

FFY12 Year-End Annual Report

MassDEP/U.S. EPA Region I Environmental Performance Partnership
Agreement: 2010-2012

Massachusetts Department of Environmental Protection
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Introduction

This document is the Massachusetts Department of Environmental Protection's (MassDEP's) Federal FY 2012 Year-End Annual Report for the MassDEP/US EPA-Region I Program Plan/Performance Partnership Agreement (PPA). In Federal FY 2012 (October 1, 2011 – September 30, 2012), the last year of our 3 year PPA, MassDEP received about \$14 million from U.S. EPA under an umbrella grant agreement called the Performance Partnership Grant (PPG). The PPG, and the associated narrative agreement that outlines work commitments to be performed by MassDEP (called the Performance Partnership Agreement [PPA]), covers MassDEP's implementation of federally-delegated programs under the Clean Air Act, Clean Water Act, RCRA, etc. Since 2001, MassDEP has elected to combine the annual PPA narrative with the annual agency-wide Program Plan in an attempt to have a single comprehensive plan for the agency's activities for the coming year (including federally-funded and non-federally funded).

This document provides information on MassDEP's accomplishments for FFY 2012 and has three parts:

Part 1: Priorities and Commitments – Tables summarizing progress made toward the environmental goals and in meeting the commitments contained in the FFY12 PPA Grant Workplan

Part 2: Inspection Tables -- Inspection tables showing the number and type of inspections conducted in FFY12.

Part 3: MassDEP Accomplishment Highlights for 2012 under the following headings: Innovation, Reform and Cross-Cutting Issues; Clean Air, Energy and Climate Change; Clean and Safe Water; Waste Site Management and Cleanup and Compliance and Environmental Stewardship.

For more information on MassDEP's activities, including MassDEP Program Plan/Environmental Performance Partnership Agreements (PPAs) and Year-End Annual PPA Reports for previous years, please see the MassDEP website at the following URL:

<http://www.mass.gov/dep/about/priorities/ppahome.htm>

For more information on MassDEP's activities, accomplishments, and the Commonwealth's environmental trends, go to:

- MassDEP Programs and Initiatives: <http://mass.gov/dep/about/missionp.htm>
- Statistics on Cleaning Up Oil and Hazardous Waste Sites in Massachusetts: <http://www.mass.gov/dep/cleanup/priorities/progeval.htm>
- Air and Climate: Reports, Plans and Data: <http://www.mass.gov/dep/air/priosres.htm>
- Waste Reduction and Recycling Information: <http://www.mass.gov/dep/recycle/priorities/wrr.htm>
- Toxic Use Reduction Act (TURA) Data and Results: <http://www.mass.gov/dep/toxics/tura/turadata.htm>
- Progress Report on Water, Waste Water and Wetlands: <http://www.mass.gov/dep/water/priorities/epphome.htm>

EPA's MassDEP 2012 PPA Priorities & Commitments List and End of Year (Sep 30, 2012) Progress Report Record (note: #s parenthesis are a crosswalk to last year's P&C List)

GOAL 1: TAKING ACTION ON CLIMATE CHANGE AND IMPROVING AIR QUALITY

Objective 1.1: Address Climate Change

GHG

GHG Permitting

Collaborate with EPA on conducting workshops and providing technical assistance for industry on the implementation of GHG permitting.

Discussions have been ongoing EPA, NESCAUM states, and NACAA. Worked on drafting GHG permitting guidance to present on web page upon pending promulgation of Title V GHG regulation (see 3)

Work with EPA to develop state PSD and Title V rules which incorporate the GHG permitting requirements of EPA's Final GHG Tailoring Rule.

Title V GHG rules proposed, hearing June 19, 2012, comments closed June 30, 2012. Response to comments completed and final reg package submitted for approval PSD regulation prep still in process

Actions in the industrial sector

Work with EPA to identify units that will be subject to the fossil fuel-fired power plant 111(d) regulations when it is finalized in May 2012 and begin working on a plan to submit regulations for these sources as required by EPA's emission guidelines.

on hold, regulations not yet promulgated by EPA

Work with EPA on the implementation of the Greenhouse Gas Reporting Rule and analysis of the reported data. Activities may include: 1) reviewing a preliminary list of MA facilities subject to reporting rule; 2) assisting EPA in notifying facilities potentially subject to the rule; 3) answering and/or directing questions from facilities on the rule; 4) helping EPA analyze and do quality assurance on the reported data, etc.

Work has been ongoing and proceeding forward.

Work with EPA and the Bureau of Ocean Energy Management Regulation and Enforcement on permits, rules and reporting for offshore energy development.

Ongoing

Work with EPA, MA DOER, and MA EOEEA to implement a Net Zero Energy goal program and promote energy efficiency upgrades in the wastewater and drinking water sectors. Strategies include energy management planning, aeration and pump optimization, promoting more efficient motors and/or boilers, and onsite power generation opportunities where they save energy and reduce emissions. Include complementary activities in the "MassDEP only" portion of the plan.

Accomplished.

<i>Actions in the transportation sector</i>	
Continue to implement the MA Rideshare program	MassDEP continues to implement this program and is in the process of streamlining survey and reporting requirements under MassDEP's regulatory reform initiative.
Through the Northeast Diesel Collaborative (NEDC), promote programs to improve fuel efficiency and reduce emissions from transportation and goods movement such as EPA's SmartWay Transport Partnership and EPA's Clean Ports USA program. (OTAQ 04).	MassDEP participates on NEDC and promotes diesel reduction projects including MassClean Diesel and the Clean Markets program.
Objective 1.2: Improve Air Quality	
<i>Ozone, PM_{2.5}, PM₁₀ and CO</i>	
Participate in EPA's AIRNOW program. This includes: 1) Submitting ozone and PM2.5 real-time data and forecasts to the Data Management Center; 2) Issuing EnviroFlash alerts; 3) participating in Region I's outreach and forecasting workshop; and 4) as state travel restrictions allow, attending the annual National Air Quality Conference.	MassDEP fully participated and completed activities listed.
Continue development of 2008 periodic emission inventory (PEI). Select base year for 2011 8-hour ozone standard SIPs.	2008 PEI: MA: submitted preliminary data to EPA National Emissions Inventory (NEI) July 2010. MA made final submittal to NEI with corrections and addendums August 2011. 2011 Base Year PEI: MA developed preliminary data and submitted to EPA by revised deadline of 1/7/2013.
Ensure that the state's air emissions database is compatible with EPA's re-designed National Emissions Inventory (NEI) database system.	Done
Submit 2010 point source data for large, type A sources (MA's Air Operating Permit and SM80 sources) to EPA's NEI by December 31, 2011.	Completed in October 2012 for both facility and emissions flows.
Commit to move forward with the regulatory process for the rules necessary pursuant to the following CTGs issued by EPA: 1) Industrial Cleaning Solvents; 2) Offset Lithographic Printing & Letterpress Printing; 3) Flexible Package Printing; 4) Paper, Film, and Foil Coatings; and 5) Miscellaneous Industrial Adhesives.	DEP, through a coordinated work group effort begun in FFY 2011, made significant progress to address these items; drafting new or revised sections for our air pollution control regulations, 310 CMR 7.18, where facilities/activities in the source category known or potentially found in MA, or negative declarations as applicable. Expect to meet with EPA to discuss status and raise specific issues by end of CY 2012.

Identify the number of sources, analyze what current rules need to change, and prioritize those rule changes for future action, for the following sources subject to EPA's new CTGs: 1) Metal Furniture Coating; 2) Miscellaneous Metal Products and Plastic Parts Coatings; and 3) Fiberglass Boat Manufacturing Materials.	DEP, through a coordinated work group effort begun in FFY 2011, made significant progress to address these items; drafting new or revised sections for our air pollution control regulations, 310 CMR 7.18, where facilities/activities in the source category known or potentially found in MA, or negative declarations as applicable. Expect to meet with EPA to discuss status and raise specific issues in April 2013.
Submit a negative declaration, if applicable, for the following CTGs: 1) Large Appliance Coatings; and 2) Automobile and Light-Duty Truck Assembly Coatings.	To be submitted concurrent with regulations discussed under commitment #s 14&15 above.
Submit rules relied on in 8-hour attainment demonstration, including rules limiting emissions from asphalt paving, adhesives & sealants. The NOx provisions of 310 CMR 7.29 will also be submitted.	Final adhesives and sealants rule expected to be submitted to EPA in first half of 2013. NOx provisions of 310 CMR 7.29 were submitted to EPA as part of Regional Haze SIP.
Work with EPA on the transition from CAIR to the Transport Rule program.	Continue to work with EPA staff to discuss transition issues in light of court decision on Transport Rule.
Complete and submit annual I/M reports to EPA. (OTAQ 06)	Report submitted to EPA July 31, 2012.
Submit ozone designation recommendation by the date required by EPA.	Designation recommendation was submitted by required date.
Process conformity determinations for 8-hour ozone nonattainment areas and CO maintenance areas. (OTAQ 03a).	MassDEP Conformity letter issued September 6, 2012.
Continue to participate in Northeast Diesel Collaborative to advance state and regional programs to reduce diesel emissions.	MassDEP regularly participates on NEDC calls and activities to advance programs to reduce diesel emissions.
<i>NO₂, SO₂ and Pb</i>	
Submit lead NAAQS infrastructure SIP to EPA. Due date is Oct 15, 2011.	Public hearing held in June 2012 was submitted to EPA December 4, 2012
Propose infrastructure SIP for the one hour NO ₂ standard by September 30, 2012. SIP is due January 22, 2013.	Expect to propose infrastructure SIPs for NO ₂ , ozone and SO ₂ for public hearing in June 2013.
Work with EPA in developing a list of sources the state will conduct refined dispersion modeling as part of its supporting documentation for the SO ₂ maintenance plan SIP submittal in FY 2013.	Awaiting final EPA guidance. Two staff attended AERMOD, an air dispersion modeling training, in October 2012.
Participate in EPA's AIRNOW program. This includes: 1) Continued submittal of SO ₂ real-time data to the Data Management Center; 2) Develop a reasonable method of notifying the public of elevated SO ₂ levels, such as providing real-time 1-hr SO ₂ AQI information on the DEP web site.	MassDEP fully participated and completed activities listed.
<i>Regional Haze</i>	

Participate in the modeling activities of the Ozone Transport Commission (OTC) and in the northeast regional haze planning organization Mid-Atlantic and Northeast States Visibility Union (MANE VU) to ensure that Massachusetts' ozone and Regional Haze modeling obligations are appropriately addressed.	Multiple staff continue to participate in the modeling activities through numerous monthly OTC and MANE-VU committee calls.
Submit the regional haze SIP to EPA, with BART provisions and adopted regulation implementing the state's low sulfur fuel oil measure. (OAQPS N08).	Completed. MassDEP promulgated low sulfur oil regulations on 8/3/12 and submitted a final Regional Haze SIP, including BART provisions, on 8/9/12.
<i>Title V / NSR Permits</i>	
Insure that 100 percent of Title V operating permit significant modifications are issued within 18 months of receiving a complete permit application or settlement of an enforcement case. Provide necessary data through the TOPS Tracking Form to document the goal every six months. (OAQPS P11).	1 SIG MOD application received and issued within 18 months of submittal. TOPS Information was provided to EPA.
Insure that 100 percent of new Title V operating permits are issued within 18 months of receiving a complete permit application or settlement of an enforcement case. Provide necessary data through the TOPS Tracking Form to document the goal every six months. (OAQPS P11).	TOPS report shows 4 initial operating permits applications older than 18 months. Previous submittal showed 7.
Title V operating permit renewals: Document the number of expired Title V permits as of Oct. 1, 2010 and reduce the total universe by 10% during the fiscal year. Provide necessary data through the TOPS Tracking Form to document the goal every six months. (OAQPS P11).	The data was submitted to EPA via the pdf TOPS report in Jan and July 2012. We have no expired operating permit approvals, all renewal applications were submitted on time.
Insure that 78 percent of major NSR permits are issued within 12 months of receiving a complete permit application. Provide necessary data to document the goal every six months. (OAQPS P001).	No major NSR permits under review during FFY 2012.
Insure that data are submitted to EPA's RACT, BACT, LAER Clearinghouse for new major sources and major modifications within 90 days of permit issuance. Provide the data documenting the timeliness of the submissions in the end of year report.	No such determinations issued during FFY 2012.
Issue PSD permits in accordance with the Delegation Agreement signed on April 11, 2011.	No such permits under review during FFY 2012.
<i>Air Monitoring</i>	

<p>Air Monitoring Network: Implement plans to monitor for October, 2008 lead NAAQS. Annual network plan should address the need for any lead source based monitors to be operational in accordance with lead final rule (0.5 TPY). The Annual network plan should also address NCore based lead monitor which must be operational by January 1, 2012. Must also include one year monitoring study for lead at Nantucket Airport. (OAQPS M22).</p>	<p>Done. Lead monitoring started at Harrison Ave (Boston) and Republican (Springfield) in January 2011. Nantucket started January, 2012.</p>
<p>Air Monitoring Network: Submit to EPA by July 1, the annual air monitoring network plan and schedule (40 CFR 58.10). Plan should include work toward developing new monitoring networks consistent with the requirements on NO₂, SO₂, CO, and ozone NAAQS rules. (OAQPS M08).</p>	<p>Done. Approved by EPA in September, 2012.</p>
<p>Air Monitoring Network: Operate EPA-approved network (SLAMS, PAMS, PM), enter the air monitoring, precision and accuracy data into AQS within 90 days (180 days for PAMS) of the end of each calendar quarter (40 CFR 58.12, 58.14, & 58.16) (OAQPS M11) and submit the Annual Air Quality Data certification by May 1, 2012 (40 CFR 58.15). (OAQPS M06).</p>	<p>Done. Certification submitted May 1, 2012.</p>
<p>Toxics Air Monitoring: Continue operation of the toxics air monitoring sites and enter the data into AQS. (OAQPS M20).</p>	<p>Done and ongoing.</p>
<p>Quality Assurance: Ensure all approved QAPPs are reviewed by November 1, 2011, and confirm this in writing to EPA. Major changes will require a QAPP revision. Ensure adequate, independent QA audits of NAAQS monitors or participate in NPAP and PEP QA programs. (OAQPS M10).</p>	<p>Done. QAPP letter sent by November 1 for both 2011 and 2012.</p>
<p>Prepare to terminate or extend, as needed, the FY11 PM §103 air monitoring grant on March 31, 2012.</p>	<p>Done. The grant was extended by April, 2012 according to EPA schedule.</p>
<p><i>Air Toxics</i></p>	
<p>Work with EPA to develop and implement a compliance and assistance strategy for the final Industrial, Commercial, and Institutional Boilers NESHAPs for area sources. Implementation activities should include: developing workshops and trainings for affected facilities; conducting outreach mailings to facilities or trade association groups; updating websites to include information about the NESHAPs; providing technical assistance to facilities; amending Boiler Environmental Certification Workbook to include information on NESHAP and EPA contacts; and evaluating Boiler ERP regulation as applied to oil-fired boilers.</p>	<p>MassDEP provides Susan Lancey at EPA the assistance she requires. MassDEP updated the Environmental Results Program (ERP) workbook Boiler Environmental Certification and added the federal requirements to our web. For oil fired ERP boilers we send the ERP cert to EPA. No new oil fired ERP boilers.</p>

<p>Work with EPA to perform compliance and assistance activities for the area source National Emission Standards for Hazardous Air Pollutants (NESHAPs) for reciprocating internal combustion engines. Implementation activities could include: developing workshops and trainings for affected facilities; conducting outreach mailings to facilities or trade association groups; updating websites to include information about the NESHAPs; providing technical assistance to facilities; and working to promote pollution prevention in the sector as part of the outreach or trainings.</p>	<p>Worked with Susan Lancey at EPA as requested. MassDEP updated our Environmental Results Program (ERP) workbook for reciprocating internal combustion engines and added an engine homepage to our website.</p>
<p>Continue delegation and implementation of toxic requirements under section 112, 129, and 111(d) for major sources rules, area source rules, and residual risk rules. (OAQPS T06)</p>	<p>Done and ongoing</p>
<p>Submit revisions to 310CMR 7.08 which meet EPA's May 10, 2006 final rule for Large Municipal Waste Combustors.</p>	<p>Proposed revisions under review by DEP management.</p>
<p>Analyze whether there are any facilities in Massachusetts subject to EPA's December 16, 2005 rule for Other Solid Waste Incinerators. If no facilities exist, submit the appropriate negative declaration to EPA.</p>	<p>One facility identified.</p>
<p>Once the Commercial and Industrial Solid Waste Incinerator (CISWI) rule is reconsidered by EPA, submit either a negative declaration letter or a State Plan by the required deadline.</p>	<p>Regulation was not issued by EPA.</p>
<p>Analyze the requirements of EPA's Sewage Sludge Incinerator (SSI) rule finalized in March 2011. Meet with EPA to discuss the regulatory options available to insure compliance with the applicable requirements for SSI units in Massachusetts. State Plan is due to EPA no later than March 2012.</p>	<p>Met with EPA 10/17/2012 to discuss regulatory options and received a conditional agreement on a permit-based plan. ? We are presently evaluating the possibility of taking delegation of SSI activities once EPA writes a Federal Plan, and in the interim working with facilities on getting operating permits submitted by 2014 deadline, rather than develop a state plan.</p>
<p>Review and comment on the draft 2008 National Air Toxics Assessment (NATA)/National Air Pollutant Assessment (NAPA) when it is available for comment.</p>	<p>2008 NATA not available yet.</p>
<p>Support EPA's efforts to produce an accurate National Emission Inventory (NEI) for Hazardous Air Pollutants (HAPs). This includes reviewing Massachusetts point source data released for comment under EPA's Risk and Technology Review rulemakings, to the extent that appropriate emissions data is available.</p>	<p>No requests to review point source data by EPA were received during FFY12.</p>
<p>Objective 1.3: Restore the Ozone Layer</p>	
<p>No specific PPA related action for the State</p>	
<p>Objective 1.4: Reduce Unnecessary Exposure to Radiation</p>	

No specific PPA related action for the State	
GOAL 2: PROTECTING AMERICA'S WATERS	
Objective 2.1: Protect Human Health	
<i>Certification of Drinking Water Labs</i>	
Maintain full certification of the DEP WES state principal laboratory and follow up promptly on any action items resulting from EPA's audits of the laboratory. Maintain required schedule for private laboratory inspections.	Done - The MassDEP/WES state principal laboratory continues to maintain certification. The Laboratory Certification Program, including the frequency of inspections of MassDEP-certified laboratories, continues to meet EPA requirements.
<i>Source Water Protection</i>	
Continue to support implementation of local programs and, where appropriate, continue to integrate source water protection implementation into other programs appropriate (e.g., UIC, stormwater). (SP-4a-b).	Ongoing -Source Water Protection Program staff continue with this work. This past year the DWP implemented bi-monthly meetings with BRP's Source Water Protection, Stormwater, Wetland and UIC programs to coordinate work.
<i>Drinking Water</i>	
Work to achieve target of 91% of population served by CWSs that receive drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.	Ongoing
Work to achieve target of 90% of CWSs that provide drinking water that meets all applicable health-based standards through approaches including effective treatment and source water protection. (SP-1).	Ongoing
Work to achieve target of 95% of "person months" (i.e., all persons served by CWSs times 12 months) during which CWSs provide drinking water that meets all applicable health-based drinking water standards. (SP-2).	Ongoing
LT2/Stage2: Implement rules and coordinate, as necessary, with Region. Work with Region to make any changes necessary to primacy package to obtain EPA approval.	Ongoing - Regulatory changes will be sought in 2013 regulation package to finalize.
GWR: Implement rules and coordinate, as necessary, with Region. Work with Region to make any changes to package to obtain approval.	Ongoing - Regulatory changes will be sought in 2013 regulation package to finalize.

<p>Sanitary surveys: Continue expanded use of electronic sanitary survey tool; conduct surveys of Community Water Systems (CWS) on three-year cycle (and 5 year cycle if system has met the MassDEP outstanding performance criteria) and non-transient non-community water systems (NTNCWSs) and transient non-community water systems (TNCWSs) on five-year cycle. At a minimum, report surveys for surface water and GWUDI systems to SDWIS. Note: three-year cycle for surveys conducted at CWSs (served by surface water/GWUDI) will be measured for FY11 based on the period 1/1/09 through 12/31/11. With implementation of new GWR requirements regarding surveys, "self-audits" by systems will not count as sanitary surveys toward the meeting the measure. (SDW-1a).</p>	<p>Ongoing</p>
<p>Program Reviews (previously called Data Verifications): Work with the Region to improve SDWIS data quality highlighted in the Data Reliability Study. Prepare for the next program review by reviewing the deficiencies identified in the past program review and discussions with the Region as part of the data reliability study, and evaluate policies, procedures, and data management to ensure that compliance determinations are consistent with state and federal regulations. Continue to implement the corrective action plan developed to follow-up on the deficiencies outlined during the most</p>	<p>Ongoing</p>
<p>Security/Emergency Response: continue to coordinate with EPA on security workshops, drills and all hazards preparedness.</p>	<p>Ongoing</p>
<p>Implement Short-Term LCR revisions. Continue to follow-up on any LCR action items (e.g., follow-up on LCR data verification) and work with EPA to obtain final LCR primacy approvals for both minor revisions and short term revisions.</p>	<p>Ongoing</p>
<p>Maintain timely and accurate reporting to SDWIS and otherwise comply with 40 CFR 142.15.</p>	<p>Ongoing - MA continues to follow the SDWIS/FED reporting practices as outlined in our signed Trading Partner Agreement with EPA Region 1.</p>
<p>Coordinate with EPA on mid-year and year-end PWSS reviews, including status of various rule implementation, GPRA progress, and resource issues. Also use the Logic Model continue to use the Model with Region in midyear process and to facilitate any program analysis as needed.</p>	<p>Ongoing</p>
<p><i>UIC</i></p>	

<p>Continue to identify and to close or permit identified motor vehicle waste disposal wells and large capacity cess pools; report number identified, closed or permitted (UIC National Measure SDW-8). Continue to report UIC activities (e.g., number of inspections conducted, number of permits issued, number of wells closed, UIC enforcement activity, etc.) to EPA per 7520 forms.</p>	<p>Ongoing</p>
<p>Complete eDEP (electronic registration - UIC applications), complete upgrades to MassDEP UIC database (authorized-by-rule and permitted Class IV & V wells) and complete schema to transfer UIC data to EPA UIC database. Provide updates responses and clarifications to questions raised during EPA's primacy review related to 1999 amendments to EPA's Class V regulations that may be impacted by recent (and proposed) MassDEP UIC related regulatory revisions that have occurred since the original MassDEP application for the Class V 1999 amendments. Develop a schedule to finalize and submit a revised MassDEP Primacy Package that reflects the MassDEP UIC related regulatory revisions that have occurred since the original MassDEP application for primacy for the Class V 1999 amendment.</p>	<p>Ongoing -The UIC eDEP electronic registration portion of this item is complete. The electronic transfer to EPA from DEP databases for permitted UIC wells is ongoing. The Primacy Package work is ongoing.</p>
<p>Objective 2.2: Protect and Restore Watersheds and Aquatic Ecosystems</p>	
<p><i>Water Monitoring</i></p>	
<p>Continue implementing final comprehensive water monitoring strategy covering lakes, rivers and estuaries, as financial resources allow. Continue implementation of probabilistic design survey, as resources allow . (WQ-5).</p>	<p>Accomplished</p>
<p>Provide updated monitoring strategy to EPA if not completed during FY11.</p>	<p>Continued to work on updating monitoring strategy in FY12.</p>
<p>Report on outcomes of monitoring activities using FY2011 106 supplemental funding for monitoring by Sept. 30, 2012, and prepare workplan for FY2012 106 supplemental funds by May 1, 2012.</p>	<p>Accomplished</p>
<p>Participate as feasible in New England-wide projects such as the Biological Condition Gradient (BCG) workgroup, other biological/water quality monitoring activities, and attend relevant regional meetings/conferences (e.g., NEAEB).</p>	<p>Attended NEAEB and continued reference stie monitoring activities.</p>
<p>Participate in, as feasible, or coordinate with EPA Office of Water's National Aquatic Resource Surveys (NARS) and submit workplan reflecting level of participation.</p>	<p>Accomplished</p>
<p>303(d)/305(b)</p>	

Submit the 305(b) and 303(d) Integrated Report using ADB by April 1, 2012. (WQ-7)	Accomplished
Submit CALM (Comprehensive Assessment and Listing Methodology) document by April 1, 2012 if not completed during FY11.	Accomplished
MassDEP will continue to georeference waters to NHD 1:25,000 and will begin using 1:24,000 when MassGIS is updated to reflect the finer resolution.	Ongoing effort continues.
<i>STORET/WQX (Water Quality Exchange)</i>	
Continue routine annual uploads of physical, chemical and biological data to WQX (formerly STORET) assuming DWM's new data management system (WRATS) is finalized to allow for this action to take place- (formerly STORET).	Ongoing
<i>Water Quality Standards - Biological, Nutrient, Temperature</i>	
EPA will provide support to DEP, EEA, DCR and other state and federal agencies in their efforts toward addressing flow quantity and water level issues as part of their Sustainable Water Management Initiative.	Accomplished
Continue ongoing WQS activities and work with EPA to resolve outstanding issues.	Ongoing
Work with EPA towards the development of nutrient response criteria, and phosphorus and nitrogen criteria for lakes/ponds/impoundments and rivers/streams/estuaries at the earliest possible time. (WQ-1a, 1b).	Accomplished
Provide any necessary schedule updates and a brief progress report to EPA for the development of numeric water quality criteria, total phosphorus and total nitrogen for lakes/ponds/impoundments; rivers/streams; and estuaries in Massachusetts by December 2011. (WQ-1c).	Accomplished - Update provided in December 2011
In meeting their responsibilities under commitments 90 and 91, EPA and DEP recognize that there is not sufficient data available in Massachusetts to establish numeric criteria for both phosphorus and nitrogen in lakes/ponds, impoundments, rivers/streams and estuaries and therefore "as early as possible" in some instances will be significantly in the future. Further, EPA and DEP agree to work together to collect any necessary data, as well as, assess the progress being made within the region and nationally on the development of science for establishing phosphorus and nitrogen numeric criteria.	Accomplished
<i>TMDL Development</i>	

Establish and submit to EPA for approval 40-50 TMDLs during FY12, and provide tentative list of water bodies (future substitutions allowed) by 9/30/11. Work with EPA contractor toward completion of TMDLs under development. (WQ-8b)	37 TMDLs were submitted to and approved by EPA
Participate in Region 1/State/NEIWPCC TMDL efforts to improve environmental effectiveness of the TMDL program. (WQ-8b).	Accomplished
EPA agrees to continue to monitor and report on RI efforts to develop a TMDL for Nitrogen for Narragansett Bay.	Ongoing
EPA agrees to closely coord. w/ MA & carefully consider MA strategies & implementation plans prior to initiating residual designation (RD) efforts, or making a decision on any RD petition. EPA will solicit & give strong consideration to DEP's views on whether RD is necessary to ensure reasonable progress toward meeting WQS. Agencies agree to coordinate closely in event an RD is considered as part of the implementation plan for any future TMDLs. (WQ-8b).	Ongoing
<i>Watershed Approach</i>	
Using the PPA process, 303(d) list, the nonpoint source RFP, national estuary program CCMP, and other state processes, work to identify priority watersheds and water bodies for the state to focus effort to identify and remediate specific sources and to protect and improve water quality. (SP-10, SP-11, SP-12).	Ongoing - The 2013 RFR for 319 projects prioritized work in three watersheds that were selected using the Recovery Potential Screening Tool.
In those priority water bodies and watersheds, work to leverage existing tools such as the state's TMDL, nonpoint source, water quality, permit, SRF grant, national estuary, and source water assessment programs to concentrate implementation efforts and to measure improvements.	Ongoing - In addition to watershed prioritization through 319, DEP collaborated with NRCS on its National Water Quality Initiative with the goal of selecting HUC 12 subwatersheds of common interest to be targeted for additional Farm Bill implementation funding.
Develop a list of water bodies for EPA by 2/15/12 that the state is working to fully restore (measure L) or partially restore (measure Y) over the next several years. (SP-10, SP-11).	Ongoing
For measure W, work with EPA Region 1 to review and update (if needed), a list of impaired watersheds (at the 12-digit level)- where the state is implementing strategies, plans, or undertaking significant work that is designed to produce results that "may" meet the improved definition for measure W watersheds (SP-12).	Ongoing

<p>Collaborate on the Mystic River Watershed Initiative to improve water quality and environmental conditions throughout the watershed by serving on the Mystic River Watershed Initiative Steering and Science Committees and actively participate in all meetings, support priority actions, including environmental justice, to the best of each agency's ability and within their authorities. Assist with identifying and removing numerous suspected sources of pollution from the Mystic River Watershed through coordination of EPA's and the MA DEP's monitoring, water quality, remedial, and enforcement programs.</p>	<p>Ongoing</p>
<p>Participate on Regional Healthy Watershed State Work Group to help implement Region 1's Healthy Watershed Strategy and/or work to assess healthy watersheds in your state (WQ 22a and 22b).</p>	<p>Preliminary conversations underway between EPA and MassDEP. New NPS guidelines include identification and protection of healthy watersheds.</p>
<p><i>319 Program</i></p>	
<p>Continue to use the 2004 Nonpoint Source Program and Grants Guidelines for States and Territories to identify eligible activities, program priorities and reporting requirements.</p>	<p>Done</p>
<p>A representative of the state's NPS program should attend all NPS and GRTS national and regional meetings convened by EPA if possible. States shall utilize s. 319 funds to cover travel expenses for NPS program staff to attend regional and national GRTS training meetings, national NPS conferences, and regional NPS meetings and conferences, unless prevented by state-wide travel bans.</p>	<p>Done</p>
<p>Continue to work with other government agencies to influence the targeting of a portion of the Farm Bill Programs (e.g., EQIP) to areas of environmental concern (i.e., impaired waters, fragile waters in need of protection, and a watershed approach).</p>	<p>Done</p>

<p>Continue to target 319 funds for priority segments or water bodies to include measure W/L watersheds. Identify water bodies that were recently partially or fully delisted due to water quality improvement, and investigate whether local, state, or federal NPS mitigation occurred that might make these waterbodies a candidate for a NPS Success Story. Prepare and submit at least 1 success story for restored or partially restored water bodies in accordance with EPA national computational guidance. If no water bodies are identified for success stories under this category, if possible, submit 2 success stories that show progress toward achieving water quality goals and/or demonstrate ecological restoration. See http://water.epa.gov/polwaste/nps/success319/ for more information about candidate success stories. (SP-10, SP-11, SP-12, WQ-10).</p>	<p>partially complete.</p>
<p>Continue to enter all 319 grant dollars and mandatory data elements into the Grants Reporting Tracking System (GRTS) by Feb 15th of each year and provide timely review of national GRTS reports prepared for the state. (WQ-9).</p>	<p>Done</p>
<p>Continue to ensure that watershed based plans developed using incremental dollars portion of the 319 funds will contain the 9 (a- i) elements specified in the 2004 guidance. (WQ-10).</p>	<p>Done</p>
<p>Continue to submit a 319 related workplan and annual report for all projects and activities. Identify match sources and amounts. Provide information annually relative to the distribution of funding toward implementation projects, staffing, and statewide nonpoint program activities, progress in meeting the annual priorities and commitments and in carrying out the state NPS Management Program, improvements in water quality resulting from program implementation, and the status of implementation projects.</p>	<p>Done</p>
<p>If funding levels are stable, work to maintain current levels of funding to implement structural and non-structural BMPs and watershed projects that continue or enhance successful water quality restorations that can be reported to Congress and OMB.</p>	<p>Done</p>

Discuss water quality monitoring at planned Resources and Staffing Issues meetings in November and May for 1-3 waterbodies with local 319 funded projects completed during the last 5 years to evaluate progress in meeting water quality standards and document success.	Done
<i>NPDES Development</i>	
Identify NPDES work-sharing activities for FY 2012.	Ongoing
Explore developing a plan and interim milestones to evaluate the capacity, authority, feasibility, costs , advantages, disadvantages, and support for NPDES authorization for MA.	Ongoing
MassDEP will work with EPA to develop efficiencies for processing NPDES permits including ways to reduce duplication between the agencies, increase production of permits, develop nutrient effluent limits, consolidate state agency reviews, and explore state NPDES delegation.	Ongoing
Participate in bi-monthly coordination and planning calls on the status of joint NPDES permits. Include regular discussion of enforcement coordination in these meetings.	Accomplished
Coordinate on NPDES Permitting for Power Plants.	Ongoing
Assist EPA in responding to comments received during public comment periods.	Accomplished
Assist EPA in defending NPDES permit appeals	Ongoing
Assist in the issuance of "priority" permits during FY 12. These permits will be determine in the late months of FY2011 and include, but are not limited to any targeted permits if not issued in FY 2011 (e.g. GE-Lynn, Brayton Point, Gloucester, Taunton, Charles River PCD, South Essex Sewerage District, UMass Boston, MWRA Deer Island). EPA and MassDEP will identify any and all critical issues associated with any priority permit prior to its going to public notice so as to avoid any delay in issuance thereafter. (WQ-19a).	Ongoing.
Assist as applicable in the development and issuance of General Permits including drafting any state specific requirements for GPs. Provide coordination and state reviews and approvals of NOIs under all effective GPs as required. (WQ-12a).	Accomplished.
Consider joint administration and enforcement of the Phase II MS4 Permit.	Accomplished.

Should MA decide to jointly issue the MS4 GPs: assist in public notice and issuance of new Phase II MS4 general permits; Assist in the review of NOIs and other permit-related documents; Assist in authorizing discharges under new Phase II MS4 GPs, as resources allow.	N/A
Support and coordinate (both agencies) storm water permitting outreach efforts, as resources allow.	Ongoing
Assist in the joint reissuance of Phase I MS4 permits for Boston and Worcester. (WQ13a & b).	Ongoing - Awaiting draft permits from EPA
Assist in the development of new Phase II Storm Water MS4 GP for issuance if all final GPs are not issued in FY11. Assist with public inquiries regarding the implementation of the new Construction Storm Water GP and Multi-Sector GP.	Ongoing
Continue to work with EPA to approve and enforce Long Term CSO Control Plans. Work with EPA to deal with Communities that chose sewer separation as the cost-effective alternative and want to amend their LTCP to address the added requirement of treating stormwater.	Ongoing - MassDEP staff are working with the 19 CSO communities on the implementation of the various phases associated with their CSO long term control plans.
Continue to work with EPA to reconcile policy issues related to variances/water quality standards determinations/and affordability issues.	Accomplished
Complete state law revision to allow electronic public notifications of NPDES permits, if not completed in FY2011.	Ongoing
Provide 401 certifications for the reissued Vessel General Permit (VGP) and small-VGP, so that the permit terms assure compliance with Massachusetts water quality standards.	Accomplished
Work to develop general performance standards for development and re-development projects that would meet MA anti-degradation requirements in MS4 permits, if not done in FY2011.	Done
<i>Wetlands</i>	
Update annually a tracking report on gains and losses on wetlands state-wide by December 31st of each year. Report will be based on available gain/loss data while DEP develops an electronic tracking mechanism as part of the eDEP and WIRe applications. Every five years (2010, 2015, etc.) report of trends and patterns for the previous five years.	Ongoing -Annual reporting of gain/loss data completed to date and will be continued with trend reporting in 5 year increments
Continue Web-based reporting on the status of DEP Wetland Program Development Grant projects.	Ongoing - Web based reporting on grant status complete and will be continued.

Continue to participate in the NEBAWWG biological monitoring and assessment effort.	Ongoing
Continue implementing wetlands biological monitoring and assessment plan. (WT-4).	Ongoing
<i>Dredged Material Management</i>	
Participate on Regional Dredging Team Technical Workgroup to coordinate with other federal and state agencies on planning and regulatory activities associated with dredging and dredged material management.	Done - Coordinated with CZM regarding planning & regulatory activities
Participate Joint Processing via project posting in ACoE's website to coordinate with other federal and state agencies on planning and regulatory activities associated with dredging and dredged material management (CO-6).	Done
<i>No Discharge Areas</i>	
Coordinate with MA CZM to implement outreach and enforcement strategies in support of current NDAs (Buzzards Bay, Cape Cod Bay, Boston Harbor, North Shore, and Salem Sound), and future NDAs (Mt. Hope Bay, south Cape and Islands). (CO-2).	Completed
Support efforts by MA CZM to complete NDA designation for Mt. Hope Bay, Cape Cod National Seashore, and south Cape Cod and the Islands. (CO-2)	Completed
<i>Beaches</i>	
Coordinate with MDPH when necessary to investigate/enforce chronic beach closures due to bacteria. If state funding/staffing constraints become an issue, DEP will notify EPA and discuss strategies to address the shortfall. (SP-9, SS-2).	N/A
<i>National Estuary Program</i>	
EPA to provide administrative, technical, and financial support to the National Estuary Programs in your state. (CO-4).	N/A
EPA to disseminate national and regional guidance and award grants and cooperative agreements in a timely fashion. (CO-4).	N/A
Participate on Buzzards Bay National Estuary Program Steering Committee and coordinate with MA CZM to support implementation of Buzzards Bay CCMP. (CO-3, CO-4, and 4.3.2).	Accomplished
Participate on Massachusetts Bays Estuary Program Management Committee and coordinate with MA CZM to support implementation of Massachusetts Bays CCMP. (CO-3, CO-4, and 4.3.2).	Accomplished

Participate on Narragansett Bay Estuary Program Management Committee and coordinate with RI DEM to support implementation of Narragansett Bay CCMP. (CO-3, CO-4, and 4.3.2).	Accomplished
GOAL 3: CLEANING UP COMMUNITIES AND ADVANCING SUSTAINABLE DEVELOPMENT	
Objective 3.1: Promote Sustainable and Livable Communities	
<i>Environmental Justice</i>	
MassDEP will continue to implement EJ policies.	Ongoing
Objective 3.2: Preserve Land	
<i>Sustainable Material Management</i>	
MA will continue to work on projects that reduce or divert municipal solid waste from incineration and landfills while supporting a sustainable materials approach. This approach, emphasizing the value of materials, will lead to increasing source reduction, reuse, recycling and composting.	<ul style="list-style-type: none"> • Awarded \$1.5 million in grants to municipalities to expand programs • Established the Recycling Works in MA program to assist businesses with waste reduction – www.recyclingworksma.com • Revised facility siting regulations and worked with stakeholders to develop an organics diversion action plan including a waste ban.
<i>RCRA Authorization</i>	
Public Notice of rules (Labs Rule, DTC, Evaporators and remaining HSWA listings).	Draft regulation package being reviewed by BWP management.
<i>RCRA Permit Renewals</i>	
Renew TSDF permits at three (3) TSDFs on the 12-15 permit renewal baseline. (2) TSDF renewals that were commitments in FY 11 will have drafts completed by the end of FY 11 and renewals issued in FY12.(HW0)	1 TSDF license was issued. 1 TSDF applicant filed a notice of closure. 2 TSDF licenses were delayed due to fees issues.
<i>UST</i>	
<i>STAG funds are included in the PPG to cover costs for UST Program activities that are ineligible with LUST Prevention (LP) Funds. LP funds are not PPG eligible - funds are in separate cooperative agreement.</i>	
Continue MassDEP UST program development work including, but not limited to, development of MassDEP UST regulations to replace existing Department of Fire Service regulations; development of on-line (eDEP) registration, change of status and third party inspection report submittal and automated data systems; verification of regulated universe information and database clean-up; and development of additional compliance assistance materials and outreach.	<p>Reg Amendments: Undergoing final review of regulations prior to release for public hearings.</p> <p>Online Data Management System: Drafting RFR for procurement of system</p> <p>Ongoing Activities: Facility verification, data clean up and compliance assistance and outreach</p>
Improve UST Operational Compliance: (a) Perform state lead field inspections to determine significant operational compliance.	MassDEP performed 244 inspections during FFY12.

Improve UST Operational Compliance: (b) continue to improve operational compliance by 0.5% over rate of previous year. (ST6 / 3.2).	The percentage of Mass UST facilities in Significant Operational Compliance declined from 36% in 2011 to 32% in 2012.
Inspect all regulated UST facilities once every 3 years; complete all inspections by 8/8/13	MassDEP is on target to meet the 8/8/2013 “every three year” inspection deadline.
Reduce Number of Confirmed UST Releases Annually – Regional target of <400; In FY10, confirmed releases were 260 (<4% of National total). (ST1 / 3.2).	MassDEP continues to work toward reduced number of confirmed UST releases.
Continue development and implementation of operator training. All operators must be trained by 8/08/12.	MassDEP met the 8/8/2012 Operator Training deadline.
Post the annual USTCA public record which will include: the number, sources, and causes of underground storage tank releases; the record of compliance by USTs; and data on the number of UST equipment failures in State. FIFTH ANNUAL REPORT DUE 12/31/2011.	MassDEP posted public records for the number of UST systems and continues toward collection of source and cause of UST releases.
Objective 3.3: Restore Land	
<i>Emergency Preparedness</i>	
EPA will continue to work with the New England states on Homeland Security and emergency response readiness issues through routine, day-to-day coordination and the existing Regional Response Team mechanism.	On-going
<i>RCRA Training & Meetings</i>	
Attend EPA sponsored regional and national RCRA meetings and training as appropriate.	MassDEP staff attended RCRA meetings and training as resources and approvals allowed. Attended two bi-annual EPA Region I enforcement meetings; attended one NEWMOA conference; participated in monthly EPA HQ RCRA Interpretation Network (RIN) and NEWMOA conference calls.
<i>Corrective Action Sites</i>	
Achieve Human Exposures Controlled Under Current Conditions at two (2) facility. (CA1).	MassDEP did not complete HE Controlled EI reviews for its two remaining candidates, Walton & Lonsbury and Handy and Harmon. Neither facility would meet the criteria at this time.
Achieve Contaminated Ground Water Migration Under Control at two (2) facility. (CA2).	MassDEP did not complete GW Migration EI reviews for its two remaining candidates, General Chemical and Handy and Harmon. Neither facility would meet the criteria at this time.
Achieve site-wide Remedy Selection at three (3) facilities.	MassDEP completed zero (0) remedy selections in FFY12. MassDEP had hoped to complete two (2) at NetOptix or Wyman-Gordon (Grafton).
Achieve Construction Complete at four (4) facilities. (CA5).	MassDEP completed zero (0) construction completes in FFY12. MassDEP had hoped to complete two (2) at NetOptix or Wyman-Gordon (Grafton).

Assessment of financial assurance current status for all new remedies.	MassDEP conducted a corrective action financial assurance review General Chemical Corporation's proposed remedy. This involved a significant level of enforcement and coordination with our AG's office.
Verify adequacy of financial assurance instrument for all remedies, as resources allow.	MassDEP conducted financial assurance reviews at 21 Facilities subject to Corrective Action, Closure, and Post Closure. In addition, the remaining financial assurance monies for Walton and Lonsbury site were disbursed and the trust fund terminated upon expenditure of the funds.
<i>LUST</i>	
<i>Not PPG eligible - funds are in separate LUST Trust Cooperative Agreement.</i>	
The National FY12 annual target for leaking underground storage tanks (LUSTs) cleanups was 11,250. Massachusetts FY12 commitment was 60. Massachusetts' FY13 LUST cleanup commitment (as part of Region I's regional commitment of 262) is 60.	In FY12 Region I completed 321 LUST cleanups with MA completing 61 (MA commitment was 60).
Objective 3.4: Strengthen Human Health and Environmental Protection in Indian Country	
No specific PPA related action for the State	
GOAL 4: ENSURING THE SAFETY OF CHEMICALS AND PREVENTING POLLUTION	
Objective 4.1: Ensure Chemical Safety	
No specific PPA related action for the State	
Objective 4.2: Promote Pollution Prevention	
No specific PPA related action for the State	
GOAL 5: ENFORCING ENVIRONMENTAL LAWS	
Objective 5.1: Enforce Environmental Laws	
Submit annual Compliance Plans containing descriptions of the state's compliance, assistance and innovative programs, including projections for inspections and other priority activities. See "FY2012 Guidance for Compliance and Assistance and Innovative Program Strategies in New England Performance Partnership Agreements".	FFY 13 ACMS proposal for RCRA and Air submitted August 2012. Revised Air proposal submitted November 2012.
Submit annual 2012 End of Year report on Compliance, assistance and innovation program accomplishments, activities and results.	done
Enter/send information necessary to satisfy the inspection, testing, compliance monitoring, and enforcement minimum data requirements (MDRs) to EPA's national AFS data system at least once every 60 calendar days (as required by the ICR). (CAA 16, CAA 17).	Complete. All actions transmitted from FMF within 60 days and each upload receives QC within 10 days of upload. A second round of QC quarterly may pick up additional actions not included in the upload. These missing actions (< 2% of total) may be found and entered after the 60 day period.

<p>Identify/address/resolve HPVs in accordance with EPA's Timely and Appropriate Enforcement Response to High Priority Violators (the HPV policy), July 1999. Inform the EPA NE liaison in person, by phone, or by email within 45 days of identifying/addressing/resolving an HPV. (CAA 16, CAA 17).</p>	<p>Complete. Only 3 new HPV were identified in FFY12. 1 HPV from FFY11 was addressed in FFY12 and 9 HPV from the current and previous years were resolved in FFY12. We continue to have one FFY10 case unaddressed and on the EPA Watch List.</p>
<p>EVAULATION, REPORTING & QUALITY ASSURANCE</p>	
<p><i>Re-Opener Clause</i></p>	
<p>The Regional Office will strive to honor the spirit of the PPA. In keeping with this spirit the Region will work with EPA HQ to limit the impact of unexpected demands on the states. To address new, very high priority issues that might emerge a re-opener clause will be included as part of this process permitting the Regional Office and/or the state to introduce necessary changes to the PPA.</p>	<p>On-going</p>
<p><i>Performance Partnership</i></p>	
<p>A process for jointly evaluating and reporting progress and accomplishments under the workplan must be developed and described in the workplan. The process must be based on a negotiated schedule. (40CFR35.115).</p>	<p>Accomplished</p>
<p>An annual written progress report must be submitted within 90 days after the end of the annual grant period. (40CFR35.115, 40CFR31.40).</p>	<p>Accomplished</p>
<p><i>QMP QAPP</i></p>	
<p>Continue to implement the State Quality Management Plan (QMP) and submit an Annual update letter to the EPA-NE Quality Assurance Unit documenting the status of annual quality system assessments and any changes necessary to the QMP.</p>	<p>Done</p>
<p>Review the State QMP and summarize changes made to the QMP in the update letter to the EPA-NE Quality Assurance Unit.</p>	<p>Done</p>
<p>Update the State Quality Assurance Quality Assurance Project Plan inventory list.</p>	<p>Done</p>

Accomplishment Highlights | 2012



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A Look Back at 2012

The Massachusetts Department of Environmental Protection (MassDEP) achieved numerous important accomplishments in 2012 to protect the environment of the Commonwealth and the health of its residents.

Key initiatives in 2012 focused on making the agency better and smarter, while operating with limited resources and increased responsibilities. MassDEP's Accomplishment Highlights for 2012 document provides an overview of some of the agency's most notable achievements, which include:

Innovation and Reform

MassDEP has made major progress advancing a suite of regulatory reforms, which includes more than 21 changes to streamline agency processes and find efficiencies. The regulatory changes cover a wide array of programs and will positively change the way the agency does business, allowing MassDEP to maintain a strong level of environmental protection with its current reduced resources. The agency has already put in place those reforms that were simple to implement. MassDEP has drafted regulations to implement the majority of the reforms. The first wave of draft regulations was released for public comment in late 2012, and the remaining will be available in early 2013. Also, MassDEP received the approval and first-year funding for a key information management overhaul that will transform MassDEP's operations by improving online services to the regulated community, while expanding transparency for the public. This upgrade will

also capitalize on state-of-the-art information technology tools to make MassDEP's internal operations faster, smarter, and more efficient. In addition, the agency continued to streamline permitting efforts and it remains one of the few environmental agencies nationwide that provides the guarantee of a timely permit decision or money back.

Clean Air, Energy and Climate Change

MassDEP's progress towards reaching greenhouse gas emission reduction goals this past year was significant and includes regulatory changes that promote cleaner fuels for home heating and power plants and further improvements to the Massachusetts Low Emission Vehicle Program. MassDEP has also been active in efforts to strengthen the Regional Greenhouse Gas Initiative, a nine-state cap and trade program for carbon dioxide emissions from major power plants, and is working on new regulations to curb greenhouse gas emissions from refrigerants and electric transmission. Further gains were made through the Clean Energy Results Program (CERP), a partnership with the Massachusetts Department of Energy Resources (DOER) to harness MassDEP's regulatory expertise to facilitate clean energy projects. CERP's focus on increasing the production of renewable sources of energy like wind, solar and anaerobic digestion, while reducing the use of fuels that pollute, has resulted in great successes such as permitting 78 megawatts of clean energy on closed landfills and advancing seven organics diversion and anaerobic digestion projects. In addition, the agency's efforts

to improve air quality gained significant traction with the final revisions to the Massachusetts Regional Haze State Implementation Plan, which addresses Massachusetts sources that contribute to regional haze. Additionally, MassDEP distributed more than \$1.4 million in grants to foster the advancement of diesel hybrid trucks and the use of technology that helps to reduce diesel exhaust emissions.

Clean and Safe Water

In 2012, the new Sustainable Water Management Initiative (SWMI) framework was finalized, which enables MassDEP to use science-based streamflow standards to regulate large water withdrawals, thus helping to ensure the long-term sustainability of state water resources. This historic initiative will balance human needs with ecological considerations and ensure a clear and predictable set of rules for water withdrawals. MassDEP also continued to make strides in protecting the Commonwealth's water resources by providing \$14.3 million in low-interest water infrastructure loans to communities across Massachusetts to improve drinking water quality and reduce water pollution statewide. Also, \$1.4 million in grants from the U.S. Environmental Protection Agency (EPA) and the Obama Administration were utilized to address polluted stormwater runoff into the state's lakes, rivers and coastal waters, and a phosphorus ban for turf fertilizer was passed by the state legislature that will reduce nutrient-loading to state waterways and save municipalities millions in treatment costs.

Waste Management and Site Cleanup

In partnership with the Commonwealth's Department of Energy Resources (DOER), Department of Agriculture (DAR), Clean Energy Center (CEC), and multiple stakeholders, MassDEP finalized anaerobic digestion siting regulations that allow for clear and predictable permitting of facilities to tap into the substantial energy value of organic waste while preserving dwindling

landfill capacity. These regulatory changes support the goals of the Draft Solid Waste Master Plan to significantly expand the diversion of organic materials from disposal facilities to operations where useful energy and products can be created. Furthermore, more than \$2 million in grants were made available to 118 communities and regional groups as part of the Sustainable Materials Recovery Program (SMRP), which will help to increase the diversion, re-use, composting and recycling of materials now going to landfills and incinerators. In addition, MassDEP launched the "RecyclingWorks in Massachusetts" program, a new initiative to provide Massachusetts businesses and institutions with the information and assistance they need to reduce waste and recycle more.

The Commonwealth has experienced a number of very serious natural disasters, most significantly in 2012, Superstorm Sandy. The agency plays a key role in the effective emergency response to storms, assisting communities with damage assessments, debris management, and addressing flooding. MassDEP also continued to advance cleanup of the state's most challenging and contaminated sites by launching a third round of assistance through the multi-agency Brownfield Support Team (BST) Initiative, established to accelerate cleanup and prepare underutilized contaminated properties for economic and community redevelopment.

Compliance and Enforcement

A primary role of MassDEP is to prevent, identify and stop environmental violations. This was another effective year of high-profile enforcement cases that included a record-setting New Bedford Harbor settlement and the Chickley River agreement in western Massachusetts. The landmark settlement in New Bedford will result in the expedited cleanup of PCBs in the New Bedford Harbor Superfund site. As part of that action, the record-setting \$366 million agreement with AVX Corp was the largest "cash-out" agreement ever

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Innovation, Reform and Cross Cutting Issues

Information Technology Transformation

In early 2012, MassDEP finalized an actionable roadmap for a major information management overhaul of MassDEP's information management capabilities called the Environmental Information and Public Access System (EIPAS) project.

The EIPAS project roadmap describes a new information technology (IT) environment for MassDEP with a tightly integrated online system that enables the Department to utilize all of its environmental information in a cohesive and automated fashion. Efficient use of information is critical as the Department is increasingly required to do more with less. With EIPAS in place, citizens will have vastly-improved access to vital environmental information; businesses will experience much quicker and more predictable interactions with the Department; and MassDEP personnel will be able to reduce the amount of time spent on data entry and administrative activities and make more informed decisions based on timely and accurate information.

The Secretariat of Energy and Environmental Affairs (EEA) and MassDEP were recently awarded the first-year capital funding necessary to begin implementation of this multi-year transformation.

EIPAS will serve as the foundation for systems and services within the EEA Secretariat. All EEA agencies within the Secretariat will be participating as EIPAS is developed and will benefit from the services developed. A Request for Response for vendor services will be issued in the Spring of 2013 with an anticipated contract to be signed in Fall of 2013. Find more details

about EIPAS at: <http://www.mass.gov/dep/about/priorities/eipas.htm>

Regulatory Reform to Improve Agency Efficiencies

This year, MassDEP continued to make major progress with the Regulatory Reform Initiative, which when fully implemented will be the most sweeping array of streamlining improvements in MassDEP history. Commissioner Kenneth Kimmell kicked off MassDEP's Regulatory Reform Initiative in the spring of 2011 with the goal of maintaining the agency's current high standards of environmental protection with a drastically-reduced present level of staff (which has dropped more than 30 percent since 2002). MassDEP's Regulatory Reform Initiative was also a mechanism for reviewing existing regulations to identify efficiency improvements as required of all state agencies under the Economic Development Reorganization Act of 2010. With help from external stakeholders, including all of MassDEP's standing advisory committees, the agency developed a wide range of regulatory reform ideas. After considering public comments on a draft plan last winter, MassDEP issued the final Regulatory Reform Action Plan in March of 2012 that included a number of regulatory changes, as well as some improvements to agency policies.

The regulation changes cover a wide array of programs, and generally fall into one or more of the following themes:

- Reduce MassDEP staff time for relatively low-value tasks;
- Avoid redundant permitting of matters

handled well at the local level;

- Use tried-and-true performance standards in lieu of individual permits;
- Incentivize environmentally beneficial projects; and
- Lighten regulation by consolidating permit applications, harmonizing notice requirements, and other common sense approaches.

The proposed changes to regulations include the following programs: asbestos and air quality; water pollution discharges; Chapter 91 waterfront licensing, including license review procedures, review processes for new energy technologies, permitting for dredging projects, and licenses for small docks and piers; wetland streamlining for renewable energy projects, activities in the buffer zone, stormwater management structures, and ecological restoration projects; sewer extension and connection permits; solid waste streamlining of permits for transfer stations, landfill post-closure uses for solar energy, and improved compliance for landfill sites; streamlining for waste site closures and Activity and Use Limitations (including allowing landowners to “close out” sites with vapor intrusion by using highly effective ventilation systems to protect against indoor air exposure); review of alternative septic systems; and permit approvals for land application of sludge and septage.

The draft regulations for improvements to the asbestos program, as well as the proposed solid waste program enhancements, were released for public comment in December 2012. The remainder of the proposed draft regulations will go out for formal public comment in early 2013. MassDEP hopes to finalize most of these regulation changes by summer 2013, while putting the most complex changes in place in the fall of 2013. More information on all of MassDEP’s regulatory reforms can be found here: <http://www.mass.gov/dep/about/priorities/regreform.htm>.

To receive notice of MassDEP’s draft regulations out for public comment, sign up at: <http://www.mass.gov/dep/public/reglist.htm>.

Permitting at the Speed of Business

MassDEP is committed to continuous improvement in its permitting efforts and was the first agency of its kind in the nation – and remains one of the few today – to offer applicants the guarantee of a timely permit decision or their money back.

MassDEP promulgated regulations in July 2007 cutting permitting timelines for most of its permit categories by 20 percent, and MassDEP committed to issuing 90 percent of its permitting decisions within 180 days. In Fiscal Year 2012:

- 90 percent were issued in 90 days or less, an increase from 69 percent in FY2007.
- 97 percent of permits were issued within 180 days—in FY07, only 81 percent were issued within that time period.
- 98.5 percent were issued within permit timelines—an increase from 89 percent in FY07 (and FY12’s permit timelines were 20 percent shorter).

Targeted Streamlining Success: Working in close partnership with key stakeholders, MassDEP also moved aggressively to implement reform proposals to address targeted permit categories. Results of these efforts follow:

Air Quality Permitting:

- Since FY07, 99 percent of air permits were issued within the permit timelines, and 91 percent were issued within 180 days—82 percent were issued within 180 days during the previous five years.
- 30 applications qualified for the simpler Limited Plan Approval, instead of the Comprehensive Plan Approval (saving applicants time and money).

Groundwater Discharge Regulations:

- Over the past five years, 98 percent of groundwater (GW) permits were issued within the permit timelines and 82 percent of GW discharge permits were issued within 180 days (an increase from 68 percent within 180 days during the previous five years).
- In FY2012, 92.6 percent of GW permits were issued within 180 days and 78 percent within 90 days, significant increases from FY07, when 71.4 percent were within 180 days 32 percent were issued within 90 days.

Chapter 91 – Public Tidelands Permitting:

In late 2008, MassDEP revised its regulations for Chapter 91 licensing to streamline the licensing process and align MassDEP’s licensing process with the Massachusetts Coastal Zone Management Office to shorten the time it takes to issue a final license. The changes also created a presumption that wind turbine/renewable energy projects (and their ancillary facilities, such as cabling) are water-dependent, minimizing the time to commence project review.

- Over the past five years, 62 percent of license decisions were issued within 180 days—only 20 percent were issued within 180 days during the prior five years.
- In FY12, 91 percent of license decisions were issued within 180 days and 81.6 percent were issued within 90 days—significant increases from FY07, when 22 percent were issued within 180 days and only 16 percent within 90 days.

MassDEP’s Permitting Assistance and Management Office (PAMO) provides additional assistance in navigating the MassDEP permitting process and expediting decisions that are business-critical. Applicants are encouraged to contact this office when they:

- Propose a large and complex facility or project that will require permitting coordination among various local, state and federal agencies, or across multiple MassDEP regions.
- Utilize MassDEP’s Fast Track Permitting to accelerate review and approval of the proposed facility or project.

- Need an impartial ombudsman to address questions or concerns that may arise about MassDEP permitting procedures, timelines or outcomes.

The Permitting Assistance and Management Office focuses on maintaining timely permitting, ensuring that permits achieve high levels of environmental compliance, and embody consistent interpretations of the agency’s laws and regulations. This office helps MassDEP in achieving these two important goals of maintaining our strict environmental standards while conducting permitting at the speed of business.

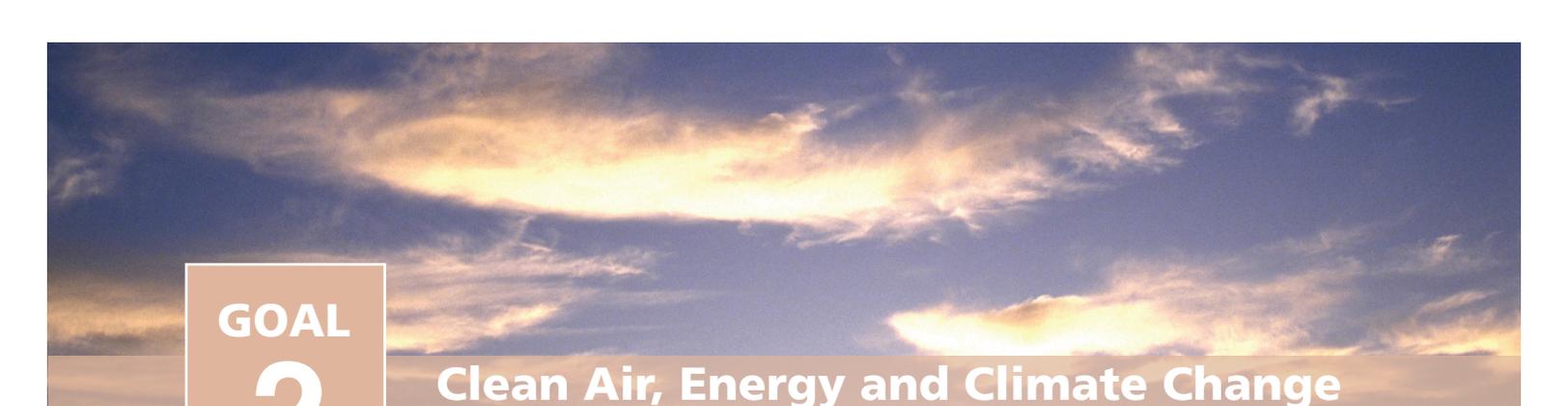
The telephone line dedicated to PAMO is 617-654-6650, and e-mail inquiries can be sent to: MassDEP.PermitAssistance@massmail.state.ma.us.

Information about MassDEP’s permit improvement efforts is available on the agency’s web site at: <http://www.mass.gov/dep/service/business.htm>

More information on PAMO may be found here: <http://www.mass.gov/dep/service/online/gettings.htm>

Spreading the Word about MassDEP’s Environmental Goals and Successes

MassDEP utilizes a number of communication and outreach tools to bring attention to the good work being accomplished to protect the environment and public health in the Commonwealth. In 2012, the agency expanded utilization of standard outreach tools such as press releases, opinion columns and media interviews. MassDEP also features a wide variety of information on its web site (www.mass.gov/dep), regularly updates interested parties via a handful of free email “Listserves,” the “EnviroMatters” eNewsletter (<http://www.mass.gov/dep/public/publications/enews.htm>), and in real-time through the agency’s new official Twitter feed (<http://twitter.com/massdep>). In 2012, MassDEP issued more than 1,200 Tweets and by year’s end had more than 1,300 followers. MassDEP also occasionally contributes to blog postings hosted by the Executive Office of Energy and Environmental Affairs.



GOAL

2

Clean Air, Energy and Climate Change

Reducing Greenhouse Gas Emissions

The Global Warming Solutions Act (GWSA), signed into law in 2008 made Massachusetts one of the first states in the nation to move forward with a comprehensive regulatory program to address climate change. The GWSA requires the Executive Office of Energy and Environmental Affairs (EOEEA), in consultation with other state agencies and the public, to set economy-wide greenhouse gas (GHG) emission reduction goals for Massachusetts that will achieve reductions of:

- Between 10 and 25 percent below statewide 1990 GHG emission levels by 2020; and
- 80 percent below statewide 1990 GHG emission levels by 2050.

MassDEP is playing a lead role in advancing the goals of the GWSA. In 2012, the agency made some significant progress implementing key elements of the GWSA through promulgation of regulations for low-sulfur oil and low-emission vehicles, and making further progress on rules for greenhouse gas permitting at stationary sources. Additional information on reducing greenhouse gas emissions may be found at: <http://www.mass.gov/dep/air/climate/reduce.htm>

Cleaner Fuels for Home Heating & Power Plants - On August 3, 2012, MassDEP finalized amendments to its air pollution regulations that lower the allowable sulfur content of distillate oil (home heating oil) and residual oil (used in power plants and industrial and commercial boilers). The regulation is part of a regional strategy by northeast and mid-Atlantic states to lower emissions of sulfur dioxide (SO₂). These changes are also needed to meet federal Clean

Air Act requirements to reduce regional haze in federally-targeted areas, including national parks and wilderness areas. In addition, the use of lower-sulfur heating oil increases the efficiency of heating equipment, thereby also reducing emissions of carbon dioxide - a primary greenhouse gas.

New Clean Car Standards - MassDEP promulgated amended regulations for the state's Low Emissions Vehicle (LEV) Program. These regulations adopt the California "Advanced Clean Cars Program," which includes three parts: 1) More stringent tailpipe and evaporative motor vehicle emission standards for model-year 2015-2020 vehicles; 2) More stringent greenhouse gas emission standards for model-year 2017-2025 vehicles; and 3) Requirements for increasing the numbers of "advanced technology vehicles" (e.g. electric vehicles) in Massachusetts starting in model-year 2016. MassDEP's LEV program is part of the plan to attain and maintain federal air quality standards under the Clean Air Act, and also a key element of achieving the goals of the Global Warming Solutions Act. Additional information on the LEV program may be found at: <http://www.mass.gov/dep/air/community/daqcpu05.htm>

Expanded Greenhouse Gas Permitting - An historic 2007 U.S. Supreme Court decision (MA vs. EPA) resulted in GHGs being legally considered to be an "air pollutant" under federal rules for the first time. Early in 2013, MassDEP will publish state regulations that incorporate federal GHG thresholds into the state Title V Operating Permit Program (air permits covering the largest facilities) to regulate GHGs as air pollution. Once in place, commercial and industrial facilities that already

have Operating Permits (about 150 facilities statewide) must include GHG emissions in their next permit renewal application if they trigger the thresholds for GHG emissions. Facilities that exceed the thresholds and that do not already have an Operating Permit will be required to apply for a permit within one year. The agency expects that as a result of this new regulation a handful of additional facilities will need an Operating Permit solely due to GHG emissions.

In 2013, MassDEP, along with other EOEAA agencies and other state agencies, will continue to advance other activities to implement the Massachusetts Global Warming Solutions Act.

Additional information on the Global Warming Solutions Act may be found at: http://www.mass.gov/dep/air/climate/gwsa_docs.htm

Regional Haze SIP Revisions Finalized

The federal Clean Air Act contains requirements for the protection of visibility in 156 national parks, forests and wilderness areas that include some of our nation's most treasured public lands. Unfortunately, enjoyment of the scenic vistas in these pristine areas is hampered by regional haze, which is caused by fine particle pollution that impairs visibility over a large region by scattering or absorbing light. Fine particle pollution also adversely impacts human health, especially for children, the elderly, and people with heart or respiratory conditions.

In 1999, the U.S. EPA issued regulations known as the Regional Haze Rule, which requires states to develop State Implementation Plans to reduce haze-causing pollution to improve visibility in Class I areas. The overall goal of the regional haze program is to restore natural visibility conditions at these priority areas by 2064.

On August 9, 2012, MassDEP finalized revisions to the State Implementation Plan (SIP) to address Massachusetts sources that contribute to regional haze. The revisions to the Regional Haze SIP

address Best Available Retrofit Technology requirements and other emission reduction commitments for power plants that generate electricity.

Information on Massachusetts Regional Haze SIP may be found at: <http://www.mass.gov/dep/air/priorities/hazeapps.htm>

Clean Energy Results Program

Launched by MassDEP in November 2011, with funding from the Massachusetts Department of Energy Resources (DOER), the Clean Energy Results Program (CERP) advances environmental protection by promoting the development of renewable energy and energy efficiency projects in Massachusetts. Among the first program of its kind to be established at a state environmental authority, the Clean Energy Results Program streamlines agency assistance to clean energy developers, municipal officials, and the public, and creates a science-based set of resources to inform project review and siting statewide. The citizens of the Commonwealth will benefit from cleaner air, climate protection and the assurance that clean energy projects are properly sited and constructed to protect human health and the environment.

The program's many accomplishments over the past year include:

- Permitted 78 megawatts of clean energy on closed landfills, underutilized contaminated sites (i.e. brownfields), and federal Superfund sites;
- Held a highly successful Renewable Energy at Closed Landfills workshop for municipalities and industry professionals;
- Revised the "Siting Wind and Solar Projects in Public Water Supply Lands" guidance to provide clarity to public water suppliers and their representatives seeking approval to install wind and solar energy projects on lands held by public water systems;
- Launched a comprehensive training initiative in conjunction with the Licensed Site



Professional Association (LSPA) to address questions and considerations related to the reuse of contaminated property for clean energy;

- Developed a streamlined permitting pathway for the composting/anaerobic digestion of source-separated organics to generate methane for fuel in combined heat and power operations;
- Advanced seven organics diversion and anaerobic digestion projects (farms, wastewater treatment plants, and other locations);
- Established low-interest Recycling Loan Fund rates for organics collection and processing companies, and raised the maximum loan amount to \$500,000;
- Launched the RecyclingWorks in Massachusetts Program providing technical assistance for food waste diversion to businesses and institutional entities;
- Completed a comprehensive study of the potential for anaerobic digestion/combined heat and power at state institutions and local wastewater treatment facilities;
- Initiated discussions with three large wastewater facilities to assess clean energy potential using Anaerobic Digestion (AD);
- Collaborated with DOER on an energy efficiency evaluation/audit for 16 new wastewater and drinking water facilities; and
- Finalized a scope of work for a new In-Conduit Hydropower Project Study for drinking water and wastewater facilities.

Some other important clean energy highlights from 2012 include:

Energy Bill Boosts MassDEP's Clean Energy Efforts: An Act Relative to Competitively Priced Electricity in the Commonwealth was signed in August 2012, which includes several provisions that will directly strengthen MassDEP's work to tap the hidden energy value of food waste.

A component of this legislation is raising the total "net metering" cap from 3 to 6 percent of the

utilities' peak load. Net metering allows owners of solar, wind, and other clean energy facilities to run their electric meters backwards and use energy produced "behind the meter" (i.e. on-site). Net-metering also allows owners to sell excess power generated by a facility back to the grid, providing an important monetary incentive for the installation of renewable energy. The current statewide cap for net-metering of 3 percent is close to being reached.

Recognizing the many benefits of anaerobic digestion (AD), the legislation added AD as an eligible technology allowed to net meter (along with agricultural facilities, wind and solar). Anaerobic digestion is a technology that converts organic material - such as food waste and bio-solids from wastewater treatment - into a methane-rich biogas that can be used for heat and electricity. MassDEP has been working over the past year to put a number of measures in place to ensure the streamlined, responsible siting of anaerobic digestion facilities.

These changes will have a positive impact on advancing MassDEP's work with DOER and the Massachusetts Clean Energy Center to promote clean energy and energy efficiency across the Commonwealth.

Wind Turbine Health Impact: In an effort to advance public understanding of renewable energy sources, MassDEP in collaboration with the Massachusetts Department of Public Health, released a report early in 2012 by an independent panel of experts studying potential health impacts from wind turbines. The panel was composed of physicians and scientists with broad experience in areas including acoustical noise/infrasound, public health, sleep disturbance, mechanical engineering, epidemiology, and neuroscience.

The "Wind Turbine Health Impact Study: Report of the Independent Expert Panel," was sought to help address questions about potential human health impacts associated with proximity to wind turbines. The panel was asked to identify any

documented or potential human health impacts or risks that may be associated with exposure to wind turbines, in order to facilitate discussion of wind turbines and public health based on the best available science. The panel was also asked to offer suggestions relative to best practices.

The report can be viewed at this link: <http://www.mass.gov/dep/energy/wind/panel.htm>

Wind Turbine Acoustics: In December 2012, MassDEP and the Massachusetts Clean Energy Center (MassCEC) concluded a solicitation for proposals and contracted with a qualified acoustic consultant team to assist in conducting a research study on wind turbine acoustics. The study will involve both short- and long-term sound sampling at up to eight wind turbine projects at various distances from the turbine. It will also include collection of data on amplitude modulation, infrasound, and low frequency sound, as well as extensive meteorological information, MassCEC and MassDEP are undertaking this research study to measure the level and quality of sound emissions from a variety of operating wind turbine projects in Massachusetts. The purpose of the study is to gather more data and information about the levels and characteristics of turbine sound under real-world conditions, to educate the public and to help inform the wind turbine siting and approvals process. It is intended to inform state agencies, local decision-makers, project developers, researchers and the public. The knowledge gained from this study will help to address questions related to the sound impacts from wind turbines and potentially assist in the development of siting standards and municipal wind energy bylaws.

MassCEC is directing the study with MassDEP's technical input. Some of the goals of this study follow recommendations by the Independent Expert Science Panel.

In 2013, MassDEP will continue to harness its expertise to bolster energy efficiency and renewable energy and will expand activities to:

- Encourage dramatic expansion of recycling/ conversion of organics to renewable energy (via anaerobic digestion) with the goal of diverting an additional 350,000 tons per year of organic material from landfills and incinerators by 2020 and increasing energy production from aerobic and anaerobic digestion to 50 megawatts (from under 10mw today);
- Expand energy management programs for wastewater and drinking water plants with goal of achieving zero-net energy at 20 percent of drinking water and wastewater treatment facilities (74 facilities) by 2020;
- Ensure safe siting and use of renewable energy sources (wind, solar, anaerobic digesters, sustainable biomass, etc.);
- Provide assistance and support for siting renewable energy projects via the Clean Energy Support Teams; and
- Promote energy efficiency at sites and facilities that MassDEP regulates.

These accomplishments and many more are outlined in the progress reports of the Clean Energy Results Program available at: <http://www.mass.gov/dep/energy/quarterlyreport.htm>

Reducing Diesel Emissions

Hybrid Diesel Trucks

In 2012, MassDEP distributed \$400,000 in federal grants to help private firms fund the purchase of 11 diesel hybrid heavy-duty trucks - bringing cleaner air quality to Massachusetts. The funding came from the American Recovery and Reinvestment Act (ARRA) and the Diesel Emissions Reduction Act (DERA) federal grant programs, and an environmental enforcement



settlement between the American Electric Power Service Corporation and the U.S. Environmental Protection Agency (EPA). The funding was distributed by MassDEP as part of a Diesel Hybrid Vehicle Purchasing Program, which helps to foster the advancement of hybrid technology in the private sector.

Although the cost of buying a diesel hybrid truck is high, fleet operators have already reported a positive experience with the trucks, particularly in terms of increased fuel economy and fuel savings. Collectively, the diesel hybrids purchased under the MassDEP program will consume 15,884 fewer gallons of diesel fuel each year or an average of 1,444 gallons less per vehicle. Diesel hybrids reduce several types of air pollutants that are released in diesel emissions, such as particulate matter (PM), hydrocarbons (HCs), and carbon monoxide (CO). Diesel retrofits are also one of the few diesel pollution control technologies that target reductions in carbon dioxide (CO₂), a primary contributor to global warming. CO₂ emission reductions can be as high as 50 percent with the hybrid technology.

MassDEP worked with the Northeast States for Coordinated Air Use Management (NESCAUM) under the Northeast Hybrid Truck Consortium, to bring diesel hybrid trucks to Massachusetts and other New England states.

To learn more about the MassCleanDiesel program, please visit: <http://www.mass.gov/dep/air/diesel/masscleandiesel.htm>

Technologies that Reduce Harmful Diesel

Also in 2012, MassCleanDiesel's Clean Markets Program, a state-sponsored grant program, provided an additional \$940,000 in federal and other grants to install technologies to reduce the diesel exhaust emissions of 73 long-haul trucks and diesel engines serving local wholesale markets and warehouses.

The grants will subsidize all or part of the costs involved with the purchase and installation of the following technologies:

- Auxiliary Power Unit (APU) - APU allows a truck's main engine to shut down during periods of extended idling by providing cooling, heating, and electrical power;
- Electric Transportation Refrigeration Unit (eTRU) - A freezer unit powered by land-based electricity rather than a diesel engine, an eTRU eliminates diesel fuel use and its associated emissions; and
- Retrofit Device - A pollution control device that is installed in place of or in-line with the existing muffler of a diesel engine's exhaust system.

The three pollution control technologies offered under the program will reduce fine particulate matter (PM_{2.5}) emissions ranging from 700 lbs/yr to 2,950 lbs/yr depending on engine model year. PM_{2.5} is a pollutant that has been implicated in the state's high pediatric asthma rate and is considered a probable carcinogen.

The MassDEP grant program is funded by the federal Diesel Emissions Reduction Act and an environmental enforcement settlement between the American Electric Power company and the U.S. Environmental Protection Agency.

Over the past three years, MassDEP has funded the installation of emission reduction technologies in more than 2,100 diesel school buses, 23 municipal construction engines, 205 waste collection vehicles, and 342 state-owned highway vehicles.



GOAL

3

Clean and Safe Water

Sustainable Water Management Initiative (SWMI)

MassDEP has been working closely with the Executive Office of Energy and Environmental Affairs (EEA), the Department of Conservation and Recreation (DCR), the Division of Fish and Game (DFG), and a number of important stakeholders, on a new framework, known as the Sustainable Water Management Initiative (SWMI), to better protect the Commonwealth's water resources. This major undertaking is intended to balance the sometimes competing needs in the Commonwealth - water supply for human use and protection of aquatic ecosystems. To do this, the agencies have been working on developing predictable, science-based, and protective standards for high-quantity water withdrawals. The underpinning for the standards was a U.S. Geological Survey (USGS) report that used extensive fish-sampling data and sophisticated modeling to demonstrate that as water is withdrawn in the driest month of August, and the percentage of impervious area in a watershed increases, the abundance of sensitive fish populations decline.

The final SWMI framework, released on November 29, 2012, is a plan that will, for the first time, put in motion regulations that implement "stream-flow" criteria, which are science-based standards to help prevent streams from drying up. In addition, the framework establishes a safe yield requirement that can be applied consistently and clearly across the Commonwealth. This is a vast improvement over the state's current water withdrawal permitting process.

The framework uses a USGS peer-reviewed scientific model to better understand the relationship between water withdrawals and the health of streams and rivers, and to flag water basins that have been impacted by large water withdrawals, high percentages of impervious cover (paved surfaces and development), and other human alterations. EEA and its agencies used the results of the USGS study to develop a method of categorizing habitats in the water sub-basins based on present natural and manmade conditions, including water withdrawals.

This initiative is intended to encourage communities that have not already done so to make investments in water conservation, thereby saving money and making their local environment more attractive for residents. In situations where more water is needed by a supplier, the mitigation requirement will be fair and reasonable, and focused on water efficiencies and efforts to keep water discharged to the environment within its current watershed basin.

In order to further inform the agencies and water suppliers on how the framework will be implemented, four pilot projects - in Amherst, Danvers-Middleton, Dedham-Westwood, and Shrewsbury - were set up to test the on-the-ground impacts of the proposed framework and incorporate the lessons learned.

To assist communities and water suppliers in implementing the new water withdrawal requirements, EEA has committed approximately \$11 million in grant funding that will be made available in 2013.

The Commonwealth's goal is to have final water withdrawal regulations in place by December of 2013 that will implement the new SWMI framework. The draft regulations, being developed in early 2013, will take into account the information derived from the four community pilot projects, and will be subject to full public review and comment. To accompany this effort, and to provide greater clarity to the permitting process, the state will develop a guide or handbook to accompany the regulations that will incorporate the various SWMI elements to make the transition smooth and predictable.

For more information on the SWMI framework and water withdrawals under the Massachusetts Water Management Act, go to: www.mass.gov/eea/swm

Limiting Phosphorus in Fertilizers

To reduce the amount of phosphorus in fertilizers, and ultimately result in healthier rivers, ponds and coastal embayments, a bill was signed into law by Governor Patrick in the fall of 2012. This law requires the Department of Agricultural Resources (DAR), with MassDEP's assistance, to promulgate regulations by Jan. 1, 2014 that will limit the amount of nutrient pollution, mainly phosphorus, from lawn fertilizers.

Surface water quality problems are aggravated when fertilizers are placed on lawns. When it rains or when the snow melts, the runoff picks up nutrients as it travels across the land. Eventually, this stormwater runoff is carried into the nearest body of water. There, nutrients help to produce algae, contributing to problematic algae blooms and the declining health of lakes, rivers and bays.

The U.S. EPA has ordered municipalities, treatment plants, businesses and other wastewater producers to cut the amount of phosphorus being discharged in stormwater. The EPA is expected to issue more stringent permits that will require communities to cut their phosphorus discharges

by up to 55 percent. This could result in cities and towns being required to build stormwater treatment facilities that can cost millions of dollars. The reduction of phosphorus in fertilizers sold in Massachusetts will help to address the problem, reducing the pollution in runoff waters, and lessening the need for expensive treatment works.

To read the full text of the Massachusetts law to limit nutrients from lawn fertilizers, go to: <http://www.malegislature.gov/Laws/SessionLaws/Acts/2012/Chapter262>

Nonpoint Source Pollution Grants

Utilizing funds from the Obama Administration and the U.S. EPA, in 2012 MassDEP targeted more than \$1.4 million in grants for seven projects that will address polluted stormwater runoff into the state's lakes, rivers and coastal waterways.

The grants focus on the implementation of measures to control nonpoint source (NPS) pollution, which is caused by rainfall or snowmelt that moves over or through the ground, picking up natural and human-made pollutants and depositing them in local water bodies. Types of NPS pollution include nutrients from lawn and garden fertilizers and agricultural operations, bacteria from pet waste and waterfowl, oil and grease from parking lots and roadways, and sediment from construction activities and soil erosion.

The 2012 grants were awarded to the Barnstable County Department of Health and Environment; Geosyntec Consultants; the Franklin Regional Council of Governments for one project connected to the South River and a second project involving the Western Millers River Watershed; the Town of Provincetown to address their harbor stormwater system; the Manchaug Pond Foundation for pond improvement; and the Charles River Watershed Association to address stormwater pollution with a "porous pavement"

project. These grants will help to implement or demonstrate best management practices to mitigate the effects of polluted stormwater runoff, and will help develop and distribute information that is needed to support local outreach and education efforts to address the impacts of polluted stormwater. For more information on these grants, go to: <http://www.mass.gov/dep/public/press/1012nine.htm>.

Low Interest Water Infrastructure Loans

Working closely with MassDEP, in 2012 the Massachusetts Water Pollution Abatement Trust (MWPAT) approved \$14.3 million in low-interest water infrastructure loans to communities across Massachusetts under a program called the "State Revolving Fund." The projects financed by these loans improve drinking water quality and reduce water pollution statewide through the construction and upgrading of drinking water and wastewater infrastructure.

Loans through the Massachusetts Water Pollution Abatement Trust (MWPAT) are offered at an interest rate of 2 percent. A 2 percent interest rate provides a substantial subsidy to the community versus current market rates. On average, a community will save \$246,000 in debt service costs for every \$1 million borrowed and repaid over 20 years. Since its establishment in 1989, the Trust has loaned \$5.2 billion to improve and maintain the quality of water in the Commonwealth. An estimated 97 percent of Massachusetts' citizens have benefited from the MWPAT's financial assistance.

0% Interest Loans to Reduce Nutrients in Wastewater

In 2008, a law was signed that reduces the standard Clean Water State Revolving Fund (SRF) loan interest rate of 2 percent down to zero

percent, provided that the proponent meets certain criteria. In order for communities to qualify for zero percent loan interest, they must: address nutrient-rich wastewater discharges to the environment; conduct a comprehensive wastewater management planning process; ensure that the project is consistent with any regional water resource management plan; implement ordinances to prevent the wastewater system from creating uncontrolled growth or sprawl; and the community cannot be in violation of any state or federal consent order.

In September 2012, the Town of Chatham became the first municipality to qualify for a zero percent loan to help finance the town's \$14.5 million first-phase of sewer work. The SRF interest-free loan of approximately \$13 million will save Chatham nearly \$2.9 million in interest payments over 20 years.

Chatham used data and analysis from the Massachusetts Estuaries Project (MEP) to draft a comprehensive wastewater management plan that included upgrades to its wastewater treatment plant, pump stations and sewer systems. This SRF funding will allow the community to implement upgrades that will significantly reduce nutrient pollution discharged to local water bodies.

The MEP, administered by MassDEP in conjunction with the University of Massachusetts at Dartmouth, uses science-based calculations to determine the total amount of nitrogen allowed to be discharged into an embayment before the water quality deteriorates.

This project is one step in a multi-phase, 20-year effort by Chatham to expand their wastewater facilities to address nutrient pollution. This \$13 million in SRF funding, along with funds awarded by the federal Rural Development Administration, will help to expand the town's existing wastewater treatment plant and expand the town's wastewater collection system.



For more information on the 0% SRF loan program, please visit: <http://www.mass.gov/dep/water/wastewater/cwsrf.htm>

For more information about the Massachusetts Estuaries Program, please visit: <http://www.mass.gov/dep/water/resources/mep.htm>

40th Anniversary of the Federal Clean Water Act

October 2012 marked the 40th anniversary of the U.S. Clean Water Act (CWA). In Massachusetts, incredible strides have been made, not only by implementing the CWA, but by also implementing state laws – including the Massachusetts Clean Waters Act and the Wetlands Protection Act, that protect the Commonwealth’s wetlands, waterways and coastal resources now and into the future.

On October 12, 2012, MassDEP’s Bureau of Resource Protection Assistant Commissioner, Beth Card, had the opportunity to participate in a symposium to celebrate the 40th Anniversary of the federal Clean Water Act which was hosted by the Harvard Law School and the Natural Resources Defense Council. She joined a select group of Clean Water Act authors, academicians, and practitioners from around the country to discuss the history of the CWA, successes and challenges that lay ahead and ways to get creative by looking at trading programs or cross-media (air and water) approaches now and in the future. The group also discussed concerns about funding for implementation and political struggles related to reauthorization of the Act.

Highlights of MassDEP’s experiences in watershed management and investing resources to advance the important goals of the CWA may be found in a short paper prepared by MassDEP at: <http://www.mass.gov/dep/water/priorities/cwa40.htm>



GOAL 4

Waste Site Management and Cleanup

Diverting Organics from Landfills

On November 23, 2012, recycling, composting and conversion regulations and wastewater treatment facility regulations were finalized that would significantly help allow facilities to tap the energy value of food waste and other organic materials. These regulatory changes support the goals of MassDEP's Draft Solid Waste Master Plan to significantly expand the diversion of organic materials from disposal facilities to composting and conversion operations where useful energy and products can be created and used.

More than one million tons of food waste and other organic material are disposed of every year by food processors, large institutions and residential sources in Massachusetts. Approximately 100,000 tons of organics are recycled or composted each year, but the state has set a goal of diverting an additional 350,000 tons per year by 2020.

The amended rules remove barriers to the development of certain types of recycling, composting and cutting-edge green technologies in the Commonwealth, such as anaerobic digestion (AD). AD is a technology that turns organic materials into a biogas that can be used to generate heat and electricity. The final rules will also encourage generators to separate organics from their waste stream and to recycle, compost or convert this material to energy, which will in turn encourage development of a system to collect the organic materials from the generators, and encourage the construction or expansion of composting or anaerobic digestion facilities.

These rules build upon incentives that the legislature provided in the summer of 2012, when it enacted an energy bill that gives electricity generated through anaerobic digestion the same financial incentives as wind and solar power, such as the ability to sell excess power back to the electrical grid at favorable rates.

The new rules also complement other efforts to promote this technology, such as: identifying suitable sites for AD on state land to allow state facilities to beneficially reuse food wastes at on-site digesters and make use of the energy generated, and assisting the private sector and local governments with the development of the infrastructure for collecting organics from generators.

MassDEP is also working to add organic materials from large generators and institutions to the list of materials banned from disposal at landfills and incinerators by 2014, a move that would ensure the availability of a steady stream of organic materials for those who invest capital in building anaerobic digestion facilities.

MassDEP is working with DOER, MassCEC and DAR to provide assistance to a number of project proponents looking to divert organics to anaerobic digestion at publicly and privately owned sites across the Commonwealth.

For more information on available financial and technical assistance for AD projects, go to: <http://www.mass.gov/dep/energy/cerpanaerobicdigestion.htm>

America Recycles Day 2012

To mark American Recycles Day on Nov. 15, 2012, MassDEP announced that more than \$2 million in grants were made available to 118 communities and regional groups as part of the Sustainable Materials Recovery Program (SMRP), which was created under the Green Communities Act. These funds will help to increase the diversion, re-use, composting and recycling of materials now going to landfills and incinerators.

The grants will help start Pay-As-You-Throw programs; subsidize the large, wheeled recycling carts needed to start single-stream curbside recycling programs; purchase recycling educational materials to distribute; and assist with the permitting of an anaerobic digestion processing facility in the Town of Bourne.

Approximately 25 percent of the waste stream is made up of organic materials, so there is a tremendous opportunity to produce fertilizer products from composting, or even better, to generate clean energy through anaerobic digestion of food waste. The more successful the state is at keeping valuable materials out of the landfills and incinerators, the more support there is of a green economy and a reduction in local governments' costs to dispose of waste.

The SMRP offers funding to cities, towns and regional entities - as well as certain non-profit organizations that provide services to them - for recycling, composting, reuse and source reduction activities that will help reduce the amount of waste disposed in landfills and incinerators. Waste prevention and recycling reduce greenhouse gas emissions by reducing methane production in landfills, saving energy and increasing forest carbon sequestration.

An alphabetical list of the city, town or regional group that has been conditionally awarded a grant, along with a full description of each grant can be found at: <http://www.mass.gov/dep/recycle/recawgr.htm#awards>

Reducing Disposable Shopping Bag Use at Supermarkets

Based on data released in 2012, a joint initiative of MassDEP and the Massachusetts Food Association (MFA) with the grocery and supermarket industry to reduce the number of disposable paper and plastic shopping bags distributed in Massachusetts has achieved excellent results during its first three years - a reduction of 33 percent since 2007. As part of the voluntary initiative, 12 supermarket chains, comprised of 384 stores representing more than two-thirds of the industry in Massachusetts, have been participating in the effort by tracking annual paper and plastic bag usage. Participating chains reported achieving the initiative's goal of 33 percent reduction in disposable bag distribution in Massachusetts since 2007.

Each supermarket chain has implemented steps to encourage using less disposable bags, including training staff to reduce wasteful distribution of bags, offering reusable bags for sale, providing cash incentives for reusable bag use, accepting used plastic bags for recycling and posting instructional signs reminding patrons not to forget to bring their reusable bags.

In addition to the industry working to reduce the distribution of disposable shopping bags, MassDEP has created a consumer brochure entitled "Sack the Bag" that encourages shoppers to use fewer disposable bags.

Participating grocery chains include: Big Y Supermarkets, Crosby's, DeMoulas Market Basket, Donelan's, Foodmaster, Hannaford Bros., Price Chopper, PriceRite, Roche Bros., Shaw's Supermarkets, The Stop & Shop Supermarket Co., and Trucchi's.

For more information on this initiative, go to: <http://www.mass.gov/dep/public/press/1111fadp.htm>

'RecyclingWorks in Massachusetts'

In 2012, MassDEP launched the "RecyclingWorks in Massachusetts" program, a new initiative to provide Massachusetts businesses and institutions with the information and assistance they need to reduce waste and recycle more.

The RecyclingWorks program is funded by MassDEP and administered by the Center for EcoTechnology (CET), a non-profit organization based in Northampton and Pittsfield. The program provides a comprehensive set of statewide services, as well as targeted business assistance services.

Statewide services include a hotline and e-mail address to help businesses answer their questions and either start new recycling programs or improve existing programs. RecyclingWorks also features a web site (www.recyclingworksma.com) that includes a searchable recycling service-provider database and guidance materials by material type and business sector.

The RecyclingWorks program will also coordinate the Massachusetts WasteWise program, a free, voluntary program that provides networking, tools and guidance to help businesses to advance recycling initiatives.

In addition to the statewide services, the program will provide site visits, technical assistance and workshops to work with specific businesses, business sectors, and chamber of commerce partnerships. Short-term areas of focus will include increasing diversion of food waste from large generators such as supermarkets, colleges and universities, and hotels.

Cleanup Guidance for Indoor Air Vapors

In December 2011, MassDEP released guidance for parties conducting cleanups of waste sites where contamination may include harmful vapors

entering the indoor air of nearby buildings. This guidance is protective of public health and provides clear and predictable guidelines for parties conducting or responsible for the cleanup to facilitate economic development at "Brownfields" sites.

Soil and groundwater contamination by substances known as volatile organic compounds (VOCs) is a well-documented problem throughout the United States. In Massachusetts alone, the soil and groundwater at thousands of sites has been impacted by releases of VOC-containing contaminants such as petroleum products, dry cleaning fluids, and industrial solvents. These chemicals can, in some cases, move up through the soil as vapors into nearby buildings, contaminating indoor air. Although vapor intrusion has been a concern at only a small percentage of the sites that have been reported to MassDEP, in those cases where it is a concern it can be challenging to address.

MassDEP's Vapor Intrusion Guidance provides the technical and regulatory approaches recommended to address the vapor intrusion pathway at residences, schools and daycare facilities, as well as commercial and industrial sites, in conformance with the state regulations governing site cleanups.

In the course of developing this guidance, MassDEP and external stakeholders identified provisions in the regulations that could be revised to enhance, expedite and more efficiently assess, mitigate and close disposal sites with vapor intrusion concerns. MassDEP has proposed amendments to its regulations which will be available for public hearing early in 2013. Following the promulgation of those amendments, the agency will revisit this guidance and update it to reflect the regulatory changes, as well as other changes that may be helpful based on the experience gained in applying the guidance to sites.



This “Interim Final Vapor Intrusion Guidance” is available on MassDEP’s web site at: <http://www.mass.gov/dep/cleanup/laws/vifin.pdf>.

Collaboration is Accelerating and Advancing Brownfields Redevelopment

On November 29, 2012, five new projects were designated for assistance through the Commonwealth’s multi-agency Brownfields Support Team (BST) Initiative to spur cleanup of the state’s most challenging and contaminated sites and prepare for economic and community redevelopment.

The five Brownfields sites designated in the third round of the BST are: Lower Millyard in Amesbury; the former Lewis Chemical site in Hyde Park; the Central Steam Plant in Fitchburg; Ludlow Mills in Ludlow; and the Payne Cutlery and former Elco Dress sites in New Bedford.

The Brownfields Support Team is an effective collaborative approach that brings together state, local, and federal agencies to help advance and accelerate the redevelopment of major Brownfields sites across the state. First launched in 2008, the BST has coordinated 24 state, local, and federal agencies over the last several years to tackle some of the state’s most complex Brownfields. By working closely with key stakeholders in all levels of government, the BST has helped to deliver more than \$18 million in funding to accelerate cleanup, streamline progress to overcome technical roadblocks, and reuse more than 300 acres of valuable property for community and economic development.

In addition to Amesbury, Boston, Fitchburg, Ludlow, and New Bedford, the latest communities to join the BST, earlier BST sites include: Fall River, Grafton, Haverhill, Springfield, and Worcester from the first round, and Attleboro, Chelmsford, Chicopee, Gardner, and Somerville from the second round. The BST has also worked with

the City of Brockton to assess a complete list of brownfields in need of redevelopment. The BST Round III formally brings together staff from MassDEP, the Executive Office of Housing and Economic Development (EOHED), the Massachusetts Development Finance Agency (MassDevelopment), the Massachusetts Department of Transportation (MassDOT), along with the Massachusetts DOER, the latest addition to the BST. Together, these participating agencies help designated municipalities solve problems impeding the redevelopment of contaminated properties. Other state and federal agencies will also participate on these teams depending on the project needs. In previous rounds of the BST, additional agencies have included the Office of the Attorney General, the U.S. EPA, the U.S. Department of Housing and Urban Development (HUD), and the Federal Transit Administration.

Additional information on MassDEP’s Brownfield Program may be found at: <http://www.mass.gov/dep/cleanup/brownfie.htm>

Noteworthy Brownfields Agreement Ensures Cleanup and Revitalization of Property

A new affordable housing complex and long-term care facility in Great Barrington took a major step towards development early in 2012 after the signing of an environmental agreement that will ensure the cleanup and revitalization of the property.

The Community Development Corporation South Berkshire (CDCSB) owns the property, and plans to create a mixed-use development that will include a 40-unit low-income housing project, a 30-unit elderly housing and continuing care facility, 30,000 square feet of commercial space and publicly accessible open space along the Housatonic River. It is the last remaining large-scale development site in the downtown corridor of Great Barrington. The project is the subject of a Brownfields Covenant Not to Sue Agreement

(Brownfields Covenant), between Attorney General Martha Coakley's Office, Energy and Environmental Affairs Secretary Richard K. Sullivan, and property owner CDCSB. The agreement limits the liability related to contamination on the property in exchange for promises to clean up the property and pursue the redevelopment project.

Under the agreement, CDCSB will clean up the property in accordance with MassDEP standards, as well as build the elderly and low-income housing projects and develop commercial space.

The site was formerly used for the manufacture of log home components by the New England Log Home Co., resulting in the release of various contaminants, including dioxins, pentachlorophenol, metals, and petroleum hydrocarbons. In 2001, a fire burned more than half of the main building to the ground, making it unsuitable for reuse. Charred debris, including building remnants, contained asbestos. The contamination was released to the soil and groundwater at the site before CDCSB acquired the property. The property, about 8.2 acres, is located at 100 Bridge Street, in Great Barrington, abutting the Housatonic River.

Brownfields Covenants are developed through close coordination between the Attorney General's Office and MassDEP.

For additional information on the Great Barrington property cleanup, go to:
<http://www.mass.gov/dep/public/press/1211gbah.htm>

Oil Spill Emergency Response Trailers Provided to Coastal Communities

MassDEP and Commissioner Ken Kimmell delivered six emergency spill response equipment trailers to the City of Boston in the fall of 2012 to protect Boston Harbor and the city's waterfront in the event of a spill of oil or other hazardous material. The trailers contain state-of-the-art

equipment, such as containment and absorbent booms, and they will be located in Charlestown, East Boston, South Boston and Brighton until needed.

Since 2005, MassDEP has delivered 82 response trailers to 69 Massachusetts coastal communities. The trailers cost \$32,000 each to purchase, stock, outfit and deliver. The funds used to deliver the trailers come from a provision in the Oil Spill Prevention and Response Act of 2004, which was passed as a result of the massive Buzzards Bay oil spill in April 2003.

Moving forward, this MassDEP program will continue to re-stock the trailers with new equipment as needed. The agency will also continue to assist coastal communities with spill-response training and planning exercises that identify sensitive resources that would be a priority protection area should a spill occur. For more information on this program and the Boston presentation, go to: <http://www.mass.gov/dep/public/press/0912chsp.htm>

Spill and Disaster Response, Site Cleanup, and Hazardous Waste Management

The agency plays a key role in emergency response to natural disasters, such as Storm Sandy, assisting communities with damage assessments, debris management, and addressing flooding. During 2012, working with U.S. EPA, MassDEP also conducted time-critical removal of hazardous materials at a number of priority residential and populated locations statewide, abating contaminants like lead, arsenic, hydrocarbons, and PCBs. MassDEP continues to play a key role in the Housatonic River cleanup (GE site) by developing a new cleanup option in 2012 that has broad local support. The agency is working with U.S. EPA to select a workable option that protects public health and the extremely valuable ecological resources downstream. MassDEP also continues to advance Superfund site cleanups by completing



work at the Hathaway & Patterson site; taking over long-term groundwater treatment at the Groveland Wells site; and helping advance cleanup at the Creese & Cook Tannery site in Danvers.

PCB Cleanup of New Bedford Harbor Superfund Site

In 2012, MassDEP joined state and federal agencies to announce a landmark settlement that will result in the expedited cleanup of PCBs in the New Bedford Harbor Superfund site. The record \$366 million agreement with AVX Corp. was announced by MassDEP, the Attorney General's Office, the U.S. EPA and the U.S. Department of Justice.

This settlement is the largest "cash-out" agreement ever achieved by the federal Superfund program, and it will allow the harbor cleanup to be completed within seven years, instead of the estimated 40 years under the current funding structure. The current plan utilizes \$15 million from the Superfund and \$1.5 million from state resources to dredge the PCB-contaminated sediment from the harbor floor.

New Bedford Harbor and the nearby Acushnet River were contaminated by PCBs discharged to those water bodies over many decades of the operations by AVX's predecessor company, Aerovox, which manufactured electrical capacitors. The PCBs have contaminated fish and shellfish in the harbor, and there is a ban on eating those species caught in local waters.

The settlement has been filed in federal court and a federal judge is expected to rule on the agreement in early 2013. For more details on the issue and the settlement, go to: <http://tinyurl.com/cfltugq>.

FAST Mobile Lab

MassDEP's emergency response units are available 24/7 and 365 days a year - when an

environmental or public health emergency hits without notice. The highly trained engineers and scientists at MassDEP join the local fire and police departments, the Fire Marshal's Office and the HazMat Teams, the State Police, and the U.S. EPA as critical members of the response team. And MassDEP brings a very important asset - the Field Assessment and Support Team (FAST) mobile laboratory. The FAST vehicle played a key role in two emergency response events in 2012 in Woburn and the South End of Boston.

In Woburn, a tractor trailer overturned and spilled 7,500 gallons of gasoline. The gasoline impacted the nearby Aberjona River and explosive vapors seeped into a hotel and gym along the river. The FAST vehicle set up monitors to track the vapors and eventually helped to pinpoint them and get them removed. In the South End, a steam pipe explosion caused dangerous asbestos fibers to coat the street, cars and buildings in the area. Tests and analysis in the FAST lab helped to define the contaminated area and get it cleaned up quickly.

As these cases illustrate, emergency response, on-site environmental analysis and timely remediation are key facets of MassDEP's service to the Commonwealth. MassDEP Commissioner Ken Kimmell published an opinion column in publications in Woburn and the South End focusing on the FAST vehicle response to these incidents, and that column can be seen here: http://www.mass.gov/dep/about/fast_wob_bos.htm.

Site Cleanup at General Chemical, Framingham

In 2012, the General Chemical Corporation (GCC) of Framingham completed the closure and decontamination of its industrial facility located at 133 Leland Street. This two-acre site has operated as GCC's hazardous waste transfer station since the company's inception in 1960, but GCC decided last spring to shutter the facility.

The GCC site, consisting of three buildings and 20 above-ground storage tanks and associated piping, was systematically and methodically closed over the summer of 2012 in a well-designed and -executed closure plan that was reviewed, modified and overseen by MassDEP. Careful oversight was important because the facility abuts an elementary school and a residential neighborhood.

MassDEP closely monitored and reported the findings on this activity daily on its web site in order to provide the public greater transparency and a consistent stream of data, keeping local officials and the neighborhood well-informed. The FAST vehicle (see previous story) was deployed to the scene because it has the capabilities and has been specifically designed to provide on-scene sampling and analysis of air, water, soil, sediment, and soil gas by gas chromatography, achieving “parts per billion” detection limits. Ambient air monitoring used a variety of instruments and meters, at specific areas of concern, or the monitors were moved on the site if the situation and conditions changed.

Air monitoring and testing was conducted during this pilot cleanup at the closed facility, and a test indicated that cleaning methods produced only low levels of air pollution that was below levels of concern for people’s health. Only then did MassDEP approve the full closure process.

An extensive, multi-lingual outreach was carried out before the pilot test and before the final closure work. During this outreach, residents were

notified through the assistance of local official channels, local radio and media, the Internet, and reverse 911 calls. Framingham Health Board members, fire, police and school department officials were kept updated with notifications, as well as updates to MassDEP’s web site, where on-site inspectors posted reports by the next day.

The final closure included the power washing and removal of tanks and cleaning (washing and/or scarification) of storage building floors, secondary containment structures and the loading/unloading areas of the facility.

While GCC still faces years of remedial cleanup of groundwater on and near the site, the closing of an aging facility, which in recent years struggled to achieve consistent compliance with current hazardous waste practices, is largely a positive step for environmental protection.

The groundwater contamination from solvents and chemicals is mostly the result of decades of past practices, going back to 1920, a time when environmental laws and regulations covering hazardous materials’ handling and disposal were not as strict, or simply did not exist. MassDEP will continue to keep the public informed as this final part of the facility closure process proceeds.

For additional information on the cleanup and decontamination work performed on the General Chemical Corp property in Framingham, go to: <http://www.mass.gov/dep/about/region/gcc2.htm>



GOAL 5

Compliance and Enforcement

MassDEP's Activities Continue to Effectively Find and Correct Violations

MassDEP's Compliance Assurance Strategy: In FY12, MassDEP continued efforts to promote compliance with our protective environmental rules and regulations by employing a Compliance Assurance Strategy that utilizes a range of compliance approaches, including compliance assessment activities, enforcement, technical assistance, and public education. MassDEP strategically utilizes and integrates these compliance assurance tools to achieve our ultimate goal—maintaining a clean and healthy environment.

A crucial element of any effective compliance assurance strategy is a robust compliance and enforcement program that maintains a highly-visible presence in the regulated community, includes the issuance of timely and appropriate penalties, and takes other enforcement actions against environmental scofflaws. The goal is to deter current and would-be rule-breakers by finding violators, and to make those violators return to compliance, restore any damage caused, and pay a penalty that exceeds the economic benefit of noncompliance.

MassDEP's enforcement efforts continued to yield important environmental benefits, such as reduced ozone pollution, fewer asbestos particles released to the air, proper cleanup of contaminated soils, and protected water for Massachusetts citizens.

Despite the diminishing resources MassDEP has experienced in recent years, we continued to strive to maintain a robust compliance and enforcement presence in FY12, as summarized below:

Inspections: It is critical to MassDEP's compliance and enforcement success that the agency maintains a vigorous and visible "cop on the beat" presence, which can best be measured by the number of facilities its inspectors visit. The traditional inspection – a physical visit to review the compliance status of a regulated facility or site – remains the mainstay of MassDEP's compliance assessment program. In FY12, MassDEP performed 7236 inspections, which is consistent with the past several years, and an increase over FY11.

Enforcement Actions: While inspections can be used to further any number of strategic compliance and enforcement goals, a primary reason for performing them is to discover violations. MassDEP is committed to undertaking timely and appropriate enforcement actions when facilities are found to be out of compliance. In FY12, MassDEP issued over 3103 enforcement actions, including:

- **Lower Level Enforcement (LLE),** These are a variety of notices of non-compliance (NONs) which are generally used to require correction of minor compliance problems, provide notice that existing practices are unacceptable, or warn of administrative orders and/or penalties if problems are not corrected. In FY12, MassDEP undertook 2355 lower level enforcement actions.
- **Higher Level Enforcement (HLE),** HLE encompasses a range of enforcement actions generally pursued for more serious violations. These include administrative consent orders (ACOs) with or without penalties, penalty assessments (PAN), permit and license

suspensions or revocations, and referrals to the Attorney General (AGO) or U.S. Environmental Protection Agency (EPA). In FY12, MassDEP undertook 844 HLE actions.

- **Penalties:** An important element of a credible enforcement program is setting appropriate penalties and fines which send a strong message to regulated facilities that breaking environmental rules won't gain them any financial advantages and, in fact, will cost them more in the long run. In FY12, MassDEP independently assessed approximately \$2.16 million in administrative penalties.

For information on MassDEP's compliance assistance activities, go to: www.mass.gov/dep/service/complian.htm

For information on MassDEP's enforcement activities, go to: www.mass.gov/dep/service/enforcem.htm

Owner of Mobile Home Park Ordered to Construct New Wastewater System and Pay \$250,000 Penalty

In August of 2012, the owner of the Pocasset Mobile Home Park in Bourne was ordered to pay a \$250,000 civil penalty and to transfer more than \$2.7 million to fund the construction of a new sewage collection system and wastewater treatment facility after failing to upgrade the deteriorating septic system.

This order was the culmination of years of MassDEP efforts to compel the owner of the park to address repeated overflows from the park's septic systems. MassDEP issued a permit to construct a groundwater treatment plant in 2007, but the owner refused to fund the construction. MassDEP worked with the Attorney General's Office over the years to require the owner to pump the system as needed to ensure that the sewage didn't overflow onto the property and the yards of nearby residents.

However, the owner continued to fail to comply with court orders, resulting in repeated wastewater overflows. In February 2011, the Superior Court appointed a receiver to operate and manage the park. In August of 2011, the court found the park owner liable for violating the Massachusetts Clean Waters Act and the Consumer Protection Act by failing to pump and maintain the septic system, despite being issued a permit by MassDEP in May 2007 that required the upgrade.

The sustained efforts of MassDEP and the Attorney General's Office resulted in a final order to construct the necessary wastewater treatment facility that will end years of overflows, frustration for park residents, and increase protection of public health.

Penalty of \$7.5 Million for Environmental Violations

A primary role of MassDEP is to be a strong "cop on the beat" to prevent, identify and stop environmental violations. This was another effective year, highlighted by assessing the largest-ever environmental violations penalty of \$7.5 million to the Wheelabrator trash-to-energy facilities in Saugus, North Andover, and Millbury for toxic ash disposal violations. Of this penalty, \$4.5 million will be paid to local communities for environmentally-beneficial activities. For additional information on the Wheelabrator settlement, go to: <http://www.mass.gov/dep/public/publications/0611wheel.htm>

Major Natural Resource Damage Claim Settled against General Motors in Framingham

A settlement approved in May 2012 by a federal court establishes \$875,000 as the allowed claim of the Commonwealth to resolve allegations that the former General Motors plant in Framingham caused damage to natural resources.



The U.S. bankruptcy court for the Southern District of New York approved the settlement between MassDEP and a successor to GM established to handle certain unresolved claims, the Motors Liquidation Company General Unsecured Creditors Trust (GUC Trust). GM owned and operated the plant from 1946 to 1994. During most of that time, the property included a paint shop, above ground storage tanks, an industrial wastewater treatment plant, railways, wetlands areas and a storm water settling lagoon. In 1994, GM sold portions of the property to Auto Dealers Exchange Services of America (ADESA). However, GM retained ownership of 30 acres of wetlands that included Beaverdam Brook, a lagoon, and the four-acre former landfill.

During GM's operations at the property, discharges of hazardous materials, including polycyclic aromatic hydrocarbons (PAHs) and metals contaminated nearby natural resources. In particular, discharges from various storm water outfalls and the settling lagoon contaminated the Beaverdam Brook streambed, banks and surrounding wetlands. The contamination impaired birds, animals and benthic macro-invertebrates including worms and snails. Based on scientific assessments and toxicity studies, the adverse ecological effects have been attributed to elevated metals and PAH concentrations.

The Attorney General's Environmental Protection Division negotiated the agreement on behalf of MassDEP and the Massachusetts Trustee for Natural Resources, with the successor to the automaker's NRD liability the GUC Trust.

Under the settlement, distributions will be paid quarterly with the actual amount tied to the value of new GM stocks and other instruments. Funds will be placed in the Massachusetts Natural Resources Damages Trust and used for activities such as funding natural resource restoration, assessment of natural resource damages, and enforcement of natural resource laws.

For additional information on the Massachusetts Natural Resource Damages Assessment and Restoration (NRD) program, go to: <http://www.mass.gov/dep/cleanup/sites/nrd/nrd.htm>

MassDEP Teams with Lawrence on 'Candid Camera' Initiative

In 2012, MassDEP's Environmental Strike Force (ESF) announced another successful effort utilizing hidden surveillance cameras to nab illegal dumpers. This time, the "Candid Camera" program was in the City of Lawrence. The city identified a public park where dumping had become a chronic problem. Lawrence – like other urban communities – has struggled with illegal dumping, incurring hundreds of thousands of dollars in taxpayer cleanup costs.

For this case, the ESF partnered with the Lawrence Inspectional Services Department, and targeted a dumping spot on a walking trail along the Spicket River. MassDEP posted a few low-cost, high-resolution cameras that snapped photos, day and night, when dumpers showed up. The cameras recorded evidence and license plates of frequent scofflaws who dumped construction debris, tires, appliances, household garbage and furniture. In all, the program captured images of eight people illegally dumping, and they eventually paid fines. In some cases, violators were required to come back to the site and clean up the mess themselves. In many cases, the waste that was dumped could have been disposed of for free by simply contacting the city or by obtaining a bulk item sticker for a nominal fee.

Since 2005, the Candid Camera program has involved the ESF and more than 20 municipalities, and has resulted in approximately 100 illegal dumpers being identified and fined by the communities or by MassDEP. Not only does this work help improve the environment, but it saves cities and towns money in disposal costs, and it allows local public works crews to focus on

important maintenance work on roads, sewers and water lines – not trash!

Additional information on the Lawrence site, may be found at: <http://www.mass.gov/dep/public/press/1012stfo.htm>

Environmental Results for the Chickley River in Hawley

In November 2012, MassDEP announced a settlement that will remedy a serious violation of state environmental laws within a five-mile portion of the Chickley River in western Massachusetts. In late August of 2011, Tropical Storm Irene devastated large areas of the state, and the Town of Hawley was hit very hard. The heavy rains caused a lot of storm debris to be washed into the Chickley River, severely impacting the normal flow. Under an emergency certification, MassDEP gave the town and its contractor, E.T. & L. Corp. permission to remove the debris from the river. But the contractor went way beyond what was

allowed under the permit – to the detriment of the river. The contractor removed all boulders from the river, and dumped those boulders on the riverbank and in protected wetland areas, and the company removed river sediment and fauna that channelized the river, all of which severely damaged the natural ecosystem there.

In an agreement that involved MassDEP, the town, the contractor, the U.S. EPA, the Army Corps of Engineers, the Division of Fish and Wildlife, Trout Unlimited and the Connecticut River Watershed Association, E.T. & L. must implement a river restoration plan, valued at \$400,000, contribute to a \$150,000 escrow account to be used for post-restoration monitoring, and pay a \$175,000 penalty; \$66,000 of the penalty will be suspended as long as the company completes the restoration project. The Town of Hawley will fund \$109,000 of the escrow account. For more details on the settlement, go to: <http://www.mass.gov/dep/public/press/1112chck.htm>

Additional Information from MassDEP

For more information on MassDEP's activities, accomplishments, and the Commonwealth's environmental trends, go to:

MassDEP Programs and Initiatives:

<http://mass.gov/dep/about/missionp.htm>

Statistics on Cleaning Up Oil and Hazardous Waste Sites in Massachusetts:

<http://www.mass.gov/dep/cleanup/priorities/progeval.htm>

Air and Climate: Reports, Plans and Data:

<http://www.mass.gov/dep/air/priosres.htm>

Waste Reduction and Recycling Information:

<http://www.mass.gov/dep/recycle/priorities/wrr.htm>

Toxic Use Reduction Act (TURA) Data and Results:

<http://www.mass.gov/dep/toxics/tura/turadata.htm>

Progress Report on Water, Waste Water and Wetlands:

<http://www.mass.gov/dep/water/priorities/epphome.htm>



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