remediated by disposing of furniture and other materials. There were further changes made to the ventilation system. Still, the leaders of HARC and CLEAN are not confident in the conclusion of the MDPH study.

The City confirmed that all vapor intrusion issues have been fully evaluated and addressed, and since December of last year, there are no longer any closed off classrooms.

Residents identified yet other issues at the Parker Street Waste Site. There are three public housing developments near the Parker Street Waste Site – Parkdale, Westlawn, and Shawmut Village (Potter Street). Residents voiced concerns of mold visible on the exterior of some public housing buildings and of neighborhood flooding during rain events. While the mold may not be related to the waste site, residents feel it should be investigated to identify the cause of the mold, correct the problem, and ensure that there is no danger to these developments posed by the Parker Street Waste Site.

Towards the end of 2015, the City reached a record \$8.5 million settlement with two of the PCB polluters responsible for contamination at the Parker Street Waste Site.³⁰ In a letter to the editor, Eddie Johnson, president of CLEAN, expressed his dismay that the funds would not be allocated to further cleanup of the site. He said that instead, most of the settlement money would be spread across cash-strapped city agencies.³¹

The City disputes these claims. City officials say that the contaminated lots reacquired by the City have been remediated, and there are plans for a new dog park on the site. Other currently unused lots are being assessed, and designs are

[report-feb-2013.pdf](#) and at <http://www.mass.gov/eohhs/docs/dph/environmental/investigations/new-bedford/2013/parker-street-waste-site-report-feb-2013.pdf>, accessed in February, 2016.

³⁰ “New Bedford reaches record settlement in lawsuits against PCB polluters,” Steve Urbon, New Bedford Standard Times, November 12, 2015.

³¹ “Your View: Parker Street settlement should go toward cleanup,” Eddie L. Johnson, New Bedford Standard Times, December 13, 2015. Despite doubts that the residents have about the use of the settlement funds, the City maintains that the allocation has been properly dictated by the terms of the settlement. Divergent narratives like these often strain relationships between residents and public officials.

under way for further outdoor amenities after a cleanup, which is planned for later in 2016 on into 2017.

As with the New Bedford Harbor Superfund site, the saga of the Parker Street Waste Site suffers from the same erosion of trust between some community groups and public officials. Once the further remediation projects are under way, the various stakeholders may be able to chart out some common ground.

IV. Other Potential Environmental and Public Health Issues

A. Lead Exposure

Lead is a naturally-occurring metal that is toxic if ingested, especially to children six years of age and younger. Lead was used in gasoline and in house paint for its durability properties until it was phased out in the 1970's; however, houses constructed before 1978 may still pose health hazards to children who are poisoned by eating paint chips, to which lead gives a sweet taste. Even without children eating paint chips, on-going lead exposures can occur indoors from lead dust generated when windows are opened and closed and when paint from surfaces degrades – children breathe the dust and touch contaminated surfaces. While the lead isn't absorbed through the skin, children put their hands in their mouths and often chew on surfaces where lead dust has deposited. Recent science shows that all lead exposures can cause serious health consequences, including brain and nervous system damage and, very rarely, death.³² EPA and the Centers for Disease Control advise that there is no safe level of lead in a child's blood.³³

Lead exposure may actually be the most widespread toxic exposure for people who live, work, and recreate in New Bedford. New Bedford's housing stock is fairly old, with over 50 percent built prior to 1940 and 85 percent pre-1978.³⁴ The state Department of Public Health reports that six percent of the 3,650 children tested in 2015 (212 children age nine months to four years) had blood lead levels above the action level of 5 micrograms per deciliter set by the Centers for Disease Control.³⁵ Longtime New Bedford activist John "Buddy" Andrade is concerned about newcomers and immigrants who may not be aware of lead

³²In 2000, a New Hampshire child died from lead poisoning. See Centers for Disease Control, MMWR Weekly, June 8, 2001, <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5022a1.htm>, last accessed July 2016.

³³ See e.g., <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

³⁴ See MDPH Bureau of Environmental Health data, available at <http://www.mass.gov/eohhs/docs/dph/environmental/lead/stats/screening-and-prevalence-statistics-by-community-cy-2015.pdf>, last accessed July 2016.

³⁵ See footnote 35, above.

poisoning issues. Also, lead poisoning statistics are often artificially low, because they only pertain to poisonings that are reported, and the Department of Public Health's data does not include testing of five- and six-year old children, who are also at heightened risk. There are likely many more cases of childhood lead poisoning than the reported numbers reflect.

Since the recent drinking water crisis in Flint, Michigan, communities across the nation are now asking questions about the integrity of their drinking water supply. New Bedford's drinking water is sourced from five freshwater ponds – Assawampsett Pond, Great Quittacas Pond, Long Pond, Pocksha Pond, and Little Quittacas Pond. The water is pumped, treated, and distributed through 283.4 miles of distribution pipes snaking throughout the city.

EPA's Lead and Copper Rule³⁶ allows for not more than 10 percent of annual water samples taken by drinking water suppliers to exceed the EPA action level of 15 parts per billion. The City of New Bedford tests for both regulated and unregulated contaminants. New Bedford's 2015 water quality report showed only two sites above lead the action level of 15 parts per billion,³⁷ but ensuring lead-free drinking water does not stop with testing water from the source.

Lead in water usually comes from pipes, solder, or brass fixtures. New Bedford has replaced all but 13 percent of its service pipes with copper pipes and plans to continue replacing the remaining city-owned lead pipes. Most likely, the source of lead in drinking water is in the solder or fixtures of the privately-owned pipes that lead up to the house from city pipes. Residents can volunteer to have their water tested for lead, and recent tests revealed that 17 of 140 homes³⁸ tested showed elevated lead levels. However, there are major challenges to testing drinking water at renter-occupied housing and multi-family housing, and families living in those dwellings remain vulnerable. Mayor Mitchell told the *Standard Times* that accuracy is "extremely difficult to ensure in multi-family homes."³⁹

Residents are also worried about whether there is lead in drinking water at New Bedford's public schools. Schools can be especially vulnerable to lead in drinking water, because water sits in pipes for prolonged periods of time, like weekends and school holidays, providing ample time for lead to leach into the stagnant

³⁶ 56 Fed. Reg. 26460 - 26564, June 7, 1991

³⁷ See *South Coast Today's* recent coverage of lead in drinking water, "Fight to keep New Bedford's water safe ongoing, but no testing in multifamily homes leaves big question mark", by Eric Bosco, March 16, 2016, available at <http://www.southcoasttoday.com/article/20160319/NEWS/160319377>, last accessed June 2016.

³⁸ A map of the homes that tested positive for lead in their drinking water can be found at <https://www.google.com/maps/d/u/0/embed?mid=159aCm3n9jaFjbUI-0XoJA51YTQI>, accessed July 2016.

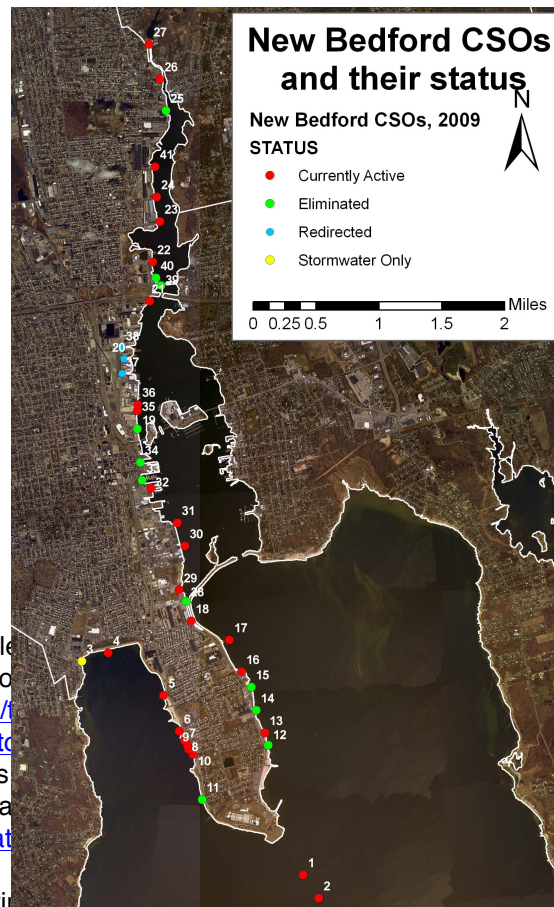
³⁹ See *South Coast Today*, footnote 26, above.

water.⁴⁰ New Bedford has recently taken preliminary tests of drinking water at its public schools, testing two locations in each school. In response to concerned parents, teachers, and public school staff across the Commonwealth, the Massachusetts Clean Water Trust, a state body, will provide \$2 million to test for lead in drinking water in Massachusetts public schools.⁴¹ With this funding, the City plans to test every faucet in every New Bedford public school.

Anyone wanting to know whether their home is serviced by lead pipes can call the City at (508) 763-2231, and City staff can look up the address to let homeowners and residents know whether they have lead pipes. Both the City of New Bedford and the Massachusetts Department of Environmental Protection can provide advice on how to minimize the risk of ingesting lead from drinking water.⁴²

B. Wastewater

Back in 1987, the Conservation Law Foundation along with DEP and the EPA sued the City of New Bedford for failure to meet wastewater treatment standards required under state law and the federal Clean Water Act. The parties entered a consent decree, requiring New Bedford to construct a new wastewater treatment plant, which went online in 1996. The new plant was intended to address impacts from industrial discharges as well as a nagging problem with combined sewer overflow or “CSO.” However, New Bedford’s problem with CSOs persists.



⁴⁰ See, e.g., *Boston Globe's* recent coverage of lead levels in water, by Matt Ro <https://www.bostonglobe.com/metro/2016/06/06/lead-levels-water/0prm4JC9cnag3FkiAXc8LM/stc>. New Bedford was not among those 20 school districts.

⁴¹ Information on the Assistance Program for Lead in Drinking Water <http://www.mass.gov/eea/agencies/massdep/water/drinking-water.html>, last accessed August 2016.

⁴² DEP has relevant information about leaded drinking water <http://www.mass.gov/eea/agencies/massdep/water/drinking/is-there-lead-in-my-tap-water.html>, last accessed July 2016. New Bedford’s Department of Public Infrastructure provides information regarding lead in drinking water at http://www.newbedford-ma.gov/public-infrastructure/wp-content/uploads/sites/49/2014/pdf/Public_Ed_Letter_2014_Translated.pdf, last accessed July 2016.

CSOs are not a problem unique to New Bedford. Cities and towns all over the country are scrambling to reduce these discharges that happen principally during wet weather events. Older sewer systems are designed to carry sewage to waste water treatment plants. During heavy rain events, stormwater runoff enters the sewers as well. When the treatment plant reaches its capacity, the “overflow” bypasses the treatment plant and discharges directly into the receiving water, which in the case of New Bedford is the inner harbor and Buzzards Bay. Heavy rainfall in 2014 caused total CSO discharges of 328 million gallons of raw sewage to be discharged directly into the harbor. When the \$8.2 million dollar Coggeshall Street sewer project, which will separate the sewer lines from the stormwater drains, is completed,⁴³ New Bedford will have 25 remaining CSOs, discharging about 175 million gallons of untreated stormwater and sewage into New Bedford Harbor and Buzzards Bay during heavy rains.⁴⁴

It’s worth mentioning that the neighboring Town of Fairhaven’s wastewater treatment facility (which also services Mattapoisett) and its CSOs also discharge into the inner harbor. Increasingly, this results in nitrogen pollution that compromises the water quality and shoreline habitat, and is further complicated by the hurricane barrier, which reduces the amount of water that flushes with clean water from beyond the barrier in the outer harbor.⁴⁵

C. Fishing and Food Production

Research undertaken for this report did not identify any commercial farms in New Bedford, although there are certainly local gardens, some of which may produce food. Like in many urban areas, contaminated soils stymie the ability to farm without raised beds. New Bedford does, however, have a farmers market that is populated by farms in neighboring communities like Dartmouth, Mattapoisett, and Fairhaven.

Fishing is the industry with which New Bedford is most readily identified. In fact, New Bedford prides itself on having the number one fishing port in the nation for

⁴³It is unclear when the Coggeshall Street sewer project will be completed.

⁴⁴Information as to CSO volumes comes from [ecoRI news](http://www.ecori.org/pollution-contamination/2015/6/15/new-bedfords-daunting-expensive-battle-with-cso-discharges), which cites computer modeling by the environmental engineering and consulting firm Camp Dresser, McKee and Smith. See “New Bedford’s Expensive Battle with CSO Discharges,” by Joyce Rowley, June 15, 2015 at <http://www.ecori.org/pollution-contamination/2015/6/15/new-bedfords-daunting-expensive-battle-with-cso-discharges>, accessed February, 2016; see also, <http://www.newbedford-ma.gov/public-infrastructure/wastewater/combined-sewer-overflows/>, accessed February, 2016.

⁴⁵New Bedford Shoreline and Recreation Plan, 2008 – 2013 available at <http://www3.epa.gov/region1/superfund/sites/newbedfordo/507964.pdf>, accessed February 2016.

better than a decade.⁴⁶ New Bedford's commercial fishing industry generates more than \$1 billion in economic activity.⁴⁷ Although there is a fishing ban inside the hurricane barrier that has been in place since 1979, the Massachusetts Department of Public Health also advises against eating lobster and bottom-feeding fish outside the hurricane barrier.⁴⁸

Despite that ban, there are many anecdotal reports of recreational and subsistence fishing in the inner harbor, especially among immigrants who may not speak or understand English. EPA's 2015 Community Involvement Plan and Institutional Control Plan for Seafood Consumption⁴⁹ contains information obtained from numerous interviews with local stakeholders in the New Bedford Harbor region. According to EPA's research, people have been seen fishing at Riverside Park and on the Coggeshall Street, Fairhaven, and Apponagansett bridges. It is believed that some of the subsistence fishing is done by new immigrants from Guatemala, who speak the Mayan language, K'iche. While fish advisories have been translated into Spanish and Portuguese, they are not in K'iche, a language that is not written. And it is also believed that some people who may be fishing are unable to read in any language. A pilot study undertaken by researchers at the Boston University Superfund Research Program identified routine fishing and consumption of New Bedford Harbor fish, even when signage is present and recognized by people fishing.⁵⁰

Community Economic Development Center (CEDC) has been working intensively with the Maya K'iche for nearly 15 years. In the last few years CEDC, in partnership with the City and EPA, has deployed Spanish-, Portuguese-, and K'iche-speaking outreach workers to ensure that information about fish toxicity reaches as many recreational and subsistence fishermen as possible.

Still, there is room for further investigation into the types of fish caught and consumed both inside and outside the hurricane barrier.

D. Climate Change

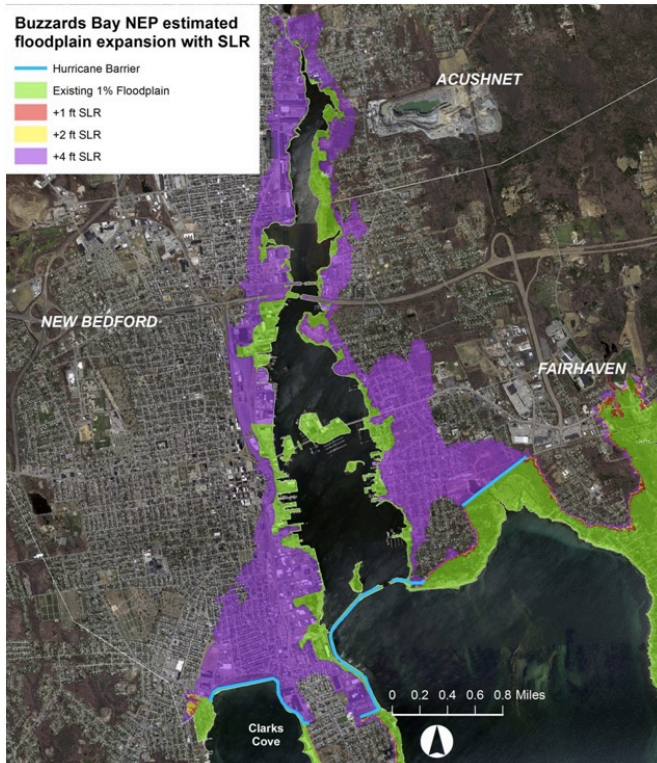
⁴⁶ See Port of New Bedford website at <http://www.portofnewbedford.org/commercial-fishing/our-commercial-fishing-industry/>, last accessed July 2016.

⁴⁷ See Port of New Bedford website at <http://www.portofnewbedford.org/commercial-fishing/our-commercial-fishing-industry/>, last accessed July 2016.

⁴⁸ See <http://www.mass.gov/eohhs/docs/dph/environmental/exposure/nb-area-1-tri-1214-english.pdf>, accessed February 2016.

⁴⁹ The Community Involvement Plan and Institutional Control Plan for Seafood Consumption is available at <http://www.epa.gov/sites/production/files/2015-05/documents/574395.pdf>, accessed November 2015.

⁵⁰ This study has not yet been published, but this preliminary information was supplied for this assessment by the BU research team.



As with any oceanfront city, New Bedford municipal authorities, state officials, and local residents should be and are concerned with the potential impacts from climate change, including storm surges and sea-level rise. New Bedford has a heightened vulnerability because of how flooding may affect and mobilize polluted soils and sediments.

In 2014, the independent nonprofit ocean science and policy group SeaPlan was retained to prepare a climate change vulnerability assessment and adaptation study for New Bedford, Fairhaven, and

Acushnet. The results of this study showed vulnerability, despite the existence of the hurricane barrier,⁵¹ during a Category 2 hurricane and sea-level rise of four feet. Computer modeling showed that for a Category 3 hurricane combined with sea level rise of four feet, inundation depths could reach 32 feet and affect more than 30,000 residents of New Bedford’s environmental justice communities. SeaPlan’s “Climate Change Vulnerability Assessment and Adaptation Study for Water Quality Infrastructure in New Bedford, Fairhaven, and Acushnet”⁵² was a project commissioned by the Buzzard’s Bay National Estuary Program, an advisory and planning unit of the Massachusetts Office of Coastal Zone Management. It is a platform from which climate resiliency and adaptation planning should take place. The research was first presented in June of 2014, and recommends 24 site-specific adaptation actions. They include a hydraulic modeling study of New Bedford’s CSO system, which is identified as the highest priority. In fact, the study helped the City obtain a \$250,000 grant to plan for flood-proofing of the nine most vulnerable pump stations, most of which are in EJ communities.

⁵¹ New Bedford’s hurricane barrier was at one time the largest and most sophisticated hurricane barrier in the world. A five-minute video on the construction and technical details of hurricane barrier is available at <https://www.youtube.com/watch?v=MAiueDDTyAg>, last accessed in February 2016.

⁵² Available at <http://climate.buzzardsbay.org/download/seaplan-climate-vulnerability-new-bedford-area.pdf>, accessed August 2016.

V. Environmental Justice Resources

A. Federal Environmental Justice Tools

On September 30, 1993, EPA established a formal federal advisory committee to examine environmental justice issues and advise the agency. That committee, known as the National Environmental Justice Advisory Council or “NEJAC,” is a sector-diverse, multi-stakeholder panel. With its ability to hold public comment sessions, NEJAC meetings rather organically became a place where EJ activists from around the country could meet each other, share stories, and formulate advocacy strategies. In its early years, NEJAC played a critical galvanizing role in the environmental justice movement.

Six months after the creation of NEJAC, on February 11, 1994, President Clinton signed Executive Order 12898,⁵³ known as the federal Executive Order on Environmental Justice. This was the first time in history the U.S. government acknowledged the disproportionate environmental burden cast on its low-income and people of color communities. It imposed a suite of actions – among them, the development of EJ strategies intended to prioritize enforcement, improve research, and ensure greater public participation – to be undertaken by 17 enumerated federal agencies.

Another action President Clinton took to address environmental justice was to direct EPA to begin accepting administrative complaints filed under Title VI of the federal Civil Rights Act of 1964.⁵⁴ Title VI proscribes recipients of federal funding from discriminating in the implementation of their programs based on race, color, or national origin. Title VI has two methods of redress. First, aggrieved parties can sue in federal district court. This avenue has been largely abandoned since a 2001 Supreme Court ruling⁵⁵ that requires a showing of intent to discriminate in order to prevail. Before then, courts had been willing in some cases to consider a showing of discriminatory effect as proof of intent,⁵⁶ an incredibly high bar. Second, aggrieved parties can file an administrative complaint with the relevant federal agency. Before the Clinton Administration, Title VI had been unused in an environmental context and principally ignored by EPA.

⁵³ Federal Register, Vol. 59, No. 32, February 16, 1994, available at <https://www.archives.gov/federal-register/executive-orders/pdf/12898.pdf>, accessed January, 2016.

⁵⁴ 42 U.S.C. § 2000d *et seq.*

⁵⁵ *Alexander v. Sandoval*, 532 U.S. 275 (2001).

⁵⁶ *See, e.g., South Camden Citizens in Action vs. New Jersey Department of Environmental Protection*, 145 F.Supp. 2d 446 (2001), which was decided five days before *Sandoval, id.*, and later vacated in accordance with that Supreme Court decision.

Over the years, more than 200 Title VI complaints filed with EPA⁵⁷ have languished as EPA attempted to devise a quantifiable method to measure discrimination and demonstrate disproportionate impacts through comparison with other communities.⁵⁸ Sadly, that struggle continues to this date as some of the people, whose complaints have been hanging in limbo for a decade or more, have died in the intervening years. Last year Earthjustice, a nonprofit environmental law firm, filed a case on behalf of a group of Title VI complainants against EPA in federal district court, asserting that the backlog of Title VI complaints constitutes unreasonable delay.⁵⁹ EPA's poor track record with respect to civil rights issues is the subject of ongoing hearings held by the U.S. Commission on Civil Rights.

B. State Environmental Justice Tools

Besides having its own implications, the federal Executive Order on Environmental Justice led to a host of states creating their own EJ policies and other initiatives that mirror the federal model. Massachusetts issued its environmental justice policy applicable solely to environmental agencies in 2002.

The 2002 EJ Policy came with \$1 million attached to it to prioritize the cleanup of contaminated sites under the Department of Environmental Protection's 21E⁶⁰ program. The EJ Policy also required state environmental agencies to create EJ strategies, paralleling the federal EO 12898. Fourteen years after the issuance of the EJ Policy, no state agency has prepared an EJ strategy, not even DEP, the only state agency to have an appointed EJ staff member besides the Executive Office of Energy and Environmental Affairs' (EEA) own appointment. The applicability of the EJ Policy was litigated only once, before the Supreme Judicial Court in 2014. That case involved the siting of a natural gas-fired power plant adjacent to an EJ community in Brockton, a city like New Bedford with one of the highest concentrations of EJ communities in the state. The Supreme Judicial Court decision was mixed. The Court held that environmental justice had been

⁵⁷ [A complete list of Title VI complaints filed to date can be found at https://www.epa.gov/ocr/complaints-filed-epa-under-title-vi-civil-rights-act-1964](https://www.epa.gov/ocr/complaints-filed-epa-under-title-vi-civil-rights-act-1964), accessed March 2016

⁵⁸ EPA records reflect that two Title VI complaints have been filed by Massachusetts residents since EPA started accepting complaints in 1993. A 1999 complaint concerning an incinerator in North Andover was withdrawn and a 2005 complaint by JFY Networks was rejected as moot. EPA maintains an exhaustive list of all complaints at <http://www.epa.gov/ocr/complaints-filed-epa-under-title-vi-civil-rights-act-1964>, last accessed February 2016.

⁵⁹ The Center for Public Integrity wrote a series of articles on EPA's failure to implement Title VI. Media coverage on Earthjustice's litigation is available at <http://www.publicintegrity.org/2015/08/03/17668/environmental-racism-persists-and-epa-one-reason-why>, accessed in December 2015.

⁶⁰ MGL c. 21E

properly weighed in the siting decision, but the Energy Facility Siting Board, an EEA agency, was required and failed to create an EJ strategy.⁶¹

In 2014, Governor Deval Patrick signed Executive Order 552 (EO 552), extending environmental justice obligations to all executive branch agencies. Like the existing state EJ policy, EO 552 calls for, among other things, the formulation of EJ strategies by all executive branch agencies. To his credit, Governor Baker's Administration has expressed an unqualified commitment to environmental justice and has no plans to rescind EO 552, although legally Governor Baker or any future governor could. EEA issued a Revised Draft EJ Policy for public comment in 2015. Since the closure of the comment period last fall, stakeholders still await the issuance of a Final Revised EJ Policy. There has been no mention of the EJ strategies by EEA or any other state agency. EEA's strategy was due, according to the dates set out in EO 552, over a year ago. In fact, besides the appointment of a Director of Environmental Justice (which was achieved before EO 552 went into effect⁶²), none of EO 552's mandated actions have been taken. The issuance of the Draft Revised EJ Policy was a promising start that seems to have fizzled.

C. Local Environmental Justice Tools

CLEAN, the local environmental justice organization headed by Eddie Johnson, has been a strong advocate for an environmental justice ordinance for the City of New Bedford, while the City favors a New Bedford environmental justice policy. If New Bedford were to enact an EJ law, it would be the first such law in Massachusetts and most likely among the first in the nation. The success of either instrument depends on rigorous enforcement. One problem with a policy is that policies typically provide no right to use the courts to enforce the policy. The meager returns realized from the state EJ Policy and the overdue mandates of EO 552 provide an important lesson in that regard.

EJ laws have better potential than policies and executive orders, because, generally speaking, laws are enforceable in a court of law, while policies and executive orders are not. Connecticut⁶³ and New York have environmental justice

⁶¹ Brockton Power, LLC vs. Energy Facility Siting Board, et al., slip opinion available at <http://cases.justia.com/massachusetts/supreme-court/2014-sjc-11405.pdf?ts=1406851527>, accessed February 2016.

⁶² The Director of Environmental Justice position is vacant at the time this report's release, and EEA is actively recruiting to backfill this position.

⁶³ Public Act No. 08-94, An Act Concerning Environmental Justice Communities and the Storage of Asbestos-Containing Material, available at <https://www.cga.ct.gov/2008/ACT/PA/2008PA-00094-R00HB-05145-PA.htm>, last accessed February 2016.

laws that apply to the siting of power plants. The New York law⁶⁴ requires an environmental justice impact study component. Proponents of new power plants must identify environmental justice communities within one half mile of a proposed new plant, the study of impacts must include an analysis of cumulative impacts of air pollution burdens, and the law requires the designation of a comparison community – that backstop that EPA has failed to clearly define within its Title VI enforcement framework – showing that the burden is disproportionate in comparison with other non-environmental justice communities.

Connecticut's law, on the other hand, lacks a substantive component. Although it does provide for the consideration of the development of a community benefits agreement⁶⁵ with the project proponent, there is no requirement that a community benefits agreement be reached. And there is nothing in the law that could stop the siting of a new power plant.

These two laws in Connecticut and New York lie in stark contrast to each other. The Connecticut law is a reminder that having a law or ordinance may not be the solution without an impact analysis provision and commitment to enforcing the law. Simply put, a weak or unenforced EJ law is of no more use to EJ communities than an unenforceable EJ policy.

With its abundant brownfields sites and dearth of remediation dollars, the City of New Bedford and its residents are faced with a challenge when it comes to creating an “environmental justice infrastructure,” such as an ordinance or policy that helps the City address environmental justice issues. Doing so will require a deep and meaningful partnership with resident groups and other organizations to carefully think through what will be the most impactful and manageable tool for New Bedford. Additionally, the City and its stakeholders will have to consider how much can be done with available dollars.

VI. Other Tools and Resources

⁶⁴ 6 CRR-NY IV H 487, Analyzing Environmental Justice Issues in Siting of Major Electric Generating Facilities Pursuant to Public Service Law Article 10, available at [https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=lc1b73790eb9511e18b86000845b8d3e&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=lc1b73790eb9511e18b86000845b8d3e&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)), last accessed February 2016.

⁶⁵ A community benefits agreement is a contract between a project proponent and the local host community or municipality, requiring certain benefits, such as funding for health studies, park creation, or local hiring, in exchange for support for the project or, sometimes, subsidies. See, e.g., the Los Angeles Sports and Entertainment District (Staples Center) Community Benefits Agreement, available at <http://www.forworkingfamilies.org/resources/staples-cba>.

A. Zoning and Planning

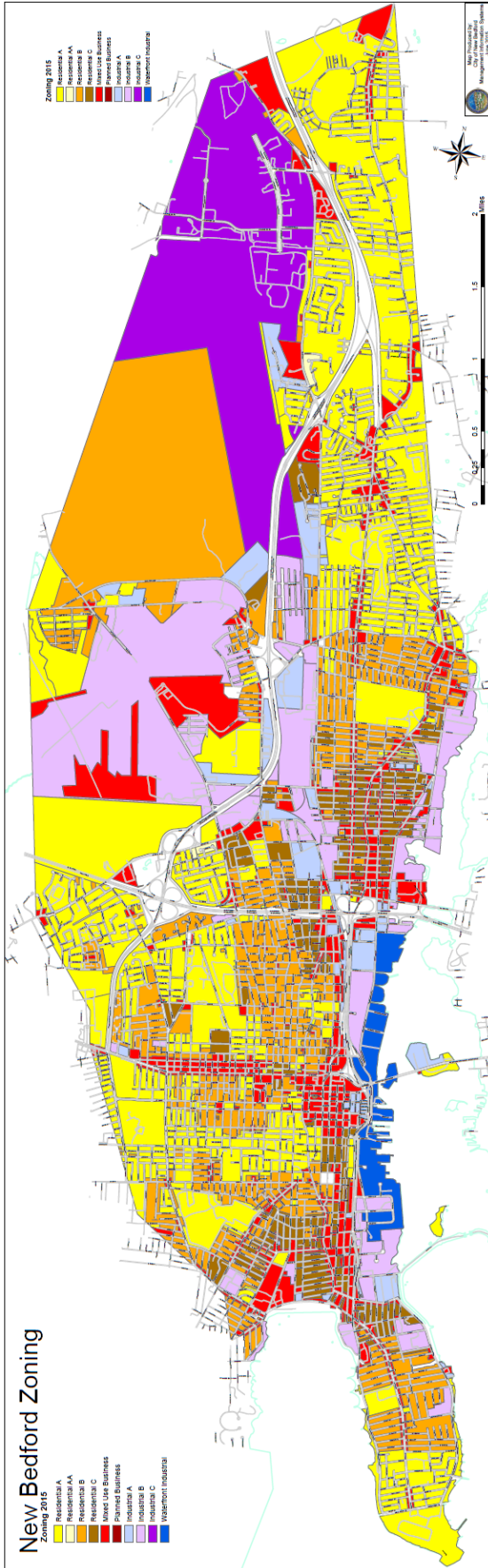
New Bedford completed its latest master plan in 2010. “A City Master Plan: New Bedford 2020,”⁶⁶ was the result of extensive public engagement and is intended to guide New Bedford towards a thriving economy. The master plan embraces traditional harbor economic engines, such as fishing and seafood processing. But it also looks towards new uses like the proposed South Terminal. The Cape Wind project, a proposed offshore wind farm in Nantucket Sound, was supposed to be a cornerstone use of the South Terminal, which would have served as a staging area for the construction of that ill-fated project. Nevertheless, the South Terminal will still service the Block Island offshore wind farm now being constructed by Deep Water Wind, among other uses.

The master plan also promotes grassroots neighborhood planning, playing on the strengths of neighborhoods while attempting to eradicate blight, which could be enormously useful in not only bringing more community members to the table, but in having the community define the agenda, increasing the trust in the process. The City has already used the master plan to engage over 1,100 residents at public meetings, focus groups, and cultural events. One outgrowth of this civic and neighborhood planning will be a Riverwalk spanning more than two miles.⁶⁷

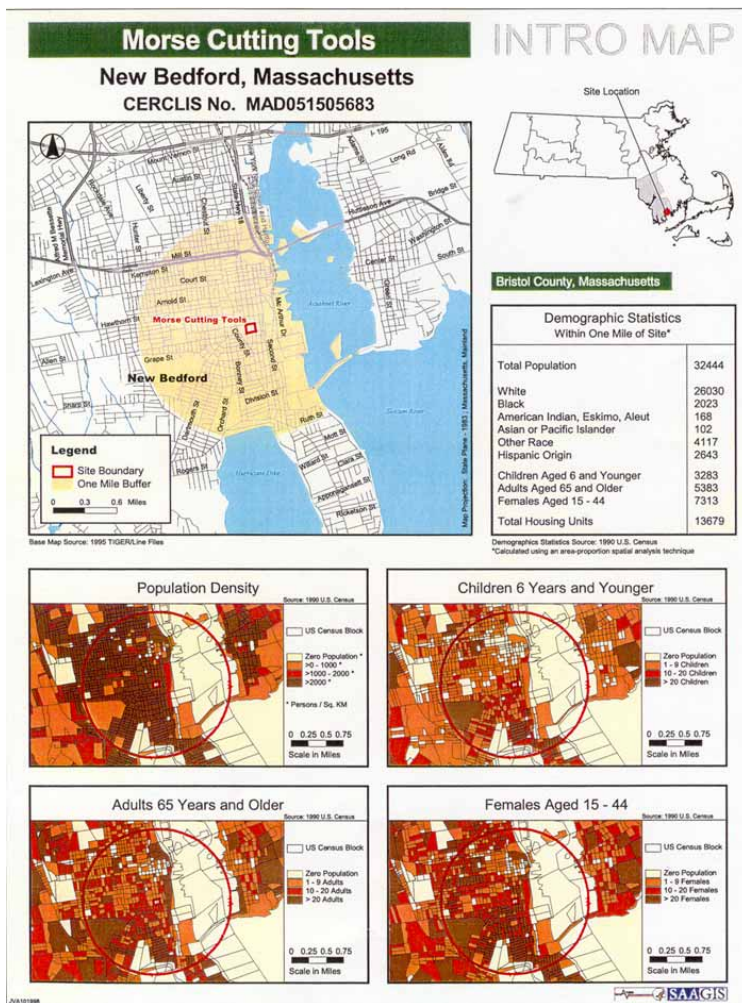
One challenging issue facing New Bedford stakeholders is zoning. With New Bedford’s history dating back to one of the oldest European settlements in the nation, people arrived centuries before any industrial land uses. In those early days, it was common for people to live near their places of business, and it was normal to dump waste into the soil and water bodies.

⁶⁶ Available at <http://www3.epa.gov/region1/superfund/sites/newbedford/507969.pdf>, accessed January 2016.

⁶⁷ The City provided this information, which was included in its successful application to EPA for its Brownfields 2015 Area-Wide Planning Grant, see https://cfpub.epa.gov/bf_factsheets/gfs/index.cfm?event=factsheet_display&display_type=PDF&xpg_id=8789, last accessed July 2016.



This map is available online at
 City of New Bedford Zoning
 Map
http://3t848o30ike211t7x11nzg.xi.wpengine.netdna-cdn.com/wp-content/uploads/2013/2015/Zoning_2015.pdf, accessed
 February 2016.



The Morse Cutting Tools site is an example of how those early practices led to environmental problems the City and its residents continue to grapple with. Morse Cutting Tools opened for business in New Bedford in 1864. Prior to that, the site had been used as a tannery. Workers lived near their work as a matter of convenience. Decades later, a plume of toxic chemicals was found under the now abandoned Morse Cutting Tools site as well as under some of the surrounding homes.

Neighboring residents contacted then-Congressman Barney Frank, reporting respiratory illnesses and cancers, which some suspected

were caused by the lingering pollution. Congressman Frank petitioned the Agency for Toxic Substances and Disease Registry, an arm of the Centers for Disease Control, for a public health assessment. ATSDR concluded in 2000 that there was no apparent public health threat, something understandably frustrating and confounding for the local community, which was witnessing an unusual incidence of illness in the area.⁶⁸

This sort of discrepancy of perceptions and conclusions between researchers and residents is nothing new to New Bedford residents. It's a key reason why it is critical residents are at the table and can define the agenda in partnership with city officials. The neighborhood planning promoted in the master plan has been

⁶⁸ The ATSDR public health assessment is available online as an HTML document at <http://www.atsdr.cdc.gov/HAC/pha/pha.asp?docid=1269&pg=1>, accessed in February 2016.

an important partnership opportunity for overcoming legacy pollution and public health threats.

B. Smart Growth and Community Development

There are several organizations that are currently providing technical and/or financial resources to New Bedford or may do so in the not-so-distant future. Some of these organizations are engaged with the City, and are positioned to leverage the impact of New Bedford's community-based organizations and help bring about significant change much faster. To do so, it is critical that New Bedford's residents lead the change, which is a key component of the following projects.

1. Great Neighborhoods Initiative

The Massachusetts Smart Growth Alliance was created over a decade ago by a diverse set of organizations⁶⁹ that shared a vision for better planned, more prosperous, and equitable cities and towns in the Commonwealth. Its Great Neighborhoods Initiative works closely with the City and also supports local organizations working on smart growth issues. The Smart Growth Alliance has been working with groups in New Bedford, such as the Community Economic Development Center, to strengthen local smart growth efforts. The Great Neighborhoods Initiative has also a place where smart growth advocates in New Bedford can meet and share skills and experiences with other GNI communities, like Lawrence, Gloucester, Dorchester, and many others.

2. Groundwork South Coast

Groundwork USA is a network of local nonprofit organizations focused on building community capacity, reclaiming brownfields and other blighted land, and engaging communities, businesses, and government in improving the environment while stimulating economic vitality. There are more than 20 Groundwork organizations nationally, with two in Massachusetts – Groundwork Lawrence and Groundwork Somerville. Groundwork is currently working with several City departments, including Parks and Recreation, Environmental Stewardship, and Community Development and Planning, as it prepares to launch Groundwork South Coast, which would serve New Bedford and other communities in the South Coast region.

⁶⁹ Conservation Law Foundation is a founding member of the MSGA. The full list of member organizations is available at <http://ma-smartgrowth.org/about/steering-committee/>, accessed February 2016.

3. Healthy Neighborhoods Equity Fund

The Healthy Neighborhoods Equity Fund (HNEF) is a pioneering project of CLF Ventures, the strategy-consulting arm of the Conservation Law Foundation. CLF Ventures devises market-based solutions that benefit the environment and society as a whole. HNEF is one of its signature projects that aims to address the very serious economic, environmental, community, and health consequences of what, where, and how we invest in and build communities in the United States

HNEF is a \$30 million private equity fund investing in the building blocks of healthy communities in Massachusetts. The Fund advances a quadruple bottom line. That is, in addition to investing in projects that yield a strong financial return, the Fund also measures its bottom line by a thriving community, sustainable environment, and improved population health. The fund will invest in transportation-oriented development projects that implement a community vision, capitalize on the investments already made by other sources, and demonstrate clear potential to advance regional equity and reduce health disparities. To assess the impact of these investments, CFLV is conducting a multi-prong 10 year research project to measure and track changes in the built, natural, and economic environment along with changes in health of communities.

The health component makes the HNEF unique. It's a feature that requires ongoing engagement with the community. The ongoing research project partners with community residents and organizations, creating opportunity for the local community to have a stake in shaping development projects and practices to maximize health and human impacts for both current and future residents. New Bedford could be an excellent candidate for an HNEF-funded project.

4. University of Massachusetts School of Law

UMass Dartmouth's nascent law school is noteworthy. It opened its doors in 2010 as the Commonwealth's public law school. It currently houses three legal clinics, affording law students under the supervision of licensed attorneys the opportunity to take on legal cases. The community development clinic helps South Coast businesses with legal filings, including incorporation, contracts, and tax filings. These services could support new and existing environmental justice organizations by providing assistance with any business or corporate (non- or for-profit) issues.

5. Funding Sources

Massachusetts has the benefit of a strong brownfields law to support the cleanup of lesser-contaminated sites and return them to economic productivity. A central element of the law is the Brownfields Redevelopment Fund, which offers loans and grants to finance the assessment and remediation of contaminated sites. The City of New Bedford, like many Massachusetts cities and towns, has benefited greatly from the BRF, which across the Commonwealth has created thousands of housing units and jobs. In 2014 alone, New Bedford received nearly \$100,000 to assess contaminated sites.⁷⁰

In the last few years, however, the BRF has been tapped dry on and off over the years. Mass Development, the state's economic and finance agency, manages the BRF. Nonprofit organizations, community development organizations, developers, municipal officials, and many others have been urging the legislature and the Governor's Office to include recapitalization of the BRF in economic development bills before the legislature. Replenishing the BRF is a high priority across a broad range of interest groups, and Governor Baker signed into law at the end of the 2016 legislative session an economic development bill that authorizes \$45 million for the BRF.

As a Gateway City, New Bedford also has access to other state resources, including tax credits and loans, set aside to help stimulate economic development in these 26 priority cities.⁷¹

VII. New Bedford's Environmental Future

There are three key factors that will determine New Bedford's environmental future.

- Civil society – organizations and institutions that promote the will of the community
- Trust
- Access to adequate financial resources

A. Civil Society

New Bedford's civil society, including community-based organizations, environmental advocacy organizations, and concerned individuals, is uniquely

⁷⁰ See Brownfields Redevelopment Fund, Fiscal Year 2014 Annual Report, at <http://www.massdevelopment.com/assets/pdfs/annual-reports/Brownfields-Annual-Report-2014.pdf>, accessed January 2016.

⁷¹ More information on financial resources reserved for Gateway Communities is available at <http://www.mass.gov/hed/docs/dhcd/cd/gateway/stateresourcessupportingrevitalizationofgatewaycities.pdf>, accessed February 2016.

strong. People in New Bedford are engaged, mobilized, and ready to define the future. At the same time, many residents are exhausted and say that once cleanups reach a certain point, they stall.

Along with longstanding groups that have been in the fight for environmental justice for decades, there is a younger generation of activists who bring a fresh, can-do outlook. Older activists and younger activists should be in contact, with older activists passing on their knowledge and experience to the next generation. Local groups, especially community-based organizations, should be thinking about how to mentor younger people and help shape them into tomorrow's leaders. The Trustees' (formerly the Trustees of Reservations) South Coast Youth Conservation Corps has been very successful in connecting youth with their environment. Likewise, the Southeast Environmental Education Alliance (SEEAL) is a collaboration of 20 groups that seeks to raise awareness of environmental stewardship. Partnerships between these youth-oriented organizations and groups led by more seasoned adults could produce some very positive results for New Bedford and the South Coast.

B. Trust

While some residents speak of positive relationships with some city officials and regulators, others have a withering view of some of those same regulators. There is an acute lack of trust in some cases, grounded in the emotional impacts of pollution along with a dysfunctional history of dealings – be they over the New Bedford Harbor Superfund site, the Parker Street Waste Site, the Morse Cutting Tools site, or other sites. This lack of trust hasn't improved much since the 2003 Tufts environmental justice assessment and policy recommendations.

Building trust between regulators and community groups can seem like a daunting challenge at times, especially when it seems that the two don't speak the same language. While EPA refers to the New Bedford Harbor Superfund site in two segments – the upper harbor and lower harbor – longtime residents know their harbor to be in three pieces – the upper, middle, and lower harbors. This disparity in language may not seem significant on its face, but a disagreement over a seemingly pedestrian issue can become inflamed quickly and stand in the way of resolution of the underlying problem.

"It's been going on too long, and the people of New Bedford deserve better than that."

- New Bedford Resident

Some situations, meetings, or public forums might benefit from an independent facilitator that both sides can agree to. Boston University's Superfund Research

Program has served in some instances as a science bridge between residents and regulators and will likely continue to be helpful in this regard.

C. Access to Adequate Financial Resources

New Bedford Director of Environmental Stewardship Michele Paul lamented that one of the biggest environmental justice challenges the city faces is identifying contaminated sites that are not yet on the city's radar. While the city recently received a \$400,000 EPA brownfields site assessment grant to help underwrite the cost of finding these sites, there is simply not enough money to go around.

It is critically important that city officials stay in close communication with residents groups, and they do seem to have accomplished that to an extent. Any break in communications could foment distrust, and city officials should continue to be vigilant in engaging the community.

The bottom line is that more state, federal, and private financial resources are sorely needed in New Bedford.

VIII. Recommendations

1. New Bedford Comprehensive Problem-Solving Model

EPA and state agencies already work together in New Bedford on specific issues, such as the Parker Street Waste Site, and continue to coordinate on the New Bedford Harbor Superfund site. New Bedford is a uniquely contaminated community that calls for thinking outside the box. State and federal regulators should develop a New Bedford-focused problem-solving model that would deploy an inter-programmatic, inter-agency team to conduct a comprehensive environmental investigation and implement broad-based solutions. EPA developed its own environmental justice collaborative problem-solving model⁷² that brings together a wide range of stakeholders, including community groups, government, industry, and academia to work together to develop and implement a strategic, community-driven agenda. New Bedford would greatly benefit from this type of collaboration.

2. Title VI Compliance Review

Under Title VI of the federal Civil Rights Act of 1964 and its implementing regulations, EPA is equipped with the discretionary authority to conduct in-depth

⁷² "See "EPA's Environmental Justice Collaborative Problem-Solving Model," available online at <https://www.epa.gov/sites/production/files/2015-04/documents/ejproblemcollaborativesolvingmodel.pdf>, last accessed July 2016.

reviews of recipients of federal financial assistance. The Federal Bureau of Investigation used similar authority to investigate allegations of discrimination and police misconduct in Ferguson, Missouri. A Title VI compliance review in New Bedford would ensure that there are no activities contributing to a discriminatory impact on people of color, immigrants, and other protected classes.

3. Review of the New Bedford High School Health Consultation

It is clear that local residents are skeptical of the conclusions the Massachusetts Department of Public Health reached in its 2013 New Bedford High School Health Consultation. Local groups like HARC and CLEAN should seek funding for the assistance of an independent expert to review and critique the MDPH investigation and undertake further investigation as appropriate.

4. Update the New Bedford Harbor Fish Advisory

State and local officials should partner with community groups to conduct a fish survey to confirm fish being caught in the contaminated harbor as well as the outer harbor, what type of fish are being caught and whether those fish are being eaten or sold. The fish survey should be undertaken in addition to the intensive and public education outreach underway by CEDC the City, and EPA discussed in IV. Section C., above. A new fish advisory should be issued by MDPH with any new information discovered through the survey and translated into additional relevant languages and pictographs to reach populations that are not able to read or that speak unwritten languages, like K'iche.

5. Study Cumulative Impacts

Environmental contamination in New Bedford is ubiquitous. And while researchers and regulatory agencies and others address the contamination site-by-site or source-by-source, it's not clear that there is any effort to address cumulative impacts and synergistic effects caused by the inter-action of two or more pollutants. Toxic substances in New Bedford do not present themselves in a vacuum. There are ambient PCBs, there are contaminants in fish that subsistence fishers may be eating, despite the fishing ban. Maybe someone lives above a toxic groundwater plume or unwittingly drinks lead-tainted water. Even if each exposure is at a level that is not dangerous, combined or in reaction to each other, these toxins can present acute risk to human health.

The subject of cumulative impact in New Bedford deserves immediate attention. Recently the Massachusetts Department of Public Health, in partnership with the

Centers for Disease Control, launched a biomonitoring project⁷³. Simply put, biomonitoring measures levels of environmental chemicals in a person's body fluids and tissues. The study will monitor PCBs and select metals, such as lead, mercury, and cadmium. New Bedford residents who are willing to volunteer for this project could help MDPH gain insight into the special health risks New Bedford poses.⁷⁴

6. Improve Public Transportation Links between the South Coast and Boston

New Bedford's economic health could be bolstered by transportation options linking it with Greater Boston. The South Coast region is the only region within 50 miles of Boston without a public transit link between Boston and its major cities – Taunton, Fall River, and New Bedford. South Coast Rail⁷⁵ would restore commuter rail service between Boston and the South Coast.

The MBTA has a number of challenges it has to solve in both the near and long term, not the least of which are adequate funding and quality service on the routes it currently serves. Connecting New Bedford to Boston by commuter rail should be included in future expansion plans for the MBTA.

7. Advocate for School Siting Legislation

Other states have laws restricting the siting of schools on contaminated or formerly contaminated properties.⁷⁶ State Representative Denise Provost's H. 738, *An Act protecting school children from environmental toxins*, introduced by State Representative Denise Provost, would bring DEP into the school siting process and create a legal cause of action to enforce the law, also known as the "Schools Protection Act." It failed to pass on its first try, but if reintroduced next legislative term and passed, this law could help with future school siting decision in New Bedford and elsewhere in the state.

⁷³ Additional information on this study is available on the mass.gov website at <http://www.mass.gov/eohhs/gov/departments/dph/programs/environmental-health/biomonitoring/about-biomonitoring-ma-study.html>, last accessed February 2016.

⁷⁴ Additional information on how to volunteer for the biomonitoring project can be found at <http://www.mass.gov/eohhs/gov/departments/dph/programs/environmental-health/biomonitoring/participant-information.html>, accessed March 2016.

⁷⁵ Additional information on South Coast Rail is available on MassDOT's website at <http://www.massdot.state.ma.us/southcoastrail/Home.aspx>, last accessed February 2016.

⁷⁶ See e.g., Rhode Island's school siting law, RIGL Ch. 23-19.14, available at <http://www.ride.ri.gov/Portals/0/Uploads/Documents/Students-and-Families-Great-Schools/Health-Safety/Guidance-School-Siting.pdf>, accessed April 2016.

8. Advocate for Online System to Track Properties with Lead Service Pipes and Create a Systematic Plan for Lead Testing

The Boston Water and Sewer Commission has an online portal that allows the public to access immediate information on whether or not there are lead service pipes leading up to a private property.⁷⁷ The City of New Bedford should seek funding to establish a similar system and seek funding to help property owners to replace lead service pipes. Furthermore, New Bedford should prioritize replacing any remaining lead pipes in its system and come up with a systematic plan for testing for lead in schools, public housing, and multi-family housing.

9. Advocate for Implementation of Executive Order 552 and Develop a City EJ Ordinance

As discussed above, New Bedford residents and the local advocacy group CLEAN have been advocating for an EJ ordinance. This is an opportunity for New Bedford to take a leadership position in the state in adopting a strong, enforceable tool that local communities can use to ensure that New Bedford a safe and healthy community for all residents, regardless of race or income. The City should begin a focused public dialogue and collaborative process for addressing environmental justice. Additionally, local groups should take their campaign for environmental justice to the State House demand that the Governor instruct his administrative agencies to make environmental justice a top priority and implement Executive Order 552 fully.

10. Advocate for Elimination of Combined Sewer Overflow

New Bedford and Fairhaven residents should build a strong coalition to advocate for a pathway and timeline for the total elimination of New Bedford's CSOs.

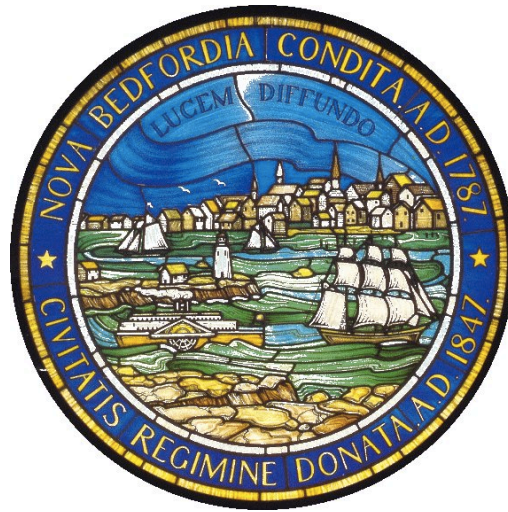
11. Train Future Leaders

As discussed above in Section VII. B., there are already organizations working with New Bedford youth. By partnering with schools and creating curricula around environmental education focused on New Bedford, there is an opportunity to engage youth more broadly and get their input on solving some of the environmental issues that have become entrenched. Similarly, outreach can be expanded through engagement to seniors and elderly services providers

⁷⁷ The BWSC portal can be accessed at http://www.bwsc.org/COMMUNITY/lead/leadmaps.asp#TOP_PAGE, accessed April 2016.

Conclusion

New Bedford is a city with generous assets, replete with a rich history, stunning views, and an active civil society. It has a large and growing skilled workforce. It has excellent educational institutions in close proximity, including the University of Massachusetts Dartmouth and its new law school. It has a fishing fleet that is unparalleled in the U.S., and New Bedford has its people, who love it and want to set it on a solid course towards revitalization.



Its future depends on stakeholders working together in an honest and trusting relationship. It depends on taking advantage of funding programs available to it as a Gateway City and finding new funding sources. New Bedford has the benefit of many strong, forward-thinking community-based organizations working with long-time residents and new immigrants, as well as knowledgeable and dedicated city staff carrying out the vision of the elected city government.

Environmental justice calls for a locally-driven agenda, and it is important that organizations not based in the area support and follow the lead of locals. With new organizations that can support grassroots and community-based organizations entering the scene, there is an opportunity to leverage numerous positive results. This report will hopefully serve as scaffolding upon which a broad range of stakeholders can catalyze change and rally support towards achieving environmental justice in New Bedford, a city that, despite its challenges, remains an important historical, cultural, and economic resource of Massachusetts and the nation.



Location: User-specified polygonal location
 Ring (buffer): 0- mile radius
 Description: New Bedford

Summary of ACS Estimates	2008 - 2012
Population	95,038
Population Density (per sq. mile)	4,715
Minority Population	29,798
% Minority	31 %
Households	39,182
Housing Units	43,865
Housing Units Built Before 1950	27,253
Per Capita Income	21,615
Land Area (sq. miles) (Source: SF1)	20.16
% Land Area	91 %
Water Area (sq. miles) (Source: SF1)	2.01
% Water Area	9 %

	2008 - 2012 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	95,038	100%	508
Population Reporting One Race	90,714	95%	1,379
White	74,460	78%	430
Black	7,964	8%	342
American Indian	468	0%	96
Asian	936	1%	134
Pacific Islander	17	0%	26
Some Other Race	6,870	7%	351
Population Reporting Two or More Races	4,324	5%	234
Total Hispanic Population	15,715	17%	347
Total Non-Hispanic Population	79,323		
White Alone	65,240	69%	430
Black Alone	6,679	7%	294
American Indian Alone	164	0%	63
Non-Hispanic Asian Alone	906	1%	134
Pacific Islander Alone	0	0%	12
Other Race Alone	3,028	3%	249
Two or More Races Alone	3,306	3%	195
Population by Sex			
Male	44,790	47%	270
Female	50,249	53%	346
Population by Age			
Age 0-4	6,423	7%	216
Age 0-17	22,063	23%	248
Age 18+	72,976	77%	305
Age 65+	14,534	15%	173



Location: User-specified polygonal location

Ring (buffer): 0- mile radius

	2008 - 2012 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	64,101	100%	303
Less than 9th Grade	11,309	18%	164
9th - 12th Grade, No Diploma	8,705	14%	117
High School Graduate	20,108	31%	178
Some College, No Degree	14,516	23%	162
Associate Degree	4,019	6%	128
Bachelor's Degree or more	9,462	15%	147
Population Age 5+ Years by Ability to Speak English			
Total	88,616	100%	508
Speak only English	55,542	63%	329
Non-English at Home ¹⁺²⁺³⁺⁴	33,073	37%	276
¹ Speak English "very well"	18,408	21%	220
² Speak English "well"	6,096	7%	152
³ Speak English "not well"	5,564	6%	142
⁴ Speak English "not at all"	3,004	3%	140
³⁺⁴ Speak English "less than well"	8,568	10%	176
²⁺³⁺⁴ Speak English "less than very well"	14,665	17%	207
Linguistically Isolated Households*			
Total	4,634	100%	107
Speak Spanish	1,666	36%	93
Speak Other Indo-European Languages	2,880	62%	83
Speak Asian-Pacific Island Languages	55	1%	29
Speak Other Languages	33	1%	40
Households by Household Income in 1999			
Household Income Base	39,182	100%	133
< \$15,000	8,327	21%	103
\$15,000 - \$25,000	5,901	15%	100
\$25,000 - \$50,000	10,063	26%	127
\$50,000 - \$75,000	6,572	17%	117
\$75,000 +	8,319	21%	143
Occupied Housing Units by Tenure			
Total	39,182	100%	133
Owner Occupied	17,027	43%	132
Renter Occupied	22,154	57%	124

Description: New Bedford



EJSCREEN ACS Summary Report



Location: User-specified polygonal location

Ring (buffer): 0- mile radius

Description: New Bedford

2008 - 2012

Percent MOE (±)

ACS Estimates

Population by Language Spoken at Home **			
	ACS Estimates	Percent	MOE (±)
Total (persons age 5 and above)	88,616	100%	508
English	N/A	N/A	N/A
Spanish	N/A	N/A	N/A
French	N/A	N/A	N/A
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	N/A	N/A	N/A
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	N/A	N/A	N/A
Chinese	N/A	N/A	N/A
Japanese	N/A	N/A	N/A
Korean	N/A	N/A	N/A

Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	N/A	N/A	N/A
Other Asian	N/A	N/A	N/A
Tagalog	N/A	N/A	N/A
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	N/A	N/A	N/A
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	N/A	N/A	N/A
Total Non-English	N/A	N/A	N/A

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race. N/A means not available.

Source: U.S. Census Bureau, American Community Survey (ACS) 2008 - 2012.

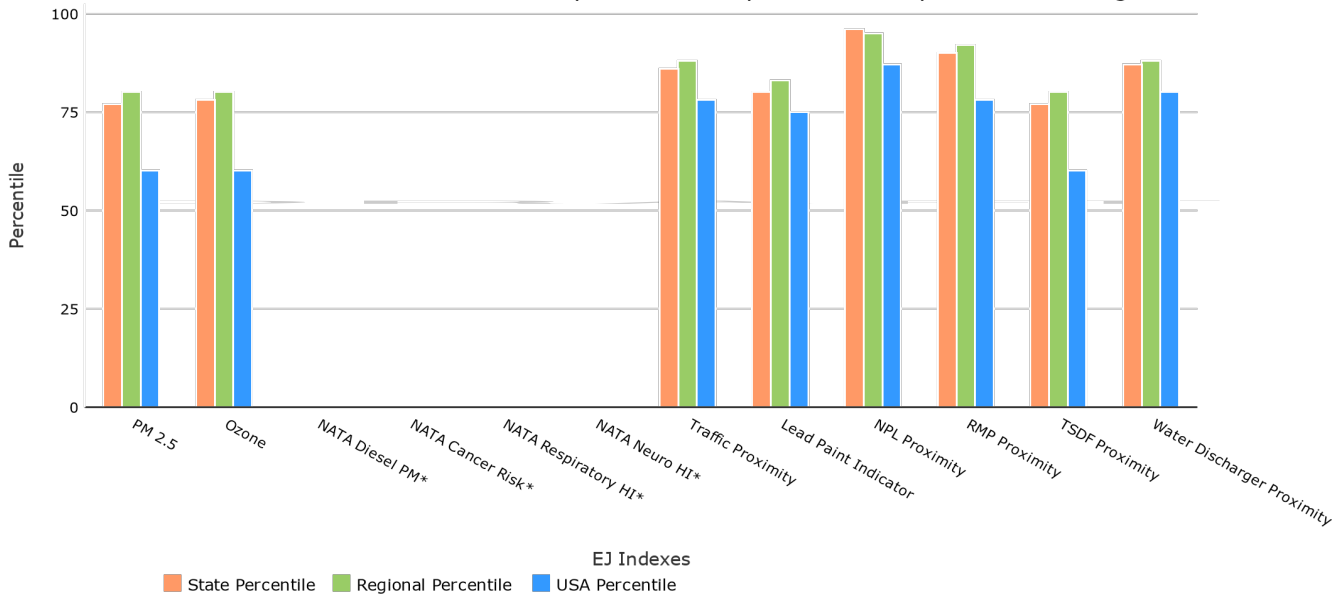
**Population by Language Spoken at Home starts available at the census tract summary level and up.

November 03, 2015

EJSCREEN Report for the User Specified Area
 MASSACHUSETTS, EPA Region 1
 Approximate Population: 95038
 New Bedford

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	77	80	60
EJ Index for Ozone	78	80	60
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	86	88	78
EJ Index for Lead Paint Indicator	80	83	75
EJ Index for NPL Proximity	96	95	87
EJ Index for RMP Proximity	90	92	78
EJ Index for TSDF Proximity	77	80	60
EJ Index for Water Discharger Proximity	87	88	80

EJ Index for the Selected Area Compared to All People's Block Groups in the State/Region/US



This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

Selected Variables	Raw data	State Average	%ile in State	EPA Region Average	%ile in EPA Region	USA Average	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m ³)	8.13	9.15	10	8.87	20	9.78	16
Ozone (ppb)	43.5	40.4	96	40.7	80	46.1	33
NATA Diesel PM (µg/m ³)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Air Toxics Cancer Risk (risk per MM)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	130	120	76	110	79	110	80
Lead Paint Indicator (% pre-1960s housing)	0.71	0.53	69	0.47	77	0.3	87
NPL Proximity (site count/km distance)	0.6	0.12	97	0.11	97	0.096	98
RMP Proximity (facility count/km distance)	0.65	0.23	91	0.2	93	0.31	87
TSDF Proximity (facility count/km distance)	0.018	0.046	12	0.035	50	0.054	43
Water Discharger Proximity (count/km)	0.65	0.32	86	0.34	85	0.25	92
Demographic Indicators							
Demographic Index	38%	24%	79	23%	82	35%	63
Minority Population	31%	24%	73	21%	77	36%	55
Low Income Population	45%	24%	84	25%	84	34%	71
Linguistically Isolated Population	12%	6%	84	5%	87	5%	85
Population with Less Than High School Education	31%	11%	92	11%	93	14%	88
Population under Age 5	7%	6%	67	5%	69	7%	57
Population over Age 64	15%	14%	64	14%	61	13%	68

*The National-Scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <http://www.epa.gov/ttn/atw/natamain/index.html>.






EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decisionmaking, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and

local knowledge before taking any action to address potential EJ concerns. For additional information, see: www.epa.gov/environmentaljustice.







New Bedford Environmental Justice Populations

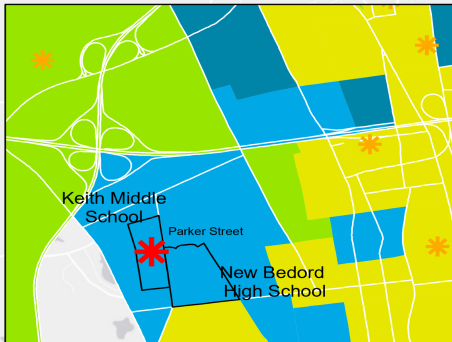
Points of Interest

-  Key Industrial Sites
-  21E Sites*
-  Schools
-  Keith Middle School & New Bedford High Campuses
-  Hospitals

EJ Populations

-  Income
-  Minority
-  Minority & Income
-  Minority, Income & English

*21E sites are classified and recorded by MassDEP as locations with oil and/or hazardous material disposal



Data sources: U.S Census Bureau, 2010 Decennial Census Tiger Files, Massachusetts Office of Geographic Information Systems (MassGIS), Created July 2016 - Massachusetts State Plane Projection (Meters) 2001

Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community