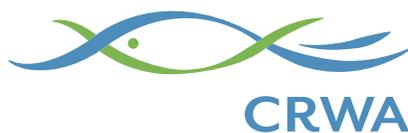
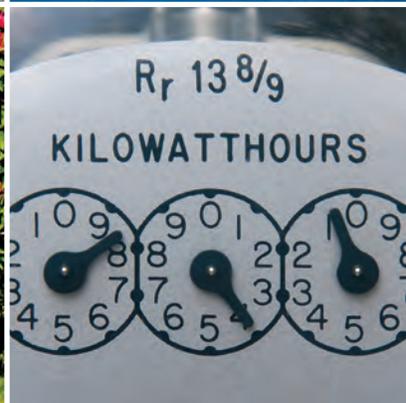




Massachusetts Energy and Environment Report Card

YEAR TWO



THIS REPORT WAS PREPARED BY THE FOLLOWING ORGANIZATIONS:



Charles River Watershed Association, a research and advocacy non-profit, uses science, advocacy, and the law to restore, protect, and enhance the Charles River, its watershed, and public access. It promotes sustainable water resource management policies and practices with a focus on water quality, streamflow and habitat, green infrastructure, water conservation, and climate change resiliency.



Clean Water Action works to protect our environment, health, economic well-being and community quality of life. Our goals include clean, safe and affordable water; prevention of health threatening pollution; creation of environmentally safe jobs and businesses; and empowerment of people to make democracy work.



Conservation Law Foundation forges lasting solutions to environmental challenges for the people of New England. CLF takes on powerful opponents who would pollute our air and water and squander our resources. Our deep local knowledge, legal acumen, and policy expertise make CLF a prime mover in building our clean energy future, countering climate change, and safeguarding our communities.



Environmental League of Massachusetts is committed to combating climate change and protecting our land, water, and public health. By creating diverse alliances and building the power of the environmental community, we use our collective influence to ensure Massachusetts is a leader in environmental and economic sustainability.



Environment Massachusetts is a statewide, citizen-funded environmental advocacy organization. Our staff and members work to protect Massachusetts' air, water and open spaces through grassroots organizing, coalition-building, public education, and direct advocacy.



Massachusetts Rivers Alliance's mission is to protect and restore the Commonwealth's rivers and streams. The organization works to strengthen statewide river policies in four areas: water quality, stream flow, wildlife habitat, and investment in green infrastructure. We also strengthen, connect, and unify our 60+ member organizations in support of shared river protection goals.



Massachusetts Sierra Club's mission is to inspire and empower humanity to explore, enjoy, and protect the wild places of the Earth. We aim to help accelerate the transition to 100 percent carbon-free electricity by 2030, to replace carbon-based fuels in other sectors by 2040, to protect the natural environment of Massachusetts, to represent member concerns effectively at state and local levels, and to promote diversity, equity, and inclusiveness.

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Overview

The results of the 2016 presidential election promise to be devastating for progress in protecting our natural resources and public health. We are already seeing rollbacks and budget cuts with more to come. The federal agencies charged with maintaining minimum environmental standards, conducting reputable climate science and keeping the public safe from environmental threats are now being led by secretaries and administrators who have publicly questioned and attacked environmental programs and policies. The White House has declared its intent to gut reasonable federal efforts to curb emissions. Similarly, the White House has proposed massive federal spending cuts on clean energy, efficiency, and other environmental programs. We also are witnessing overt efforts to boost the use of dirty fossil fuels such as tar sands and coal.

What was important last year is now vital

Now more than ever, states need to lead on environment and energy issues. In Massachusetts, we pride ourselves on our innovative environmental regulations and policies and working to encourage other states, especially in New England and the Northeast, to take up active regional leadership on these issues.

But there is much more to be done. Advocates and the Baker administration need to work together to make sure that we have strong protections in place and that we are promoting cutting edge policies and technologies that will make us healthier and safer and contribute to our economy.

So, how are we doing?

This assessment evaluates how the Baker administration is performing in managing the state's environmental and energy programs through the

Executive Office of Energy and Environmental Affairs (EEA). It is our attempt to both recognize the achievements of the past year and identify where the administration needs to do more. We continue to see attention paid to energy and climate change, but other important environmental issues are not getting the consideration they deserve.

We also continue to feel the impact of budget cuts and staff losses. We simply cannot do more with less at this point.

Last year, we offered two dozen recommendations on a wide array of issues that would have helped the Commonwealth move toward stronger environmental protection and enhanced public health. Unfortunately, only a few were adopted.

OVERALL GRADE



GRADE

With one more year under their belt, but very little to no improvement on many priority issues, we once again give the state a C on their overall performance in managing and leading on environment and energy.

We saw slight improvements in land protection, energy efficiency and reducing the use of toxic chemicals and a lower grade for environmental justice with other grades static. We added a number of new important and timely issues along with a new section on solid waste (see table, page 5).

This year, we sought out a number of knowledgeable outside stakeholders including municipal representatives, legislators, energy experts, academics, and policy innovators. We asked them about their views on priorities and their sense of how or whether the Administration was making progress. We have included their input as appropriate.

We recognize that some of the concerns raised in this assessment existed prior to the Baker

Bottom Line

While we saw some improvements this past year in a few areas, this progress is overshadowed by:

- Environmental agencies that are struggling with deep budget cuts and drastic staff reductions.
- A set of energy policies that continue to support the construction of gas pipelines which undermines good progress on energy efficiency and renewables.
- A transportation system that likely won't be able to meet our citizens' future travel needs in ways that are consistent with the long range requirements of the Global Warming Solutions Act.

administration coming into office. That said, the Baker Administration is now in charge and responsible for carrying out the state's work on environment and energy issues. We also note that this report is not comprehensive; the authors selected and assessed issues that are major environmental and energy priorities.

Key developments since last year

A number of developments stand out from the past year. In July, the legislature passed and the Governor signed an omnibus energy bill that will lead to significant increases in the use of renewable energy, particularly offshore wind. Several important energy policies, however, did not survive the legislative process such as an increase in the Renewable Portfolio Standard. We will be pushing for enactment of those policies this session.

Work on the important issue of energy storage is moving forward with support from the administration. The administration also has proposed a new approach to promoting solar energy that currently is being reviewed. And, in September of last year, Governor Baker issued Executive Order 569 dealing with climate change. The E.O. acknowledges that "climate change presents a serious threat to the environment and the Commonwealth's residents, communities, and economy" and it directs the agencies to develop policies and strategies to help us meet our mandated greenhouse gas



emission reductions and prepare our communities for the impacts of climate change.

In May of last year, the Massachusetts Supreme Judicial Court (SJC) released a decision in *Kain et al v. MassDEP* affirming the state's obligations under the Global Warming Solutions Act and ordering the Commonwealth to create and implement new regulations to meet its carbon emission reduction mandates. This was an extremely important victory and led to MassDEP drafting new regulations that will reduce emissions from a number of different sources.

Three months later in August 2016, an equally significant SJC decision was issued that rejected a natural gas "pipeline tax," an attempt by pipeline companies and electric utilities—supported by the Baker administration—to shift the burden of paying for new gas pipelines onto electric ratepayers. Private pipeline companies will now need to find other ways to finance their projects.

The clean energy sector is one of the fastest growing job sectors in the state. The most recent Clean Energy Center's Jobs report found that clean energy is now a \$11.8 billion industry in Massachusetts, and represents 2.5 percent of the Commonwealth's Gross State Product.

All of this is good news not only because it advances our efforts to address climate change but also because the clean energy sector is one of the fastest growing job sectors in the state. The most recent Clean Energy Center's Jobs report found that clean energy is now a \$11.8 billion industry in Massachusetts, and represents 2.5 percent of the Commonwealth's Gross State Product. Clean energy jobs represent 2.9 percent of the overall workforce in the state—and these are well-paying jobs. The clean energy industry employs residents of every region in Massachusetts. More than 6,300 new clean energy jobs were added in 2016, and for the first time the sector has more than 100,000 jobs.

On the bad news side of the ledger, Massachusetts experienced the worst drought since the 1960s. This summer, many rivers throughout Massachusetts experienced record low flows, and many tributary streams and portions of some major rivers, such as the Ipswich and Parker, went dry. The drought also posed a challenge for public water suppliers when several local municipal water sources became too depleted to meet demand. The state's response was ineffective and points to new challenges and a need for new approaches.

With climate change scientists predicting increases in both floods and droughts, we need to prepare for both extremes. The most effective, immediate, and least costly way to achieve this is to conserve water during a drought. More information on this issue can be found in the water section of the assessment.

Leadership and vision on the environment

Leaders set a direction, build an inspiring vision, and motivate their team to be dynamic in reaching that vision. The team, in turn, sorts out priorities and sets goals so they (and in this case, the public) can evaluate progress and determine if goals have been achieved.

In the past, Commonwealth leaders of both parties have been held to high standards and have led our environment and energy programs to be among the very best in the country. In their own ways, Governors Weld, Cellucci, Swift, Romney and Patrick were all leaders who made environmental progress in areas including defending our car emission standards, acquiring and managing public lands, implementing cutting-edge regulations to reduce pollutants from power plant smokestacks, protecting our rivers, and developing and implementing the Regional Greenhouse Gas Initiative (RGGI) to reduce carbon emissions.

Regrettably, we do not see that same leadership on environmental issues from Governor Baker. While he is engaged and cares about other important concerns from addressing the opioid crisis to reducing health care costs, compared to these other issues, we see lackluster leadership on the environment. The Governor is known for his management skills, but we have not seen evidence of this translating to the environmental agencies. Even more importantly, the Governor has yet to communicate a comprehensive environmental vision or to provide focus and energy to EEA. This vision and energy are essential for unleashing the state agencies to do their best and producing the results that the Commonwealth very much needs.

At the highest level, this assessment points to the fact that the agencies need to be staffed, funded and inspired in a much more powerful way moving forward. Many of the specific results described here are the fall-out of this lack of vision and leadership.

Grade Comparisons

	2016	2017
Overall	C	C
Budget	C	C
Energy and Climate Change		
• Energy Efficiency	B	B+
• Renewable Energy	C+	C+
• Reducing Global Warming Pollution	n/a	B-
• Gas Pipelines	D	D
• Modernizing the Grid	n/a	Incomplete
• Electric Vehicles	B+	B+
• Reducing Transportation Emissions	D	D
Water		
• Drought Management	n/a	C
• Sustainable Water Mgt/Water Mgt Act Permits	Incomplete	D
• Interbasin Transfer	n/a	C
• Stormwater Management	C	Incomplete
• Delegation of NPDES	D	D
• Repeal of site specific criteria for lakes and ponds	F	n/a
Environmental Justice	B-	C-
Land Conservation	B	B+
Toxic Chemicals Use	D	C-
Solid Waste (new)		
• Metrics		D-
• Decreasing MSW Disposal		D
• C & D Recycling		Incomplete
• Waste Ban—Food		A
• Waste Ban Enforcement		C
• Protect Environment from Dangerous Facilities		B

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Budget

In the early 2000's, environmental agencies received a penny of every state operating dollar, but with the state budget growing and environmental funding remaining stagnant, environmental agencies are currently receiving only half a penny of every state budget dollar.

During the 2014 gubernatorial campaign, funding the environmental programs was a high-level priority for most candidates and then-candidate Charlie Baker committed to devoting 1% of the state budget for environmental programs by the end of four years. Since then as Governor, he has expressed his ongoing commitment to achieving that level of investment, but his actions have not matched his words. The Governor has now issued three budgets and we are no closer to 1%. In fact, the Governor's Fiscal Year 2018 budget would fund environmental programs at \$12.5M less than what the legislature allocated two years ago, prior

to the loss of more than 200 staff due to early retirements. This represents a 5% cut.

Highlights of the Governor's FY18 budget released in January include:

- An increase of \$2.3 million for the Department of Environmental Protection (MassDEP) that includes funding for five new inspectors for compliance and enforcement
- An increase of \$2 million to the Executive Office of Energy and Environmental Affairs
- An increase of \$1.5 million for Safe Drinking Water Act implementation
- An increase of \$172,000 for the Office of Dam Safety

When we look agency-wide, however, and compare the Governor's FY 2018 proposal to the budget passed last year by the legislature, the Governor's budget makes significant cuts to the Department

As a candidate, Governor Baker committed to devoting one percent of the state budget to the environment. The Governor has now issued three budgets and we are no closer to one percent. The impacts of insufficient funding can be seen throughout the environmental agencies.

of Conservation and Recreation (DCR) and the Department of Agricultural Resources (MDAR). DCR, which manages state parks, parkways, and forests, receives a cut of more than \$4 million (5%) and MDAR is cut by more than \$800,000 (4%).

The table below shows funding levels over the past few years. As the overall state budget grows, environmental funding is not keeping pace. Massachusetts cannot consider itself a pro-environment state if it continues to significantly underfund its environmental programs. We must reverse this trend.

Due to the Early Retirement Program that went into effect in 2015 and continued in 2016, hundreds of long-time employees who had considerable expertise and were making significant contributions to protecting our environment and public health have left the agencies. Some agencies, such as MassDEP, have been able to make up for a portion of the losses, re-filling 30 of the 109

positions that were vacated through early retirement (27%). However, the staffing level of approximately 650 is substantially lower than a few years ago. More retirements are expected for 2017 (12 to 20 are anticipated).

It is worth noting that MassDEP receives approximately \$20M per year from the U.S. Environmental Protection Agency. In FY16, that covered 97 employees. With expected cuts to EPA, MassDEP will likely lose federal funding. Therefore, our state environmental agencies are going to be more dependent on investments by the state and prioritization by the Governor takes on heightened importance.

Even without likely federal budget cuts, recent funding cuts and staff reductions mean the agencies currently cannot adequately carry out their core functions, not to mention some newer responsibilities including addressing climate change and sustainable water resource management. MassDEP has a major role to play in implementing the Governor’s climate change Executive Order, and ensuring compliance with the Supreme Judicial Court’s decision directing the agency to issue new regulations to comply with the Global Warming Solutions Act. In addition, staff that were collecting and tracking data for various environmental programs are now gone or re-assigned.

Decreased Enforcement for Serious Environmental Violations

One issue of serious concern is that MassDEP’s oversight—inspections and enforcement—has

Not Keeping Pace: Environmental Budget by Agency

Agency	2015 GAA	FY 2016 GAA	FY 2017 GAA	FY 2018 H1
DAR	\$ 20,793,746	\$ 23,242,351	\$ 23,351,998	\$ 22,526,376
DCR	85,520,812	90,190,723	86,856,407	82,441,224
DEP	57,640,647	58,739,063	51,345,834	53,688,382
DFG	27,046,308	27,508,142	28,087,460	27,972,674
EOEEA	28,864,579	30,862,097	29,805,877	31,391,043
Environmental Total	\$ 219,866,092	\$ 230,642,376	\$ 219,447,577	\$ 218,019,699
Total State Budget	\$36,326,224,233	\$38,161,680,347	\$39,249,261,765	\$40,909,016,091
Share of Budget Spending	0.61%	0.60%	0.56%	0.53%

GAA = General Appropriations Act (funds allocated by the legislature) H1 = Governor’s Fiscal Year 2018 Budget

declined almost in lockstep with drastic decreases in the agency’s funding and the resulting staff losses. Enforcement requires monitoring data, inspections, and staff with the expertise to evaluate and bring actions, all of which have been deeply impacted by the budget cuts. Since 2009, MassDEP’s budget has declined by 30 percent; the agency has lost almost 45 percent of its staff since 2000.

According to a recent story in the *Boston Globe*, MassDEP’s enforcement for serious violations has declined by more than half since 2006 while monetary penalties plummeted by nearly 75 percent. In a number of recent cases, MassDEP has also forgiven the penalties provided the violator complies with the terms of its consent order. And while this has been an issue for years, since the Baker administration took office, MassDEP has conducted 1,000 fewer inspections and 1,000 fewer enforcement actions than the median number during the past decade.

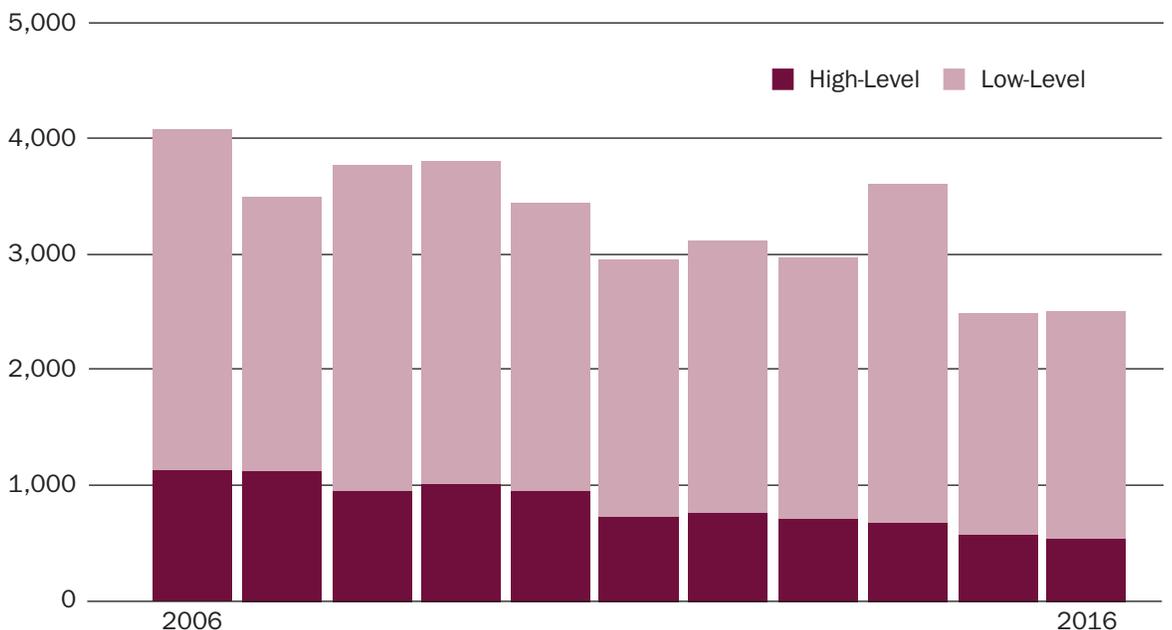
Oversight and enforcement play a vital role in environmental protection: not only does this ensure a level playing field for all, it also punishes

the violator and serves as a deterrent to others. In 2016, MassDEP assessed less than \$2 million in penalties. And because the Attorney General’s office primarily relies on referrals from MassDEP to bring major environmental prosecutions, it is not surprising that fines in AG enforcement actions are down by more than 50 percent since 2015. Since these fines go to the state’s General Fund, this is a significant drop in this revenue source. Coupled with the predicted decline in federal enforcement over the next four years, the state’s shrinking enforcement is bad news for protection of our air and water.

Massachusetts State Parks

Park users and friends groups from all over the state have reported that underinvestment in our parks and forests translates to limited recreational opportunities and diminished quality of user experiences. Campgrounds are closed, trails and facilities are not maintained, programming for children has been significantly scaled back, and environmental laws are not being enforced (e.g., off road vehicle use in undesignated areas, illegal camping, dumping of trash), making our parks less safe.

Number of Enforcement Actions



Between 2006 and 2016, state officials conducted 52 percent fewer “higher level” enforcement actions for serious violations and 33 percent fewer lower level enforcement actions.

Source: The Massachusetts Department of Environmental Protection



We note that DCR is making progress in a number of ways. In an effort to complete long-overdue Resource Management Plans (RMPs) for DCR properties more quickly, the agency is now incorporating multiple units into a Complex. For example, the Blue Hills Complex includes the Blue Hills Reservation along with about a dozen other properties. In these RMPs, the agency is honing in on truly top priorities which will help focus efforts and direct resources.

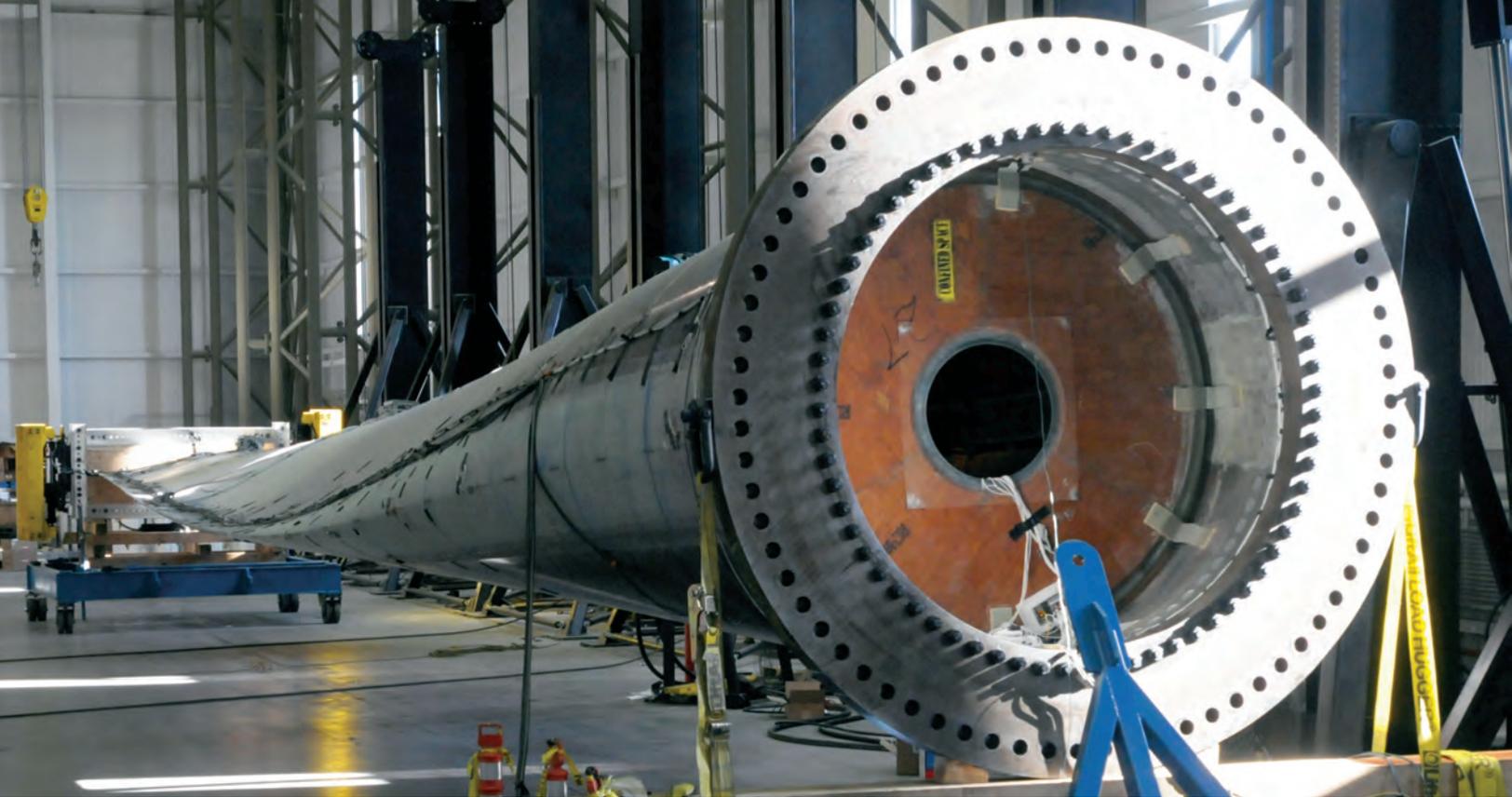
Another positive recent development is a coordinated improvement effort in four categories: Customer Experience, Infrastructure & Operations; Policy & Compliance; and Marketing & Communications. DCR staff is working in teams, with coordination from EEA, to identify major barriers to effective work, ways to remove the barriers, and what is needed to improve the flow of work. For example, in Operations, fleet management software was purchased, additional fleet management

staff were hired, and the number of available vehicle repair garages were increased for medium and heavy duty repairs. Under customer experience, a constituent tracking tool is being created to ensure issues are tracked and resolved in a timely fashion.

An asset management system is still needed and we hope that will be funded and implemented soon so DCR and the DCR Stewardship Council can study what an optimal “base budget” should be for the agency to operate at a predictable but rigorously-applied level of performance.

RECOMMENDATION

Increase funding for the environmental agencies so they can carry out their full responsibilities to protect the environment and public health. Honor the commitment to dedicate one percent of the state budget to environmental protection.



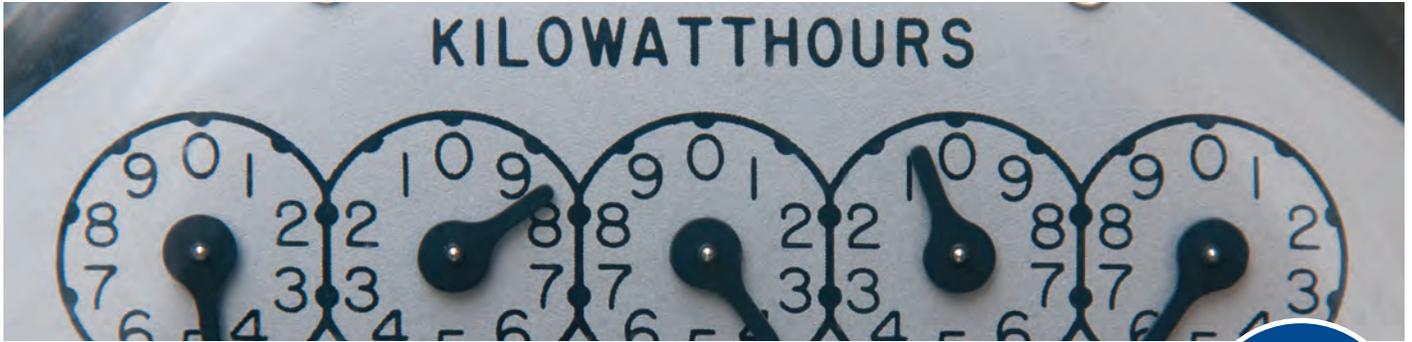
Energy and Climate Change

The year 2016 was the warmest on record. There are no prospects for federal action on climate change except the rollback of programs and policies. It is up to the states to forge ahead with bold new energy and climate policies that will protect our environment and public health as well as spur economic development and speed the transition to phase out carbon in our energy system.

From its top-ranked energy efficiency programs to the Global Warming Solutions Act, Massachusetts has enjoyed an energy and climate policy leadership role among states. But to maintain our leadership status, it is not enough to make incremental progress or coast on the success of policies that are already in place. The Baker administration needs to aggressively expand the energy efficiency and renewable energy sectors. There are now over 100,000 clean energy jobs in Massachusetts. Pursuing policies to continue to increase the diversity of our energy mix with new renewables and enhanced efficiency will help grow jobs as well as protect human health and the environment.

Governor Baker signed the Energy Diversity Act into law last year. This law contains important provisions to help foster offshore wind as well as regional hydropower and new onshore wind. Independent studies¹ quantified both the economic and environmental benefits of adding additional amounts of offshore wind to the power grid. The Baker administration is also working to comply with a Supreme Judicial Court decision that requires the state to adopt new regulations to reduce greenhouse gases and conform to the requirements of the Global Warming Solutions Act.

While these are generally positive steps, there are areas of concern. For example, cuts to the state's solar net metering program could jeopardize the future growth of solar energy and the ability for people from all walks of life to access solar power. Also, the Baker administration remains a proponent of new natural gas pipelines. Rather than supporting new fossil fuel infrastructure, the Baker administration should double down on energy efficiency and new sources of renewable energy.



ENERGY EFFICIENCY



Massachusetts has been pursuing greater energy efficiency for more than a quarter century. Massachusetts invests over \$600² million per year in energy efficiency (EE) programs. These investments are paying off in tangible ways that directly impact the power system as well as greenhouse gas emissions. Each year, investments in EE result in about 123 megawatts (MW) of peak energy savings.³ Looking to the future, these EE programs will deliver 723 MW of peak energy savings between 2020 and 2025, according to analysis by ISO New England. This amount of savings is larger than the new natural gas-fired Footprint plant in Salem. The more the Commonwealth invests in EE, the less dependent we are on fossil fuels for energy production.

As we write this, we are working with the administration to introduce legislation that would require home sellers to perform an energy saving audit of their properties and obtain an EE rating, similar to a “miles per gallon” sticker on an automobile. We applaud the administration for taking this action. Cities such as Portland, Oregon and Austin, Texas have adopted similar requirements. If enacted, Massachusetts could build on its EE leadership and will be the first state to make this a requirement for home sales. However, even if the legislation passes, there is still significant room for improving energy efficiency in a number of areas.

The Baker administration and the Department of Energy Resources (DOER) are in the middle of implementing the 2016–2018 utility sponsored EE plans. As with past EE plans, they focus heavily

on savings associated with the installation of more energy efficient lighting. At some point in the future, the lighting stock will be transformed from the older incandescent lights to more efficient

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alternatives like LEDs. Therefore, it is critical that as we move forward with EE plans, we include a focus on other EE measures such as heating and air conditioning systems and commercial equipment that have not been as thoroughly converted to more efficient technologies. In order to earn their EE performance incentives, the utilities need to do more in the next round of EE plans, especially in the commercial and industrial sphere.

The Commonwealth has made some progress in the past to promote more efficient commercial, residential and especially public buildings and to reduce the overall environmental impacts throughout their life cycle. In July 2016, the Board of Building Regulation and Standards voted to approve an update to the Massachusetts Stretch Energy Code. The Massachusetts stretch code

More needs to be done to improve energy efficiency in our buildings, especially as new ones are being built.

earned national accolades when first adopted in 2009, and as of January 2017, 190 municipalities, comprising 65.8% of the state's population, have adopted the stretch code. These locally adopted codes are more aggressive than our base building codes, result in higher energy savings and lower operating costs for the owner or future operator.

Unfortunately, the changes made to the stretch code in July were not nearly as ambitious as they could have been. For example, in the commercial building sector, the new stretch code exempts buildings smaller than 100,000 square feet and only applies to new buildings. This effectively excludes much of the commercial construction in the state. Modest improvements were made on the residential side, but there the new stretch

code missed an opportunity to reach as many homes as it could have. It is important that the Commonwealth continue to work with cities and towns to ensure that we take advantage of progress in the areas of new technology, sensor based energy systems and energy innovation.

RECOMMENDATIONS

The administration cannot maintain the status quo on energy efficiency. These additional issues deserve the attention and support of the Baker administration:

- **Expanding the focus of EE programs beyond lighting.**
- **Re-establishing the scope of the stretch code in future versions to:**
 - **address small-to-medium commercial buildings**
 - **reincorporate requirements for existing buildings**
 - **introduce energy audit/benchmarking requirements similar to those included in building energy use disclosure ordinances in Boston and Cambridge.**



RENEWABLE ENERGY

The Energy Diversity Act also requires utilities to purchase a substantial amount of offshore wind as well as onshore clean energy resources like hydropower and wind. While the existing commitment to 1600 MW of offshore wind is a positive step, Massachusetts has the potential to do much more. It is critical for Baker administration officials to support stronger commitments to offshore

wind, at the same time as they work to implement existing commitments on schedule.

DOER and the Department of Public Utilities (DPU) are in the process of implementing these onshore wind and hydropower requirements alongside the Commonwealth's electric utilities. A concerning development in this process had been the utili-

ties' drafting of the clean energy request for proposals in a manner that privileged large Canadian hydropower resources over other large-scale renewable resources, like onshore wind and solar. As the parent companies of the two largest utilities, Eversource and National Grid, have equity stakes in transmission projects that propose to bring large Canadian hydropower to Massachusetts and that will likely bid into the request for proposals, it is imperative that DOER and DPU prevent the utilities from stacking the deck in favor of their own projects. Fortunately, after receiving public input, the utilities and DOER made significant changes to their proposed plan of action that now create a more level playing field for onshore wind and solar.

The bill also authorized DOER to determine whether to set targets for electric companies to procure viable and cost-effective energy storage systems by January 1, 2020. After commissioning a widely praised and comprehensive study, *State of Change*, at the end of 2016 DOER decided to do so. Because energy storage will be crucial to the successful integration of greater amounts of intermittently available renewable resources like solar and wind, it is imperative that the DOER set aggressive and meaningful storage targets.

Unfortunately, the Baker administration's record on supporting solar energy is much weaker than its support for large hydropower or even large-scale renewables like onshore and offshore wind. In 2015, Governor Baker filed a bill that would have slashed the compensation for solar energy under the state's net metering program to levels that would have been insufficient to support continued solar development. The final bill signed in April 2016 represented a significant improvement over the Governor's proposal, but still included significant cuts to the value of net metering credits. These cuts will have a particularly negative impact on low-income communities, renters, and others who are unable to install solar panels on their roofs but would like to participate in shared solar installations. To ensure the continued strength of Massachusetts' solar industry, the administration must commit to the continuation of the state's net metering program, and

ensure that the benefits of solar are available for all residents.

EEA began work in 2016 on a new solar incentive policy aimed at replacing the existing Solar Renewable Energy Credit (SREC II) program. Under this new program, solar developers will be compensated with a fixed price for each KWh of energy produced. These prices would vary, depending on the location of the solar facility (for example, new solar on a closed landfill would

To ensure the continued strength of Massachusetts' solar industry, the administration must commit to the continuation of the state's net metering program, and ensure that the benefits of solar are available for all residents.

be compensated at a slightly higher rate than solar on a farm field) and the customers they would serve (here, new solar serving low-income customers would be compensated at a slightly higher rate than residential customers). We appreciate the administration's efforts to protect environmentally sensitive areas by providing greater solar incentives in areas suitable for development. Because the development of this policy is ongoing at the time of publication of this report, in-depth analysis or grading is not possible. However, the authors look forward to participating in the development of this new incentive scheme and will work to make it as robust as possible.

In 2016, the state funded four projects totaling \$2.3 million via the Affordable Access to Clean and Efficient Energy Initiative. The purpose of this initiative is to help low- and moderate-income Massachusetts residents access cost-saving, clean and efficient energy technologies. This program was set up in 2016 with \$15 million and is administered by DOER and the Massachusetts Clean Energy Center (MassCEC). We encourage

EEA to expand this program to help better serve low- and moderate-income residents.

While the Energy Diversity Act was a good step toward meeting Massachusetts' needs for clean energy, that journey is far from complete. Numerous renewable energy-related bills have been filed in the 2017–2018 legislative session, including an increase in the Renewable Portfolio Standard that would continue to spur the creation of clean energy jobs in the Commonwealth and reduce our greenhouse gas emissions. The administration should make clean and renewable energy a priority in each legislative session, beginning with support for the RPS increase.

RECOMMENDATIONS

- **Ensure that DOER and the DPU allocate sufficient resources and staff to implement both the offshore wind and onshore clean energy resource procurements on schedule.**
- **Ensure a balanced process of reviewing proposals that ensures an appropriate role for renewable resources in the clean energy Request for Proposals.**
- **Assess the need for additional offshore wind resources above and beyond the requirements in the Energy Diversity bill.**
- **Set meaningful and aggressive energy storage targets for 2020 in line with DOER and MassCEC's *State of Charge* report.**
- **Ensure the continued availability of solar net metering by supporting the elimination of the net metering cap and restoration of full retail rate net metering for low-income and community solar projects.**
- **Support the proposed increase in the Renewable Portfolio Standard so that the program can continue to support local renewable energy and jobs in the renewable energy industry.**
- **Take all necessary steps to ensure that the siting of new energy infrastructure is done in a responsible manner and minimizes harmful impacts to natural resources including agricultural soils, wildlife habitat, forests and protected lands, while also maximizing our ability to take advantage of Massachusetts' renewable energy potential.**



REDUCING GLOBAL WARMING POLLUTION

In response to a decision by the Supreme Judicial Court in 2016, EEA has been working to draft new regulations to meet the Global Warming Solutions Act's (GWSA) legal requirement to achieve a 25% reduction in total greenhouse gas emissions by 2020.⁴ The currently proposed rules generally move the state in the right direction to reduce greenhouse gas emissions, but more is needed to

comply with the Court's order. In particular, it is concerning that the transportation sector emissions limits are not enforceable as proposed, and the proposed cap on fossil fuel-fired power plants is inadequate to ensure the necessary emissions reductions. We also note that the GWSA includes language that regulations required by the Act will expire in 2020 and this must be addressed.

In the latest update to its Clean Energy and Climate Plan, EEA stated that there is a “substantial risk” that the Commonwealth will not meet the 2020 limit, based on analysis indicating that even with existing programs and policies, our 2020 emissions may be as much as five million tons in excess of that limit. In order to comply with the Court’s order—which requires regulations that ensure we, in fact, do not exceed the 2020 limit—the rules must be designed to address, and remove, that risk.

The Regional Greenhouse Gas Initiative (RGGI), is another critical program that has supported clean energy and energy efficiency in Massachusetts while reducing carbon pollution. It is now time to move expeditiously to reach agreement on the Program Review to extend the RGGI emissions cap from 2020 to 2030 and to reduce the overall emission cap. To their credit, officials in the Baker administration were the first among the RGGI states to pledge support for doubling the rate at which emissions decline each year, from 2.5% per year to 5% per year. Unfortunately, since then, the administration has retreated from committing to a specific target for RGGI. To strengthen RGGI, we need Governor Baker to articulate a strong vision for the program’s future, reaffirm his commitment

to a 5% per year emissions reduction, and encourage his fellow governors to get on board.

RECOMMENDATIONS

- **Conclude the GWSA rulemakings in a timely and efficient manner that ensures compliance with the Act and the associated Supreme Judicial Court decision.**
- **Make the rules’ proposed transportation sector emissions limits enforceable.**
- **Support efforts to extend the GWSA regulations to 2050. Set a goal of a 50% emissions reduction from 1990 levels by 2030 to be on the path to meet reductions of 80% by 2050.**
- **Tighten the proposed cap on in-state electric power plants by at least 1 million tons of CO₂.**
- **Reaffirm the commitment to the 5% reduction in greenhouse gas emissions currently being considered under the Regional Greenhouse Gas Initiative program review.**
- **Establish the carbon reduction research center that was authorized by the energy diversity legislation in 2016.**
- **Support legislation that would put a price on carbon—an approach that would send strong market signals to spur the transition to a clean energy future.**



GAS PIPELINES

Governor Baker and EEA leadership continue to push for new natural gas pipelines in the face of evidence of significant long-term decreases in New England’s demand for natural gas over the lifetime of those proposed pipelines and the

implementation of ISO-NE’s federally-approved electricity market program designed to ensure the reliability of our electric power system in the absence of new gas pipelines. New England must use less, not more, gas over the next thirty years



in order to meet our state's climate mandates and regional climate goals. The Governor's approach ignores the need for policies that would mitigate the Commonwealth's current overreliance on natural gas for electric generation. In addition to alternatives to natural gas, the Commonwealth has non-pipeline natural gas supply infrastructure (particularly liquefied natural gas import and storage infrastructure) that could be used to meet our current needs while the energy system transitions to low or non-emitting energy sources. Continuing to support the interests of natural gas pipeline companies rather than searching for more targeted and cleaner solutions to our energy needs is not in the best interests of the people of the Commonwealth.

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Accounting for and Stopping Methane Leaks

In addition to adding pipelines, existing pipelines are a large source of emissions that is being underestimated in our climate protection planning. According to MassDEP, between 1.1 and 1.3 percent of gross GHG emissions from Massachusetts in recent years (2011–2013), and 2.4 percent in 1990 on a CO₂e global warming potential (“GWP”) basis, were from natural gas systems in the Commonwealth.

To address this, MassDEP proposed methane reduction requirements aimed at reducing methane (CH₄) emissions from natural gas distribution mains and services by establishing mass-based, annually declining aggregate limits. The limits

would apply to CH₄ emissions from main and service lines owned by gas operators with Gas System Enhancement Plans (GSEPs) (a subset of all of the leaking pipelines).

This is expected to reduce emissions by less than one tenth of a percent of the total CO₂e reductions projected for 2020. Further, MassDEP did not address emissions from liquefied natural gas (“LNG”) storage or import facilities, or above-ground natural gas distribution equipment. Perhaps worse, the Department doesn't include the longer term leak reduction requirements for 2030, 2040, or 2050, nor does the Department set declining emissions caps to 2050 for this industry in the proposed requirements, although in their request for comments they sought information on those aspects of the proposal.

While these percentages may appear small, methane (the greenhouse gas component of natural gas, and the majority of natural gas air emissions), even in small amounts causes significant near term climate damage. Methane's global warming potential is 87 times that of CO₂ in the 20 years after it is emitted.

RECOMMENDATIONS

- **Given the environmental and economic cost of new pipelines and the legal challenges facing current pipeline efforts, the Baker administration should reconsider its approach to natural gas infrastructure by taking an evidence-based look at what the Commonwealth's precise needs for natural gas are in the short- to mid-term.**
- **Invite the market to provide the cheapest GWSA-compliant solutions to meet those needs.**
- **Take stronger and continued steps to control methane emissions. This is imperative if Massachusetts is to meet its GWSA mandated greenhouse gas emissions reduction of 80 percent from 1990 levels by 2050.**



MODERNIZING THE ELECTRIC GRID AND ELECTRIC UTILITY REGULATION

INCOMPLETE

The energy system in Massachusetts is undergoing a significant transition as consumer-centric technologies upend the historic model of simply supplying energy to consumers. Utilities face expectations to accommodate and promote distributed solar, efficiency, smart energy management, and energy storage, even as these technologies challenge current regulatory structures. Clearly, reforms are required to move beyond the historic model of centralized power stations and large utility infrastructure to a 21st century energy system that takes full advantage of smart and efficient appliances, electric vehicles and other storage, and rooftop solar.

Massachusetts needs to modernize its electric grid to accommodate new technologies and ways of generating and distributing electricity. We need to align incentives to utilities to hasten this transition.

In recognition of the new challenges and opportunities presented by new technologies and active consumers, in 2014 the Massachusetts Department of Public Utilities (DPU) ordered utilities to develop plans focusing on four grid modernization objectives: 1) reducing the effects of outages; 2) optimizing demand and reducing system and

customer costs; 3) integrating distributed resources; and 4) improving workforce and asset management. Currently, the DPU fails to tie utility earnings to grid modernization outcomes. Without making this link we are unlikely to shift utilities' current financial incentive from building infrastructure to meeting system needs at lowest cost.

Utility responses to the order in 2015 were insufficient in addressing the fundamental challenges and opportunities in the transition to a clean, distributed, customer-centric energy system. National Grid outlined the most ambitious investment plan, with deployment of advanced metering infrastructure to enhance consumer energy options and control, and optimize the operation of the system. National Grid failed, however, to adequately prepare for integration of distributed energy resources and the transition from a one-way power delivery model to a multi-directional, networked system. Eversource focused on upgrading grid-side infrastructure rather than focusing on consumers and did not provide a strategic plan for adapting to shifts in the energy system and using distributed technologies to deliver lower, more stable energy costs. Unitil also presented a modest proposal, predicated in part on prior installation of metering infrastructure with limited functionality.

The DPU has worsened the situation with multiple delays in the proceedings. Filings were made in August 2015, and decisions should have been made in 2016. However, due to the delays, hearings

are currently scheduled for May 2017. To make matters even more difficult, the DPU recently authorized Eversource to shift consideration of key investments from the grid modernization proceeding to Eversource's general rate case. This shift raises numerous questions, and leaves an uncertain path forward.

Separately from the investment-focused grid modernization proceedings, National Grid and Eversource have proposed major changes to electricity rate design that would seriously impact consumers and lower incentives for energy efficiency and clean energy investments. In 2016, the DPU laudably denied National Grid's proposals for tiered customer charges and unreasonable access fees for clean distributed generation. More recently, Eversource has made a range of rate design proposals that would lower incentives for energy efficiency and clean energy investments and move away from rates that provide incentives for customers to help manage system costs.

Without improvements in grid modernization plans, Massachusetts utilities will struggle to adapt to accelerating trends toward an increasingly networked, electrified, and low-carbon energy system. Without improved business models, the utilities will not have the incentive to propose such plans. Without greater transparency, coordi-

nation and stakeholder engagement, Massachusetts will fail to develop a consistent and broadly-supported plan to modernize the grid. Without improved rate structures, customers will not have the proper incentives to increase the efficiency of the electric system. Neighboring states, including Rhode Island and New York, are taking steps to address all of these issues and Massachusetts is at risk of falling behind.

RECOMMENDATIONS

- **Complete the current grid modernization proceedings and initiate a Grid Modernization 2.0 proceeding that (1) aligns utilities' financial incentives with grid modernization objectives, (2) establishes a consumer advisory board for grid modernization to promote transparency and stakeholder support for investments, (3) optimizes usage of clean local energy resources for the benefit of consumers, and (4) protects low-income consumers.**
- **Examine options to require utilities to fully consider cheaper clean local energy alternatives to traditional infrastructure investments.**
- **Deny utility proposals for rates that lower incentives for energy efficiency and clean generation and promote rates that give proper incentives to consumers.**



ELECTRIC VEHICLES

In December 2016, the Baker Administration announced \$12 million in funding for the Commonwealth's electric vehicle rebate program (MOR-EV). Consumers can qualify for rebates ranging from

\$750–\$2,500 on the purchase or lease of more than 25 qualifying new electric vehicles (EVs), including battery electric, plug-in hybrid electric and fuel cell vehicles. This continues to be a good program.

The Commonwealth’s electric vehicle rebate program offers excellent and interactive access to data collected and is a great model for state government in general. This data is updated twice a month and presents an interesting and useful picture of the adoption and distribution of EVs in Massachusetts. It would be a great step forward if other agencies adopted a similar approach to data collection and transparency.

In addition, the MOR-EV Program Statistics offer interactive access to data collected by the agencies and include a variety of information about the adoption and distribution of EVs in Massachusetts. While we have concerns about outsourcing government obligations, the Center for Sustainable Energy’s program administration of this data offers

a great example of how to dashboard data in an open and transparent fashion. Updated twice a month, this dashboard offers an interesting and useful picture of the progress of the MOR-EV program. It would be a great step forward for other agencies to use a similar approach in-house for comparable programs.⁵

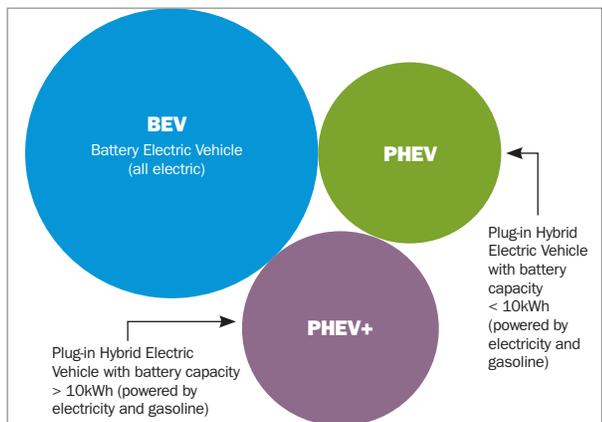
Several other positive developments this past year have supported the adoption of EVs in Massachusetts. Some of these developments were not the direct result of EEA actions but we note all of them to give a fuller picture of the current EV landscape.

- The Massachusetts legislature passed a bill (S. 2505), promoting the adoption of zero-emission vehicles and measures to reduce barriers to EV ownership. The Act prohibits subscription fees or membership requirements from being imposed on EV drivers using publicly accessible charging stations. Additionally, municipalities can now designate certain parking spaces for drivers of EVs.
- If approved by the Department of Public Utilities, over the next 5 years, Eversource plans to

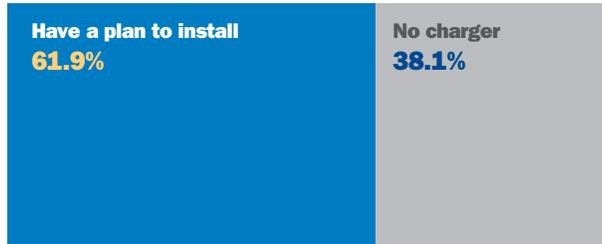
Top EV Retailers by Rebates

Dealer or Store	City	Quantity
Tesla Motors, Inc.	Multiple	1,051
Quirk Chevrolet	Braintree	317
Marcotte Ford	Holyoke	100
Smart Center Boston	Somerville	99
Herb Chambers BMW	Boston	81
Herb Connolly Chevrolet	Framingham	74
Colonial Chevrolet	Acton	68
Marlboro Nissan	Marlborough	67
Mirak Chevrolet	Arlington	62
Watertown Ford	Watertown	62
Herb Chambers Ford	Braintree	58
Acton Ford	Acton	52
Herb Chambers Chevrolet	Danvers	49
BMW of Peabody	Peabody	45
Muzi Chevrolet	Needham	44

Rebates by Vehicle Category



Drivers Who Have or Plan to Install a Level 2 Charger



Source: <https://mor-ev.org/program-statistics>. Data is updated semi-monthly. Last updated: March 24, 2017.

develop up to 4500 charging ports at over 500 sites, and National Grid has outlined a three-year plan to help develop over 1200 charging ports at 140 sites, ramping up EV charging infrastructure and, ideally, favorable rates and smart charging and load balancing policies in the Commonwealth.

- The Massachusetts Department of Transportation has installed EV fast charging stations (which can charge an EV in 20 minutes) at six service plazas along the Massachusetts Turnpike.
- Massachusetts has proposed new regulations to cap greenhouse gas emissions from state fleet passenger vehicles, which incentivizes the Commonwealth to own or lease greater numbers of EVs.
- In survey data of the state's Mass Drive Clean 2015 EV test drive campaign, consumer perception of EVs improved among 83 percent of participants. Expansion of the program will help engage and introduce potential consumers to EVs.

Pre-wiring during construction is cheaper than retrofitting, and expanding the number of EV-ready buildings in the Commonwealth is an important goal.

However, Massachusetts made limited progress on some of the key issues identified in 2016. An important provision in the recently passed EV bill referenced above that would have required new residential and commercial buildings to be pre-wired for EV charging was weakened from a requirement to a recommendation. Pre-wiring during construction is cheaper than retrofitting, and expanding the number of EV-ready buildings in the Commonwealth is an important goal.

Massachusetts electric utilities made no meaningful progress in establishing “time of use rates” in 2016 to reduce charging costs and ensure charging does not take place during periods of peak electricity demand.

Finally, in 2016, the Commonwealth added three electric buses in the Pioneer Valley Transit Agency (PVRTA) area, taking the total count of electric buses in operation or committed in the state to about 14—far short of what is needed to meet the state's climate goals and expand access to clean transportation.

RECOMMENDATIONS

- **Massachusetts should wisely invest the \$69 million plus in funds available through the Volkswagen Environment Mitigation Trust to accelerate investment in zero emission vehicles such as electric transit buses, school buses and port vehicles, including using the full 15 percent of funds available for charging infrastructure.**
- **Focus efforts, such as the EV Incentive Pilot Program and EV car sharing, to promote EV adoption in low-income communities across the state that are most affected by poor air quality.**
- **While not in EEA's direct purview, the Commonwealth needs a comprehensive plan to advance the deployment of electric buses in towns and cities across Massachusetts. Massachusetts should commit to: (i) incorporating 100 electric buses into our public transit fleets by 2019; (ii) 50% of new bus purchases are electric by 2025; and (iii) 100% of new bus purchases are electric by 2030. Low-income residents and people of color, who are disproportionately exposed to urban air pollution and often dependent on city buses, should not have to suffer from the health impacts of diesel or CNG buses and would greatly benefit from cleaner zero-emission buses. VW settlement funds provide an opportunity to prioritize procurement of electric buses.**
- **Massachusetts should commit to having 100% of owned or leased passenger vehicles in state fleets be EVs by 2020. The mandated DOER and Department of Transportation study on adoption of EVs by state fleets is an opportunity to set aggressive targets for electrification of the state vehicle fleet.**
- **EEA should advocate for the Board of Building Regulations and Standards to include “EV**

Ready” requirements in the state building code.

- DOER should collaborate with ISO-New England and other New England states to study regulatory barriers and solutions to effectively incorporating EVs into our electricity grid.
- The Department of Public Utilities should require electric utilities to incorporate broader consideration of EVs and EV charging into their “grid modernization” plans.
- EEA should take the lead in establishing a process for group purchase of EVs to allow

state agencies to maximize their buying power.

- EEA should take the lead in developing initiatives to strengthen the consumer EV shopping experience at auto dealerships through training salespersons on EV technology and programs that incentivize dealerships to sell more electric vehicles through awards and recognition.
- DOER should take the lead in developing and promoting the establishment of an EV car-sharing pilot program.



REDUCING TRANSPORTATION SECTOR EMISSIONS



This issue bridges the agencies and while it is not primarily the responsibility of the energy or environment agencies, it is necessary to include here as the state is not planning adequately to meet our citizens’ transportation needs over time, while also meeting the economy-wide goals of the Global Warming Solutions Act. Given the long time frame for transportation planning, if decisions and policy guidance are not started now, it is unlikely we will meet our long-range targets.

The transportation sector is now the largest single source of greenhouse gases (GHGs), producing 37% of the Commonwealth’s total emissions (2014), more than the electric sector (see chart below). The lack of progress in reducing transportation emissions remains disappointing and demonstrates a lack of vision and innovation on the part of the Baker Administration. Even as the courts found that the state wasn’t meeting its obligations under the GWSA, the review of new

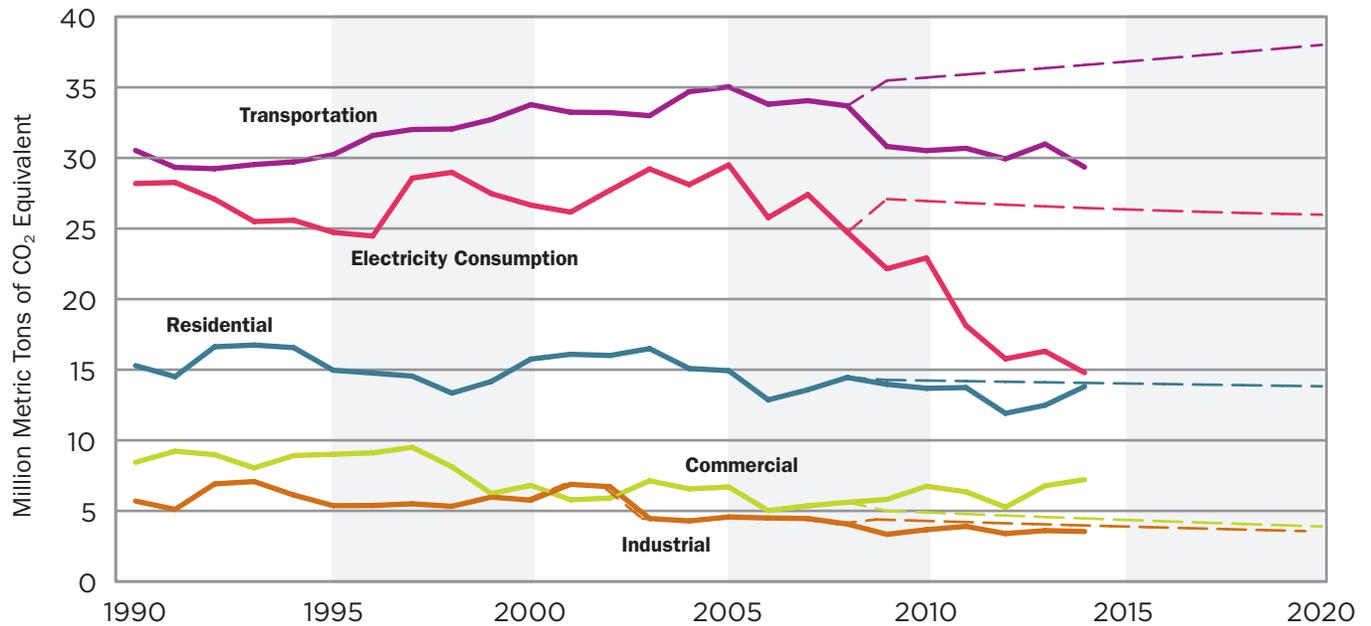
transportation measures was uninspired and in the end, may not meet the key legislative and judicial tests.

In addition to being an environmental issue, transportation sector energy needs is an economic issue. Our continued dependence on oil, none of which is produced in-state, and the public health impacts of burning transportation fuels, provide many reasons for new and pioneering approaches to reducing transportation energy use.

For example, in 2014 Massachusetts citizens and businesses used more than 3 billion⁶ gallons of transportation fuel and spent over \$8 billion dollars for the privilege. And, we do this annually.

Reducing our transportation energy consumption would keep billions of dollars in state that could create jobs and strengthen the economy. This will take leadership and long-term thinking.

Greenhouse Gas Emissions by Sector



The transportation sector is now the largest source of GHG emissions. The dotted lines represent business-as-usual projections.

RECOMMENDATIONS

- Track all transportation fuels entering the state by fuel type.
- Address the transportation funding crisis through leadership and honest talk with the taxpayers of the Commonwealth—we need to raise additional revenue for transportation. Ban the sale of gasoline vehicles by 2030 and set a goal of zero transportation emissions by 2050.
- Task the Environment, Energy, Housing and Economic Development and Transportation agency heads to work together to reduce emissions from the transportation sector.
- Put a policy emphasis on shifting car and truck traffic to lower polluting modes and reducing vehicle miles of travel (VMTs) through transit improvements, land use changes, and transportation demand management measures.
- Continue to improve the energy efficiency of vehicles through continued legal connection with the California Car Program.
- Take a leadership role in the Transportation and Climate Initiative (TCI) working across the Northeast to agree on a package of market-based strategies and public investments to reduce transportation sector emissions by 30 to 40 percent by 2030, while creating tens of thousands of new jobs. We feel that more than ever, it is time for Massachusetts and Governor Baker to bring the northeast Governors together to move this initiative forward.
- Offer cities and towns incentives and options for development that require less vehicle travel, or that is capable of being served by low carbon transit services.



Water

Massachusetts' freshwater resources are crucial to human and environmental health and to sustaining a strong economy. As climate change brings increased droughts and floods, managing these vital natural resources—surface waters, wetlands and groundwater—to meet these challenges is more important than ever. Governor Baker's recent Executive Order 569, establishing "An Integrated Climate Change Strategy," provides a directive for "strategies that conserve and sustainably employ the natural resources of the Commonwealth to enhance climate adaptation, build resilience and mitigate climate change."

Measures to make our water resources more resilient fall squarely within the imperative of climate change adaptation. Independent decision-making by cities and towns about water resources simply will not suffice as we experience the effects of

climate change—change that will only exacerbate our current water shortages and flood vulnerability. These challenges require state-level leadership.

When reviewing the administration's record on water policy and programs, we see progress on some issues, but little to no movement on others. We continue to be concerned that the state continues to lack an overall vision and plan for sustainable water resources management.

As noted in last year's assessment and again this year, budget cuts and early retirements have hit MassDEP hard. MassDEP has lost 30% of its staff since 2009. The agency continues to struggle to carry out core programs for safeguarding water quality and ensuring our rivers and streams don't run dry. Enforcement of environmental laws has declined and permits are being delayed because of these deep budget cuts and staff losses.

Work still not getting done or backlogged includes:

- Issuing timely water supply permits and conducting five-year permit reviews;
- Monitoring, assessing, reporting and research on water quality and quantity around the state;
- Developing Total Maximum Daily Load analyses (water pollution control plans) required under the federal Clean Water Act for the state's water bodies; and
- Enforcing water permit conditions—i.e., water withdrawal and pollution discharge limits and conservation standards.

Bright spots include the work of the Division of Ecological Restoration (DER) within the Department of Fish and Game. DER provides technical assistance to municipalities and watershed groups and project management for dam removals, culvert replacements, and other river restoration work. Its tiny budget should be increased to enable it to play a larger role in climate resiliency and adaptation. The administration also has provided grant support for municipalities and farmers to encourage water conservation, and funding to encourage regional collaboration to improve stormwater management. We are hopeful that the work in progress by the Drought Management Task Force to revise the state's Drought Manage-

ment Plan will result in improved drought preparedness and resilience.

Two related issues that warrant attention are lead in drinking water and more broadly, water infrastructure. The situation in Flint, Michigan has brought the lead issue to light and to its credit, the administration is taking steps to test for lead in our schools. \$2 million from the Massachusetts Clean Water Trust has been released to help public schools test for lead and copper in drinking water. MassDEP is providing technical assistance to ensure that public schools can sample taps and water fountains and replace pipes and outlets that exceed safe levels. In March 2016, the Massachusetts Water Resources Authority approved a program to make available \$100 million in interest-free loans to its member communities to replace lead service lines. But the pressing need to deal with our crumbling water infrastructure remains. The lack of attention to this issue has persisted for many years but with data from a 2012 Water Infrastructure Finance Commission report, we now know the magnitude of the problem: the Commission identified a more than \$20 billion need over the next 20 years. We look to the administration and legislature to take action.



DROUGHT PREPAREDNESS AND MANAGEMENT

The current drought, which began in 2015 and worsened last summer to extreme drought in many parts of the state, resulted in record low flows in rivers and streams. Many tributary

streams and portions of some major rivers, such as the Ipswich and Parker, went dry, stranding fish and stressing wildlife. The drought also posed a challenge for public water suppliers, with six

seeking emergency declarations from MassDEP and several others forced to purchase water at a much higher cost from regional suppliers because their local water sources were too depleted to meet demand for drinking water and firefighting. Farmers were particularly hard hit by the drought as irrigation needs increased and available water sources decreased. About 80 percent of farmers that responded to a federal survey reported losing at least 30% of a specific crop.

EEA and its agencies were very slow to respond to the drought. The state’s initial failure to recognize the extent of the drought prevented it from developing an effective response strategy. The Drought Management Task Force met for the first time in July. It quickly became clear that the state’s Drought Management Plan (DMP) was inadequate and that the state lacked basic tools and the suite of coordinated communication and actions necessary to respond effectively at each drought level. Many residents and businesses did not realize the severity of the drought until late August, when it was far too late to save significant amounts of water through conservation and particularly, through reductions in nonessential outdoor water

use (e.g., lawn watering). This was a missed opportunity to reduce summer water use by at least 30 percent.

To his credit, Secretary Beaton recognized the need to improve the state’s drought response, and has directed agency staff to revise the DMP. Staff is currently updating both the DMP drought metrics and the actions triggered at each drought stage. We note, however, that under existing state law Secretary Beaton can only recommend, but not require, water use restrictions across a drought region.

RECOMMENDATIONS

We urge the interagency group now updating the DMP to complete its work before this summer. We support giving the EEA Secretary legal authority to order water conservation measures uniformly in drought regions, and to municipalities, the authority to enforce such measures—a current gap in state law. We also urge the administration to complete the update of the Massachusetts Water Conservation Standards by the Water Resources Commission and to appoint a permanent director of state water policy.



DELAYED WATER MANAGEMENT ACT PERMITS



Last summer’s severe drought underscored the importance of timely water withdrawal permitting. Had MassDEP fully implemented the 2014 amended Water Management Act regulations (WMA regulations), the drought’s effects in some regions could

have been less damaging to the environment and to water supplies.

The WMA regulations resulted from a multi-year, multi-stakeholder effort to ensure a more

Many water suppliers and the communities they serve are not subject to the reasonable conservation conditions and other requirements established in the WMA regulations.

sustainable water future for Massachusetts. The regulations require large water withdrawers to minimize and mitigate impacts of increased withdrawals and to explore alternative sources that are less environmentally damaging. The regulations promote permits based on the most recent fisheries and streamflow science. Because these permits are good for 20 years, it is vital that the state also take into account expected impacts on water resources due to climate change.

To date, few permits have been issued. In 2016, only eight permits were issued to public water suppliers by MassDEP and only a handful were issued in 2015. More than 100 water permits scheduled to be renewed under the new WMA regulations have been “administratively continued” by MassDEP. Consequently, many water suppliers and the communities they serve are *not* subject to the reasonable conservation conditions and other requirements established in the WMA regulations.

RECOMMENDATION

The WMA regulations require that permittees minimize their existing impacts, offset the impacts of future increased withdrawals, and implement standard water conservation measures. These regulations are an important step forward for achieving water sustainability in Massachusetts, but only if MassDEP actually issues the permits.



PROPOSED CHANGES TO THE INTER-BASIN TRANSFER ACT REGULATIONS

The Interbasin Transfer Act (ITA) requires careful consideration of the environmental impacts of transferring water and wastewater from one river basin to another, to discourage unnecessary transfers. Large water transfers can deplete water sources, harming local ecology and water supplies. There is also a clear climate mitigation nexus between water and the energy used for pumping, treating, and transporting it across river basins. Water Resources Commission staff has proposed numerous changes to the ITA regula-

tions. However, these changes were drafted before the governor issued E.O. 569 to address climate change.

The proposed changes to ITA regulations fail to account for climate change. The draft regulations will reduce review of some transfers, and eliminate the requirement that applicants develop local water resource management plans. This is precisely the type of planning that communities should be doing under E.O. 569 and should be a

prominent component of the municipal vulnerability assessments. The proposed regulations also fail to incorporate the state’s science-based seasonal stream flow standards into ITA review and would allow regional water supply systems to tie up millions of gallons of water for 20 years for as yet unidentified customers.

RECOMMENDATION

The draft regulatory changes should be pulled back and re-examined in light of climate change to ensure that they will both protect and make the water environment as resilient as possible, now and for the next century.



DELEGATION OF WATER POLLUTION CONTROL PROGRAMS



MassDEP is seeking to take over responsibility for issuing wastewater and stormwater permits under the federal Clean Water Act’s National Pollution Discharge Elimination System, or NPDES program. The question of state delegation, or “primacy” for the NPDES program has been raised before, most recently in 2016, when the Governor introduced legislation to authorize the change. The legislation was sent to study in part due to legislators’ concerns about high program costs.

The Governor has now reintroduced this bill and wants to pay for the program through annual budget appropriations. This would leave the program vulnerable to future budget cuts. In 2013, the legislature asked MassDEP to evaluate the feasibility and cost of delegation. The agency reported that the program would cost approximately \$10M annually. The agency now estimates the program cost at \$4.7M annually, which includes \$1.5M for outside contract assistance—a low ball figure.

The federal government currently provides this program at no cost to Massachusetts, courtesy of all U.S. taxpayers. Despite the daunting price tag for the state, drain on MassDEP’s already thin resources, lack of NPDES permitting expertise, and no clearly articulated environmental benefits, the administration continues to push for delegation.

RECOMMENDATION

Defer delegation unless and until Massachusetts is ready to take on this program by first building up its stalled and weak water pollution program—investing in water quality monitoring and assessment, strengthening its water science and research capability, and restoring compliance and enforcement staff. MassDEP desperately needs additional funding to fulfill its existing obligations to protect water quality and quantity and to conduct research. The administration should support increasing MassDEP’s annual operating budget, rather than take on an expensive new program with no clear environmental benefit.



INCOMPLETE

STORMWATER MANAGEMENT

Most Massachusetts rivers, streams, lakes and ponds fail to meet state water quality standards due to polluted stormwater runoff that quickly discharges to waterbodies during a storm. While U.S. EPA is primarily responsible for reducing stormwater pollution through its NPDES permit program, the state jointly issues these permits. In 2016, the state reluctantly co-signed the municipal stormwater general permit for Massachusetts, which takes effect on July 1, 2017. In 2016, MassDEP provided \$53,500 in grant funding to support a statewide stormwater collaborative to assist municipalities with permit compliance.

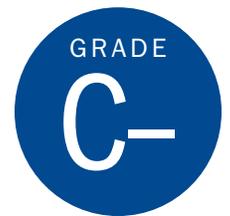
It remains to be seen whether the state will play a robust role to ensure compliance with the general permit and to take enforcement where necessary.

RECOMMENDATIONS

MassDEP should support strong measures to reduce stormwater pollution and join EPA in implementing and enforcing the new permit. MassDEP should continue to address cost concerns by providing municipal grants, technical assistance, and support for municipal green infrastructure and regional stormwater coalitions.



Environmental Justice



Since we released our assessment last year, some modest progress has been made on environmental justice issues but we are eager to see this effort expand. Environmental Justice (EJ) is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. Studies have determined that lower-income and minority communities suffer from a disproportionately high share of environmental burdens and at the same time lack environmental assets in their neighborhoods

The administration recently released a revised Environmental Justice (EJ) policy and although more than two years late, we commend EEA on the public engagement process it conducted. The policy brings with it some increased protections for vulnerable communities, particularly where public health is concerned. However, the

Environmental Justice is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment.

policy has its limitations, and the environmental justice efforts of EEA should not end here. There is much more work to be done, and EEA should set the example for the rest of the executive branch.

We remain concerned that, apart from updating the EJ policy, Executive Order 552 has not been implemented. First, it is imperative that EEA backfill the Director of Environmental Justice position, which has been vacant since last summer. Second, it is critical that the Governor's Environmental

Justice Advisory Council provided for in Section 2 of the Executive Order be empaneled. That body, along with the Interagency Working Group provided for in Section 5, can offer support to EEA in operationalizing the Executive Order.

Executive Order 552 and the revised environmental justice policy are key instruments to guide EEA in developing policies that protect Massachusetts' most vulnerable communities and prioritize them for reducing sources of pollution they host. The 40+ year old municipal solid waste incinerator and ash landfill in Saugus illustrates the urgent situation low-income communities and communities of color in Massachusetts face.

The aging Saugus ash landfill, the only unlined landfill in Massachusetts, has grown in recent years to 50 feet in height. EEA had the opportunity to protect potentially impacted communities in Saugus, Revere, and Lynn through last year's Massachusetts Environmental Policy Act (MEPA)

process. However, we feel it misapplied the 2002 environmental justice policy and MEPA triggers, including the volume of additional ash, applicable to the facility. As a result, local residents may be facing a toxic soup of pollutants should the unlined, waterfront landfill be hit by a major storm.

RECOMMENDATIONS

- **Make a public commitment to promoting environmental justice.**
- **Appoint a new Director of Environmental Justice.**
- **Ensure that all state agencies have an Environmental Justice Coordinator in place, beginning with EEA agencies.**
- **Appoint members to the Governor's Environmental Justice Advisory Council immediately, and convene the Interagency Working Group on Environmental Justice.**
- **Create a plan and timeline for implementing other provisions of EO 552.**



Land Conservation



Massachusetts has a successful history of protecting wildlife habitat, parks, working lands, and providing access to outdoor recreation. To date, roughly 25% of the Commonwealth's land area is protected as parks and state forests, wildlife management areas, private conservation lands, and working farms and forests. This success is very much tied to significant public investment in land protection driven by strong public support. It is also based on conservation biology principles of protecting rare species and wildlife, providing habitat connectivity and supporting long-term resilience. Noted Harvard conservation biologist E.O. Wilson, in his book, *Half-Earth: Our Planet's Fight for Life*, advocates for 50% of the earth to be protected to ensure that 85% of the world's species survive and that our planet is safe and healthy for generations to come. Massachusetts is half way there. The global average is 15%.

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The Baker administration has articulated the following land protection priorities: (1) making nature more accessible to under-served populations, especially in Environmental Justice neighborhoods; (2) focusing conservation and stewardship on our most productive and diverse wildlife habitats; (3) enhancing and expanding sustainable forestry on private and public forests to support

rural communities; (4) improving the stewardship of our public and private lands; and (5) improving the connectivity and resilience of natural systems to a changing climate.

Only two year aggregate data was available at time of writing. During the 2015 and 2016 Fiscal Years, Massachusetts completed 597 land and parks projects, and 26,515 acres were protected. The highest annual average in acreage for land protection is roughly 16,000 acres per year.⁷ The 2015 and 2016 Fiscal Years saw an investment of \$102 million of public dollars, including capital funding, a state tax credit of \$2 million per year, federal Land and Water Conservation Funds, and Massachusetts Water Resources Authority funding.

A highlight of the work of the Executive Office of Energy and Environmental Affairs is the Urban Tree Planting Program, with over 5,000 trees planted in Gateway Cities to enhance neighborhoods and provide natural cooling.

This administration has also focused on stewardship of state lands, and the Departments of Conservation and Recreation and Fisheries and Wildlife have conducted habitat restoration projects on 6,000 of their acres. The Department of Conservation and Recreation “Foresters for the Birds” program, in partnership with Mass Audubon, has resulted in habitat management plans for declining bird species on 5,400 acres of private forest. The Commonwealth has also invested in marking property boundaries for state conservation lands and increasing monitoring of easements that it holds.

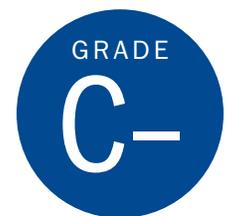
The land protection process has improved in the second year of the Baker administration. Some open positions have been backfilled, however, we note that across the environmental agencies staffing is still down significantly.

RECOMMENDATIONS

- **Commit to investing at least \$50 million annually to state land protection programs to meet conservation goals as outlined in BioMap2, protect working farms and forests, and increase park access in urban areas.**
- **Support increasing the state conservation land tax credit from \$2 million annually to \$10 million annually. There currently is a three year waiting period for this popular program.**
- **Support increased funding for the state match for the Community Preservation Act. This local option tool which supports open space and outdoor recreation, historic preservation, and affordable housing has now been adopted by 172 of Massachusetts’ 351 communities. The state match has decreased to roughly 20%. The Baker administration has been supportive of this important program through proposing the use of stabilization funds, which has been an important stop-gap measure.**
- **Support legislation updating our outdated zoning laws to prevent sprawl, give communities the tools they need to direct growth, and assure predictability for developers.**
- **Uphold the public trust and oppose conveyance of state conservation land for natural gas pipelines or other fossil fuel infrastructure. We would like to see the Baker Administration use all tools at its disposal to oppose these unnecessary build-outs of fossil fuel infrastructure.**



Reducing the Use of Toxic Chemicals



Massachusetts was once a national leader on reducing the use of toxic chemicals. The Toxics Use Reduction Act (TURA), passed in 1989 was one of a kind. It sought to prevent chronic diseases and disorders such as cancer, asthma and infertility, which are all linked to exposure to toxins in the environment. It requires that Massachusetts companies that use large quantities of certain toxic chemicals reduce their use to the extent possible and measure and report the results so that the success of the program can be tracked and shared.

The program has been incredibly successful at achieving its environmental aims *while also saving companies money*. From 1990 to 2013, Massachusetts companies reduced toxic chemical use by 48 percent, waste by 77 percent and on-site

releases by 91 percent and many companies have reported costs savings from working with the program. This law set a high bar for its time in environmental health protection.

However, Massachusetts has since lost its leadership position. The TURA program is currently not being used to its fullest potential (see below), and while states like Washington, Minnesota, Connecticut and Vermont have each passed multiple bills to protect children, workers and others from toxic chemicals—Massachusetts has trailed behind. So much has been learned in recent decades about our exposure to toxic chemicals, the health effects that they can cause, and the associated health costs—yet Massachusetts has failed to act on that information to protect its residents and workers.

Under TURA, chemicals with significant safety and public health impacts can be designated as “High Hazard Substances (HHS).” When a chemical receives an HHS designation, it brings companies that use that chemical into the program, leading to reduced exposure and greater disease prevention, and this often can spur the development of safer alternatives.

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Between 2008 and 2013, the HHS designation was used about once a year on average—consistently though at a slow pace. In 2014, the state took a very proactive approach and proposed five new HHS designations, adopting four. The fifth chemical class, toluene diisocyanates (TDI)—whose chemicals are used in the production of materials such as foams, paints, binders, and sealants and are linked to skin irritation, asthma, and inhalation sensitization—was put on hold at the end of 2014 due to industry opposition.

In 2015, the program virtually ground to a halt. The TDI designation was not discussed (at least not publicly). No new HHS designations were proposed. Not only did the state do nothing to advance this important program, it didn’t even finalize work that was all but completed.

In 2016, the TURA Administrative Council made the decision to designate three chemicals in the class of TDI as higher hazard substances, effectively putting a stamp on the research and background work that had been done in 2014. With this action, the program tied up a loose end, but

the current administration has yet to consider any new designations or proactively consider additional ways to use the program to protect health. In fact, the TURA program failed to even hold meetings for most of 2016: the Administrative Council (the TURA decision making body) and its Advisory Committee usually meet bi-monthly, but did not meet from May 2016 until March 2017.

Furthermore, the program continues to be hampered by the fact that fees paid by users of “TURA listed” toxic chemicals have not been raised since its inception in 1991, despite a statutorily required annual increase. Without funding keeping pace with inflation and rising costs, the program has experienced significant cutbacks in staffing, preventing the full realization of health benefits and cost savings for Massachusetts industries that could be achieved.

It is also worth noting that MassDEP offered a one-time TURA amnesty to encourage facilities that had failed to comply with the reporting requirements to voluntarily return to compliance. More than 130 facilities—about 25% of all facilities required to report—took advantage of the amnesty which ran from January 2015 through July 2016. Lax compliance and oversight is due to a shortage of program resources and trained inspectional staff.

Overall, in 2016 the TURA program remained inadequately funded, failed to hold meetings and did little more than tie up loose ends. This can hardly be called a success for environmental and human health protection. Without more aggressive action to implement the TURA program and advance additional policies to protect consumer health, Massachusetts will continue to lag behind.

RECOMMENDATIONS

The TURA program should consider at least five additional chemicals per year for HHS designation. Additionally, the TURA fee structure should be modernized in keeping with state law and to maintain and improve the effectiveness of the TURA program.



Solid Waste

Massachusetts is at a crossroads in terms of solid waste. The Commonwealth can either embrace a zero waste future—designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials and conserve and recover all resources—or continue to endanger public health by burning, burying, and wasting resources. MassDEP’s 2010–2020 Solid Waste Master Plan sets modest, but important reduction, recycling and diversion goals, but the Commonwealth does not have programs in place to achieve even these modest goals by 2020, not to mention the long-term goals set for 2050. Furthermore, MassDEP has stopped tracking good metrics to measure their progress, and is not adequately investing in zero waste programs.

The Baker administration has largely continued the policies of disinvestment in MassDEP, the historic inadequate enforcement of the solid waste bans and lack of oversight over dangerous solid waste facilities. As discussed below, staff shortages have led to MassDEP not compiling and analyzing data necessary for the department to evaluate its programs or meet its waste goals. MassDEP also has not put programs in place to combat recognized shortcomings of the waste system or enforce their own regulations. The Commonwealth needs to adopt and expand zero waste programs like universal recycling, pay-as-you-throw, and a textiles ban.

While MassDEP has recognized the danger to public health and the environment presented by some waste facilities, and has denied a permit to expand in at least one instance, the agency continues to allow dangerous facilities to operate and in some instances has supported their expansion.

2010-2020 Solid Waste Master Plan Goals

The Massachusetts 2010-2020 Solid Waste Master Plan, “A Pathway to Zero Waste,” was issued in April, 2013 by MassDEP (the “SWMP”). The goal of the plan is to put the Commonwealth on the path to “higher reused and recycling rates and reduced disposal.”

More specifically, the SWMP goals include:

- Reducing municipal solid waste (MSW) disposal in landfills and incinerators by 30 percent by 2020, (from 6.55 million tons of disposal in 2008 to 4.55 million tons)
- Reducing MSW disposal in landfills and incinerators by 80 percent by 2050 (from 6.55 million tons of disposal in 2008 to 1.31 million tons), and “virtually eliminate products containing toxic chemicals from our disposal facilities”
- Increasing the recycling rate for construction and demolition materials (“C&D”), excluding asphalt, brick and concrete, to 50 percent by 2020.



TRACKING OF SOLID WASTE METRICS

MassDEP has stopped tracking key metrics due to staff shortages. As a result, it is impossible to ascertain if the Commonwealth is on a “pathway to zero waste” or not. Through 2012, MassDEP tracked the total amount of MSW and non-MSW generated (including C&D waste). MassDEP also tracked the diversion of these materials, including the MSW recycled or composted, the C&D recycled, other C&D diversion (see more below) and other non-MSW diversion. MassDEP also tracked how much of each C&D material was recycled.

MassDEP no longer compiles, tracks, or analyzes any of these numbers. The agency did not compile the numbers for 2013 at all—they skipped a year so they could catch up.

In 2014 and 2015, MassDEP only reported disposal totals, net exports, and remaining in-state landfill and incinerator capacity. MassDEP’s policy

MassDEP has stopped tracking key metrics due to staff shortages. As a result, it is impossible to ascertain if the Commonwealth is on a “pathway to zero waste” or not.

now is to compile only the disposal numbers, more specifically, how much MSW and C&D is burned and buried in the state, and how much is exported or imported for disposal. While MassDEP plans to review the Commercial Food Waste Ban’s success this year, there will not be an accounting of the other materials composted in the state.

The reason for this change is clear. Due to lack of resources, MassDEP was unable or notoriously late to compile these numbers. Staff from

MassDEP have stated at public meetings that in the past the department used two full-time employees, or FTEs to compile and analyze data, while the analysis done for 2014 and 2015's waste numbers only took one-half FTE.⁸ Despite the importance of this data to measure progress and ensure accountability, MassDEP is unable to devote adequate resources to this work.

RECOMMENDATION

MassDEP is beginning its review of the 2016 solid waste numbers now. The department should include all of the metrics used in 2012. MassDEP is also planning to begin work on the 2020–2030 Solid Waste Master Plan. An excellent first step would be to convene the Solid Waste Action Committee to determine which metrics should be tracked and how to fund this work moving forward.



DECREASING MSW DISPOSAL IN LANDFILLS AND INCINERATORS



The SWMP's primary goal is to reduce Municipal Solid Waste (MSW) disposal in landfills and incinerators by 30 percent by 2020. In 2008, 6.55 million tons of MSW was disposed of into landfills and incinerators. By 2020, that number must be reduced to 4.55 million tons. The 2015 Solid Waste Data Update released in March 2017, states that the total disposal was 5.51 million tons. On its face, it would seem that Massachusetts is a little over half-way to meeting its goal. However, this reduction is deceiving. The SWMP was completed in 2013, and was supposed to plan for 2010–2020. Why use 2008 disposal

numbers as the baseline for comparison? Because disposal dropped off sharply in 2009 (5.8 million tons) and 2010 (5.43 million tons) due to economic factors,⁹ MassDEP is reporting a decrease that likely had little to do with their work. If instead MassDEP used the 2010 disposal number—5.43 million tons—as its baseline, we would see that disposal has actually increased by 80,000 tons between 2010 and 2015. When disposal increases, it means we need to do more to encourage recycling and waste reduction.

RECOMMENDATION

Improve data collection and analysis so the Commonwealth can track enforcement and success of waste bans and other programs. Adopt zero waste programs like mandatory universal recycling, pay-as-you-throw and additional waste bans in Massachusetts.

When disposal increases, it means we need to do more to encourage recycling and waste reduction.



INCOMPLETE

INCREASE CONSTRUCTION AND DEMOLITION RECYCLING

The SWMP goal for C&D waste is to increase the recycling rate to 50 percent by 2020. MassDEP based this goal on 2007 C&D generation, and specified that the goal was to reduce C&D disposal and non-recycling diversion by a total of 400,000 tons annually by 2020.

In 2007 Massachusetts already recycled about 200,000 tons of C&D a year¹⁰ so when we add in the new goal the Commonwealth has committed to recycling a total of 600,000 tons of C&D each year.

The SWMP stated that increasing C&D recycling would hopefully decrease disposal and diversion of C&D materials. Diversion of C&D has historically been the burning of wood, and the use of C&D materials in daily cover and shaping at landfills. These are often not the highest and best uses of these materials. For instance, in 2007, 510,000 tons of C&D was diverted, and 670,000 tons was disposed of, but in actuality, all 1,180,000 tons ended up in a landfill or incinerator.

MassDEP did not track how much C&D was generated in Massachusetts in 2015 (see above). The department also did not track how much C&D was recycled or otherwise diverted. MassDEP did

report that Massachusetts disposed of a net total of 392,271 tons of C&D in 2015. Because this number is entirely out of context, it is impossible to track any progress towards MassDEP's stated goal of recycling another 400,000 tons, or 50% of C&D.

In the past, MassDEP documented an increase in C&D recycling—the 68% recycling rate based on actual generation in 2010 had increased to 73% in 2012.¹¹ Without updated numbers, we have no way of knowing if that trend has continued.

It is also possible that not much C&D was produced at all in 2015. It is a waste stream that is heavily impacted by building and the housing market. When one reviews data back through 2005, C&D generation peaked in 2005 (5.1 M tons), declined steadily until 2011 (2.7 M tons) and increased again in 2012 (3 M tons). Without the context of tonnage generated, analysis is guesswork and conclusions weak at best.¹²

RECOMMENDATION

Compile the C&D numbers for 2013–2016. If C&D recycling has not improved by 400,000 tons per year, prohibit landfills from diverting C&D to incinerators or for daily cover at landfills to ensure the 2020 C&D goal is met.



WASTE BANS

MassDEP estimates that 40% of the Municipal Solid Waste (MSW) disposed of in landfills and incinerators are waste ban items, or materials that are prohibited from disposal because they are readily recyclable or extremely toxic.¹³ In 2013, MassDEP hired three full-time inspectors to increase the enforcement of the waste bans. In October of 2014, MassDEP also instituted a groundbreaking ban on the disposal of commercial food waste by any institution that generates more than one ton of food waste a week.

The establishment and implementation of the commercial food waste ban not only was a sensible first step to banning all food waste, but MassDEP staff and their partners worked tirelessly to create clear guidelines and best practices, educate stakeholders and promote the program. A recent economic impact analysis on the commercial food waste ban¹⁴ found that it has created more than 900 new jobs and \$175 million in economic activity across the Commonwealth.

The enforcement of the waste ban as a whole is a more complicated story. With new inspectors, MassDEP was able to increase the number of inspections conducted in 2015, and is consistently issuing many more enforcement actions than it did prior to 2014,¹⁵ but there is no evidence that

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reduction and reuse programs are working or that recycling has increased. Once again, because the waste generated, recycled and otherwise diverted is no longer being tracked, there is no way to measure failure or success.

RECOMMENDATIONS

Expand the food waste ban to institutions that generate more than a half ton a week. Textiles and mattresses should also be added to the waste ban. Require all waste be placed in clear plastic bags so that inspectors will be better able to enforce the bans. Finally, establish metrics that can document and help improve waste ban enforcement and simplify enforcement process so they are not as procedurally onerous and do not consume as many MassDEP resources.



**COMMERCIAL
FOOD WASTE
BAN**



**ENFORCEMENT
OF WASTE BANS**



PROTECTING THE ENVIRONMENT FROM DANGEROUS WASTE FACILITIES

MassDEP also is charged with permitting waste facilities and protecting citizens and the environment from the dangerous contaminants emitted from those facilities. In the case of the Southbridge Landfill (operated by Casella Waste), MassDEP has established that the landfill is releasing contaminants into the ground and surface water in Southbridge. The agency also has determined that the landfill is the likely source of the contaminants found in more than 40 home wells in the adjacent town of Charlton. Due in part to these two factors, MassDEP denied Casella Waste's request for a footprint expansion of the Landfill. There is another request for a permit to expand the Landfill vertically using sixty foot high walls. There are also two other footprint expansions that Casella is seeking. Ground water monitoring wells on the site have shown contaminants for about 20 years and now lead and 1,4 Dioxance have been found in more than twenty home wells in Sturbridge, west of the Landfill.

Unfortunately, the Saugus Ash Landfill is a very different story. Operating without a liner and located in an Area of Critical Environmental Concern in Rumney Marsh, the Saugus Ash Landfill has been

accepting over a hundred thousand tons of toxic incinerator ash since 1975. For 25 years prior to that, it was accepting MSW. According to a Consent Order issued by the MassDEP, it was scheduled to close in 1996. Since that time, the owners/operators of the facility have received nine extensions to continue operating. Most recently, Wheelabrator Saugus, the owner and operator, completed the MEPA process for an expansion of the Ash Landfill—specifically the filling of two valleys that were installed for water run-off.

Despite more than 200 letters from the public and local officials requesting a full MEPA review, MassDEP did not recommend that Wheelabrator be required to complete one.

RECOMMENDATIONS

- **MassDEP should continue to deny requests for expansion of the Southbridge landfill.**
- **MassDEP should deny the Wheelabrator Saugus permit, not only due to the contamination being released from the site, but also because the facility is extremely vulnerable to climate change impacts such as sea level rise and storm surge.**



Conclusion

It is time for the Governor to prioritize building on Massachusetts' record of environmental achievement and solidify our role as a true national leader. This will require a new level of vision and commitment from Governor Baker—of a kind not yet demonstrated. We urge the

Governor to take bold action so we don't squander the opportunities in front of us to make real progress on these critical environment issues. Nothing less than our climate, our rivers, our beautiful natural areas, and our health and that of our children is at stake.

ENDNOTES

- 1 See *2015 Economic Study—Off Shore Wind Development—Final*
- 2 See <https://www.iso-ne.com/system-planning/system-forecasting/energy-efficiency-forecast>
- 3 See <https://www.iso-ne.com/system-planning/system-forecasting/energy-efficiency-forecast>
- 4 From the 1990 baseline, such that total 2020 emissions across the state are no more than the equivalent of 70.8 million metric tons of CO₂.
- 5 <https://mor-ev.org/program-statistics>
- 6 Motor-fuel use: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, MF-21, available at www.fhwa.dot.gov/policyinformation/statistics.cfm as of June 2014.
- 7 <http://www.mass.gov/eea/docs/eea/land/land-report-2014.pdf>
- 8 John Fischer, February 2, 2017 SWAC meeting.
- 9 2010 Solid Waste Data Update, November 2011, page 5. <http://www.mass.gov/eea/docs/dep/recycle/priorities/10swdata.pdf>
- 10 2007 Solid Waste Data Update on the Beyond 2000 Solid Waste Master Plan, May 2009, Massachusetts Department of Environmental Protection, Executive Office of Energy and Environmental Affairs, page 12
- 11 2012 Solid Waste Data Update, December 2015, <http://www.mass.gov/eea/docs/dep/recycle/priorities/12swdata.pdf>
- 12 Id. and 2007 Solid Waste Data Update on the Beyond 2000 Solid Waste Master Plan, May 2009, Massachusetts Department of Environmental Protection, Executive Office of Energy and Environmental Affairs, page 12. <http://www.mass.gov/eea/docs/dep/recycle/priorities/07swdata.pdf>
- 13 Massachusetts Waste Bans as a Tool to Drive Waste Reduction, June 2016, MassDEP <https://uszwbc.org/wp-content/uploads/2016/06/Fischer-waste-ban-presentation-USZWBC-June-2016.pdf>. This excludes the commercial organics waste ban.
- 14 Massachusetts Commercial Food Waste Ban Economic Impact Analysis, submitted to MassDEP by ICF, 100 Cambridgepark Drive, Suite 501, Cambridge, MA 02140, December 2016. <http://www.mass.gov/eea/docs/dep/recycle/priorities/orgecon-study.pdf>
- 15 Massachusetts Waste Bans as a Tool to Drive Waste Reduction, MassDEP June 2016, <https://uszwbc.org/wp-content/uploads/2016/06/Fischer-waste-ban-presentation-USZWBC-June-2016.pdf>. In 2015 there were more than 230 waste ban inspections conducted (up from 185 conducted in 2014), about 5,300 loads inspected, (up from 4,000 in 2014), there were 146 Notices of Noncompliance (down from 159 in 2014), 12 higher level enforcements (up from 3 in 2014) and more than 500 generator/hauler letters (down from about 600) issued by MassDEP. MassDEP Waste Ban Compliance and Enforcement, MassDEP January 14, 2015. http://www.newmoa.org/events/docs/147_137/MassDEPWasteBansJan2015.pdf

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Charles River Watershed Association

<http://www.crwa.org>

Clean Water Action

<http://www.cleanwateraction.org/states/massachusetts>

Conservation Law Foundation

<http://www.clf.org>

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<http://www.environmentmassachusetts.org>

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<http://massriversalliance.org>

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<http://www.sierraclub.org/massachusetts>

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<https://www.environmentalleague.org>