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Organization: **Town of Agawam, Massachusetts**

PERMIT YEAR 13: 2016 ANNUAL REPORT

NPDES PERMIT # MAR 041 001

Reporting Period: May 2015– April 2016

MA DEP Transmittal X270556

NPDES Phase II Small MS4 General Permit Annual Report

Part 1. General Information

Contact Person: **Chris Golba**

Title: **Superintendent
Department of Public Works**

Telephone Number: **413-821-0623**

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____



Name: _____

Richard A Cohen

Title: _____

Mayor

Date: _____

April 27, 2016

Part 2. Introduction

The following is the Town of Agawam Massachusetts Annual Report as required by the EPA NPDES Phase II Small MS4 General Permit Regulations. This report is for Year 13 of the existing five year permit cycle. This report includes a self-assessment review of compliance with the permit conditions, an assessment of the appropriateness of the selected BMPs, an assessment of the progress towards achieving the measurable goals, a summary of results of any information that has been collected and analyzed, a discussion of activities for the next reporting cycle, a discussion of any changes in identified BMPs or measurable goals, and reference to any reliance on another entity for achieving any measurable goal.

RELIANCE ON OTHER ENTITIES

INTER-CONNECTED MS4s - The Town of Agawam has interconnected MS4s within its boundaries as follows: Massachusetts Highway Department controls certain State numbered routes, Massachusetts Department of Environmental Management controls Robinson State Park on the Westfield River, the Springfield Water and Sewer Commission controls the Bondi's Island Regional Treatment Facility on the Connecticut and Westfield Rivers, and the City of Springfield owns and operates the Bondi's Island Landfill on the Westfield River. Each of these facilities have drainage systems which are separate from or interconnect to the Town of Agawam's drainage system but are under control and operation by entities other than the Town of Agawam.

VOLUNTEERS – Several of the permit conditions within the minimum control measure for public participation relies on the interest and participation of volunteers.

SELF-ASSESSMENT

During Permit Year 13 of the EPA NPDES Phase II Small MS4 General Permit, the Town of Agawam continued to work to improve the quality of stormwater runoff using the six Minimum Control Best Management Practices as a guideline as well as the anticipated future permit requirement changes.

Public Education and Outreach continued to be implemented year round. Activities included educational displays, classroom education, local cable access bulletins, community website news and events, newspaper press releases and informational pamphlets. Messages included watershed education, water conservation, protecting our groundwater, proper pet waste disposal, "FOG" fats, oils and grease, community clean ups and HHW disposal.

Public Involvement and Participation activities continue to depend on volunteers and funding. The CT River Watershed and Westfield River Watershed have been very instrumental in

recruiting volunteers and helping the Town of Agawam keep the area along the CT River clean. In addition the town was successful with public participation at its annual Household Hazardous Waste collection, Rain Barrel distribution, river clean-up, water conservation challenge, proper disposal of sharps at the Health Department and pet waste survey participation.

The Town has continued to update the GIS mapping of the stormwater system and resolve reported illicit discharge issues through the Illicit Discharge Detection and Elimination program. The DPW (with the help of the Conservation Commission) continued to perform diligent inspections of construction sites and ensured that the Town's Construction Runoff Ordinance has been properly adhered to. Due to a lack of funding and manpower, the Town has had difficulty inspecting existing drainage outfalls and detention ponds for illicit discharges and any necessary maintenance. In 2011 under contract for the Town, Tighe & Bond inspected and confirmed the locations of all existing drainage outfalls and performed illicit discharge testing. Tighe & Bond completed this work with the assistance of the Agawam Engineering Division. All outfalls that were able to be located were inspected, photographed and linked to our GIS database.

In year 9, the Town reported about the progress of the South West Area Sewer expansion project, designed to help eliminate the use of septic systems in the area which have a history of failing. Due to budget constraints, that project has been postponed indefinitely. In response to this, the DPW/Engineering Division will closely monitor the storm drainage system in the southwest area of town for any potential illicit discharges. If an illicit discharge is reported, the DPW will take steps to immediately correct the problem.

In Year 13, the DPW, in conjunction with the Pioneer Valley Planning Commission, applied and was approved for a 319 Nonpoint Source Pollution Grant. This grant will allow the Town of Agawam to study the possibility of establishing a stormwater utility similar to other communities in the area. The work will include identifying major needs and costs for the municipal stormwater program and evaluating billing, unit, rate and other financial considerations. A local advisory task force which will include town residents will be responsible for learning about stormwater utilities, defining an actionable case for a local utility in Agawam, engaging other residents and making recommendations on all aspects of a potential utility.

In anticipation of the release of the final version of the updated NPDES Phase II Small MS4 General Permit for Massachusetts, the Town of Agawam has begun the process of purchasing new equipment in order to comply with the regulations projected to be included within the permit based on our review of previous draft versions. The Town now has in stock water quality test kits for detecting ammonia, pH, temperature, nitrates, chlorine and detergents within stormwater discharges. The Town is in the process of ordering a new portable camera inspection system that will allow the DPW to more efficiently find defects within drainage pipes and structures, locate illicit connections, and inspect stormwater outfalls.

Good Housekeeping and Pollution Prevention practices continue to be a priority throughout the town. Employees continue to be educated on best management practices for municipal operations. Street sweeping, HHW collection, used motor oil collection and mercury waste collection, prescription drug drop off and sharps collections continue to take place as funding is available. In addition, the town has expanded its organic lawn care practices to include additional athletic fields at School Street Park.

The Town of Agawam believes it has made a good effort in better educating residents, businesses and town employees and implementing best management practices that would help reduce negative impacts on stormwater runoff that would affect our water supplies.

PART 3. STORMWATER MANAGEMENT PROGRAM**MINIMUM CONTROL BEST MANAGEMENT PRACTICES****SECTION 1 – Public Education and Outreach****1A Educational Displays**Original BMP Description:

The Town will post one educational display per year in the Municipal Buildings. Displays will contain information on stormwater related issues and may be obtained from an applicable governmental or other public agency, purchased from a distributor, or created by students working on projects under BMP #1B. The Department of Public Works (DPW) will have responsibility for this BMP, which will be utilized in Years 1 through 5.

Year 13 Activities

The town continues to use posters available through the "Think Blue MA" Campaign at the Town Hall and DPW Municipal Annex. Due to the findings of pet waste bags within the stream bed along near a Stormwater outfall off of Adams Street (as reported in section 3C) the town chose to display the Think Blue Pet Waste poster at the DPW Annex and Dog Officers office, encouraging the proper disposal of pet waste.

The DPW now has available a community literature area. At this time, residents have available to them the following literature at the DPW:

- 13 Ways to Conserve Water at Home
- Water – Every drop counts
- Ground Water – Protecting our supplies
- "FOG" Fats, Oils and Grease

The DPW continues to use the conference room bulletin board to display stormwater related topics and news relevant to home owners, businesses, developers, industrial properties, and municipal employees.

See Appendix 1A

Best Management Practice Assessment / Proposed Changes

Goal has been met. No changes proposed at this time.

Possible Future Activities

As necessary, the town will continue to educate the community on stormwater related topics using municipal buildings and businesses as a means to distribute the materials.

1B Classroom EducationOriginal BMP Description:

The Town will continue the science curriculum and encourage stormwater educational topics to be included in the curriculum for Grades 4 through 8. At minimum, the curriculum will include one presentation given to the students about stormwater related topics. The School Department will be responsible for this BMP, which will be implemented in Years 1 through 5.

Revised BMP Description:

The Agawam Public Schools will use the recommended teaching lessons from the state MCAS standards in grades K – 10 to increase awareness about stormwater related topics. The DPW will continue to support programs within the schools as funding is available as well as continue to seek volunteers for stormwater projects throughout the community.

Year 13 Activities

During permit year 13, the DPW again coordinated the "Watershed On Wheels" to visit the Agawam Middle School. Fourteen 5th grade classrooms were introduced to the CT River Watershed through an Immersion Trailer; highlighting habitats, ecosystems and food chains, lessons on the CT River Watershed using a Watershed Table, and a Biological Artifacts center; exploring the behavioral and structural adaptation of animals that live along the CT River Watershed.

In addition, the DPW invested in an Enviroscape Watershed Model for use at any of the elementary and middle school locations. All schools were notified of the availability of the watershed model for classroom use.

As in permit year 12, the DPW again provided the Middle School students and staff (600) with "Ground Water – Protecting our Water Supplies" booklets. Teachers and students read the pamphlet and discussed what stormwater is, how they can protect ground water, and how to conserve water. Students and teachers then took a pledge through the National Mayor's Challenge for water conservation online at www.mywaterpledge.com/students.

See Appendix 1B

Best Management Practice Assessment / Proposed Change

No proposed changes to this BMP

Possible Future Activities

It is anticipated that the DPW will continue to coordinate the WOW Express to visit the Middle School students each school year as the WOW Express is available.

1C Local Cable AccessOriginal BMP Description:

The Town will post two informational bulletins per year on the local cable access channel. Bulletins will contain information on stormwater related issues and associated community activities. The DPW will have responsibility for this BMP, which will be utilized in Years 1 through 5.

Year 13 Activities

During permit year 13 the Town of Agawam posted the following information to help viewers learn more about stormwater management, healthy habits, and community activities.

- River Clean-up, WRWS
- Household Hazardous Waste Collection, Department of Public Works
- Prescription Drug Drop off – Agawam Police Department
- Rain Barrel Sale, Department of Public Works
- Compost Bin Sale, Department of Public Works
- Water Conservation Challenge – Mayors Department
- Community Clean-up – Department of Public Works

Best Management Practice Assessment / Proposed Change

No proposed changes to this BMP

Possible Future Activities

The town will continue to post educational bulletins and community activities as they arise.

1D Community Website**Original BMP Description:**

The Town will post stormwater educational information on the community website two times per year. The website will include a link to DEP's website and updates annually or as needed. The DPW will be responsible for this BMP, which will be implemented in Year 1 and updated in Years 2 through 5.

Year 13 Activities

During permit year 13 the Town of Agawam updated the Events section of the town website to include the following information to help viewers learn more about stormwater management, healthy habits, and community activities.

- River Clean-up, WRWS
- Household Hazardous Waste Collection, Department of Public Works
- Prescription Drug Drop off – Agawam Police Department
- Rain Barrel Sale, Department of Public Works
- Compost Bin Sale, Department of Public Works
- Water Conservation Challenge – Mayors Department
- Community Clean-up – Department of Public Works

The DPW has also made available a link to an electronic version of the current stormwater report.

See Appendix 1D

Best Management Practice Assessment / Proposed Change

No proposed changes to this BMP

Future Activities

The DPW will continue to update the website as necessary as to keep the general public informed of stormwater issues and environmental events.

The DPW is currently working with the IT department to help integrate photos of community projects related to stormwater management into an online photo gallery on the town website.

1E Newspaper Press ReleasesOriginal BMP Description:

The Town will send out two press releases per year to the local newspaper. Press releases will contain information on stormwater related issues and community activities. The DPW will have responsibility for this, which will be utilized in Years 1 through 5.

Year 1 Activities

During permit year 13, the following press releases were sent and published in local newspapers.

- River Clean-up, WRWS
- Household Hazardous Waste Collection, Department of Public Works
- Prescription Drug Drop off – Agawam Police Department
- Rain Barrel Sale, Department of Public Works
- Compost Bin Sale, Department of Public Works
- Water Conservation Challenge – Mayors Department
- Community Clean-up – Department of Public Works

See Appendix 1E

Best Management Practice Assessment / Proposed Change

No proposed changes

Possible Future Activities

Town will continue to send out press releases to local newspapers throughout permit year 14.

1F Informational PamphletsOriginal BMP Description:

The Town will distribute one informational pamphlet or notice per year to every household Town-wide. The pamphlet or notice will likely be included with the mailing of the Consumer Confidence Report on water quality. Pamphlets will contain information on stormwater related issues and may be obtained from an applicable governmental or other public agency, purchased from a distributor, or

possibly created by student's project under BMP #1B. The DPW will have responsibility for this BMP, which will be utilized in Years 1, 3, and 5.

Year 13 Activities

In June 2015, the town distributed approximately 12,500 Aqua Almanacs to all businesses and dwelling units in Agawam. Included in the water report was a "FOG", Fat's Oils and Grease flyer, providing best management practices for both home owners and food service establishments.

See Appendix 1F

Best Management Practice Assessment / Proposed Change

No proposed changes.

Possible Future Activities

Pending future General Permit Requirements

MINIMUM CONTROL BEST MANAGEMENT PRACTICES**SECTION 2 - PUBLIC INVOLVMENT AND PARTICIPATION****2A Adopt-a-Road**Original BMP Description:

The Town will continue to support neighborhood cleanup days by providing trash-bags and subsequent collection for voluntary roadside cleanups. The town will document locations targeted during each permit year as well as communication with potential volunteers. The Department of Public Works (DPW) will be responsible for this BMP, which will be implemented in Years 1 through 5.

Year 13 Activities

Through the continued efforts of the, CT River Watershed Association and the Westfield River Watershed Association, areas along the CT River were cleaned during permit year 13.

Through the efforts of local volunteers, areas along Springfield Street, North Westfield Street, school grounds and athletic fields were cleaned of litter, debris, and cigarette butts.

See Appendix 2A

Best Management Practice Assessment / Proposed Change

No changes at this time.

Possible Future Activities

Agawam will continue to promote "Agawam Clean" community clean-ups during the month of May. The DPW will continue to encourage and support local volunteers as they become available.

2B Attitude SurveysOriginal BMP Description:

The Town will include a questionnaire with stormwater related questions with the mailing of the water bills. The questionnaire will be used to measure community awareness of stormwater issues and the success of the Public Education and Public Involvement components of the Stormwater Management Plan. The DPW will have responsibility for this BMP, which will be utilized in Years 2 and 5.

Year 13 Activities

Attitude surveys were distributed as an insert of the Consumer Confidence Report / Aqua Almanac in permit year 2, 5 and 9.

The town participated in the distribution of paper surveys at local animal hospitals in town as well as direct distribution at the Agawam Dog Park to help define an effective messaging on bacteria and pet waste management as noted in section 2D

See appendix 2B

Best Management Practice Assessment / Proposed Change

Any changes pending future General Permit Requirements

Future Activities

Additional surveys pending future General Permit Requirements

2C Catch Basin Marking

Original BMP Description:

The Town will support and supervise volunteer groups to mark catch basins with stormdrain markers. The DPW will supply guidance to volunteer groups regarding the installation of stormdrain markers, directions to locations, and all necessary materials. The Town's goal is to identify and mark 200 catch basins per year depending on volunteer participation. The DPW/volunteer groups will be responsible for this BMP, which will be implemented in Years 1 through 5.

Year 13 Activities

No volunteers during permit year 13. The DPW Subdivision and Site Plan construction standards have been updated so as to require that all newly constructed catch basins be properly marked as part of the site plan and subdivision approval process.

Best Management Practice Assessment / Proposed Change

No Change at this time.

Possible Future Activities

DPW will continue to recruit and support local volunteers in marking catch basins.

2D Watershed CommitteeOriginal BMP Description:

The Town of Agawam will coordinate stormwater activities with the Westfield River Watershed Association (WRWA) within Year 1 and will participate in Years 2 through 5. The Conservation Commission will be responsible for Agawam's participation in the WRWA.

Revised BMP Description:

The Town of Agawam will partner with the Westfield River Watershed Association and Connecticut River Watershed Association as able; to coordinate stormwater related activities and public outreach within the watersheds.

Year 13 Activities

The WRWA continues to be an active partner, in helping the Town of Agawam keep the riverbanks clean. In addition to Westfield River Clean-ups, the WRWA coordinates the Source to Sea Cleanup along the CT River, seeking volunteers and DPW staff to assist in the clean-up.

As an active member of the Connecticut River Watershed Stormwater Subcommittee, the town of Agawam actively participated following projects:

- Promoting "Soak up the Rain" stormwater education campaign through the Pioneer Valley Soak up the Rain website and creating signs for rain gardens and porous paving projects.
- Participating in the distribution of paper surveys at local animal hospitals in town as well as direct distribution at the Agawam Dog Park to help define an effective messaging on bacteria and pet waste management
- Actively participated in the planning to prepare for the forthcoming 2016 permit:
 - Defining effective messaging on nutrients
 - Began retooling website education and outreach
 - Collaborated with Massachusetts state-wide coalition of stormwater coalitions
- See Appendix 2D

Best Management Practice Assessment / Proposed Change

No proposed changes

Future Activities

Activities are pending future General Permit Requirements.

2E Community OutreachOriginal BMP Description:

The Town will attempt to track the community participation level based on community outreach programs provided by the Town. The DPW will have responsibility for this BMP, which will be utilized in Years 2-5.

Revised BMP Description:

The Energy Commission, Beautification Committee, Conservation Commission, Planning and Community Development, and Department of Public Works will attempt to distribute informational flyers at local community events; as well as sponsor educational programs as funding becomes available. Flyers and programs will contain information on stormwater related issues as pertinent to the town. All parties will make every effort to track the community participation level based on community outreach programs provided by the town.

Year 13 Activities

During Permit Year 13, the DPW has offered the following programs to residents in town.

- Household Hazardous Waste Day; 181 Residents attended
- River Clean-up
- Drug Take Back at PD – Approximately 394.5 lbs of drugs collected
- Sharp Collection Program, Health Dept. - 55.5 cu ft of sharps collected
- Rain Barrel Sale
- Compost Bin Sale
- Ground Water Literature Distribution – 181 Residents, 600 students

- Water Conservation Initiative – City Standing throughout US #10 in the under 30,000 population category
- FOG Flyers – Every Household and Business in Agawam (Appendix 1F)

See Appendix 2E

Best Management Practice Assessment / Proposed Change

The town will continue to offer programs to residents and businesses as funding is available. In addition, the town will track program participation to the best of their ability.

Future Activities

Future activities are pending the rewritten General Permit Requirements.

Minimum Control Best Management Practices

Section 3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION

3A Mapping Stormwater Outfalls

Original BMP Description:

A Stormwater Outfall Map is to be developed showing the municipal stormwater outfall pipes greater than 12-inches diameter. Existing information and reports from previous investigations are to be compiled in Year 1. Approximately 25% of the outfalls are to be field inspected each year for Years 2 through 5. Inspectors will catalogue the size, pipe material and condition of each, the receiving water-body, and visual observation of the discharge and immediate downstream channel. The Department of Public Works (DPW) will be responsible for this BMP.

Year 13 Activities

GIS based mapping of the Town's existing stormwater drainage system is estimated to be complete. The Town of Agawam has updated the GIS map drainage information with new residential subdivisions that were constructed in Year 13.

The mapping shows locations of all catch basins, drain manholes, drainage pipes, outflows, detention basins, and road culverts. The GIS maps are often utilized for stormwater related investigations including searching for cross connections and tracing the sources of illicit discharges. Both the DPW foremen and the Engineering Division have a hard copy set of the Town's most current drainage plans on file for quick access in the field. Also, a workstation within the DPW has been set up for the exclusive use of GIS related activities for quick and easy data access in the office. This GIS mapping is available to the public online via the Town of Agawam's website. This includes all the drainage mapping data. The DPW has purchased tablets that will allow Town employees access to the GIS database for use in the field.

Through the efforts of the Pioneer Valley Planning Commission, the Town of Agawam is collaborating with several other communities in order to purchase an integrated mapping and data collection system that will help fulfill the requirements of the updated NPDES Phase II Small MS4 General Permit. Even though the infrastructure of the Agawam storm sewer system has been mapped, the collection system will assist the DPW in scheduling the cleaning and repair of drainage structures, prioritizing problem catchments, tracking illicit discharges and recording the results of outfall inspections. The Town and other participating communities will receive help from the PVPC to research, analyze and identify a suitable collection system via a District Local Technical Assistance Grant. Participating communities will provide a 5% in-kind match in the form of time spent on the project by staff or volunteers.

See Appendix 3A for a copy of the District Local Technical Assistance affirmation letter.

Best Management Practice Assessment / Proposed Change

The GIS mapping of all drainage structures within the Town is complete. The details described in this requirement have been gathered during the mapping process. As the DPW continues to perform complex drainage system investigations, the condition of known drainage outfalls will be reevaluated.

Possible Future Activities

The GIS drainage mapping project is an ongoing activity. Maps are updated as new construction is completed and new information about existing drainage is discovered in the field. The Town will purchase a new camera inspection system that will help to locate currently unknown or buried stormwater outfalls. The Town is in the process of scheduling demonstrations of camera systems from each of the companies under consideration. The Town will continue to work with Tighe & Bond as a consultant to improve and add to the GIS maps.

3B Non-Stormwater Discharge Ordinance

Original BMP Description:

The Town intends to adopt an ordinance or other regulatory mechanism to prohibit non-stormwater discharges into the MS4 system. The Town will evaluate existing regulations in Year 1, prepare a draft ordinance in Year 2, and propose the new ordinance for adoption in Year 3. Pending adoption, the ordinance will be enforced in Years 3 through 5. The DPW will have responsibility for this BMP.

Year 13 Activities

As noted in permit year 4, the current Water and Sewer Ordinance has been revised to reflect the Federally Mandated Requirements prohibiting non-stormwater discharges into the MS4 system. The revised ordinance was approved by the City Council on May 15, 2006. The approved ordinance is currently being used and enforced.

Best Management Practice Assessment / Proposed Change

This ordinance has been enforced during permit year 13. Any discovered illicit connections to the stormwater system are eliminated as soon as possible.

Possible Future Activities

The DPW will continue to educate the community regarding the ordinance as well as enforce the ordinance regulations regarding non-stormwater discharges into the MS4

System. The DPW may propose some revisions to the ordinance that will expand on the Federally Mandated Requirements and clarify the wording in a few sections. Any future revisions are pending future rewritten General Permit Requirements.

In Year 6, the DPW had unsuccessfully proposed a stormwater utility fee for all residents and private sites in Town to offset the increased costs resulting from both the maintenance of the municipal stormwater system and continued compliance with the NPDES regulations and the Six Minimum Control Measures in the MS4 General Permit. The Town has been approved for a 319 Nonpoint Source Pollution Grant. This grant will allow the Town of Agawam to study the possibility of establishing a new stormwater utility fee for all properties in Town. A local advisory task force comprised of Town employees and residents will be involved with the research and proposition of the new stormwater fee. The monies acquired by this fee will be used to help offset the costs of maintaining the Town's drainage system, implementing the Illicit Discharge Program and educational purposes.

See Appendix 3B

3C Develop Illicit Discharge Plan

Original BMP Description:

The Town will develop an Illicit Discharge Plan to include procedures for identifying, locating, removing illicit discharges as well as documenting actions and evaluating impacts. The Town will evaluate existing procedures in Year 2. The Town will prepare a draft plan and propose the plan for adoption in Year 3. Pending adoption, the plan will be implemented in Years 3 through 5. The DPW will be responsible for this BMP.

Year 13 Activities

As part of the development of the Non-Stormwater Discharge Ordinance, existing illicit discharge practices were evaluated. Existing activities involve the investigation and removal of illicit discharges or dumping if the DPW is made aware of an issue based upon resident complaints or observation by DPW or Town personnel. Removal of illicit discharges has been based upon existing authority by the DPW to do so. GIS drainage mapping continues to be updated as new construction and complex investigations are performed. As the mapping continues, the detailed evaluation of which areas to focus on for investigations will proceed.

The DPW has incorporated the Town's existing sanitary sewer system into the GIS maps. Having this information alongside the stormwater drainage system will allow the DPW to more accurately determine the areas most likely to have illicit discharges. The DPW will continue to update the sanitary sewer information as new construction occurs within the Town.

A copy of the Town's Illicit Discharge Detection and Elimination (IDDE) Plan can be found in Appendix 3C of the 2008 Annual Report.

An Illicit Discharge Investigation Report form is used as a method of notification and documentation by the DPW when Non-Stormwater Discharges are observed at a site that is in violation of Town Code. Copies of these reports are available at the DPW.

In Year 13, the Town of Agawam has investigated and resolved illicit discharges in the following locations: (UPDATE)

- **Adams Street:** The DPW had been informed by the residents of Adams Street that a 30-inch concrete outfall located behind #180 Adams Street had broken. Upon inspection, it was discovered that the area around the headwall had suffered heavy erosion. The headwall and a section of pipe approximately 8 feet long had collapsed into the stream bed. The DPW did not have the equipment to lift the headwall and pipe out of the stream. With the approval of the Agawam Conservation Commission, the DPW buried the headwall and broken section of pipe with crushed stone. This created a new outfall from the exposed length of pipe and helped to minimize future erosion.
- **Adams Street:** During the above mentioned outfall repair, the DPW found several pet waste bags within the stream bed. It was concluded that residents within the immediate area were dumping pet waste into catch basins that discharged to the Adams Street outfall. These catch basins had previously been marked as described in Section 3G of this report. A letter informing residents to properly dispose of pet waste was sent to residents of the following streets in the immediate area of the Adams Street outfall: Adams Street, Arbor Lane, Primrose Lane, Hunting Lane, Butterwood Road, Conifer Drive, Butternut Drive, Faymore Drive and Fernwood Drive.
See Appendix 3C for a copy of the letter sent out.
- **Valley Brook Road:** The resident of #181 Valley Brook Road contacted the DPW with a complaint concerning the culvert located on the northern corner of his property. The culvert consists of two (2) corrugated metal pipes. The roots of a tree on the stream bank were blocking the inlet of the eastern pipe causing a buildup of leaves and sediment. With the approval of the Agawam Conservation Commission, the DPW removed said tree from the bank and cleared the culvert entrance. The DPW has future plans to remove a second tree above the western pipe before the roots start to block the flow within the culvert.
- **Pleasant Valley Road:** The resident of #47 Pleasant Valley Road contacted the DPW with a complaint about the 12-inch outfall located on his property. Upon

inspection, the DPW discovered the area directly underneath the culvert headwall was eroding away, but the headwall and outfall were still intact. With the approval of the Agawam Conservation Commission, the DPW installed crushed stone underneath and around the headwall to stabilize the bank and reduce future erosion.

- **Alhambra Circle:** The residents of Alhambra Circle had been contacting the DPW about flooding in the street between house numbers 43 to 52. The pipes discharging from the two existing catch basins in that area of the road were too small to handle the stormwater runoff causing a backup of the drainage system. Additionally, the drainage system had been installed in such a way that the flow from the catch basin pipes was against the flowline of the main trunk line within Alhambra Circle. The DPW abandoned the existing pipes from the catch basins and installed new larger pipes running from the catch basins to a doghouse manhole in the trunk line. The slope of the new pipes runs in the same direction as the trunk line.
- **Reed Street:** The DPW conducted a site investigation at #56 Reed Street in response to a resident's complaint of oil running down the driveway. There was an oily film within the street gutter line as well as multiple oil stains on the driveway of #56 Reed Street. The oily film was flowing to a catch basin connected to the Town storm sewer system. The DPW informed the resident that any oil leak on their property had to be fixed. Any oil stored on their property had to be kept in approved containers and disposed of properly. The DPW has been observing this location to insure no other oil films are found.
- **Bessbrook Avenue:** The resident of #73 Bessbrook Avenue has been in contact with the DPW concerning a piece of Town-owned property located to the west of his house. White Brook is a stream located approximately 130 feet west of the Town-owned property. Runoff from Bessbrook Avenue is captured by a catch basin in the street and discharged to White Brook. It had been observed that people have been dumping leaves, debris and trash onto the Town-owned property and within the wetland area of the stream. In addition, the catch basin is filled with sediment and the drainage outfall has been completely buried by leaves. The DPW and the Conservation Commission have taken steps to prevent dumping on this property including sending a notice to all residents in the area, posting "No Dumping" signs and blocking off the property to trucks and trailers. The DPW is in the process of cleaning out the sediment in the catch basin and will be digging out the buried outfall.
- **Silver Hill Village Subdivision:** The storm sewer system of Silver Hill Village includes both underground piping within paved roads and an above ground swale which runs within a drainage easement through several properties before

ultimately discharging to a culvert under Adams Street. Since the subdivision's construction, several residents have filled in the swale on their property and installed a pipe instead without the knowledge or approval of the DPW. Also, the DPW was made aware of leaves and debris being dumped within the swale. The DPW sent a letter to the residents of properties where the drainage easement lays warning them to contact the DPW before filling in the swale and to keep the swale free of leaves, trash and other debris. See Appendix 3C for a copy of the letter sent out.

North Westfield Street: A developer had submitted plans to the Town of Agawam for the construction of three commercial buildings to be located on property abutting North Westfield Street. On the southern portion of the property was an older drainage pipe in need of repair. The pipe flowed from a catch basin in the street to a wetland area on the east side of the property. The DPW collaborated with the developer to abandon the existing pipe and install new pipe and a new outfall.

- **Doane Avenue:** The DPW has received several reports of severe flooding within the cul-de-sac of Doane Avenue, particularly during the winter months. The existing storm sewer system consisted of three connected leaching catch basins with no overflow outlet pipe. The catch basins would be easily overwhelmed during periods of heavy rainfall and create an unsafe driving condition. The DPW had previously attempted to outlet the catch basins to a nearby wetland area; however the lack of existing pretreatment and shallow slope of the ground made this infeasible. The DPW has installed an infiltration system within the cul-de-sac island consisting of two leaching chambers and perforated pipe. Overflow from the leaching catch basins will flow from the road into the infiltration system reducing flooding while also removing pollutants picked up in the street by storm runoff. The DPW has future plans to replace the leaching catch basins in Doane Avenue with Stormceptor units and connect them to the infiltration system.

A list of existing detention basins within the Town has been created. This list will be updated as new construction is completed. The Engineering Department is conducting inspections of the detention basins to prevent and eliminate illicit discharges by confirming the basins are working properly and are being maintained as per Town stormwater regulations. If it is observed that a detention basin has not been maintained, the owner of the property where the basin is located is notified and instructed to repair the basin to the satisfaction of the Town.

Tighe & Bond has inspected 95% of the known drainage outfalls in town in Year 9. During inspections, pictures were taken of each outfall and its condition was noted on an Outfall Reconnaissance Inventory Sheet along with obvious signs of any illicit discharges including noticeable odors, outflow color and turbidity, and any observed floatables.

Best Management Practice Assessment / Proposed Change

In Year 7, a program was started by the Engineering Department to inspect all mapped outfall pipes over the next four years. In Year 9, Tighe & Bond inspected 95% of the known drainage outfalls. According to the proposed new General Permit regulations, 25% of the existing outfalls must be inspected and tested each year. Due to a lack of funding and manpower, the Town may have difficulty in meeting this requirement. The DPW will make every effort to improve its performance in this BMP by setting up a detailed list of outfalls that need inspecting. All inspection results will be documented on an Outfall Reconnaissance Inventory Sheet and recorded within the GIS maps. Future Activities

The Town of Agawam has recently discovered that the roof drains from the Roberta G. Doering Middle School currently flow into the town sanitary sewer system. The DPW will be making plans to correct this as soon as possible by either redirecting the roof runoff to the storm sewer system or by installing an infiltration BMP.

In order to meet the NDPES General Permit regulations, the Town hired Tighe & Bond to assist with the necessary inspection, as described above. The Town will continue to perform inspections as time and budget allows. In future inspections, if signs of an illicit discharge are discovered, a sample will be taken from the outfall and tested in-house for the pollutants indicated within the Massachusetts Phase II Small MS4 General Permit, at a minimum. A list of outfalls that need maintenance will be created. These outfalls will be repaired and illicit discharge connections will be investigated as the Town's budget allows. The Town is currently seeking to hire more Engineers and DPW Crew Workers in order to comply with the increased inspection requirements of the new General Permit.

The Town shall continue inspecting detention basins and outfalls as the available budget and manpower allows. Town owned detention basins will be given priority. The DPW will be responsible if any repairs to the basins are deemed necessary. Inspections will also be conducted at detention basins on private property. The property owners will continue to be responsible for the mowing of the detention basins whereas the DPW will repair any drainage structures, pipes and outfalls, etc. Assistance can be given at the discretion of the DPW.

3D Inform Employees, Businesses, and PublicOriginal BMP Description:

Municipal employees, businesses and the public will be informed regarding the illicit discharge plan and the non-stormwater ordinance. Elements of the public education program will include publicity for this BMP. The DPW will be responsible for this BMP, which will be implemented in Years 3 through 5.

Year 13 Activities

In June 2015, the town distributed approximately 12,500 Aqua Almanacs to all businesses and dwelling units in Agawam. Included in the water report was a "FOG", Fat's Oils and Grease flyer, providing best management practices for both home owners and food service establishments.

See Appendix 1F

Best Management Practice Assessment / Proposed Change

No proposed changes.

Possible Future Activities

Additional future activities will be adjusted pending the rewritten General Permit Requirements.

3E Video InspectionOriginal BMP Description:

The DPW will contract for the use of a video camera to inspect storm drain pipes as practicable to follow up on illicit discharges discovered during activities under BMP #3B. The DPW will be responsible for this BMP, which will continue for permit Years 3 through 5.

Year 13 Activities

The Town is in the process of purchasing a new portable video camera inspection system with a remote controlled tractor which will be used to investigate the condition of Town-owned drainage pipes and outfalls. Demonstrations of camera systems are being scheduled from each of the companies under consideration. Video inspections are used to determine: if there are any illicit connections, if any pipes or outfalls have fallen into disrepair and to assist in mapping of the Town's drainage system. Employees in both the Engineering Division and the Sewer Department will receive training on the use of the new camera system.

Best Management Practice Assessment / Proposed Change

The DPW continues to use its current pushrod video camera system to assist in Illicit Discharge detections and other related drainage and sanitary sewer investigations. However, the pushrod camera is only suitable for inspecting small diameter pipes and outfalls. The new remote controlled camera system will be able to travel through the larger diameter pipes and outfalls within the Town drainage system. The Town will continue to use the pushrod camera for small pipes and laterals. If it is necessary, the DPW can contract out the use of a professional video camera system as it has done in the past.

Possible Future Activities

The DPW continues to discuss the opportunity to implement a new stormwater fee for all properties in Town. The monies acquired by this fee will be used to help offset the costs of maintaining the Town's drainage system and the Illicit Discharge Program including video inspections. If the new stormwater fee is implemented, the Town would have extra funding available to do more video inspections by either the Town's camera and crews or via a private company.

3F Failing Septic SystemsOriginal BMP Description:

The Board of Health (BOH) currently keeps records of septic system failures that are used to identify problem areas. The BOH will report failures to the DPW for inclusion in GIS mapping in Year 3. The BOH will be responsible for this BMP, which will continue for Years 1 through 5.

Year 13 Activities

The Health Department maintains records on all inspections involving septic systems. The Health Department has forwarded a list of all failed systems from 2015 to the DPW. Septic System locations and their failures from 2003-2012 have been incorporated into the GIS mapping project.

See Appendix 3F

Best Management Practice Assessment / Proposed Change

Due to budget constraints, the Southwest Area Sewer project has been postponed indefinitely. This project was to include South Westfield Street, Pine Street, parts of Barry Street and the subdivisions off of these streets and 2 pump stations. Once the new sewer was constructed, the areas that were experiencing septic system failures would have been able to connect to the Town sewer system. Since septic systems will

still be in use in this area, the DPW/Engineering Division will closely monitor the storm drainage system in the southwest area of town for any potential illicit discharges. If an illicit discharge is reported, the DPW will take steps to immediately correct the problem.

Future Activities

The DPW plans to further analyze septic system failures using the data that has been input into the GIS database. This information will help the Town prioritize future sewer proposals and also help residents understand where problematic areas in town are located. Analyzing septic information in GIS will also help to determine which areas of town should be classified as a high risk of illicit discharge.

3G CATCH BASIN MARKING

Original BMP Description:

The Town will support and supervise volunteer groups to mark catch basins with stormdrain markers. The DPW will supply guidance to volunteer groups regarding the installation of stormdrain markers, directions to locations, and all necessary materials. The Town's goal is to identify and mark 200 catch basins per year depending on volunteer participation. The DPW/volunteer groups will be responsible for this BMP, which will be implemented in Years 1 through 5.

Year 13 Activities

No volunteers during permit year 13.

Best Management Practice Assessment / Proposed Change

No Change at this time.

Possible Future Activities

DPW will continue to recruit and support local volunteers in marking catch basins.

The subdivision and site plan construction standards have been updated so as to require that all newly constructed catch basins be properly marked as part of the site plan and subdivision approval process.

Minimum Control Best Management Practices**SECTION 4 - CONSTRUCTION SITE RUNOFF CONTROL****4A Construction Runoff Ordinance**Original BMP Description:

The Town has adopted a Construction Runoff Ordinance which requires sediment and erosion control at construction projects with over one acre in total disturbance. The Town has evaluated existing regulations (including Zoning, Subdivision, and Wetlands regulations) in Year 1, prepared a draft ordinance in Year 2, and proposed the new ordinance for adoption in Year 3. Pending adoption, the ordinance was enforced in Years 3 through 5. The DPW, Planning Department, and Building Inspector have responsibility for this BMP.

Year 13 Activities

The current Water and Sewer Ordinance has been revised to reflect the Federally Mandated Requirements requiring sediment and erosion control at construction projects with over one acre in total disturbance. The revised edition was approved by City Council on May 15, 2006. Enforcement of the new ordinance began shortly after this approval. A new Stormwater Permit Application was created and implemented during Year 4. The ordinance and permit application continues to be used and enforced.

Best Management Practice Assessment / Proposed Change

The Agawam Engineering Division continues to work with developers to identify and address possible problematic areas before stormwater runoff issues occur. As a result, Year 11 had very few construction runoff issues in Town.

Possible Future Activities

This ordinance may be revised in the future to help clarify and improve the requirements pending the soon to be updated General Permit Requirements. The ordinance will continue to be used and enforced.

The Town continues to research, discuss and propose the opportunity to implement a new Stormwater Fee for all properties in Town. The monies acquired by this fee will be used to help offset the costs of maintaining the Town's drainage system, implementing the Illicit Discharge Program and educational purposes. Also, the new stormwater fee rules will include special incentives for private sites: to implement low impact development procedures, to reduce peak stormwater runoff rates through detention or infiltration, and to improve existing TSS removal rates.

The Town may also look into implementing a system that includes the possibility of fining developers, builders, etc. if BMPs are not properly installed and maintained resulting in erosion and sediment runoff from the construction sites.

4B Construction Plan Review

Original BMP Description:

Under the Construction Runoff Ordinance (or other regulatory mechanism), applicants with projects with disturbance over one acre will be required to submit sediment and erosion control plans for Town review and approval. Until a new ordinance is adopted (anticipated in Year 3), the Town will continue to review construction plans in accordance with existing regulations. Pending adoption, plans will be reviewed per the new ordinance in Years 3 through 5. The DPW, Planning Department, and Building Inspector have responsibility for this BMP.

Year 13 Activities

All construction sites within the jurisdiction of the Rivers Act and the Wetland Protection Act must submit plans to the Conservation Commission for review of proposed erosion and sediment control measures. These sites are inspected and overseen by the Conservation Commission with the assistance of the DPW.

All new subdivision submittals are required to include construction phase erosion and sediment control measures within the construction plan set. This includes both short-term and long term BMPs for the site.

The developers of all new subdivisions are required to submit the project's EPA NOI for construction activities, and give a courtesy copy of the SWPPP to the DPW.

DPW works with the Conservation Commission, developers, and property owners to reduce the chances of erosion control problems before they occur and alleviate any issues as soon as they arise.

An ordinance addressing erosion and sediment control was adopted by the City Council in May of 2006 and is currently being implemented by the DPW.

Best Management Practice Assessment / Proposed Change

No Change is proposed.

Possible Future Activities

The ordinance may be revised in order to clarify and improve the requirements pending the rewritten General Permit Requirements.

4C Inspection / ReportingOriginal BMP Description:

Under the Construction Runoff Ordinance (or other regulatory mechanism), projects with disturbance over one acre will be required to have regular inspection of sediment and erosion controls and reporting of construction activities. Until a new ordinance is adopted (anticipated in Year 3), the Town will continue to require inspection and reporting in accordance with existing regulations. Pending adoption, construction inspection and reporting will be enforced in Years 3 through 5. The DPW, Planning Department, and Building Inspector have responsibility for this BMP.

Year 13 Activities

As documented in permit year 4, ordinance changes had been adopted by the City Council as of May 5, 2006.

The DPW and Conservation Commission continue to work together inspecting and enforcing the Wetland Protection Act on projects within the appropriate jurisdiction.

Best Management Practice Assessment / Proposed Change

No Change is proposed.

Possible Future Activities

This ordinance may be revised in the future to help clarify and improve the rules and regulations pending the future rewritten General Permit Requirements. The ordinance will continue to be used and enforced.

MINIMUM CONTROL BEST MANAGEMENT PRACTICES**SECTION 5 POST CONSTRUCTION STORMWATER MANAGEMENT****5A Post Construction Runoff Ordinance**Original BMP Description:

The Town intends to adopt an ordinance or other regulatory mechanism to address post construction runoff from projects with over one acre in total disturbance. The Town will evaluate existing regulations (including Zoning, Subdivision, and Wetlands regulations) in Year 1, prepare a draft ordinance in Year 2, and propose the new ordinance for adoption in Year 3. Pending adoption, the ordinance will be enforced in Years 3 through 5. The DPW, Planning Department, and Building Inspector have responsibility for this BMP.

Year 13 Activities

The current Water and Sewer Ordinance has been revised to reflect regulatory mechanisms to address post construction runoff from projects with over one acre in total disturbance. The revised edition was adopted by the City Council as of May 5, 2006.

The Conservation Commission through the Wetland Protection Act continues to regulate activities within and near wetland resource areas. The DPW continues to regulate all other stormwater activities that are connected to the Town's MS4.

Best Management Practice Assessment / Proposed Change

No Change is proposed.

Possible Future Activities

This ordinance will continue to be enforced and may be revised to help clarify and improve requirements as needed pending the rewritten General Permit Requirements.

5B Site Plan ReviewOriginal BMP Description:

Under the Post Construction Runoff Ordinance (or other regulatory mechanism), applicants with projects with disturbance over one acre will be required to submit stormwater control plans for Town review and approval. Until a new ordinance is adopted (anticipated in Year 3), the Town will continue to review new development and redevelopment plans in accordance with existing regulations. Pending adoption, plans will be reviewed per the new ordinance in Years 3 through 5. The DPW, Conservation Commission, Planning Department, and Building Inspector have responsibility for this BMP.

Year 13 Activities

New stormwater regulations were approved and adopted by the City Council in May of 2006. This ordinance has been implemented by the DPW and continues to be used during the site plan and subdivision review and inspection process. The Conservation Commission through the Wetland Protection Act continues to regulate activities within and near wetland resource areas. The DPW continues to regulate all other stormwater activities that are connected to the Town's MS4.

Best Management Practice Assessment / Proposed Change

No Change is proposed.

Possible Future Activities

Shortly after the adoption of the new Ordinance, the Town began permit activities. If necessary, the DPW may make minor modifications to the ordinance in the future pending the soon to be updated General Permit Requirements.

5C Stormwater System Maintenance PlanOriginal BMP Description:

Under the Post Construction Runoff Ordinance (or other regulatory mechanism), projects with disturbance over one acre will be required to include a program outlining enhanced procedures for long term operation and maintenance of stormwater facilities. Until a new ordinance is adopted (anticipated in Year 3), the Town will continue to require stormwater facility operation and maintenance in accordance with existing regulations. Pending adoption, additional operation and maintenance requirements for stormwater facilities to be constructed as part of new development and redevelopment projects will be enforced in Years 3 through 5. The DPW, Planning Department, and Building Inspector have responsibility for this BMP.

Year 13 Activities

As documented during permit year 4, new ordinance requirements including drainage system maintenance of private sites had been adopted by the City Council. All new and redevelopment plans will continue to require maintenance activity schedules as part of the site's Stormwater Permit to the DPW.

Due to a lack of funding and man power, the DPW has had difficulty continuing with its detention pond inspection program. The DPW continues to assist in the maintenance of some privately owned detention ponds in the Town as time and budget allows. However, there are many detention areas throughout town which still require significant repair, including areas identified as needing significant town assistance with

maintenance. Three detention ponds have been identified as town owned and continue to be maintained by the DPW.

In Year 6, the DPW had unsuccessfully proposed a stormwater utility fee for all residents and private sites in Town to offset the increased costs resulting from both the maintenance of the municipal stormwater system and continued compliance with the NPDES regulations and the Six Minimum Control Measures in the MS4 General Permit. The Town has been approved for a 319 Nonpoint Source Pollution Grant. This grant will allow the Town of Agawam to study the possibility of establishing a new stormwater utility fee for all properties in Town. A local advisory task force comprised of Town employees and residents will be involved with the research and proposition of the new stormwater fee. The monies acquired by this fee will be used to help offset the costs of complying with the Town's Stormwater System Maintenance Plan.

A copy of the previous utility fee proposal can be located in the Permit Year 6 Report.

Until the utility fee is approved, the DPW will continue to maintain the public stormwater system (including outfalls, publically owned detention ponds, pipes, catch basins, culverts, drain manholes, etc.) as much as the budget will allow. The DPW has provided a list of stormwater maintenance and repair projects completed in Year 11 is included in Appendix 6C.

Best Management Practice Assessment / Proposed Change

No change is proposed, pending the soon to be updated General Permit Requirements.

Possible Future Activities

If the stormwater utility is approved, the DPW would work to improve the overall municipal stormwater system. This would include improving the work needed to meet or exceed the six minimum control measures in the MS4 Permit and any new regulations that may be required. Also, the DPW would then take on the responsibility of ensuring that all drainage detention areas located within town easements are properly maintained and in the originally proposed working condition. (Currently, this responsibility typically falls upon the property owner).

MINIMUM CONTROL BEST MANAGEMENT PRACTICES**SECTION 6 GOOD HOUSEKEEPING / POLLUTION PREVENTION****6A Municipal Maintenance Activity Program**Original BMP Description:

The Town will develop a program to outline procedures associated with maintenance of open spaces and parks, vehicular fleets, Town-related construction activities, roads, and storm sewer system. The Town will evaluate existing municipal procedures, modify any procedures if needed, and prepare the program plan in Year 1. The Town will continue to monitor compliance and revise policies as necessary in Years 2 through 5. The DPW will have the responsibility for this BMP.

Year 13 Activities

The DPW continues to work closely with the Conservation Commission to ensure that all open spaces, parks, town-related construction activities, roads and storm sewer systems are properly maintained and erosion control BMPs are properly implemented.

In permit year 12, the DPW purchased a Boom Flail Mower using Chapter 90 funding. This mower is sometimes used to mow vegetation in detention ponds.

In permit year 13, the Town Dog Park was opened to the public. Pet waste stations were placed throughout the park and the Dog Park Rules are posted outside the entrance of the park, which includes that dog owners must immediately clean up any dog waste. The Dog Park Association and the Agawam Grounds Department work together to make sure that the park is cleaned of all pet waste twice a week during the times the park is open to the public.

See Appendix 6A

Best Management Practice Assessment / Proposed Change

Any changes to this BMP are pending the final version of the updated NPDES Phase II Small MS4 General Permit Requirements.

Possible Future Activities

Future activities are pending the final version of the updated NPDES Phase II Small MS4 General Permit Requirements.

6B Training of Municipal EmployeesOriginal BMP Description:

Municipal employees performing activities under the new Municipal Maintenance Activity Program (BMP #6A) will be informed of new good housekeeping policies and procedures. This will occur pending adoption of the Program in Year 1. DPW employees will also be informed of the Stormwater Pollution Prevention Plan requirements for the DPW and Transfer Station, as applicable. Initial training will be given in Year 2. An Annual Refresher in the form of a seminar or memorandum will be given each year for Years 3 through 5. The DPW has responsibility for this BMP.

Year 13 Activities

Throughout the year, the DPW's work is inspected by both the Engineering Division and the Conservation Commission (when applicable). If any work is unsatisfactory, the DPW is informed of which BMP's need to be implemented for that work and any future projects.

The Environmental Project Coordinator attended the workshop "Debris Management Training for State, Tribal, and Local Officials" sponsored and instructed by the MEMA Region III.

As new employees are hired in the Motor Vehicle Maintenance Department, they are trained and have yearly reviews regarding the weekly inspection of State II Vapor Recovery and Gasoline Dispensing Facilities. There were no new employees during permit year 13.

Grounds and Maintenance employees renewed pesticide application certification licenses.

Due to the high turnover of new employees, all departments received three the following Spill Prevention Plans and Procedures:

- Indoor Oil Spills
- Outdoor Oil Spills
- Vehicle Washing Policy

See Appendix 6B

Best Management Practice Assessment / Proposed Change

No changes at this time unless required by the soon to be updated General Permit Regulations

Future Activities

The DPW will continue to educate town employees on Pollution Prevention and Good Housekeeping Practices for Municipal Operations.

6C Catch Basin Cleaning Program**Original BMP Description:**

The Town will develop a program with prioritized areas for catch basins in the urbanized area in Year 1. The Town will continue to monitor compliance and revise policies as necessary in Years 2 through 5. The DPW will have the responsibility for this BMP.

Year 13 Activities

During Permit Year 13, the vacuum truck used by the DPW to clean catch basins was sold because it had started to break down and was deemed unsafe to operate. A new vacuum truck has not yet been purchased. Currently, the DPW does not have the necessary equipment to continue with the routine cleaning of catch basins. In the event of an emergency, DPW workers can manually clean catch basins with hand tools. The Town is in the process of discussing options that would allow the Town to comply with this requirement of the General Permit.

Best Management Practice Assessment / Proposed Change

The town will utilize available funds in order to purchase the necessary equipment and services necessary to comply with the catch basin cleaning requirements of the General Permit. The DPW is constantly updating our list of catch basins to be cleaned. Priority shall be given to catch basins within environmentally sensitive areas and locations with a history of flooding problems.

Possible Future Activities

The DPW officials have been discussing how best to continue with the Town catch basin cleaning program. Possible options include the purchase of a new vacuum truck or contracting the services of a contractor that specializes in catch basin cleaning.

The DPW will continue to seek dedicated funds for catch basin cleanings in upcoming years. The DPW is working to input the data for catch basin cleaning into GIS so that an updated catch basin cleaning priority area list can be made.

The DPW anticipates creating a catch basin cleaning door hanger that will notify home owners and businesses when catch basins were cleaned in their neighborhood. The door hanger will include best management practices for homeowners and businesses to help keep our catch basins clean of pollutants and obstructions. - INC

6D Street Sweeping

Original BMP Description:

The Town will sweep all streets in the urbanized area once each year. The DPW has the responsibility for this BMP, which will be utilized for Years 1 through 5.

Year 13 Activities

During permit year 13, the DPW completed street sweeping in the following areas:

- 70 curb miles of roadway between April 1, 2015 – April 1, 2016
- Additional sweeping included
 - Water break clean up of soil and salt
 - Street sweeping prior to paving operations

During the winter of 2008-2009, the DPW made an economical and environmental decision to eliminate sand from their roadways and apply "Liquid Magic" to their rock salt. Liquid Magic is non-corrosive, completely biodegradable, and releases far less chlorides into the environment than either plain rock salt or calcium chloride. With the elimination of sand, the DPW has found the streets to be much cleaner in the spring thus helping with the reduction of sweeping needed.

Best Management Practice Assessment / Proposed Change

The town will continue to sweep priority areas as funding is available.

Possible Future Activities

Any changes are pending the soon to be updated General Permit Requirements.

6E Pest Control / Landscaping and Lawn CareOriginal BMP Description:

The Town will evaluate the use of toxic chemicals in Year 1 and continue to contract with licensed applicators only in Years 2 through 5. The DPW has the responsibility for this BMP.

Year 13 Activities

The DPW continues to provide maintenance services to Municipal Parks, Golf Course, and Schools. The application of fertilizers and pesticides are under the supervision of licensed pesticide applicator, thus the chemicals are used appropriately and the over-use of chemicals is avoided. The maintenance of the golf course includes the use of organic practices where appropriate

During permit year 10, 3.2 acres of Lacrosse fields at School Street Park transitioned from chemicals to organic lawn care under the TURI grant. In permit year 13 the town expanded this practice to include 4.10 acres of Soccer fields.

During Permit year 13, the Public Works and Building Maintenance Departments submitted updated Indoor and Outdoor Integrated Pest Management Plans to the Department of Agricultural Resources. The DPW implemented a mandatory reporting form and filing protocol for tracking all applications with the licensed pesticide applicator as per the MRAD regulations.

See Appendix 6E

Best Management Practice Assessment / Proposed Change

DPW will continue to maintain the Golf Course, Lacrosse and Soccer fields with organic lawn care practices and products.

Possible Future Activities

Proposed future activities are pending the rewritten General Permit Requirements and the inclusion of additional town departments.

6F Stormwater Pollution Prevention Plan / MSGPOriginal BMP Description:

A Stormwater Pollution Prevention Plan (SWPPP) will be implemented for the DPW facility under the EPA Phase II Stormwater Program Multi-Sector General Permit (MSGP). The DPW has the responsibility of this BMP, which will be utilized for Years 1 through 5.

Year 12 Activities

It is our understanding that as of this report date; the proposed 2013 Multi-Sector General Permit (MSGP) published by EPA has not been finalized. A Spill Prevention Control and Countermeasure Plan (SPCC) has been in-place for the DPW maintenance facility since November 29, 2001. A SPCC Plan was received from the consultants at Tighe & Bond and signed by the DPW Superintendent, in accordance with the requirements of the U.S. EPA Oil Pollution Prevention Regulations (40 CFR Part 112.7). The Town's SPCC Plan describes oil storage at the facility and appropriate procedures, methods and equipment used to control and document oil spills and to prevent spills from reaching surface waters. In addition, the Plan includes recommendations to upgrade the facility in areas where existing oil spill prevention, control and countermeasures are inadequate. The Town's future MSGP compliance program, specifically a stormwater pollution prevention plan, is anticipated to incorporate components of the SPCC Plan. See Appendix 6F of the 2008 Annual NPDES Report for an outline of the SPCC Plan.

In year 12, The DPW renewed its SPCC plan. The Town is currently working to create a stormwater team that would include representatives from each of the municipal buildings.

See Appendix 6F

Best Management Practice Assessment / Proposed Change

The DPW operations procedures have been implemented at the new DPW facility. During the summer/fall of 2008, a new salt/sand storage structure was built at the new facility. All winter operations have since moved to the new facility. The DPW received an updated SPCC plan and environmental audit from Tighe & Bond in Year 5. See Appendix 6F of the 2008 Annual NPDES for documentation.

Future Activities

Modify the SPCC plan as needed pending the soon to be updated General Permit Requirements. The Town is looking into a possible grant funding for the installation of rain gardens and similar stormwater treatments on Town owned parcels. Rain gardens have already been installed in the School Street Park and are proposed for phase 2 of that project which is currently under construction.

6G Used Oil RecyclingOriginal BMP Description:

The Town currently collects used oil for proper disposal and recycling. The Town will continue to offer Used Oil Recycling year-round in Years 1 through 5. The DPW has the responsibility for this BMP.

Year 13 Activities

The town continues to provide the residents a local drop off location for used motor oil.

In 2015, 3,150 gallons of used motor oil were collected at the DPW Town Garage.

Best Management Practice Assessment / Proposed Change

No changes at this time.

Possible Future Activities

The town will continue to provide residents with a drop off location for used motor oil and car batteries at no charge.

6H Hazardous Waste CollectionOriginal BMP Description:

The Town will continue its annual Hazardous Waste Collection Day subject to funding. Every fall, the Town publicizes the collection day through newspaper ads and radio and television ads. The DPW will continue to have the responsibility for this BMP, which will be utilized in Years 1 thru 5.

Year 12 Activities

The Town hosted its annual Household Hazardous Waste Collection day in the fall of 2015. 184 vehicles dropped off Hazardous Waste, rather than disposing of it in the trash or catch basins. In addition to the annual HHW Day, the DPW continues to collect used car batteries, used motor oil and mercury bearing waste by appointment.

The town purchased three safety storage cabinets in 2012. The cabinets continue to be used to properly store illegally dumped items dropped along the roadsides as well as chemicals from residents moving prior to HHW Day.

Best Management Practice Assessment / Proposed Change

The town has met it's obligation to provide a HHW event and alternative disposal options to residents.

Possible Future Activities

The town will continue to provide proper disposal options to the residents as funding is available.

MINIMUM CONTROL BEST MANAGEMENT PRACTICES**7A TMDL for the Connecticut River**Original BMP Description:

According to the Massachusetts Year 2002 Integrated List of Waters, Connecticut River is designated as Category 5 “Waters requiring a TMDL”. The targeted pollutants are priority organics, pathogens, and suspended solids. Sources of priority organics may include but are not limited to: road surfaces, inadequate fueling areas or practices, illegal dumping. Sources of pathogens may include but are not limited to: pet waste, winter road maintenance materials, illicit sewer discharges, and failing septic systems. Sources of the suspended solids may include but are not limited to: lawn care products, litter, winter road maintenance materials, erosion from construction activities, and illicit sewer discharges. The Stormwater Management Program includes many BMPs to address reduction of contaminants from these sources under all Six Minimum Control categories. The City will implement these BMPs under the responsible department and timeframes as previously described.

Year 13 Activities

All previously described Best Management Practices address the TMDL of the Connecticut River.

Best Management Practice Assessment / Proposed Change

The Connecticut River has many contributing factors to cause the need for the TMDL designation. Agawam, along with other community's efforts within Massachusetts, will contribute to improvements in this major river's water quality. Agawam participates in the Connecticut River Clean-up Committee's Stormwater subcommittee and the Westfield River Watershed Steering Committee.

Possible Future Activities

The future activities within the Town of Agawam's Stormwater Management Plan will be implemented as funding and other resources will allow.

Appendix

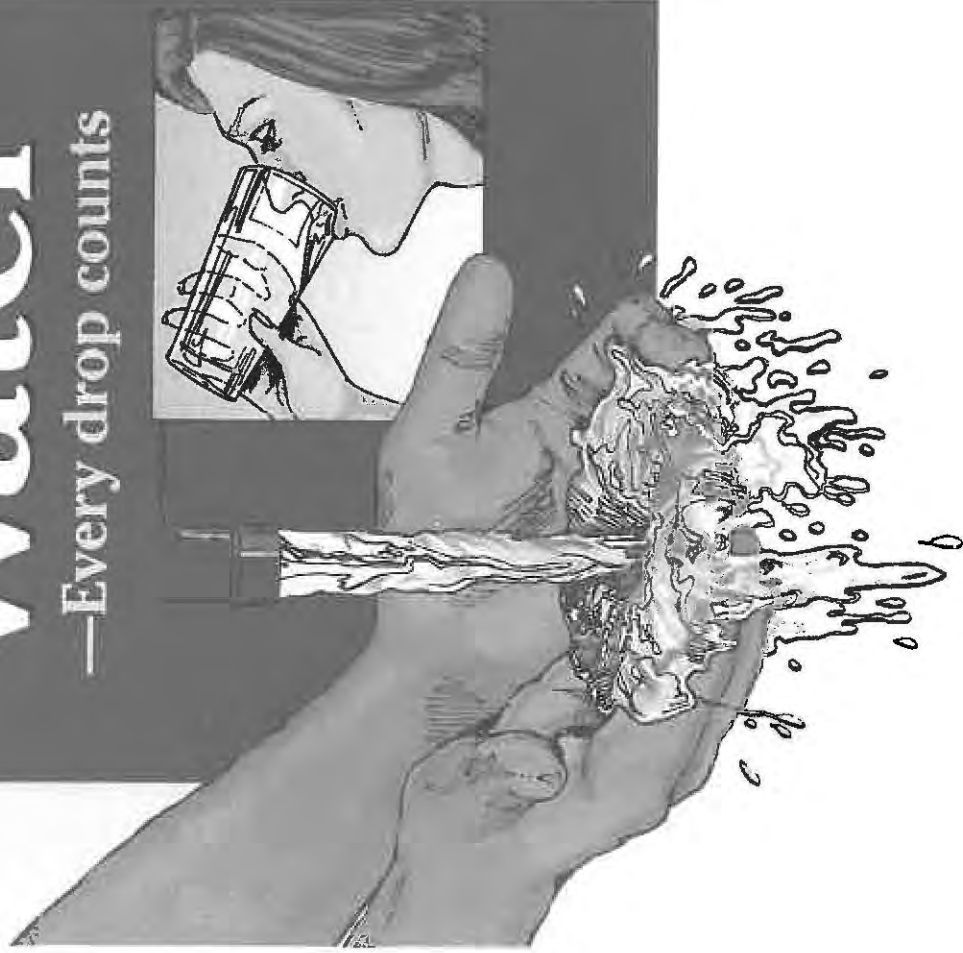
Appendix 1A

Year 13

Educational Displays

Water

—Every drop counts

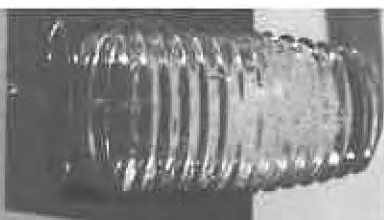


Ground Water

—Protecting our supplies



13 Ways to Conserve Water at Home



Appendix 1B

Year 13

Classroom Education

EnviroScape® Watershed/Nonpoint Source Model



Watershed/Nonpoint Source is the first in the EnviroScape series. We all live in a watershed with water pollution comes from many sources. Nonpoint sources contribute a great deal to the pollution in our water bodies. The combined affect of pollution from many small sources can have a real impact on the quality of our shared water resources.

EnviroScape® Watershed/Nonpoint Source tracks pollution from point and nonpoint sources, including

Nonpoint Sources	Point Sources
▶ residential areas	▶ factory
▶ storm water	▶ sewage treatment plant
▶ forestry areas	▶ storm drains
▶ transportation	
▶ recreation	
▶ agriculture and construction	

The Watershed/Nonpoint Source unit includes: Nonpoint source landscape top (topographical map) with storm drain pipe, clear base, houses, barn, factory, drain pipe, treatment plant, trees, golf flags, cows, cars and best management practices such as buffer strips, clay berms, manure container, soil, oils and chemicals (cocoa, drink mixes and oil mix), bridges, watercatcher, rainmaker, water plug, and User's Guide.

Stormwater pollution and runoff are visually apparent when rain falling over the landscape top carries soil (cocoa), chemicals (colored drink mixes) and oil (cocoa and water mixture) through a watershed to a body of water. Stormwater runoff and storm drain function are also addressed.

Best management practices include felt buffer strips as vegetation, clay to create berms and other methods to show conservation and water pollution prevention measures at work. The model shows nonpoint source pollution and the steps everyone can take to help prevent environmental contamination.

EnviroScape Watershed/Nonpoint Source also teaches an overall watershed concept. Two waterways flow into a larger water body, which is representative of a lake, river, bay, or ocean. The unit comes complete with a kit containing everything you need to demonstrate the movement of water through a watershed and the pollution that runoff may cause. **Ask us how you can tailor the EnviroScape to fit in your community.**

Tracy DeMaio

From: Tracy DeMaio
Sent: Tuesday, September 15, 2015 9:33 AM
To: 'Noelle Colbert'; Robinson Park Elementary; Clifford Granger Elementary; James Clark Elementary
Cc: Kristi Rosati (ktrosati@yahoo.com); Tracey Chrisanthopoulos (TChrisanthopoulos@agawampublicschools.org); cgoulet@agawampublicschools.org; rduffus@agawampublicschools.org; William Sapelli (wsapelli@agawampublicschools.org)
Subject: Enviroscope Watershed Model
Attachments: Watershed Model.pdf

Importance: High

Tracking:	Recipient	Read
	'Noelle Colbert'	
	Robinson Park Elementary	Read: 9/15/2015 9:33 AM
	Clifford Granger Elementary	
	James Clark Elementary	
	Kristi Rosati (ktrosati@yahoo.com)	
	Tracey Chrisanthopoulos (TChrisanthopoulos@agawampublicschools.org)	
	cgoulet@agawampublicschools.org	
	rduffus@agawampublicschools.org	
	William Sapelli (wsapelli@agawampublicschools.org)	

Good Morning!

I wanted to notify you that the DPW has an Enviroscope Watershed Model available for use at the Elementary Schools. I am recommending that it be used with the **fourth grade students** as to prepare them for a visit they will have from the Watershed On Wheels in fifth grade.

The Watershed Model is 30" x 25" x 6" and comes in a light weight carrying case. The kit contains everything teachers will need to demonstrate the movement of water through a watershed and the pollution that runoff may cause.

I've attached a flyer regarding the Watershed model or teachers may visit the Enviroscapes website at <http://www.enviroscapes.com/>

Please forward the information to your fourth grade teachers and if any are interested, I will deliver the model for their use on a two week loan per classroom. If you have any questions, please feel free to contact me.

Tracy

Tracy M. DeMaio
Environmental Project Coordinator
Agawam Department of Public Works
413-821-0624

Appendix 1D

Year 13

Community Website



Phelps School

How Do I...

[Departments](#) > [Public Works](#) > [Stormwater](#) > Stormwater

DEPARTMENTS

[Town Staff](#)

[Assessor](#)

[Auditor](#)

[Building Maintenance](#)

[Clerk](#)

[COA / Senior Center](#)

[Engineering](#)

[Health / School Nursing](#)

[Inspection Services](#)

[IT Department](#)

[Law Department](#)

[Library](#)

[Municipal Golf Course](#)

Stormwater

What is stormwater?

- Pure rain or snowfall plus anything it carries along with it.
- As stormwater flows, it picks up and carries away natural and human-made pollutants to storm drains.
- Unlike sewage, stormwater is not treated.
- Stormwater flows directly from our streets to waterways, inhabited by fish and other aquatic animals and plants.

[Choose a Category] ▼

- [Stormwater Permit Application](#)

✱ [2014 Stormwater Report](#) ✱

Additional Links

- ✦ [Healthy Habits](#)
- ✦ [Lawn and Garden](#)
- ✦ [Septic System](#)
- ✦ [Stormwater Pollutants](#)
- ✦ [Rain Garden](#)
- ✦ [Massachusetts Department of Environmental Protection - Stormwater](#)
- ✦ [US Environmental Protection Agency - Stormwater](#)
- ✦ [CT River Watershed Council](#)
- ✦ [Waubesa River Watershed Association](#)

Agawam Events

9/12/2015 - Household Hazardous Waste Collection

Saturday, September 12, 2015

**Agawam Department of Public Works, 1000 Suffield
Street**

9am - 12pm - BY APPOINTMENT ONLY!

Residents may drop off Household Hazardous Waste by appointment only. Appointments are required to help with traffic control and limit the wait time for residents. PLEASE make your appointment prior to attending the event. The Department of Public Works will begin taking appointments during the month of August.

What items are Hazardous Waste?

If you are a resident of Agawam and unable to attend the scheduled event on Saturday, September 12th, please contact the DPW at 821-0624 to inquire about drop-off options at one of the following surrounding community events:

5/16	Northampton - Smith Vocational High School
8/8	Belchertown - Highway Garage
9/12	Wilbraham - Wilbraham Regional High School
9/20	Amherst / Amherst - Transfer Station
9/26	South Hadley / Granby - 10 Industrial Drive
10/3	Greenfield - Greenfield Community College
10/3	Chicopee - DPW Baskin Drive
10/24	West Springfield - Town Yard
10/31	Westhampton - Department of Public Works



Appendix 1E

Year 13

Newspaper Press Releases

Register for Sept. 12 hazardous waste collection

The Agawam Department of Public Works will hold its annual Household Hazardous Waste Collection Day from 9 a.m. to noon Saturday, Sept. 12, at the DPW Annex, 1000 Suffield St.

This program offers residents a safe, economical way to dispose of household items that are flammable, reactive, corrosive or toxic. Solvents, pesticides, caustic

cleaners and oil-based paints are some examples of the different types of items that will be accepted.

For a complete list of acceptable materials, visit www.agawam.ma.us. This event is free to Agawam residents, but registration in advance is required. Appointments may be scheduled by calling the DPW at 413-821-0600, ext. 0, or 413-821-0624.

2016

Health, Police depts. can help with disposal of medical waste

The Agawam Health Department would like to remind all residents that home sharps, as well as unopened packages of hypodermic needles and lancets, should not be disposed of in solid municipal waste, including household waste, and will be collected and disposed of in accordance with state regulations. Residents are not allowed to dispose of unopened, or used syringes, needles and lancets in the household trash, regardless if it is confined to a puncture proof container or not.

With this in mind, the Health Department is pleased to offer a safe alternative for disposing of used needles and syringes. Residents may obtain a medically approved sharp container for free for a limited time, including disposal upon return of the filled container to the Agawam Health Department at Town Hall, 36 Main St., Agawam. Residents may also purchase their own medical sharps container at any medical supply store and return it filled to Agawam Health Department for disposal free of charge. Coffee cans, laundry detergent containers, milk bottles and soda bottles are not approved containers and will not be accepted.

Do not dispose of used needles, syringes, lancets, epipens, or any auto injectors in household trash or recycle bins.

The Agawam Police Department has a kiosk in its lobby at 681 Springfield St., Feeding Hills, for safe disposal of household medications (pills only). The pills can be combined together in one bag if it more convenient; they do not need to be in the pharmacy bottle for disposal.

Liquid medications will not be accepted in the kiosk. They can be combined with coffee grounds or kitty litter and disposed of in the regular trash, in addition to ointments, lotions and inhalers.

Chemo medications will not be accepted in the kiosk or household trash. Arrangement for disposal should be made with the treatment clinic.

Register for Sept. 12 hazardous waste collection

The Agawam Department of Public Works will hold its annual Household Hazardous Waste Collection Day from 9 a.m. to noon Saturday, Sept. 12, at the DPW Annex, 1000 Suffield St.

This program offers residents a safe, economical way to dispose of household items that are flammable, reactive, corrosive or toxic. Solvents, pesticides, caustic cleaners and oil-based paints are some examples of the different types of items that will be accepted.

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Aug 20, 2015

Volunteers sought for river cleanup next Saturday

Several local groups are looking for volunteers to participate in the Source to Sea Cleanup next weekend.

The 19th annual multi-state event, coordinated by the Connecticut River Watershed Council, will include local cleanup sites along the Connecticut and Westfield rivers, and at Pynchon Point in Agawam where they meet.

Two groups will gather at Pynchon Point — off River Road near the Agawam Rotary — on the morning of Saturday, Sept. 26. The Agawam Rotary Club will begin its cleanup at 8 a.m. in the Pynchon Point parking lot. For more information, email chaffee.sara@gmail.com.

The Westfield River Watershed Association meets at 9 a.m. for an orientation. The group will provide gloves and trash bags, and arrange for the pickup of trash and debris recovered at each site. For more information, contact Sheryl Becker at 413-374-1921 or sherlearth69@gmail.com, or Bill Rose at 413-786-0195 or brose1564@gmail.com.

Volunteers are encouraged to contact group leaders as early as possible so they can plan ahead for the size of the group they will be leading. Some groups may have tasks, such as finding supplies, that can be done before the cleanup day.

Several other groups are looking for volunteers in neighboring towns:

- Friends of the Windsor Locks Canal, 9 a.m. on Saturday at the state park trailhead on Canal Road in Suffield; contact Karen Carlson, 860-668-0183 or carlka@sbcglobal.net.

- Resource Revolution, 8 a.m. on Saturday at the Pioneer Valley Riverfront Club in North Riverfront Park, Springfield; contact Mickey Nowak at 413-246-3915 or mickey.nowak@unitedwater.com.



The Source to Sea Cleanup next weekend will clean up litter and dumping sites along the waterways of the Connecticut River basin, such as this tire dump in Greenfield. SUBMITTED PHOTO

nowak@unitedwater.com.

- Scantic River Watershed Association, 9 a.m. on Saturday at the Donald Barnes Boat Launch, Enfield; contact Betty Slanetz at 860-212-8000 or slanetzbb@att.net.

- Westfield River Watershed Association at 9 a.m. on Saturday at Meadow Street near the bridge in Westfield; contact Mark Damon at 413-572-9991 or markjdamon@gmail.com.

Additionally, according to the Connecticut River Watershed Association, watershed residents are encouraged to participate by reporting a trash site in need of cleaning, or organizing and registering their own cleanup groups. For more information or to register a group, visit www.ctriver.org/cleanup.

"If your group wants to get involved but needs a cleanup site, contact us to learn about reported trash sites that may be near you," said Connecticut River Watershed Council cleanup coordinator Alicea Charamut. She can be reached at cleanup@ctriver.org or 860-704-0057.

Last year, more than 2,000 volunteers along the 410-mile Connecticut River basin hauled more than 47 tons of trash from riverbanks and waterways in Massachusetts, Connecticut, New Hampshire and Vermont. Volunteers use human power and sometimes heavy equipment to pull out everything from recyclables, fishing equipment and food waste to tires, televisions, refrigerators and junk cars. To date, volunteers have prevented more than 897 tons of trash from polluting the river and its tributaries.

For more information about the watershed council, visit www.ctriver.org.

Agawam Catalyst
Mid - November 2015
Your online hometown News

Kathy Shepard, Editor
413-786-3672

agawamcatalyst@gmail.com
<http://tinyurl.com/agawamcatalyst>



A Grand Opening/Ribbon Cutting Ceremony took place on Friday, November 6, 2015 @ 12:30 p.m. at Agawam Cinemas Movie Theater located in: Southgate Shopping Plaza at 866 Suffield St, Agawam, MA The public was invited. The first movie show times began after the ribbon cutting, with **The Peanuts Movie** and **Spectre**. A notice on Facebook said, "We have the unique privilege of having our ribbon cut by Shari Baker, who is the daughter of Vic Baker. Vic Baker was the man who built and operated

this location's original Jerry Lewis Cinema. We thank all of our supporters and wonderful members of the community for being patient with the renovation and we look forward to celebrating and making many more memories with all of you!" (Kim Wheeler, holding the scissors, bought the Cinemas and with help from the community was able to get the cinemas up to industry standard in about one year.)



Westfield River Watershed Association River Fall cleanup -picture taken at Pynchon Point-Many volunteers made this cleanup a success. Courtesy photo.

MA Says No to Farm Animal Cruelty

Thanks to the hard work of ASPCA volunteers, advocates and our partners, we've blasted past our target of 95,000 signatures to help end the use of cruel, unnecessary animal confinement systems on the Commonwealth's farms.

CONNECTICUT RIVER

Shore is clean now

Volunteers pick up along riverbank

By Gregory A. Scibelli
gscibelli@turley.com

Almost 20 bags and some accompanying debris laid in the Pynchon Point parking lot at Saturday noon, under the South End Bridge on Agawam's side of the Connecticut River.

Earlier that day, the trash in those bags had been scattered around the woods, sidewalks and shores of Agawam's riverbank, before more than 20 volunteers cleaned it up.

The volunteers were organized by members of the Westfield River Watershed Association. Because of high water levels, the watershed association focused most of its efforts on the Westfield River in Westfield this year, though a smaller group worked on projects in Agawam.

"The lower banks are constantly littered on by people who use the area," said Bill Rose, a member of the watershed association. "It can be really disgusting. We organize these cleanups twice a year to try and keep this area as clean as we can."

Many of the volunteers who helped out had to overcome different conditions. The area along the riverbank is mushy and filled with trees and branches and other restrictions blocking the way.

The group worked from Pynchon Point south only. They were not able to move northwest along the Westfield River because the water was too high, wa-

RIVER | PAGE 9

Above: Frank Scutt cleans up the woods and Connecticut River shore near Pynchon Point on April 25. TURLEY PUBLICATIONS PHOTOS BY GREGORY A. SCIBELLI

Inset: Bill Rose throws another bag into the pile of trash collected in just a three hour period along the Connecticut River by members of the Westfield River Watershed Association.

RIVER ■ from page 1

tershed association member Sheryl Becker said.

Rose said the association will continue advocate for the environment along the river. It asks people who travel through area or travel in their cars by the river to not leave trash or throw it out the windows. Trash thrown out the windows of cars can be picked up by the wind and end up along the shores and even in the river.

For people using the trails and riverwalk, Rose has a simple philosophy. "You carry out what you carry in," said Rose. "If you're going to walk on the trails, bring a bag for your trash and carry it out with you."



Volunteers from the Westfield River Watershed Association begin their cleanup efforts early Saturday morning in Agawam. TURLEY PUBLICATIONS PHOTOS BY GREGORY A. SCIBELLI



Rose and Becker both praised the volunteers that helped out in this year's cleanup, including several teenagers from the West Springfield Baptist Church Youth Group. The group made the cleanup part of its regular community service and helped contributed several more bags of trash.

Another volunteer, Larry Gould, lives in the area and simply wanted to keep the area clean.

"I have been coming for the last few years," said Gould. "I just can't stand to see the area looking like this with all the trash. The scratch tickets, cigarette butts, it's disgusting."

Lane Construction, an area contractor, helped provide bags and other equipment for the cleanup.



Tharen Ring, a volunteer from the West Springfield Baptist Church Youth Group, holds up another bag of trash he collected along the River Walk on River Road in Agawam

Town cleanup day this weekend

The Department of Public Works has declared Saturday, May 2, to be "Agawam Clean" day in the town, and asking citizens to organize groups to tackle litter in any section of town where they find it — whether on streets, sidewalks, schoolyards, fields, parks, parking lots or neglected property.

Litter busters should call Tracy DeMaio at the DPW at 413-821-0624 and claim the spot.

Groups can clean their territory at any time, although the DPW is suggesting 9 a.m. to noon on Saturday. Groups are invited to take "before and after" photos and share them with the DPW. Cleaning teams should bag the litter they pick up and include it in their members' weekly curbside trash pickups. No bulk items or construction waste should be included in trash bags to be picked up. DeMaio said any group finding such items should contact the DPW.

DeMaio said she hopes this will become an annual event.

PLANNER ■ from page 1

and familiarity with the town and current projects to help him acclimate to his new roles, which will also include community and economic development.

He believes the Walnut Street Extension project is in a good place, and simply will require his project management going forward. He also said former Town Planner Deborah Dachos is available at times for consulting.

Strange is a graduate of Syracuse University, majoring in business. He later received his law degree from Western New England University, and is a member of the Massachusetts bar.

He started his career in public relations and marketing. After meeting his wife and moving to Longmeadow, he decided to pursue law because he believed law and business were intertwined.

He spent time working for the Massa-

issues during that time.

"There is a lot of legal work that goes into planning," said Strange. "So I worked with her a lot on different issues."

Cohen said Strange's unique background made him the unanimous choice of the search committee, which was appointed by the mayor. Cohen said seven candidates were selected for interviews, and four received second interviews.

"I was really impressed with his knowledge," said Cohen. "He did a lot of research about Agawam and its projects prior to coming to interview. His legal experience will also be very beneficial to our town."

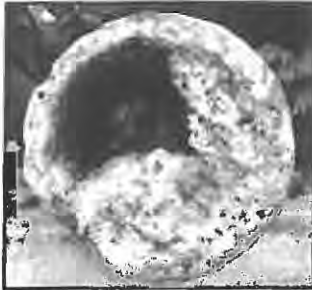
Strange has already been communicating with the Pioneer Valley Planning Commission and numerous departments in Town Hall.

He starts with a salary of \$72,000 and is employed at will as an appointee of the mayor. He will be a part of the administra-

Help The Agawam Department of Public Works Stop the "FOG"!

WHAT IS "FOG" ?

FOG is fats, oils and grease that can build up in sewer lines. When grease is washed down the sink or toilet it coats and sticks to the inside of sewer pipes. FOG is a major cause of sanitary sewer clogs and overflows.



Grease clog in sewer pipe.

WHERE DOES "FOG" COME FROM?

- ◆ Meat Fats (bacon, sausage)
- ◆ Lard
- ◆ Cooking Oil
- ◆ Butter or Margarine
- ◆ Food scraps
- ◆ Baking products
- ◆ Milk, ice cream, yogurt, sour cream
- ◆ Cream based sauces
- ◆ Salad dressing, cheeses, mayonnaise

Keep these foods out of all drains!

WHY IS "FOG" A PROBLEM?

Sewer pipes can become clogged by FOG and cause backups into basements, roadways and waterways and water bodies. Sewer backups create health hazards, can result in expensive property damage, and threaten the environment.



Sewer backup in residential basement.

Best Management Practices for Home Owners

- ◆ Never pour grease or oil down sinks, drains or toilets.
- ◆ Dispose of cooled cooking fats, oils and grease into a waxed food container such as a milk carton or container with a lid and dispose of it in the garbage.
- ◆ Use baskets or strainers in sinks to catch food scraps. Empty scraps into the trash can.
- ◆ Scrape food scraps from dishes and pans into the trash can for disposal, before washing.
- ◆ **DO NOT** use the toilet for disposing of: food scraps, sanitary items, rags, cloths, diapers, paper towels, napkins, face tissues, cat litter, "Flushable" wipes, medicines.

Did you know?

Liquid dish detergents that claim to dissolve grease may actually pass grease down the sewer line, which could cause a sewer backup. It is important to scrape greasy foods off all dishes.



Best Management Practices for Food Service Establishments

Agawam Town Code §175-29 requires Grease Interceptors (Grease Traps) for all facilities that have on-site food preparation/processing/handling/service or have other related activities.

- ◆ Train Kitchen Staff on methods to reduce the amount of grease.
- ◆ Post "No Grease in Drain" Signs as a reminder to employees.
- ◆ Dry Wipe Pots, Pans, and Dishware prior to dishwashing.
- ◆ DO NOT dispose of waste food through a garbage disposal.
- ◆ Inspect and clean Grease Interceptor ROUTINELY and keep records.



- ◆ Cover floor and sink drains with strainers to catch food scraps. Empty scraps into the trash can.
- ◆ Clean up grease spills with paper towels and disposal of the towels in the trash.



Working Together We Can Cease the Grease!



If you have any questions please call the Agawam DPW at 413-821-0600 www.agawam.ma.us

Created in partnership with the Springfield Water and Sewer Commission www.waterandsewer.org

Appendix 1F

Year 13

Informational Pamphlets

Appendix 2A

Year 13

Adopt-a-Road



VOLUNTEERS WANTED!

WESTFIELD RIVER CLEANUP

**Sat., September 26, 2015
(Westfield and Agawam)**

9:00 a.m. to 1:00 p.m.

***Sponsored by Westfield River
Watershed Association (www.westfieldriver.org)***

Please meet no later than 9:00 a.m. at one of two meeting sites for orientation and cleanup site assignments. WRWA will provide gloves and supplies. Wear clothes that can get dirty and wet.

- **In Westfield, meet at the Westfield Gas and Electric substation on Meadow St.**



In Agawam, meet at Pyncheon Point at the South End Bridge Circle, River Road.

For more information, contact Mark Damon for Westfield sites at (413) 572-9991 or mjdamon@verizon.net. For the Agawam site, contact Bill Rose at (413) 786-0195 or brose1564@gmail.com.

The Department of Public Works had declared May 2nd to be "Agawam Clean" day in town.

Residents and businesses were asked to organize groups to tackle litter clean up (streets, sidewalks, schoolyards, athletic fields, parks or parking lots) throughout town.

The DPW would like to thank the following groups for their time in helping keep Agawam clean!

• **Group: Girl Scout Daisy Troop #64542**

Clean-up location: Granger Playground and athletic field area / Annie Sullivan Memorial, Feeding Hills

Clean-up amount: 9 bags of litter!

Before and After Photos:

• Group: Helga's Bears
Location: Spill 20 - Conceder Brook?
6 Bags

• Group: J. Coughlin
Location: Spill 20 / Athletic Field
Clean up amount: thousands of
cigarette butts





Appendix 2B

Year 13

Attitude Surveys

District Local Technical Assistance FY15
Connecticut River Stormwater Committee
Stormwater Education and Outreach Program Development
for New MS4 Permit - Bacteria Messaging

Members of the Connecticut River Stormwater Committee have requested assistance from the Pioneer Valley Planning Commission to develop an integrated and more robust stormwater education program that will meet forthcoming requirements under the federal MS4 stormwater permit. The draft permit issued by U.S. EPA this past fall with a reported finalization date of early 2016, includes significant new requirements for outreach and education to the 4 target audiences: residents, businesses/commercial entities/institutions, developers, and industrial facility owners and managers. The new requirements include messages tied to specific water quality issues (bacteria, nitrogen/phosphorous, total suspended solids) and development of metrics to measure effectiveness of outreach and education messaging.

Scope of Work

PVPC will work on the following scope of work:

- 1) Define goals and objectives relative to stormwater permit, other regulatory requirements, and local needs (*PVPC 5 hours*)
 - Draft goals and objectives
 - Review with stormwater committee members and refine
- 2) Identify and analyze target audience for bacteria goals defined in 1 above (*PVPC 40 hours*)
 - Ascertain what information need about the target audience
 - Conduct research to get basic information on target audience (demographics, etc.)
 - Identify what additional information need from survey for target audience (awareness of issue, current behavior, attitudes and beliefs, where getting information and what sources trust most, what care about) – be sure to include elements that can serve as baseline for comparison as move forward with education and outreach program
 - Research stormwater education surveys conducted to date (EPA nonpoint source toolbox and other sources) and determine whether anything from which can draw
 - Include within surveys some testing about effectiveness of stormwater messaging on bacteria to date (how many have heard of ... and do they recall the message?)
 - Conduct target audience survey
 - Analyze responses

Drivers for CT River Stormwater Committee education and outreach campaign

Regulatory

EPA MS4 stormwater permit

CT River and many other local rivers, streams, and lakes are not meeting water quality standards for bacteria, phosphorous, and total suspended solids. Long Island Sound is not meeting water quality standards for nitrogen.

Sustainable water management initiative

Many local waterways are impacted due to groundwater withdrawals and communities with permitted wells must demonstrate groundwater recharge activity as part of mitigation

Nutrient management regulations – Mass Department of Agriculture has forthcoming regulations that restrict use of phosphorous in the region
need to determine status from Dept. of Ag and also why only phosphorous and not nitrogen for CT River communities

Quality of life

Improved water quality in local surface waters (for drinking, swimming, boating)

Improved human health

Improved water quality in distant surface waters – Long Island Sound TMDL for nitrogen

Reduce and avoid flooding (soak up the rain component)

Development pressure?

Goals and objectives of program

Goal 1: To reduce bacterial contributions to CT River and other local waters from stormwater sources

1. Create awareness
2. Provide information
3. Promote action in target audience

Goal 2: Reduce nitrogen and phosphorous contributions to CT River from stormwater sources

1. Create awareness
2. Provide information
3. Promote action in target audience

Goal 3: To reduce sediment loading to CT River and other local waters from stormwater sources

1. Create awareness
2. Provide information
3. Promote action in target audience

Connecticut River Stormwater Committee - Survey for Dog Owners

Take this survey and receive a coupon for \$5 off from Dave's Soda and Pet City. This survey should take no more than 5 minutes to complete. Your responses and those of other dog owners are valuable to us in finding ways to improve water quality in our local rivers, streams, lakes and ponds.

Thank you very much for your time,
*The Connecticut River Stormwater Committee **

1. What town do you live in? _____

2. Do you remember seeing or hearing about the message shown at right?

(please circle one)

a. Yes b. No



2A. If yes, did this message change the way you think about your pet's waste?

(please circle one)

a. A major change b. Somewhat of a change c. Not much of a change d. No change at all e. Not sure

Please explain: _____

3. The Connecticut River and numerous local streams are polluted with bacteria.

To what degree do you think pet waste contributes to this problem? (please circle one)

a. A great deal b. A moderate amount c. A little d. Not at all e. Not sure

4. How do you dispose of your dog's waste in your yard at home? (please circle one)

a. Pick it up and flush it down the toilet b. Pick it up and put it in the trash c. Throw it in the bushes or woods d. Nothing

Other (please describe): _____

* The Connecticut River Stormwater Committee is a collaborative of 13 municipalities working to meet U.S. EPA Stormwater Permit requirements with the help of the Pioneer Valley Planning Commission. Municipalities include: Agawam, Chicopee, Easthampton, Granby, Holyoke, Longmeadow, Ludlow, Northampton, South Hadley, Southwick, Springfield, West Springfield, and Westfield.

4A. If you do not pick up your dog's waste and instead throw it into the bushes or do nothing, what is the reason? (please circle one)

- | | | | | | | |
|------------------|----------------------------|---------------------|---|-------------------------------|-------------------------------------|-------------------|
| a. Not concerned | b. Makes little difference | c. Too much trouble | d. My neighbors don't; so why should I? | e. It is a natural fertilizer | f. It is not sanitary to pick it up | g. Not applicable |
|------------------|----------------------------|---------------------|---|-------------------------------|-------------------------------------|-------------------|

Other (please describe): _____

4B. If you do pick up your dog's waste and flush it in the toilet or put it in the trash, what is the reason? (please circle one)

- | | | | | |
|-----------------|----------------------------|----------------------------|--------------------------|-------------------|
| a. It's the law | b. Concern for environment | c. Hygiene/ health reasons | d. Courtesy to neighbors | e. Not applicable |
|-----------------|----------------------------|----------------------------|--------------------------|-------------------|

Other (please describe): _____

4C. If you do pick up your dog's waste in your yard, which of the following best describes how often you pick up the waste? (please circle one)

- | | | | | | |
|----------|-----------|--------------------------|------------|---------------------------|-------------------|
| a. Daily | b. Weekly | c. Every couple of weeks | d. Monthly | e. Every couple of months | f. Not applicable |
|----------|-----------|--------------------------|------------|---------------------------|-------------------|

5. How do you dispose of your dog's waste when you are out walking around the neighborhood? (please circle one)

- | | | | | |
|---|--|--------------------------------|-------------------------|--|
| a. Pick it up and take it home to flush down toilet | b. Pick it up and take it home to put in trash | c. Put it down the storm drain | d. Leave it where it is | e. I don't walk my dog in the neighborhood |
|---|--|--------------------------------|-------------------------|--|

Other (please describe): _____

5A. If you do not pick up your dog's waste and take it home, what is the reason? (please circle one)

- | | | | | | | |
|------------------|----------------------------|---------------------|---|-------------------------------|-------------------------------------|-------------------|
| a. Not concerned | b. Makes little difference | c. Too much trouble | d. My neighbors don't; so why should I? | e. It is a natural fertilizer | f. It is not sanitary to pick it up | g. Not applicable |
|------------------|----------------------------|---------------------|---|-------------------------------|-------------------------------------|-------------------|

Other (please describe): _____

5B. If you do pick up your dog's waste and flush it in the toilet or put it in the trash, what is the reason? (please circle one)

- | | | | | |
|-----------------|----------------------------|----------------------------|--------------------------|-------------------|
| a. It's the law | b. Concern for environment | c. Hygiene/ health reasons | d. Courtesy to neighbors | e. Not applicable |
|-----------------|----------------------------|----------------------------|--------------------------|-------------------|

Other (please describe): _____

6. How do you dispose of your dog's waste when you are out walking in a public park or forest? (please circle one)

- | | | | | |
|-----------------------------------|--|---|-------------------------|---|
| a. Pick it up and put it in trash | b. Make use of pet waste disposal facility at park | c. Kick it off the trail into the woods | d. Leave it where it is | e. I don't walk my dog in a public park or forest |
|-----------------------------------|--|---|-------------------------|---|

Other (please describe): _____

6A. If you do not pick up your dog's waste or make use of the pet waste disposal facility at the park, what is the reason? (please circle one)

- | | | | | | | |
|------------------|----------------------------|---------------------|---|-------------------------------|-------------------------------------|-------------------|
| a. Not concerned | b. Makes little difference | c. Too much trouble | d. My neighbors don't; so why should I? | e. It is a natural fertilizer | f. It is not sanitary to pick it up | g. Not applicable |
|------------------|----------------------------|---------------------|---|-------------------------------|-------------------------------------|-------------------|

Other (please describe): _____

6B. If you do pick up your dog's waste and put it in the trash or make use of the pet waste disposal facility at the park, what is the reason? (please circle one)

- | | | | | |
|-----------------|----------------------------|----------------------------|--------------------------|-------------------|
| a. It's the law | b. Concern for environment | c. Hygiene/ health reasons | d. Courtesy to neighbors | e. Not applicable |
|-----------------|----------------------------|----------------------------|--------------------------|-------------------|

Other (please describe): _____

7. What would it take to make picking up your dog's waste easier for you? (please circle one)

- | | | |
|--------------------|---------------------|--------------------------|
| a. A monetary fine | b. More receptacles | c. Easier access to bags |
|--------------------|---------------------|--------------------------|

Other (please describe): _____

8. What type of housing do you live in? (please circle one)

- | | | |
|------------------|---------------|------------------------------------|
| a. Single family | b. 2-3 family | c. Apartment building/ condominium |
|------------------|---------------|------------------------------------|

9. Do you own or rent your home? (please circle one)

- | | |
|--------|---------|
| a. Own | b. Rent |
|--------|---------|

10. What age group are you in? (please circle one)

- | | | | | |
|-------------|-------------|-------------|-------------|----------------|
| a. Under 18 | b. 18 to 24 | c. 25 to 44 | d. 45 to 64 | e. 65 and over |
|-------------|-------------|-------------|-------------|----------------|

11. What is your gender? (please circle one)

- | | | |
|-----------|---------|----------|
| a. Female | b. Male | c. Other |
|-----------|---------|----------|

12. What is the highest level of education that you have completed? (please circle one)

- | | |
|---|--|
| a. No schooling completed, or less than 1 year | f. Associate's degree (including occupational or academic degrees) |
| b. Nursery, kindergarten, elementary (grades 1-8) | g. Bachelor's degree (BA, BS, AB, etc) |
| c. High school (grades 9-12, no degree) | h. Master's degree (MA, MS, MENG, MSW, etc) |
| d. High school graduate (or equivalent) | i. Professional school degree (MD, DDC, JD, etc) |
| e. Some college (1-4 years, no degree) | j. Doctorate degree (PhD, EdD, etc) |

Thank you for completing this survey!

Appendix 2D

Year 13

Watershed Committee

Connecticut River Stormwater Committee

Annual Report

April 1, 2015 to March 31, 2016

The Connecticut River Stormwater Committee

The Connecticut River Stormwater Committee is an intergovernmental compact of 13 municipalities organized to collaborate on education and outreach about stormwater impacts on the Connecticut River. Facilitated and staffed by the Pioneer Valley Planning Commission, committee work helps NPDES MS4 regulated member communities meet stormwater education and outreach permit requirements. Based on the Memorandum of Agreement under which the committee was formed in 2008, work also helps member communities with related bylaws/ordinances and other compliance measures. Member communities are shown in Table 1 below.

Table 1: Connecticut River Stormwater Committee Member Communities

Member Community	Committee Representatives and Departments
Agawam	Tracey DeMaio, Department of Public Works
Chicopee	Quinn Lonczak, Department of Public Works
Easthampton	Jim Gracia, Department of Public Works
Granby	Dave Derosiers, Highway Department
Holyoke	Yem Lip, Department of Public Works
Longmeadow	Mario Mazza, Department of Public Works
Ludlow	JT Gaucher, Department of Public Works
Northampton	Doug McDonald, Department of Public Works
Southwick	Randall Brown and Richard Grannells, Department of Public Works
South Hadley	Melissa LaBonte, Department of Public Works
Springfield	Kevin Chaffee, Planning/Conservation
West Springfield	Jim Lyons and Amanda Santaniello, Department of Public Works
Westfield	Casey Berube, Department of Public Works

Education and Outreach over the Past Year

The Stormwater Committee has been in a transition phase over the past year, continuing education and outreach under the requirements of the 2003 permit, but taking important steps in preparing for the forthcoming 2016 permit. In some cases the work of preparing for the forthcoming permit has served to provide education and outreach under the 2003 permit. This is especially the case with the pet waste practices survey that went to dog owners throughout Stormwater Committee communities (described in greater detail below).

The narrative below summarizes the work of the Connecticut River Stormwater Committee during the 2016 reporting year, which includes the following:

- Promoted Soak up the Rain stormwater education campaign
- Designed and constructed 3 demonstration rain gardens with 2 hands-on training events

- Defined program of effective messaging on bacteria/pet waste management
- Began to define program of effective messaging on nutrients
- Discontinued collaboration with Greenscapes Program
- Began retooling website education and outreach for the Pioneer Valley
- Led first phase of urban tree planting project in Chicopee, Holyoke, and Springfield
- Collaborated with Massachusetts state-wide coalition of stormwater coalitions

1. Promoted "Soak up the Rain" stormwater education campaign

The Connecticut River Stormwater Committee continued to develop and promote the "Pioneer Valley Soak up the Rain" education campaign (a local version of the EPA's New England campaign). The campaign, a call to action for property owners to reduce stormwater runoff through strategies that soak up the rain, involved two outreach efforts for the Connecticut River this year:

Pioneer Valley Soak up the Rain Website www.pvpc.org/soakuptherain/

The Stormwater Committee continues to maintain the Pioneer Valley Soak up the Rain website, which promotes a range of practices, including tree plantings, rain gardens, permeable pavements, dry wells, and green roofs. An occasional blog that includes photos and video provides examples from the region. Property owners throughout the Pioneer Valley are also invited to submit projects that they know of to feature on the website. A "Cool resources" heading provides connection to the latest information and a "resources" menu item links to a library of informational resources. In the past year, the website had 33,997 hits with 12,095 of these hits resulting in information requests being sent to the user. Links to this website are on all member community stormwater web pages.

Soak up the Rain Signs for rain gardens and porous paving projects

The Stormwater Committee produced 150 Soak up the Rain signs, including 100 for rain gardens and 50 for porous paving. Each of the signs has two different sides to them, giving property owners the option to display a message that connotes pride in having such a facility or a more involved message that describes what the system does. Signs have been distributed to Stormwater Committee communities for use at green infrastructure stormwater management projects in their jurisdictions and distributed also to residential and business property owners with high profile projects. The Committee will continue to distribute and display signs to further the message about soaking up the rain. *See sign design below.*



Rain garden signs – both sides



Porous paving signs – both sides

2. Designed and constructed 3 demonstration rain gardens with 2 hands-on training events

PVPC continued work with the Regenerative Design Group to design and construct demonstration rain gardens in Springfield. Two of the three projects to date have also included hands-on trainings to build regional know-how in the design and installation of rain gardens. Trainees then helped by volunteering to install plants in each of the rain gardens. Though rain garden facilities are located in Springfield, trainings have been advertised throughout the region to include all Stormwater Committee communities. The three rain garden projects to date have included:

<i>Rain garden address</i>	<i>Description of facility</i>	<i>Training details</i>
Birchland Avenue - residential demonstration project	370 square foot facility that has capacity to capture and soak up 1,384 gallons of rainfall from portion of rooftop.	NA
Springfield Museums - institutional demonstration project	2,900 square foot facility near Chestnut Street that has capacity to capture and soak up 11,800 gallons from half of large rooftop on Kilroy House	Training on May 16 drew 21 participants from several stormwater committee communities. Program began with overview on the nature of stormwater impacts on the Connecticut River and the advantages of capture and infiltration of flows using rain gardens to avert flooding and pollution, and promote improved aesthetics. The training then provided detail on site evaluation, design strategy, site preparation, and installation.
Gardening the Community - community demonstration project	1,000 square foot facility along Walnut and James Streets that has capacity to capture and soak	Training on October 3 drew 22 participants from various stormwater committee communities. Program

	up 3,740 gallons from paved parking lot - this is a new community garden site and the rain garden is part of the 1st phase of construction	· began with overview on the nature of stormwater impacts on the Connecticut River and the advantages of capture and infiltration of flows using rain gardens to avert flooding and pollution, and promote improved aesthetics. The training then provided detail on site evaluation, design strategy, site preparation, and installation.
--	--	--

Promoting these trainings entailed reaching out to: Western Massachusetts Master Gardener Association, Ecological Landscape Alliance, local public libraries, and notice placements with area newspapers and social media resources. The rain garden work is made possible through a settlement agreement reached by Clean Water Action. Based on the materials, contracts, and know-how developed through this work in Springfield, this project can be easily duplicated in other stormwater committee member communities for the future. PVPC has talked with both Clean Water Action and MassDEP about additional funding to replicate this program in other communities.



Residential demonstration rain garden in Springfield



Institutional demonstration rain garden at Springfield Museums



Community demonstration rain garden at Gardening the Community's new site at Walnut and James Streets in Springfield

3. Defined program of effective messaging on bacteria/pet waste management

Based on the 2014 draft Massachusetts Municipal Separate Storm Sewer Systems (MS4) permit, the 2016 final permit to be issued by the U.S. Environmental Protection Agency will require urbanized areas draining to the Connecticut River to provide an annual message to encourage proper management of pet waste. Specifically, communities with systems that discharge to bacteria or pathogen impaired waters without an EPA approved TMDL must supplement education and outreach programming, ...with an annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate. The permittee or its agents shall disseminate educational materials to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. Education materials shall describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for noncompliance.”¹

Messaging on proper management of pet waste is also required in the June/July time frame for communities where there are nitrogen and phosphorous impaired waters.

All 13 member communities of the Connecticut River Stormwater Committee will be subject to these requirements. As such, the Connecticut River Stormwater Committee has been interested in

¹ Note that where appropriate municipalities must also provide messaging around septic system maintenance to help address bacteria impairments.

understanding the effectiveness of past pet waste messaging and how to move forward with messaging under the new permit.

With funding from the Massachusetts Direct Local Technical Assistance Program and match from the Connecticut River Stormwater Committee budget, the Pioneer Valley Planning Commission worked with member communities to devise and distribute a survey to help provide direction on bacteria messaging.

With members of the Connecticut River Stormwater Committee, the Pioneer Valley Planning Commission (PVPC) developed a three-page survey containing 20 questions for dog owners. Survey design was informed by the principles of community based social marketing. As defined by McKenzie-Mohr and Smith, community based social marketing seeks to foster sustainable behavior by first identifying barriers and benefits to a sustainable behavior. They note that barriers may be “internal” to the individual, such as lack of knowledge regarding how to carry out an activity, or external, as in structural changes that need to be made in order for the behavior to be more convenient.² As such, understanding current practices, barriers, and perceptions were integral to the six overarching questions the Stormwater Committee sought to answer through the survey:

1. Has the most recent dog waste messaging through the distribution of posters under the Think Blue Connecticut River campaign reached pet owners and got them to think about their practices?
2. Do people understand the connection between pet waste and stormwater?
3. What are current practices in yards at home, while walking in neighborhood, and walking in public parks?
4. What are the barriers to best practices?
5. What would make best practices easier for dog owners?
6. What are important considerations for messaging about pet waste practices going forward?

PVPC distributed the *paper survey* through animal hospital waiting rooms (see image at right) in Stormwater Committee municipalities and through direct distribution of surveys at two dog parks in the region. A link to the *electronic version of the survey* went by e-mail to clients of Dave's Soda and Pet City and the Northampton Veterinary Clinic. Both survey distribution methods included an incentive – a \$5 coupon to Dave's Soda and Pet City, a local pet store, with franchises throughout the region, which kindly donated the coupons.

A total of 1,279 people completed the survey – 100 paper surveys were collected and 1,179 people completed the online survey. Of the completed surveys, 641 were completed by people who live in Connecticut River Stormwater Committee member communities. The messaging analysis and report focuses on the results from those specific communities.



Box with surveys left in animal hospitals in stormwater committee municipalities.

² From: *Fostering Sustainable Behavior: An Introduction to Community Based Social Marketing*, by Doug McKenzie-Mohr and William Smith, New Society Publishers, 1999.

Major Findings from Survey

Effectiveness of most recent messaging

The past poster message about dog waste in the Connecticut River Think Blue campaign reached 8.7% of survey respondents (59 people) in Connecticut River Stormwater Committee communities. What is interesting is that fully 134 people responded to the follow up question about whether the message got them to change their practices. This may indicate that by virtue of showing the message on the survey page itself, people took in the message and were prompted to consider their practices. Comments seem to reinforce this, with many writing, "I already pick up my pet's waste." Of those 134 survey respondents, nearly 40% indicated that the ad moved them to make "a major change" or "somewhat of a change in their practices." The remaining 60% indicated either "not much of a change," "no change at all," or "not sure." Based on written comments, it is likely that those in this later category are already picking up their dog's waste.

Connection between pet waste and stormwater

The survey indicates widespread awareness that pet waste can affect streams and rivers, with 74.5% recognizing that it contributes either "a great deal," "a moderate amount," or "a little." At the same time, 25.6% of respondents are "not sure" or "do not think" that pet waste is a contributing factor to water pollution.

Current practices (in yards at home, while walking in neighborhood, and walking in public parks or forests)

Regardless of whether they are in their yard with their dog, walking around the neighborhood, or walking at a public park or forest, the majority of respondents report picking up waste. In *their own yard or around the neighborhood*, 88% and 97% of respondents respectively report picking up after their dog, and put the waste in the trash (or for a few, flush it down the toilet).

When asked why they pick up after their dog *in their own yard*, the most common response is "hygiene/health reasons", followed by "courtesy to neighbors," "concern for environment," and "it's the law." When walking a dog *around the neighborhood* or at a *public park or forest*, "courtesy to neighbors" is the most common response, followed by "hygiene/health reasons."

For dog owners who do not pick up after their dog in their yard, a follow-up question on the survey asks to identify the reason why. Of the 125 people who answered this question, 63% stated that they think dog waste is a "natural fertilizer." A smaller number of people felt that it "makes little difference" (15.0%) or it is "too much trouble" (7.2%). From the comments made as part of this question, it is clear that many people who live in more rural locations feel it is not necessary to pick up waste, or that it is not going to contaminate a water supply.

When asked a similar question in regard to *walking their dog in the neighborhood*, 12 people indicated that they don't pick up their dog's waste. In a follow up question, however, 26 people gave reasons for not picking up the dog's waste. Of those, the most popular response was that "it is a natural fertilizer." For a few, "it is too much trouble," or they simply forgot a bag or some other means of picking it up. Lastly, *when at a public park or forest*, 51 people stated they don't pick up after their dog. Of these, the most common reason was that "it is a natural fertilizer," followed by "makes little difference." Some of the comments suggest that if people are far in the woods, they don't see the need to pick it up. Similarly, if they have forgotten a bag, or do not have a way to dispose of the waste (short of bringing it home with them), they are likely to leave it.

There are several themes that emerge from among those who do not pick up after their dog. First, a sizeable number of respondents think of pet waste as a "natural fertilizer" and that it doesn't have a significant effect on water quality. Second, many respondents commented that they live in a rural area, and infer that the waste will decompose along with other wild animals wastes. These results suggest that there is an opportunity to raise awareness about pet waste in the environment and help to change behavior. If dog owners better understand the potential water quality impacts of leaving feces on the ground, they may be more likely not leave it where it falls. As several respondents who do pick up waste referred to the law as a reason, regulations and fines may be another useful strategy for behavior change as well.

Why you do not pick up your dog's waste?

	In yard		In neighborhood		In public park/forest	
Not concerned	12.0%	15	3.9%	1	7.8%	4
Makes little difference	15.0%	19	0%	0	17.7%	9
Too much trouble	7.2%	9	23.0%	6	13.7%	7
My neighbors don't; so why should I?	1.0%	1	7.7%	2	5.9%	3
It is a natural fertilizer	63.2%	79	50.0%	13	52.9%	27
It is not sanitary to pick up	1.6%	2	15.4%	4	2.0%	1
Total	100.00%	125	100.00%	26	100.00%	51

Generally, people are more likely to pick up after their dog if they are not on their own property. They are also more concerned about "courtesy toward their neighbors" when they are walking in the neighborhood or in a park, and this prompts them to pick up after their dog.

Why do you pick up your dog's waste?

	In yard		In neighborhood		In public park/forest	
Courtesy to neighbors	28.1%	232	37.4%	367	32.0%	315
Hygiene/health reasons	39.8%	329	30.3%	297	30.0%	294
Concern for the environment	22.3%	184	20.0%	197	24.0%	236
It's the law	9.8%	81	12.3%	121	14.0%	139
Total	100.00%	826	100.00%	982	100.00%	984

Barriers to best practices

Within this survey, responses indicate widespread understanding that pet waste should not be left on the ground, and that there is a responsibility as a pet owner to pick up after dogs. Some comments, however, indicate that despite good behavior reported by the survey respondents, there is a problem with "others" not picking up dog waste.

"It's already quite easy. Wish more people thought this way. It's my worst pet peeve to see dog waste on the ground."

"It's very easy to pick up my dog's poop. There should be no reason why people don't do this. Those that don't are just plain LAZY."

Public works and highway officials on the Connecticut River Stormwater Committee confirm that improper pet waste disposal practices are still a big problem in their communities.

Barriers to best practices evident in comments from survey respondents are:

- the need for greater understanding that pet waste doesn't stay where it falls – that water can carry it (or pieces of it) quite a distance so that it contaminates nearby waterbodies
- the need for greater understanding that pet waste is not a "natural fertilizer"
- lack of receptacles for easy disposal of waste
- winter months when fewer receptacles are out or it is just more difficult to access feces to pick them up
- forgetting bags at home

Making it easier for dog owners to do the right thing

To the question "What would it take to make picking up your dog's waste easier for you?" many respondents gave more than one response and also provided comments. Responses were as follows:

More receptacles	422 responses
Easier access to bags	286 responses
Monetary fine	17 responses

Seventy six of the respondents also provided comments under "other," indicating that they already pick up after their dog, or that it's the right and responsible things to do. A few commented that knowing it's a potential pollutant is a motivator. One mentioned more posted signs and making it an enforceable law and another said a compost facility so that the waste does not end up at a landfill.

Messaging Going Forward

For behavior change, community based social marketing practitioners have identified some important tools. These include gaining commitments from individuals to develop community norms that encourage people to behave more sustainably. Direct personal contact is a key technique as the research indicates that people are most likely to change some behaviors in response to direct appeals or social support from others. (McKenzie-Mohr and Smith) These are important guidelines in thinking about messaging going forward.

Discussion and key considerations

Most survey respondents report that they pick up their dog's waste. Strong motivators cited by respondents to picking up dog waste—including health/hygiene reasons and courtesy to neighbors—indicate that campaigns over the years, whether people acknowledge their impact or not, seem to have "normalized" the practice of carrying waste disposal bags, and picking up and disposing of dog waste. The availability of products, including dog waste scoops and the waste bag totes that clip to leashes, have likely also factored into this normalization of practice. From survey responses at least, the "yuck" factor of picking up waste is almost non-existent. [Less than 2% of respondents (1 and 2 people depending on setting: yard, neighborhood, park/forest) indicate they do not pick up waste due to it not being sanitary to pick it up.]

The question remains whether this survey involves a self selected group most of whom "do the right thing" or whether the self reporting within the survey is overly optimistic (at least one past study has noted that people are inclined to want to report that they are "doing the right thing"). Some of the survey comments and certainly the experience of public works and local highway officials on the

Stormwater Committee indicate there remains a problem with people not picking up dog waste or picking it up and disposing of it improperly, either leaving bagged waste on the ground or putting it down the storm drain. As such, effective messaging about dog waste will continue to be important. Following are key considerations in messaging based on survey results:

- Disabuse dog owners of the idea that pet waste is a “natural fertilizer” and inform them about the contamination issues associated with this waste, broadening the understanding of stormwater runoff concepts.
- Encourage homeowners (in both rural and urban areas) to pick up after their dog. Inform homeowners that even though the waste may not initially be located near a storm drain, stream or river, the leachate may travel toward them when carried by rainfall or snowmelt.
- Capitalize on existing motivators to pick up dog waste, particularly health/hygiene reasons and courtesy to neighbors.
- While not as strong a motivator, reminding people of the law and possible consequences of not picking up dog waste could promote best practices
- Undertake a campaign to install more waste disposal facilities, making these facilities more highly visible in public parks, forests, and particularly locations where municipal officials observe persistent problems with proper waste disposal.

Next Steps

Based on survey results, PVPC has developed a draft program of messaging for Stormwater Committee communities on pet waste that includes metrics required under the forthcoming permit. This include proposed formats and venues. The Stormwater Committee will review and refine this program in the coming months to include in the Notice of Intent and Stormwater Management Program Plan that they must each complete.

4. Began to define program of effective messaging on nutrients

Based on the 2014 draft Massachusetts Municipal Separate Storm Sewer Systems (MS4) permit, the 2016 final permit to be issued by the U.S. Environmental Protection Agency will have various education and outreach requirements for nutrients, specifically nitrogen and phosphorous. While there are four audiences noted under the permit, nutrient outreach and education is largely aimed at the residential, and business and institutional audiences. Note that the business and institutional audience includes private colleges, private schools, hospitals, and commercial facilities. Education and outreach topics relative to nutrients involve: lawn care activities, proper management of pet waste, and maintenance of septic systems.

There are additional education and outreach requirements depending on water quality issues:

A. All Pioneer Valley stormwater regulated communities are subject to the *Long Island Sound Total Maximum Daily Load (TMDL) requirements for nitrogen* and must therefore supplement Residential and Business/Commercial/Institution programs with annual timed messages on specific topics:

- an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers;

- an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate;³
- an annual message in the Fall (August/September/October) timeframe encouraging the proper disposal of leaf litter

“The permittee shall deliver an annual message on each of these topics, unless the permittee determines that one or more of these issues is not a significant contributor of nitrogen to discharges from the MS4 and the permittee retains documentation of this finding in the SWMP.”

B. Where water quality limited waterbodies are *impaired by phosphorus* (Belchertown, Easthampton, Granby, Southampton, Springfield, and Westfield), a municipality must supplement its Residential and Business/Commercial/Institution program with annual timed messages on specific topics:

- an annual message in the spring (March/April) timeframe that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorous-free fertilizers
- an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- an annual message in the fall (August/September/October) timeframe encouraging the proper disposal of leaf litter

“The permittee shall deliver an annual message on each of these topics, unless the permittee determines that one or more of these issues is not a significant contributor of phosphorous to discharges from the MS4 and the permittee retains documentation of this finding in the SWMP.”

Note that communities that are subject to a *lake or pond Total Maximum Daily Load (TMDL) requirements for phosphorus* (Granby, Hadley, Ludlow, Springfield, and Wilbraham) must develop a Lake Phosphorus Control Plan and within it describe both planned structural as well as non-structural controls. These non structural controls could include education and outreach, but based on the 2014 draft MS4 permit there does not seem to be anything specifically required on education and outreach within the permit term.

Education and outreach on nutrients

All 13 member communities of the Connecticut River Stormwater Committee will be subject to education and outreach requirements on nutrients. As such, the Connecticut River Stormwater Committee has been interested in understanding how to move forward with messaging under the new permit.

With funding from the Massachusetts Direct Local Technical Assistance Program and match from the Connecticut River Stormwater Committee budget, the Pioneer Valley Planning Commission worked to examine useful research and understand new regulations to provide direction for messaging on nutrients by the Committee.

New fertilizer use regulations in Massachusetts

Massachusetts has two sets of new regulations related to fertilizer use: one for non-agricultural turf and lawns and another for agricultural land. The new regulations for turf and lawns became effective June 5, 2015, and stipulate that phosphorous containing fertilizers may only be applied to turf and lawns when:

³ Annual messaging for pet waste is covered under the Bacteria section of this report.

1. a soil test indicates that it is needed; or
2. a lawn is being established, patched, or renovated.

This restriction mirrors laws already in place in Connecticut, Vermont, and New Jersey. Other highlights from the Massachusetts regulation prohibit nutrient applications between December 1 to March 1 or to saturated soil or soils that are frequently flooded. Professionals must keep records of nutrient applications. Retailers must display phosphorous containing fertilizer products separate from non-phosphorous fertilizer products and post a sign displaying language informing the consumer about phosphorous containing fertilizer restrictions for turf and lawns. For more detail, see language of regulation in Appendix E, and Massachusetts Department of Agricultural Resources (MDAR) Fact Sheet in Appendix F.

On December 5, 2015, regulations for the application of plant nutrients on agricultural lands became effective.

Existing Studies and Reports

In researching messaging around lawn care and nutrients, PVPC found critical guidance for the Connecticut River Stormwater Committee in a multi-year study (2006 to 2010) by the Land Grant Universities/Cooperative Extensions in New Hampshire, Vermont, Maine, Rhode Island, and Connecticut. Unfortunately, the cooperative extension at the University of Massachusetts did not participate in this study.

Focused on residential property owners, the study explores current understanding and behavior and messaging to change homeowner lawn care behavior to reduce nutrient loss in New England. PVPC could not find any studies focused on other types of property owners with lawns or even lawn care businesses or any specific explanation why the focus in this study on residential property owners.

Funded by the U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service (USDA CSREES), the multi-year study had three major components:

- Part 1: Extensive social science survey on lawn care behavior in 5 New England communities (Hampden, ME; East Lyme, CT; Milton, NH; Brandon, VT; East Kingstown, RI) conducted to inform outreach design, development and implementation
- Part 2: Development and distribution of education and outreach materials guided by the social science survey findings
- Part 3: Follow up survey to understand effectiveness of project messaging in changing lawn care behavior

The program of this project was informed by the principles of community based social marketing. As defined by McKenzie-Mohr and Smith and mentioned above in the Bacteria section of this report, community based social marketing seeks to foster sustainable behavior by: identifying barriers and benefits to a sustainable behavior, designing a strategy that utilizes behavior change tools, piloting the strategy with a small segment of a community, and evaluating the impact of the program once it has been implemented across a community.

The central question to the USDA CSREES study is: What motivates environmentally responsible behavior in lawn care? Understanding the large answer to this question helped to inform design of a

specific outreach program aimed at measurable change in the practices of small-scale landowners in caring for their landscapes. Other objectives of the study included:

- Explore primary drivers of Do it Yourselfers (DIYers) lawn care choices and practices, especially with regard to fertilizer applications
- Investigate perceived barriers and benefits to adoption of more water quality friendly nutrient application practices
- Examine relative measures of trust and frequency of contact for various sources of yard care information by neighborhood residents
- Determine effectiveness of trained opinion leaders (such as Master Gardeners, local garden center staff, alpha neighbors, Extension staff, etc) to influence residential nutrient management behavior in neighborhoods

Results for part 1 of the program are included in a document entitled, "Changing Homeowner Lawn Care Behavior to Reduce Nutrient Losses in New England's Urbanizing Watersheds, Social Science Results Summary," 2008. This work entailed 52 in depth interviews in 5 communities with turf care opinion leaders from 4 categories:

- industry/business group
- outreach/educators group
- community/alpha neighbor group
- research/scientist group

In addition self-administered questionnaires were sent to residents in each of the 5 communities with the return of 754 completed questionnaires. See a summary of the key findings in Appendix G.

Note that for parts 2 and 3 of the program (the outreach phase), Maine, conducted and reported the work separately from the other project partners. As a result there are two different reports under part 3 of the program, one that covers Maine and another report that covers the communities in Maine, as well as Connecticut, New Hampshire, Vermont, and Rhode Island. Respectively, these reports are entitled as follows: "Changing Bangor Area Lawn Care Behavior: Results from the Evaluation Survey," 2008, and "Changing Homeowner Lawn Care Behavior to Reduce Nutrient Losses in New England's Urbanizing Watersheds, Final Social Science Project Evaluation Report," July 2010.

The 2010 study acknowledges, "...the study site in Maine was able to leverage the research from this project into a larger campaign than in other study communities..." In Maine, project partners followed up on the survey by testing messaging in six "...high amenity suburban communities with heavily managed lawns." They distributed messaging as follows: two neighborhoods received no messaging, serving as the control group; two neighborhoods received standard messaging about stormwater; and two neighborhoods received "normative" messaging (which aims to redefine the norm). Normative messaging picked up on indications from the USDA CSREES survey as well as previous studies that people feel it very important that their lawn fit in with their community and that community members adhere to community standards of lawn care (one researcher on the project referred to this as the "peer pressure" approach). So messages under this category were along the lines of, "Most of your neighbors don't apply chemicals to their lawns because they know that there is a better way to go in getting a healthy lawn."

Major Findings

While study findings within the USDA CERES funded project agree that homeowners feel it very important that their lawn fit in with their community and that community members adhere to community standards of lawn care, study results also demonstrate that the standards of care and amount of fertilizers applied to lawns vary from neighborhood to neighborhood. In the first USDA CSREES survey of 5 communities across New England, the norm was not to apply fertilizers while in the Maine survey of the 6 “high amenity suburban neighborhoods,” the norm is to apply fertilizers.

Also, while the project’s first survey results indicate that there is a high level of awareness that lawn care practices may impact water quality, the Maine survey indicates that despite this understanding and concern, the perceived prevalence of chemicals used to maintain lawns in neighborhoods leads respondents to continue to apply chemicals to care for their lawns. Despite these issues, the Maine study did find that those who received normative messaging demonstrate a greater intention to reduce or eliminate fertilizer and pesticide use over those people who received standard messaging or no messaging at all.

What motivates lawn care choices and practices

The major driver for people seems to be a need to “fit in” by following the standards of lawn care they see in their neighborhood. At least one of the studies notes that this ideal of a desirable/healthy lawn is driven in large part by marketing, resulting in a type of lawn that demands high levels of input and intensive management strategies.

Most effective messaging

Based on the results coming out of the five-state New England study, it seems homeowners are aware that lawn chemicals can run off into waterways and negatively impact water quality. Homeowners also seem to understand the harmful impacts that lawn chemicals can have on children and pets. These connections between environment and health are important or very important to 77% of the respondents in the five-state USDA CERES funded survey. Along these lines, making connections to specific, local bodies of water draws on people’s a sense of place as a motivator in environmentally responsible behaviors.

While health and water quality information should continue to be part of messaging, the Maine study indicates that messaging focused on shifting norms in lawn care will be most effective in facilitating behavior change. This norm-based appeal to environmental behavior change is far more effective than other framings.

Normative messaging aims to redefine what is a desirable lawn/healthy lawn and provides a means for DIYers to achieve a desirable and healthy lawn while adhering to environmentally sensitive strategy. According to the surveys from the study, what constitutes a “healthy lawn” is interpreted on a highly variable basis-not driven by research, but marketing. These influences seem to be resulting in lawns that demand high levels of input and intensive management strategies that could easily be interpreted as being unhealthy.

Other important approaches to effective messaging from or derived from the USDA CERES funded studies include:

- A component related to, “Don’t use it all” or “Use only what needed” to address the tendency for people to use an entire package of fertilizer to avoid storage and thus overfertilize. New Hampshire Cooperative Extension is already considering development and distribution of a bag

clip that not only helps to make storage of leftover fertilizer a bit more convenient, but reminds people not to use it all.

- Messaging that plays up what appears to be common regard for lawns as providing recreational space (a functional, rather than appearance defined standard). Messaging from Paul Tukey's Safe Lawns campaign and his two books related to this campaign could be effective in this regard. It appears that the campaign organization itself is no longer operational, though the website is still up and running with tremendous information. See: Safelawns.org

Barriers to best practices

As mentioned above, the norms for lawn care within a given neighborhood and the desire for property owners to adhere to that standard present the biggest challenge in getting adoption of better practices.

Directions for more environmentally friendly practices of care must be more easily and readily available. The USDA CERES funded surveys found that people rely heavily on product packaging for application information. And the five-state survey found that University Extension and Master Gardeners are considered to be the most trustworthy sources of information.

It is important to note too that while people did not attach high importance to having a dark green lawn, clover free lawn, or golf-course quality lawn, they did feel that having a pest free lawn, having thick grass, and having a weed-free lawn are important.

While people in the 5-state survey do not seem averse to spending a little more time on their lawn (two-thirds of respondents indicated "no" or "no preference" to the question of whether they would prefer to spend less time managing their lawn than they currently do), they do feel that environmentally friendly lawn care practices will cost them more money. Good information on costs should be developed and distributed to help people understand the actual measure of this cost.

Making it easier for people to "do the right thing"

Points of purchase, where people are buying lawn care products and presumably looking for information on how to get desired results, presents great opportunity to help people do the right thing. Messaging and information could be provided in these locations through lawn care kiosks and workshops hosted by the local garden centers and hardware stores selling products in collaboration with some of the most trusted sources of information (as indicated by the New England survey): Cooperative Extension and Master Gardeners.

It is also critical to provide one reliable place to go for good information on homeowner lawn care practices. In Massachusetts, the new regulations refer people to the UMass Cooperative Extension for guidance. Guidelines for homeowners, however, are not immediately identifiable on the UMass website. Perhaps a great photo with a heading that says, "Your Lawn: What You Need to Know (click here)." While the new Massachusetts regulations focus on phosphorous, it will be important for people to also obtain information on nitrogen application, especially given that the Connecticut River basin contributes to water quality problems in Long Island Sound.

The USDA CERES funded project noted that recommendations from each the University of Connecticut and University Massachusetts Cooperative Extensions are somewhat contradictory from one another. Other cooperative extensions in New England appear to be using the recommendations coming from UConn, which might create some inconsistency with professionals who travel to other states to do lawn care.

At the same time, the New England Interstate Water Pollution Control Commission has devised a set of fertilizer guidelines for what it defines as “nonperformance turf”/“urban turf” based on four stakeholder meetings between 2012 and 2013. Stakeholders included turf fertilizer manufacturers, lawn care professionals, sports turf managers, turf industry trade groups and professional associations, researchers, university extension specialists, municipal and private groundskeepers, state and federal environmental agencies, and watershed groups. These are published in a report entitled, “Regional Clean Water Guidelines for Fertilization of Urban Turf.”

Since UMass Cooperative Extension is cited as the source for information in complying with new Massachusetts regulations, supporting UMass Cooperative Extension in developing and widely distributing concise and specific recommendations for best practices will be critical. Reconciling what may appear to be different recommendations coming from the NEIWPCC and UConn's Cooperative Extension could be helpful too.

With the new requirements that soils be tested before applying phosphorous to a lawn, it will be important to sponsor soil test days. Interpreting results will be another important component of enabling people to comply with the new regulations as results may be confusing.

Messaging Going Forward

Discussion and key considerations

While the New England USDA CESREES project focused on homeowners, there are three additional audiences to which messaging about fertilizer use is important and required under the MS4 permit. These are: lawn care companies and commercial and institutional property owners with large lawns. Working with these other audiences to understand barriers and motivations to better practices will be important going forward in communities with such property owners. (Note that under the MS4 permit, reduced fertilizer use by cities and towns on landscapes at municipal parks, schools, and other properties is part of the municipal Minimum Control Measure on Good Housekeeping.) At the same time, UMass Extension has been working already with several of these audiences. It will be important to coordinate and integrate with the work UMass is already doing.

It is also critically important to get consistent fertilizer application recommendations together for both phosphorous and nitrogen. Though the new Massachusetts fertilizer regulations only explicitly curtail phosphorous use, nitrogen is a concern in the entire Connecticut River watershed based on water quality problems in Long Island Sound. For now, the MS4 permit has no specific restrictions on nitrogen in stormwater, but this may change going forward.

To be most effective, it will be useful to focus energy toward behavior change in neighborhoods where it is clear the standard of lawn care requires high inputs of fertilizers. Door hangers, a lawn sign campaign, and workshops at nearby garden centers or hardware stores are all ways to provide focus on a specific neighborhood. Target audiences might include condominium or neighborhood associations as well. It may also make sense to identify those neighborhoods with high inputs where there are existing water quality issues in nearby lakes or rivers.

Following are key considerations in nutrient messaging for homeowners based on the MS4 permit requirements, the new Massachusetts fertilizer use regulations, and findings from the USDA CESREES project:

- Use normative messaging wherever possible making group standards more apparent (e.g., 70% of your neighbors do not apply chemical fertilizers because they understand there are better ways to get the great lawn they want). People often decide what attitudes and actions are appropriate from those around them. This will take additional research in many cases in order to understand the norm in a given area.
- Redefine what is a desirable lawn and connect this to public health and water impacts/improvements. Also, be sure to name the Connecticut River or a local lake with which people identify.
- Provide good, clear instructions on best fertilizer practices and application rates when needed. Include distinction between slow release fertilizers and information on proper use of composts.
- Provide good, clear instructions on proper use/disposal of grass clippings in April/May and proper disposal of leaf litter in August/September/October
- Draw on sense of lawns as recreational space, a functional space to keep safe for people and pets
- Promote ways to not use all the fertilizer in a bag if not needed
- Partner with UMass Cooperative Extension and Western Massachusetts Master Gardeners wherever possible as the USDA survey indicates that residents caring for lawns seem to most trust cooperative extensions and master gardener organizations on lawn care issues

Next Steps

Based on survey results, PVPC has developed a draft program of messaging for Stormwater Committee communities on nutrients that includes metrics required under the forthcoming permit. This includes proposed formats and venues. The Stormwater Committee will review and refine this program in the coming months to include in the Notice of Intent and Stormwater Management Program Plan that they must each complete.

5. Discontinued collaboration with the Greenscapes Program www.Greenscapes.org

On behalf of Stormwater Committee members, PVPC has had lengthy conversations with Greenscapes partners to encourage the coalition to stay with a program of building understanding about the connection between better lawn and garden care practices and reduced impacts on water resources and human and environmental health. It seems especially important to stay with this specialized program given the new fertilizer regulations just enacted by Massachusetts. Despite PVPC's urging, however, coordinators of the Greenscapes program decided to leave this program of messaging and expand Greenscapes to address a broader program of stormwater information to more fully serve member communities in eastern Massachusetts.

6. Began retooling website education and outreach for the Pioneer Valley

Given the various websites/pages the Stormwater Committee communities have been using to promote work under the 2003 permit, including Think Blue and Greenscapes, and the expanded education and requirements of the forthcoming permit, PVPC has begun working to retool and update web materials. This has started with a newly proposed website framework under "Think Blue: Clean Water Begins with You," that attends to the various stormwater issues and audiences under the new permit. It will bring together education and outreach materials together with metrics for understanding the effectiveness of

messages and movement away from behavior and practices that negatively impact the health of the Connecticut River.

7. Led first phase of urban tree planting project in Chicopee, Holyoke, and Springfield

PVPC is leading an effort to promote urban tree planting in the region's 3 major cities in partnership with the US Forest Service, Massachusetts Executive Office of Energy and Environmental Affairs, the Valley Opportunity Council, Nuestras Raices, ReGreen Springfield, Conway School of Design, Mass DCR, and the Cities of Chicopee, Holyoke, Springfield. Aimed at reducing stormwater flows to combined sewer areas and promoting greater climate resilience, the project involves an integrated community outreach process involving multiple neighborhood workshops and workshops for public works officials. The workshop for public works officials, held in November and conducted by engineering consultants TetraTech, drew 12 officials from 6 stormwater committee communities. The two neighborhood workshops held to date have each drawn some 40 participants. Once completed, the project will provide the following major deliverables:

- installation of 2,200 trees on local streets and yards
- final engineering design for a green streets in each municipality
- model stormwater tree rebate ordinance

The project is made possible thanks to a \$239,000 grant award to PVPC from the US Forest Service under the State and Private Forestry FY15 Northeastern Area Landscape Scale Restoration Program.

8. Collaborated with Massachusetts state-wide coalition of stormwater coalitions

On behalf of the Connecticut River Stormwater Committee, PVPC has been participating in a state wide conversation with other stormwater coalitions to determine how best to build efficiencies through collaboration for the forthcoming MS4 stormwater permit. The group, called together by a consultant and leader of the Central Mass coalition, has had two meetings to date in an effort to identify existing resources and explore possible collaborations on education and outreach. PVPC's hope is that the group can better identify all possible activities for collaboration under the permit by:

- clarifying who has produced tools and resources that can help in meeting permit requirements, perhaps with some updating
- where the gaps are in possible joint state-wide materials, and
- who would like to take responsibility for specific work going forward

Appendix 2E

Year 13

Community Outreach

Ground Water

—Protecting our supplies



The results reflect the month of April 1-30 2015.



**Help Your City Raise Its Ranking!
Spread The Word!**

CITY STANDINGS

1. Hermosa Beach, California
2. Laguna Beach, California
3. Archbald, Pennsylvania
4. Islamorada, Village Islands,
Florida
5. Oldsmar, Florida
6. Alpena, Michigan
7. Destin, Florida
8. Surfside, Florida
9. Crete, Nebraska
10. Agawam Town, Massachusetts

I PLEDGE TO MAKE THE FOLLOWING CHOICES IN MY LIFE:



- ☐ Dispose waste pharmaceuticals safely (hint: don't just flush)
- ☐ Waste less food (save a crop, save a drop)
- ☐ Use a refillable water bottle
- ☐ Reduce paper use at work or school

Previous

Next

Americans use 6.3 million tons of paper and paperboard, about 435 pounds per person per year.

WATER-USE TIP
See the benefits behind each pledge.

I PLEDGE TO MAKE THE FOLLOWING CHOICES IN MY COMMUNITY:



- ☐ Walk, bike or bus more often or drive a car with better gas mileage
- ☐ Fix car leaks and recycle my motor oil
- ☐ Use reusable shopping bags

Previous

Next

Every square mile of ocean has about 43,000 pieces of plastic floating in it. A single plastic bag can take up to 1,000 years to degrade.

WATER-USE TIP
See the benefits behind each pledge.



I PLEDGE TO MAKE THE FOLLOWING CHOICES IN MY YARD:



- ☐ Landscaping with climate-appropriate plants
- ☐ Use sprinklers on minimal settings before 8 am
- ☐ Sweep instead of hose
- ☐ Recycle and properly dispose wastes
- ☐ Pick up my pet's poop

Previous

Next

Americans recycled and composted 87 million tons of municipal solid waste, with an annual benefit of 162 million metric tons of carbon dioxide emissions reduced, equal to over 31 million cars.

[Learn More](#)
See the benefits behind each pledge.



I PLEDGE TO MAKE THE FOLLOWING CHOICES AT HOME:



- ☐ Fix that leaky faucet
- ☐ Take shorter showers, use low-flow or WaterSense devices, and turn off the tap
- ☐ Wash only full loads of laundry and dishes
- ☐ Use Energy Star appliances
- ☐ Power down to save electricity

Next

If each person reduced their paper consumption by 30%, they would save 130 pounds of waste per year.

[Learn More](#)
See the benefits behind each pledge.

Appendix 3A

Year 13

Mapping Stormwater Outfalls

March 21, 2016

Richard Cohen
Honorable Mayor
36 Main St.
Agawam, MA 01001



Timothy W. Brennan, Executive Director

RE: Affirmation of Community Commitment for District Local Technical Assistance from PVPC

Dear Mayor Cohen,

Thank you for your community's request for PVPC assistance under the Commonwealth's District Local Technical Assistance Program. We have selected your community to receive District Local Technical Assistance based the attached scope of work.

PVPC is able to provide this local technical assistance at no cost to your community thanks to funding support provided by the Massachusetts Legislature, with the support of your legislators, under a contract with the Massachusetts Department of Housing and Community Development (DHCD) for District Local Technical Assistance (DLTA) program. DHCD requires a 10% match for all projects undertaken under this contract, including a 5% cash match and 5% in-kind match. PVPC has agreed to provide the required 5% cash match on behalf of its member communities. While there is no required local cash match requirement from your community, we request that your community express its commitment to this project in the following two ways:

- Provide an in-kind match equivalent to 5% of the total budget for your project. This in-kind match can include community staff time or volunteer board members time spent on the project, and should be documented on the form attached.
- Agree to help shape a joint procurement for the region that will substantially help in the integration of mapping and data collection for the region. We are not under obligation to commit to this joint procurement at this point, but will give it serious consideration when the time comes.

Please sign the bottom of the attached commitment letter in the space provided to acknowledge that the scope of work describing the local technical assistance has been received and that you will meet the commitments described above, and return the letter to:

Joshua A. Garcia, Municipal Services Coordinator
Pioneer Valley Planning Commission,
60 Congress Street,
Springfield, MA 01104

Please feel free to contact me if you have questions regarding your project. Again, thank you for your participation in this program, and we look forward to working with you over the year.

Sincerely,

Joshua A. Garcia
Municipal Services Coordinator

DLTA FY16 Scope of Services

Project Advisory Group

Integrated Stormwater Mapping and Data Collection

DLTA Grant	\$20,000.00
PVPC Cash Match	\$ 1,000.00
In-kind Match South Hadley	\$ 200.00
In-kind Match Northampton	\$ 200.00
In-kind Match Southwick	\$ 200.00
In-kind Match Agawam	\$ 200.00
In-kind Match West Springfield	\$ 200.00

The Cities mentioned above have asked the PVPC for assistance to research, analyze, and identify an integrated mapping and data collection system that could jointly serve cities and towns that will be regulated by the forthcoming EPA stormwater permit. It is recognized that this mapping and data collection tool and/or services will enable municipalities to meet specific requirements within the forthcoming permit related to storm water system mapping, tracking the condition of infrastructure and maintenance activities, and identifying priority catchment areas. Collaborating on the purchase and use of such a system would provide significant cost savings for local communities.

Scope of Work

Timetable	Task
	Preliminary Phase
February, then April	Review draft and then final Massachusetts MS4 permit and identify all mapping and data collection requirements (<i>Deliverable: matrix identifying all requirements - PG</i>)
February - March	Obtain material from Central Mass on system evaluations to inform PV project (<i>Deliverable: summary of what they learned - PG</i>)
February-March	Define/refine scope of work with participating communities from CT River Stormwater Committee/Project Advisory Group (<i>Deliverable: finalized task list - PG</i>)
March	Explore what communities think will be approval process in each of their jurisdictions for joint purchase of mapping/data collection system (this may take the form of buying specific software or equipment, purchasing an annual subscription, purchasing long-term services, etc.) Who needs to approve and what is process for approval? (<i>Deliverable: written summary of expected approval process in each community - JG</i>)
March	Devise and finalize budget based on scope; put scope out to participating communities for commitments (<i>Deliverable: letters of commitment from participating communities - JG</i>)
	Phase 1
May	Identify mapping/data collection systems for possible evaluation (<i>Deliverable: summary of systems selected for evaluation by Advisory Group - JD</i>)
May	Enumerate capabilities that will be essential for each system - system must be able to do x...y...z...etc. (<i>Deliverable: List of capabilities for each system - JD</i>)

June	Develop review criteria (cost, ease of use, sustainability, relevance over term of permit, etc.) so that can do side-by-side comparison of each system (<i>Deliverable: Matrix of criteria for ranking systems evaluated - PG and JD</i>)
June	Prepare bid document to solicit proposals from vendors (<i>Deliverable: bid document distributed to vendors -JG</i>)
July	Select 3 mapping/data collection systems for research and evaluation and invite vendors to meeting with Advisory Group (<i>Deliverable: recommendations of systems to evaluate and agreement from AG on selected systems to research and evaluate - JD</i>)
August-September	Review and evaluate each system - will entail staff research, but also vendor presentations at advisory group meetings, etc. (<i>Deliverable: scheduled meetings with vendors and then written summary evaluation based on review criteria - JD</i>)

The project is in process and will be completed on or before December 2016.

**PVPC District Local Technical Assistance Program FY16
Integration of Stormwater Mapping and Data Collection Project**

Affirmation of Community Commitment

I hereby acknowledge that I have received a scope of work for my community's direct local technical assistance and I affirm my commitment to work to implement the work performed as appropriate and in the best interests of my community. Specifically, my community commits to the following:

- Provide an in-kind match equivalent to 5% of the total budget for your project. This in-kind match can include community staff time or volunteer board members time spent on the project. PVPC will help to track and document this time through Advisory Committee sign in sheets and a check in at each committee meeting to report on match time activity.
- Agree to help shape a joint procurement for the region that will substantially help in the integration of mapping and data collection for the region. We are not under obligation to commit to this joint procurement at this point, but will give it serious consideration when the time comes.


Signature of Chief Elected Official **RICHARD A COHEN**

Municipality: ABAWAM

23 MAR 2016
Date

Appendix 3B

Year 13

Non-Stormwater Discharge Ordinance



MassDEP NEWS

Massachusetts Department of Environmental Protection

FOR IMMEDIATE RELEASE:

October 20, 2015

CONTACT:

Ed Coletta 617-292-5737

Baker-Polito Administration Announces \$1.28 Million for Waterway Pollution Projects

Nine Local and Regional Projects to Focus on Pollution Prevention in Watersheds

BOSTON – The Baker-Polito Administration today announced that nine projects targeting water pollution from storm water runoff and erosion have been recommended for more than \$1.28 million in grants utilizing funds from the U.S. Environmental Protection Agency (EPA).

“It is vitally important that we address the effects of polluted storm runoff on Massachusetts waterways to protect both our environment and public health,” said **Governor Charlie Baker**. “Through the administration of this grant program, we are able to work with the federal government to provide our local and regional partners the resources needed to improve water quality.”

“To keep our communities healthy, we must help them maintain a clean and safe system of water resources,” said **Lt. Governor Karyn Polito**. “These water protection grants will help local officials identify storm water issues and address them promptly.”

The projects are based in Agawam, Belchertown, Franklin, Milford, Plymouth, Stoughton, Taunton, Watertown, and statewide. Six of the recommended projects will implement or demonstrate best management practices (BMP) to mitigate the effects of polluted storm water runoff. Two projects will explore development of funding mechanisms to support storm water infrastructure. One project will focus on climate change and resiliency actions that can be taken to protect critical healthy watershed resources.

The grant program focuses on implementation of measures to control nonpoint source (NPS) pollution to surface and groundwater. Unlike pollution from industrial facilities and sewage treatment plants, NPS pollution is unregulated and comes from a variety of sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and ground waters.

(more)



MassDEP NEWS

Massachusetts Department of Environmental Protection

Town of Milford

Project Name: Lower Huckleberry Brook Stormwater Treatment – **\$225,290**

Total Project Cost: \$376,038

Town of Plymouth

Project Name: Water Street Stormwater Implementation – **\$234,117**

Total Project Cost: \$390,195

Town of Stoughton

Project Name: Steep Hill Brook BMP Retrofit Project – **\$137,046**

Total Project Cost: \$236,486

The Nature Conservancy

Project Name: Protecting a Healthy and Resilient Taunton Watershed – **\$107,034**

Total Project Cost: \$179,734

Charles River Watershed Association

Project Name: Edenfield Avenue/Green Street Demonstration Project, Watertown – **\$194,648**

Total Project Cost: \$1,011,848

University of Massachusetts at Amherst

Project Name: Reducing Nonpoint Source Pollution from Equine Facilities (Statewide Project) – **\$200,000**

Total Project Cost: \$333,333

With the addition of the 2015 funding awarded today under the grant program, the Commonwealth and the EPA have provided more than \$15 million since 2007 for 78 projects to address NPS pollution across the Commonwealth.

For more information about the non-point source pollution program, turn here:

<http://www.mass.gov/eea/agencies/massdep/water/grants/watersheds-water-quality.html>

MassDEP is responsible for ensuring clean air and water, safe management and recycling of solid and hazardous wastes, timely cleanup of hazardous waste sites and spills and the preservation of wetlands and coastal resources.

(Please see related legislator quotes in the pages to follow)

###



Agawam Massachusetts

Office of the Mayor
36 Main Street, Agawam, MA 01001
mayor@agawam.ma.us

Richard A Cohen
Mayor

Tel: 413-786-4520
Fax: 413-786-9927

December 8, 2015

Mr. Timothy W. Brennan
Executive Director
Pioneer Valley Planning Commission
60 Congress Street
Springfield, MA 01104

Re: Request for DLTA assistance

Dear Mr. Brennan,

The Town of Agawam would like to request free technical assistance through the District Local Technical Assistance (DLTA) program to research, analyze, and identify an integrated mapping and data collection system that could jointly serve cities and towns that will be regulated by the forthcoming EPA stormwater permit. We understand that we will be joining several other members of the Connecticut River Stormwater Committee in this request.

This mapping and data collection tool would enable us to meet specific requirements coming out of the forthcoming permit related to mapping of our entire system, tracking the condition of infrastructure and maintenance activities, and identifying priority catchment areas. Based on experience reported by the Central Massachusetts Stormwater Coalition, we understand that collaborating on the purchase and use of such a system would provide significant cost savings for us as compared to "going it alone."

Please know that we plan to meet our 5% in-kind match in the form of time from our DPW staff, who will be available to meet with PVPC staff and provide review for PVPC work during the term of this project.

If you have any questions, please do not hesitate to contact Stormwater Coordinator Tracy DeMaio.

Thank you for your consideration of our request.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard A. Cohen".

Richard A Cohen, Mayor

RESPONSE FORM
319 NONPOINT SOURCE POLLUTION GRANT PROGRAM
4/01/15
RFR #BWR 2015-03
Administrative Summary

RESPONDENT - Patty Gambarini, Senior Environmental Planner
Pioneer Valley Planning Commission

Address - 60 Congress Street
Springfield, MA 01104

Telephone - 413-781-6045

Facsimile - 413-732-2593

Email Address - pgambarini@pvpc.org

PROJECT TITLE - Feasibility of a stormwater utility for Agawam

WATERSHED(S)/SUBWATERSHED(S) SERVED BY THIS PROJECT - Westfield River and Connecticut River

PROJECT TYPE(s) - see Section 3. A response may encompass more than one project type.

- ☐ **A. Implementation** ☐ TMDL ☐ Category 4a or 5 ☐ other
☐ **Priority basin:**
☐ **Continues the work commenced under publicly funded program(s)**
☐ **B. Healthy Watersheds**
☐ **C. Outreach and Education**
☒ **D. Stormwater Utility Development**
☐ **E. NPS Program Goal**

POLLUTANT(S) OF CONCERN: NA

AMOUNT OF FUNDING REQUESTED AND AMOUNT AND PERCENT OF MATCH FUNDING PROPOSED -

Federal Funds via MassDEP	<u>\$ 66,900</u>	
Non-Federal Match	<u>\$ 44,600</u>	% of Total Budget <u>40</u>
Total Project Budget	<u>\$111,500</u>	

PROJECT SUMMARY/OBJECTIVES -

The proposed project will study the possibility of establishing a stormwater utility in Agawam. The work will include identifying major needs and costs for the municipal stormwater program and evaluating billing, unit, rate, and other financial considerations. The most important project component, however, will be a robust public engagement process that employs a local advisory task force, the members of which will become the local experts. This group will work together to learn about stormwater utilities, define and test an actionable case for a local utility in Agawam, engage other stakeholders, and make recommendations on all aspects of a potential utility. This project will draw closely from the experience of and lessons learned in Northampton in exploring a utility there.

PRINCIPAL CONTACT (Project Manager)

Patty Gambarini, Senior Environmental Planner
Name and Title

pgambarini@pvpc.org
E-mail

(413) 781-6045
Telephone

(413) 732-2593
Facsimile

AUTHORIZED SIGNATORY - All respondents must complete, execute and return the **CONTRACTOR AUTHORIZED SIGNATURE VERIFICATION FORM** attached to this RFR (see Attachment A).

Feasibility of a Stormwater Utility for Agawam

Project Description

CONCISE STATEMENT OF THE PROBLEM - Agawam, like other communities in the Pioneer Valley, anticipates between a two and four-fold increase in compliance costs with the requirements of the next "General Permit for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems" (MS4s). (*Pioneer Valley Green Infrastructure Plan*, February, 2014) The increased costs of compliance come at a time when funding for critical municipal infrastructure, including stormwater and flood control, has seen a long period of decline and failed to keep pace with need.

Because funding for Agawam's stormwater program currently comes from the Town's general funds, such budgetary requests must compete with funding needs for schools, police, and other critical municipal services. Public Works officials are typically able to obtain resources for catch basin cleaning and street sweeping, and emergency repairs, but attending to deferred maintenance, and implementing important upgrades, never mind meeting additional compliance requirements, are not possible given existing funding for the program.

Rather than make impossible choices between meeting new stormwater permit requirements, attending to aging infrastructure, and competing with other important municipal needs, the Town of Agawam seeks to explore a dedicated, more sustainable source of funding for stormwater. The idea of a revenue source based on fees for services (a stormwater utility), as is done with drinking water and wastewater services, has been under discussion within the DPW for some time. The sense is that the timing for such an exploration is now very good due to the following:

- a clear understanding of the forthcoming stormwater permit requirements now that the second draft permit has been issued and the final permit is expected in the next year,
- acknowledgement of the challenges in funding stormwater work and a willingness to explore a stormwater utility by the current Mayor and DPW Director, and
- the benefit of recent enactments of stormwater utilities in nearby Westfield and Northampton (*As noted by Western Kentucky University's 2013 Stormwater Utility Survey, "...utilities tend to cluster. After one city develops a utility, surrounding suburbs and communities see the benefits and form their own."*)

PROJECT GOAL(s) - There are several goals for the proposed project, but overarching all of the work will be a robust public process to promote deep understanding of the challenges as well as full engagement in exploring a sustainable source of funding for the stormwater program. This will be achieved in large part through the use of a citizens advisory group with appointments from key political leaders and representation from the breadth of stakeholders (residents, businesses, institutions). Project work will also focus on elevating the visibility of municipal stormwater work through graphics that include door hangers to be used in neighborhoods when work is under way, and an illustration that clearly depicts drinking water, wastewater, and stormwater systems so that people understand the distinctions and importance of each system. The other goals area as follows:

- Identify stormwater program needs and costs in terms of compliance with the forthcoming permit and priority infrastructure repairs and improvements;
- Evaluate fee models/rate methodologies and identify which would work best for Agawam;
- Describe costs for implementation and define a strategy for moving forward.

be regulated under the forthcoming MS4 permit. The 2014 Massachusetts MS4 Draft Permit, section 1.10.c (page 7) recognizes that a consistent source of revenue is necessary to comply with forthcoming stormwater permit requirements.

PROJECT EVALUATION - ENVIRONMENTAL INDICATORS - The following will be the qualitative and quantitative measures used in project evaluation:

- Formation of an advisory group with appointments from key political leaders and representation from the breadth of stakeholders (residents, businesses, institutions)
- A series of 10 advisory group meetings that are guided by members desire to learn about the challenges, issues, and possible solutions to stormwater funding so that they are in a good position to make recommendations back to Town Council and the Mayor.
- An actionable case for stormwater funding that is based on projected costs as well as the stormwater related concerns of Agawam property owners
- A series of surveys, mailings, and/or larger public meetings that solicits feedback from at least 250 property owners
- Workable steps forward, including a model ordinance, and recommendations on how to organize rates and billing, with a description of associated costs

OUTREACH-TECHNOLOGY TRANSFER - Outreach for this project is described under the strategy section above.

It is important to note that in exploring and implementing sustainable funding for stormwater, Massachusetts communities are learning as they go. Agawam will certainly have its own "learn as it goes" process, but it can also draw on the experience and lessons learned from several nearby communities, including Chicopee and Westfield, but particularly the success of Northampton to help inform its exploration. This work in Agawam will, in turn, inform the work of other communities that follow. Specific tools to help with technology transfer of this project will include:

- A page on Agawam's website devoted to posting all materials developed for this project;
- A final report that highlights lessons learned;
- Presentations at local and regional events, sharing the experience of this project, as requested.

staff, and the consultant for learning and moving forward in the group process will be critical. The task force will learn in-depth about the needs and costs for Agawam's stormwater program, consider the options in establishing a sustainable funding source for the program, and make recommendations.

DELIVERABLES:

- Advisory committee membership that represents the breadth of property owners in Agawam
- At least 8 meetings of the advisory committee with attendance lists, and written notes from each meeting
- Written findings/recommendations from the advisory task force with a recommended strategy for moving forward

ESTIMATED COST: \$20,250 s.319 SHARE: \$13,250 NON-FEDERAL MATCH SHARE AND SOURCE: \$7,000

TASK/OBJECTIVE #4: Conduct other public outreach and education to help promote understanding about stormwater funding needs, but also define what matters most to Agawam's property owners

PVPC in collaboration with DPW staff and the consultant will conduct a series of interviews or a survey that provides information for defining and articulating a meaningful local case for stormwater funding. This work will involve local property owners, but also elected officials. Project work will also help to elevate the visibility of municipal stormwater work through graphics that include door hangers to be used in neighborhoods when work is under way, and an illustration that clearly depicts drinking water, wastewater, and stormwater systems so that people understand the distinctions and importance of each system. Following on the advisory task force's recommendations, PVPC will also provide support for conducting 2 to 3 larger public meetings so that the work of the task force and recommendations can be widely shared.

DELIVERABLES:

- Results from a series of interviews or survey
- Articulation of a meaningful local case for stormwater funding
- 2 to 3 public meetings with accompanying publicity, attendance lists, and presentation materials

ESTIMATED COST: \$15,000 s.319 SHARE: \$8,000 NON-FEDERAL MATCH SHARE AND SOURCE: \$7,000

TASK/OBJECTIVE #5: Conduct parcel analysis and calculate equivalent residential unit (ERU)

This analysis will entail reviewing existing GIS parcel data and attributes to assess impervious area by land use characteristics in Agawam. It will provide insight into the financial impact of assessing rates based on impervious area for Task #6 below. Work under this task will also determine how current utility billing can be brought together with GIS information and improved for a stormwater utility. PVPC will conduct the parcel analysis, but will work closely with the consulting firm in calculating the ERU and evaluating the capacity of the current billing system to interface

Project Budget

Expense Items	s.319 Amount	Non-Federal Match and Source	Total Amount
Salary - By Title and salary range <i>(ex.: Engineer, \$40-50/hr)</i> <u>Town of Agawam</u> DPW Superintendent \$102,700 to \$127,926 Town Engineer \$71,700 to \$90,125 Assistant Town Engineer \$66,500 to \$77,250 Stormwater Coordinator \$55,000 to \$67,980 <u>PVPC</u> Chief Planner \$ 86,000 to \$92,000 Senior Environmental Planners \$ 56,000 to \$70,000	\$24,350	\$ 2,500 - in kind staff time \$ 3,900- in kind staff time \$ 2,700- in kind staff time \$ 2,400- in kind staff time	\$35,850
Subcontractual Services - DMBE and DWBE goals will be met through subcontractual services. For this project, these goals are as follows: 3.4% DMBE = \$3,800 3.8% DWBE = \$4,237	\$41,900	\$33,100 - DPW cash match	\$75,000
Materials and Supplies (including printing, mailing - should include cost for printing 5 copies and two CDs of the final project report, with photographs)	\$500		\$500
Travel (for auto mileage only @ \$.40 /mile)	\$ 150		\$ 150
Other			
Totals:	\$66,900	\$44,600	\$111,500

REQUIRED: SOURCE(S) OF NON-FEDERAL MATCH - List all sources of non-federal match funds and the amount of matching funds being contributed by each source. Letters of support from all organizations (on the organization's letterhead) identified as providing a portion of the non-federal match for the project must be submitted with the response. These letters must detail the match to be provided by the organization, and must be signed by an authorized signatory for the organization.

EEO/AA REQUIREMENTS - Identify all budget categories from which it is anticipated that the DBE participation goals will be met. Show the anticipated dollar amount of DBE participation in each budget category.

Proposal Attachments

1. Locus Map –Town of Agawam

2. Letters of Support

Mayor Richard Cohen

Agawam Department of Public Works Director

Agawam Environmental Project Coordinator

3. Statement of Qualifications and Resumes of Project Staff

Appendix 3C

Year 13

Develop Illicit Discharge Plan



TOWN OF AGAWAM
Department of Public Works

1000 Suffield Street • Agawam, MA 01001

Tel (413) 821 0600 • Fax (413) 821 0631

Christopher J. Golba • Superintendent

November 17, 2015

Dear Resident,

The Agawam Department of Public Works (DPW) is sending out this letter to all residents of the Silver Hill Village subdivision - which includes Fernwood Drive, Primrose Lane, Arbor Lane and Butternut Drive - that have a drainage swale located on their property.

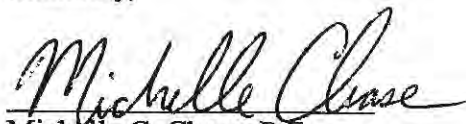
As you may or may not be aware, the subdivision of Silver Hill Village is serviced by a storm water collection system that consists of underground piping within the streets and aboveground drainage swales that flow across private property. If you are receiving this letter, it means that a drainage swale runs through a portion of your property according to the original subdivision plan enclosed herein. (The drainage swale is shown in blue and your property is shown in pink.)

The Agawam Department of Public Works (DPW) would like to remind all residents in the Silver Hill Village subdivision with a drainage swale on their property to keep it free of obstructions such as leaves, trash and other debris. This will insure a clear path for storm water to flow and prevent flooding on private property or within the street.

The DPW understands that some residents have filled in the drainage swale on their property and have installed a pipe in order to convey storm water through their property. Since these pipes were not installed by the DPW, they are considered private and it is the responsibility of the property owners to maintain them and keep the openings of the pipes clear of debris in order to insure the uninterrupted flow of storm water. Any residents planning to install private drainage pipe within a drainage swale should seek approval from the DPW first.

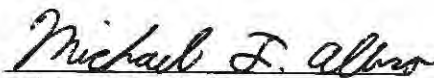
If you have any questions or would like to discuss this matter with us, please contact us at (413) 821-0600.

Sincerely,



Michelle C. Chase, P.E.

Town Engineer



Michael F. Albro, P.E.

Assistant Town Engineer

Appendix 3F

Year 13

Failing Septic Systems

FAILED & NEW SEPTIC SYSTEMS
FROM 1/1/2015 - 12/31/15
Agawam Health Department

04/15/15	Ted Cassell 26 Taft Street Feeding Hills, MA 01001	repair
04/29/15	John Mondella 541 Southwest Street Feeding Hills, MA 01030	repair
05/07/15	Frank Montagna 102 White Fox Road Feeding Hills, MA 01030	repair
06/12/15	Daniel Bousquet 54 Barbara Lane Feeding Hills, MA 01030	repair
06/22/15	John Karparis 503 Southwick Street Feeding Hills, MA 01030	repair
07/07/15	Joseph Curran 17 Duclos Drive Feeding Hills, MA 01030	repair
07/20/15	Francis Alilozek 150 Liberty Street Feeding Hills, MA 01030	repair
07/17/15	Matthew Rolland 668 Barry Street Feeding Hills, MA 01030	repair
07/22/15	Kirk Machaughton Twin Oaks Road Feeding Hills, MA 01030	new construction

Appendix 6A

Year 13

Municipal Maintenance Activity Program

Appendix 6B

Year 13

Training of Municipal Employees



Massachusetts Emergency Management Agency



Certificate of Completion

Presented to

Tracy DeMaio

For completion of the
Debris Management Planning for State, Tribal, and Local Officials (G-202) Training
MEMA Region III/IV REOC Operations Room - Agawam, MA

February 8, 2016, February 9, 2016



Michael E. Russas
Response and Field Services Section Chief





Kurt N. Schwartz
Director

**Town of Agawam
Department of Public Works**

**Municipal Separated Storm Sewer System
Phase II Permitting Goals**

Minimum Control Measure: Good Housekeeping / Pollution Prevention

This measure requires small MS4 operators to examine and subsequently alter their own actions to help **ensure a reduction in the amount and type of pollution that (1) collects on** streets, parking lots, open spaces, and storage and **vehicle maintenance areas and is discharged into local waterways;** and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

Target Area: Department of Public Works Municipal Operations -
Indoor Oil Spill

Goal: To prevent and/or reduce pollutant runoff from facility operations into the storm sewer system.

Effective Date: July 1, 2010

BMP – Spill Response and Prevention

In the event of a release of oil, the steps below will be taken.

Small Spills (<10 gallons)

For small spills that are located indoors the following procedures will be followed:

- Mobilize spill cleanup crew
- Locate the source of spill and immediately stop discharge of product, if possible
- Block off the area to prevent traffic flow from entering the spill area and notify people in the immediate area
- Deploy spill clean up material (e.g., sorbent boom, sorbent pads, speedy dry, etc.) as appropriate
- Notify the emergency coordinator
- Prepare an internal spill report to document the cause of the spill and possible ways to prevent a future similar spill

Large Spill (>10 gallons)

For large spills that are located indoors the following procedures will be followed:

- Mobilize the spill cleanup crew and notify the emergency coordinator
 - Locate the source of spill and immediately stop discharge of product, if possible
 - If there is a potential for fire or a safety risk to employees in the building activate the fire alarm, this signals the building evacuation and notifies the fire department of an emergency
 - Block off the area to prevent traffic flow from entering the spill area and notify people in the immediate area
 - Notify the emergency coordinator
 - Notify and mobilize spill cleanup contractor. The current spill contractor is Cyn Environmental
 - Deploy spill clean up materials (e.g., sorbent boom, sorbent pads, speedy dry, etc.) as appropriate. Try to contain the spill until the spill contractor arrives
 - Notify the Agawam Fire Department
 - Prepare an internal spill report to document the cause of the spill and possible ways to prevent a future similar spill
-

Primary Emergency Coordinators:

Marc Jopson	ext. 602
Steve Bonesteel	ext. 626
Chris Golba	ext. 223

Agawam Fire Department: 821-0612

Cyn Environmental: 413-599-1900

**Town of Agawam
Department of Public Works**

**Municipal Separated Storm Sewer System
Phase II Permitting Goals**

Minimum Control Measure: Good Housekeeping / Pollution Prevention

This measure requires small MS4 operators to examine and subsequently alter their own actions to help **ensure a reduction in the amount and type of pollution that (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways;** and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

Target Area: Department of Public Works Municipal Operations -
Outdoor Oil Spill

Goal: To prevent and/or reduce pollutant runoff from facility operations into the storm sewer system.

Effective Date: August 16, 2010

BMP – Spill Response and Prevention

In the event of a release of oil, the steps below will be taken.

Small Spills (<10 gallons)

For small spills that are located outdoors the following procedures will be followed:

- Mobilize spill cleanup crew
- Locate the source of spill and immediately stop discharge of product, if possible
- **Protect any nearby catch basins with sorbent booms**
- Block off the area to prevent traffic flow from entering the spill area and notify people in the immediate area
- Deploy spill clean up material (e.g., sorbent boom, sorbent pads, speedy dry, etc.) as appropriate
- Notify the emergency coordinator
- Prepare an internal spill report to document the cause of the spill and possible ways to prevent a future similar spill

Large Spill (>10 gallons)

For large spills that are located outdoors the following procedures will be followed:

- Mobilize the spill cleanup crew and notify the emergency coordinator
- Locate the source of spill and immediately stop discharge of product, if possible
- **If there is a potential for fire, call the Agawam fire department immediately**
- **If the spill is from a leaking storage tank, pump from the leaking tank to another holding tank, utilizing the cargo tank and smaller storage containers (55 gallon drums) as needed**
- **Notify and mobilize spill cleanup contractor. The current spill contractor is CYN Environmental**
- **If spill is from or near transformers located on the north side of building, notify Western Mass Electric Company**
- Block off the area to prevent traffic flow from entering the spill area
- Deploy spill clean up materials (e.g., sorbent boom, sorbent pads, speedy dry, etc.) as appropriate. Try to contain the spill until the spill contractor arrives
- **A spill from the outdoor ASTs is expected to be contained within the secondary steel walls of the tank. However, if the oil should escape secondary containment, protect nearby soil and the catch basins near the end of the driveway with booms, sandbags or earthen dikes. Use a shovel or backhoe to create a dike and control the flow of the spill. Any oil or fuel entering soil or catch basins must be removed by the spill clean up contractor as soon as possible**
- Notify the Agawam Fire Department
- **If applicable, notify the National Response Team (if the spill can enter a waterway) and the MA DEP if the spill is greater than the reportable quantity for that material. (10 gallons for diesel fuel or waste oil)**
- Prepare an internal spill report to document the cause of the spill and possible ways to prevent a future similar spill

Primary Emergency Coordinators:

Marc Jopson	ext. 602
Steve Bonesteel	ext. 626
Chris Golba	ext. 223

Agawam Fire Department: 821-0612

Cyn Environmental: 413-599-1900

Western Mass Electric Company 800-286-2000

**Town of Agawam
Department of Public Works**

**Municipal Separated Storm Sewer System
Phase II Permitting Goals**

Minimum Control Measure: Good Housekeeping / Pollution Prevention

This measure requires small MS4 operators to examine and subsequently alter their own actions to help **ensure a reduction in the amount and type of pollution that (1) collects on** streets, parking lots, open spaces, and storage and **vehicle maintenance areas and is discharged into local waterways;** and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

Target Area: Department of Public Works – Equipment and Vehicle Washing

Goal: To prevent and/or reduce pollutant runoff from facility operations into the storm sewer system.

Effective Date: July 1, 2014

BMP - Vehicle Washing Policy

1. Gray Water Rinse Area - Outside

This area is to be used as a rinse area only. No heating elements, high pressure water use or chemicals are allowed. Rinse within the identified designated area only.

2. Wash Bay - Inside

The inside Wash Bay is to be for all heavy dirt and chemical removal. Within this area, high pressure water use, heat and chemicals (soap, degreaser) are allowed.

COMMONWEALTH OF MASSACHUSETTS

Department of Agricultural Resources

**PESTICIDE CERTIFICATION/LICENSE**

JAY L HARVEY

56 WINDING LANE

SPRINGFIELD

MA 01118-0000

Document Type

Applicator License

L

Date of Issue
11/3/2015

License Number

23596

Expiration Date
12/31/2016Category/Subcategory
"000"*Jay L. Harvey***COMMONWEALTH OF MASSACHUSETTS**

Department of Agricultural Resources

**PESTICIDE CERTIFICATION/LICENSE**

MATTHEW J CARRINGTON

79 JOSEPH AVENUE

WESTFIELD

MA 01085-0000

Document Type

Applicator License

L

Date of Issue
11/3/2015

License Number

33222

Expiration Date
12/31/2016Category/Subcategory
"000"*Matthew J. Carrington*

Appendix 6E

Year 13

Pest Control / Landscaping and Lawn Care

PESTICIDE STANDARD WRITTEN NOTIFICATION

FOR SCHOOLS, DAY CARE PROGRAMS, AND SCHOOL-AGE CHILDCARE PROGRAMS

- The school, day care center, and/or school-age childcare program is responsible for sending this standard written notification form to employees, pupils, parents etc. to insure that they receive this information at least 2 working days prior to any pesticide use.
- It is recommended that the Pest Management Professional use this ready-to-copy standard written notification form for the purpose of providing pesticide use information to the school, day care center, and/or school-age childcare program. The Pest Management Professional should save this form for copying.

School:

Name of School , Day care center, and/or School age childcare program

Pest Management Company:

(Please Print)

Name

Address

Pest Management Professional:

(Please Print)

License number

A. List the Approximate Dates on which the pesticide use shall commence and conclude

Beginning Date _____

Ending Date _____

B. Record the specific location of the anticipated pesticide use

C. Pesticide Information (Pest Management Professional should be specific as is possible when listing product(s) to be used)

Pesticide Product Name	Pesticide Type	EPA Registration #	Description/Purpose of treatment and/or application
1.			
2.			
3.			
4.			
5.			

This standard written notification must be accompanied by the following 2 documents. These materials are available from the MDAR web page www.mass.gov/agr. Follow the links to the Children's Protection page.

- Chemical Specific Fact Sheet(s)
- Consumer Information Bulletin for school, day care center, and/or school-age childcare program.

School IPM Program

For the public, learn your school's IPM plan

Make Your IPM Plan Online


[Home](#)
[Create/Edit IPM Plan Online](#)
[Locate a Plan](#)
[What is IPM?](#)
[Children's Protection Act](#)
[Standard Written Notification](#)
[Emergency Waiver](#)
[Pesticides not Allowed](#)
[IPM News](#)
[Contact Us](#)

SEARCH RESULTS FOR SCHOOLS IN "AGAWAM"



CAN'T FIND YOUR SCHOOL?

YOU MUST SCROLL DOWN THE ENTIRE PAGE TO VIEW ALL FACILITIES WITH IPM-PLANS
(SUBMISSION THROUGH INTERNET & ALTERNATIVE SUBMISSION METHOD).

PLANS SUBMITTED VIA THE INTERNET:

✱ Agawam Early Childhood Center ✱

108 Perry Lane, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/9/2005	11/17/2015
Outdoor - View Plan	12/3/2009	1/12/2016

✱ Agawam Junior High School ✱

1305 Springfield Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/10/2005	11/17/2015
Outdoor - View Plan	12/4/2009	1/12/2016

✱ Agawam Senior High ✱

760 Cooper Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/10/2005	11/17/2015
Outdoor - View Plan	12/4/2009	1/12/2016

Agawam U.S. Taekwondo Center

71 Springfield Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	7/29/2013	12/2/2015
Outdoor - View Plan	7/29/2013	12/2/2015

Bambi Nursery School

22 Vernon Ave, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	10/17/2007	7/27/2011
Outdoor - View Plan	10/17/2007	7/27/2011

Bambi Nursery School

22 Vernon Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	7/16/2009	9/1/2015
Outdoor - View Plan	7/16/2009	9/1/2015

✱ Benjamin Phelps Elementary School ✱

689 Main Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
---------------	----------------	---------------

Indoor - View Plan	2/8/2005	11/17/2015
Outdoor - View Plan	12/2/2009	1/30/2013

✿ **Clifford Granger Elementary School** ✿

31 South Westfield Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/10/2005	11/17/2015
Outdoor - View Plan	12/3/2009	1/12/2016

Community Action at Agawam

733 Main Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	1/12/2012	4/9/2015
Outdoor - View Plan	1/12/2012	4/9/2015

Dee Dee's daycare

23 mar:dale ave, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor not yet submitted	n/a	n/a
Outdoor not yet submitted	n/a	n/a

✿ **James Clark Elementary School** ✿

65 Oxford Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/9/2005	11/17/2015
Outdoor - View Plan	12/4/2009	1/12/2016

Just Kiddin

110 Coronet Circle, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	8/11/2011	8/11/2011
Outdoor - View Plan	8/11/2011	8/11/2011

Muxon Headstart

29 LaFrance Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/14/2005	5/13/2007
Outdoor - View Plan	2/14/2005	5/13/2007

pams place child care center

605 springfield street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	12/7/2010	1/7/2016
Outdoor - View Plan	12/7/2010	1/7/2016

Pam's Place Child Care Center, Inc.

605 Springfield Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	10/16/2006	11/30/2012
Outdoor - View Plan	10/10/2006	11/30/2012

Perry Lane Nursery School

108 Perry Lane, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	6/19/2008	11/17/2015
Outdoor - View Plan	8/28/2008	1/12/2016

✂ **Roberta Doering School** ✂

68 Main Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/8/2005	11/17/2015
Outdoor - View Plan	12/2/2009	1/12/2016

✂ **Robinson Park Elementary School** ✂

65 Begley Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/8/2005	11/17/2015
Outdoor - View Plan	12/1/2009	1/12/2016

saint matthew school

90 berkshire st., Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/2/2005	2/2/2005
Outdoor - View Plan	2/1/2005	2/1/2005

Sand Trap School Club LLC

1399-1409 Suffield St. , Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	10/20/2006	10/20/2006
Outdoor - View Plan	10/20/2006	10/20/2006

Smart Start Preschool

21 North Westfield St., Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	6/12/2007	6/12/2007
Outdoor - View Plan	6/12/2007	6/12/2007

Smart Start Preschool Inc

17 Begley St, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	8/16/2010	1/4/2016
Outdoor - View Plan	8/24/2010	1/4/2016

The Kids Place - Feeding Hills

901 Springfield Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	1/25/2007	6/17/2015
Outdoor - View Plan	1/25/2007	6/17/2015

Westfield Head Start (Agawam Site)

733 Main Street, Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	2/10/2005	9/22/2011
Outdoor - View Plan	10/31/2005	9/22/2011

Wiggles-N-Giggles Childcare Center, LLC

1403-1405 Suffield Street , Agawam

Type of Plan:	Date Recorded:	Date Updated:
Indoor - View Plan	8/6/2012	8/6/2012
Outdoor - View Plan	8/5/2012	8/6/2012